



# INNOVATIONS FOR SUCCESSFUL SOCIETIES

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Interviewee: Mosoka Fallah

Interviewer: Leon Schreiber

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**FALLAH:** *I'm Mosoka P. Fallah. Currently I serve as the founding director of the National Public Health Institute of Liberia (NPHIL), one of the institutions developed as a result of Ebola. For the last three [Ebola] flare-ups, I have been the lead from the Incident Management System to support the counties, with specialization into case investigation and contact tracing.*

*So I got involved with Ebola sometime in late March [2014] when the first suspected case came in Lofa County [in northern Liberia]. I had come on a USAID (United States Agency for International Development) project focused on maternal/child mortality issues. I got called up to assist [with the Ebola response] by my current boss, Tolbert Nyenswah, who was then an assistant minister.*

*At first I was providing general support. Then there was a suspected case that came to the slum community in the capital, where I grew up. I left Lofa and came to Montserrado County [where the capital, Monrovia, is located] and I stopped in Chicken Soup Factory. Chicken Soup Factory is a squatters' camp, poor people, where my parents lived, where I grew up. It became very personal for me.*

*I got involved and I led the team to see the contacts and investigate cases. Eventually I started to support the Montserrado County Health Team. I was supporting them in training people, contact tracing.*

*My own background and training in infectious disease epidemiology had given me a general background. I knew things like alert, index case, contact tracing—but with respect to Ebola. So I had to go to school. I began to learn and read all the materials that had come from DRC (Democratic Republic of the Congo), WHO (World Health Organization). Then eventually I saw that the NGO (nongovernment organization) Action Contre la Faim (ACF) advertised a position for someone to be response manager. They had a little funding from the Swedish aid agency (Swedish International Development Cooperation Agency, or SIDA) and they wanted somebody. It was no money compared to what I was making when I was at USAID, but I took it because I wanted a structure [that would enable me to participate in the response].*

*At ACF there were two main goals: to develop health promotion and to develop contact tracing.*

*However, MSF (Medecins Sans Frontières – Doctors without Borders) had also come in at the same time and wanted to do contact tracing and ETU (Ebola Treatment Unit) management. So we had a couple of meetings and we finally resolved that ACF should concentrate on contact tracing and the other partners in the area would do health promotion.*

*So we had to concentrate on contact tracing.*

**SCHREIBER:** So that became your job.

**FALLAH:** *My job, in Montserrado County.*

*Yes, the largest County. At the time Montserrado had 22 zones. When we took over in July, there were cases in at least eleven of the zones. I had read and I had confidence that with effective contact tracing we would be able to end the*

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*outbreak. People asked me: "Mosoka, What can you say?" I said give me two weeks.*

*I later told them that the outbreak response for EVD (Ebola Virus Disease) had components that need to be interlinked. "Even if we find the contacts and the contacts are sick, you can't take them out of the community because there is a lack of ambulances. If there are no ETU's that will take them, if dead bodies are picked up and their contacts are not listed--these are technical things that must happen in order to succeed in containing EVD. In my naïve mind, I thought that once I get the guys up, I train them, I supervise, the disease will go away. Then I realized how much more it would take. By July things kept on exploding.*

*The first thing I did when I became directly responsible for contact tracing was an assessment of the capacity, because back in June there were issues of who was doing contact tracing for the Montserrado County Health Team. There was some structure in place.*

*The [health ministry] had experimented with locating supervision of contact tracing at the health district level. Liberia is divided into health districts. There are 91 now. The one that has just been added [2015] will make it 92.*

SCHREIBER: I see.

FALLAH: *So the level at which coordination takes place for health delivery service is at the district level. Montserrado had five, now it is going to seven. In the district, it became very apparent to us that the size of the population and variations in population distribution across the county--very densely populated urban slums and isolated rural areas—made contact tracing at the district level in Montserrado difficult. So we took a step back and decided to move intervention at the zonal level.*

SCHREIBER: Right.

FALLAH: *Those zones were created by the WHO for immunization campaigns. So it was my first order of business to look at that at the zonal level and see what existed, then to work with the county surveillance officer and understand what was happening. I came back and I wrote a small report saying that there were issues in communication and training.*

*When I started to devise training, I realized that it had to be a complex system because there are three components of contact tracing. The first comes with contact identification. You want to identify who are the contacts. So first of all you must establish a case--there is a case investigation and there is a case definition that is established. Based on that you know the case, you next try to find the contacts. That portion of contact identification is most often done by the case investigation team.*

SCHREIBER: So that would be different people from the contact tracers?

FALLAH: *Eventually I came to control all because it became apparent that if they weren't treated as a unit you had a problem. So at first it was two different groups. But it became very apparent it had to be treated as one unit. That is contact identification. Once you identify the contact based on the temporal exposure of*

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*the case, then you come to what we call long listing of contacts. So you list the contacts to that case and the level of exposure.*

*After that, technically the contact tracing is over. Next was contact follow up. From the moment you get the long listing you go ahead and take each of those contacts and start to record their status on a contact tracing form. The team has to track symptomatic observation two times a day.*

*So the contact tracer now begins with the contact follow up—to see the contact every day for twenty-one days.*

SCHREIBER: And that's the job of the contact tracer?

FALLAH: *At the time we had a case investigation team and a contact tracing team. Normally they would pool them both and call it epi-surveillance, but we had it separated: the case investigation team and the contact tracing.*

*My job was really to train people to do contact follow up. But very soon, by August, when the cases spiraled out of control, there were limited case investigators because of limited vehicles and logistics. The contact tracers were going to the homes and seeing contacts becoming symptomatic and not being picked up. Contacts were dying. People were worried and were resigning. One woman resigned from my team. "Mosoka, I can't do the job anymore," she said, "I've seen the mother die, the sister die, while promising there would be someone to pick them up. No one would pick them up. I'm out of this job." She resigned.*

*So eventually it became necessary to go back in and teach the contact tracers to do everything. So that would mean they were doing contact listing, then identification, long listing, and follow up. Because we were stretched, from 11 health districts before, now all 22 health districts [in Montserrado] had cases. So we were stretched thin.*

SCHREIBER: So that coordination between case management and contact tracing broke down?

FALLAH: *Essentially because there were too many cases for them to go to. The contact tracer would call in and say, "Come, we have a case." But the team didn't have a vehicle. Even if they go and saw the case and investigated it, there wasn't an ETU (Ebola Treatment Unit) to take those who were ill. The system was broken now. The only option was a makeshift, stopgap, Band-Aid solution.*

*The contact tracing teams became inefficient. They couldn't do the thorough contact follow up they needed to do. They missed contacts. They were not recording symptoms on time, so contacts died. It was like a free-for-all system. One leads to another and you amplify the disease. So of course it became overwhelming that kind of mood.*

SCHREIBER: So what were the key issues that you identified back in June, before the surge in infections in July? Could you specifically describe some?

FALLAH: *I wrote a report that said supervision was key. Because of how far apart the county was, there had to be a centralized monitoring team.*

SCHREIBER: Yes.

FALLAH: *So I developed a team and said there have to be monitors that would have to oversee the supervisors. First of all, I created a structure. There would be contact tracers and there would be supervisors in the zone. Monitors would go in the field physically with vehicles and see every supervisor every day.*

*One [goal] was supervision but the second was to get the data back from the field. The system has to be notified because if there is a case, it generates new contacts. Someone has to bring the records back to us in the ministry in order to collate them into the database [used to track the epidemic]. That link was missing, so I asked for that. We had one vehicle for that purpose—with my car, two vehicles.*

*We split Montserrado into two zones and got two monitors. The guys would leave in the morning.*

*Then I initiated operation meetings. There would be one meeting in the morning and one meeting at five. Eventually I said don't bother with the morning meeting, come at 5 o'clock in the evening. I had them bring the reports from the field first.*

SCHREIBER: Okay, physically collect the papers and bring them.

FALLAH: *Bring it to us, and we will review it and then give it to the data unit to analyze.*

*So imagine. Before the Ebola ended, we had thirteen teams. We went to thirteen monitoring teams; we started from two.*

SCHREIBER: So supervision and data management were some of the—.

FALLAH: *Data feedback. Data feedback – the point of contact between the Ministry of Health data units and what happens in the field. You have to keep it updated every day.*

SCHREIBER: You also had to recruit people to become contact tracers.

FALLAH: *Right.*

SCHREIBER: So there is a personnel problem.

FALLAH: *Right.*

SCHREIBER: How did you go about getting those people?

FALLAH: *That's a good question. It was one of the toughest situations. It would get better when I became part of the Montserrado IMS (Incident Management System).*

SCHREIBER: That was towards November, right?

FALLAH: *Yes. It would get even better when there was a training program. Let me tell you why.*

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FALLAH: *We inherited contact tracers from the county health team.*

SCHREIBER: Is this something that had existed before Ebola?

FALLAH: *No. We had environmental health people, health promoters, GCHVs (General Community Health Volunteers). There were immunization campaigns. They were just guys who had some kind of linkage across the county who could be brought to do vaccinations. Those very people were brought back now to do this role.*

SCHREIBER: I see.

FALLAH: *So we inherited this group. There were good ones, but there were ones that were terrible, incompetent. So it was a personnel issue first of all.*

*Some of the supervisors became the district surveillance officers; from the ministry we inherited two. Some of them became district health officers on the county level. Some of them were vaccine supervisors. You had the good ones, but others were just terrible.*

*So we had personnel supervision issues from the get-go. Also because they had already organized, some of them were not recruited from the communities, so that became another problem. They didn't want to sit down and speak to the Montserrado communities. You know what happens when you have personnel transfer? You have to induce them to go there.*

*The government sent them [to work through NGOs], but ACF was saying that they couldn't employ them as ACF staff to support the ministry of health.*

*So I'm caught up between these two rules. Having NGO (nongovernment organization) to do it but NGO saying I don't want to take full responsibility.*

*When I became head of case detection, I could hire and fire. I could then dismiss. That was from November. I could hire and dismiss. I could say, "You can't have the job; go back to the ministry and do something else." In my capacity as a member of the Montserrado IMS, I had the power to do it.*

SCHREIBER: But in the beginning—

FALLAH: *We couldn't dismiss, I could only recommend to the CSO (County Surveillance officer). So that was a challenge.*

SCHREIBER: So, just in broad figures, how many contact tracers did you inherit?

FALLAH: *Seventy-seven contact tracers and 22 supervisors.*

SCHREIBER: And the supervisors were already called supervisors at that point?

FALLAH: *Yes, they were treated as supervisors. What I did, I had active and inactive supervisors.*

*You had people from the eleven zones where there were cases. Those supervisors were in active mode. I told the eleven who were deactivated to help*

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*do health promotion and education. ACF would give us a minimum stipend to support logistics--to purchase note pads, pens, etc. ACF did a great job. ACF provided that.*

SCHREIBER: Did you retrain the contact tracers?

FALLAH: *Yes. We trained their supervisors. Initially, a guy from the CDC (Centers for Disease Control and Prevention) provided training. At the time it was PowerPoint presentations and training with some simulation. Then I had a good friend of mine from the CDC. Her name was Susan Wang. She said to me, "Mosoka, this is going to be about mentorship. That's the best thing we can give." So that was my approach was, to get the very best among them and provide mentorship. They see you do it; you ask them for feedback, you brief and debrief.*

SCHREIBER: Yes, meaning that you would go into the field with them.

FALLAH: Yes.

SCHREIBER: What was the day-to-day job of a contact tracer in the beginning?

FALLAH: *You go in the morning, see the families. At the time there was no thermo scan. You ask questions: fever, malaria? The typical thing you would see for example is this guy engaging the people? Is he looking in their faces?*

SCHREIBER: Yes.

FALLAH: *[the contact tracer is supposed] to ask how many males or females did they have in the home. On average, one tracer would see around ten persons. If contact tracers don't know [the answer to this question], they aren't doing their jobs. I'm not even asking for names. If you don't know their sex, you're not doing your job.*

SCHREIBER: Right, it means that they're not observing.

FALLAH: *No way, exactly. Then I asked how many do you know by name? How many do you know because your information is going to come from that. This is subjective reporting. People are going to lie. How do you know you are talking to the same person unless you look someone in the face? Even when using thermo scan, people we could miss people, either because someone wasn't there or because in 2% of cases people don't have the typical fever. No fever, right? We had to watch the facial expressions while people answered to see if it was an act.*

*Also there was an issue of dishonesty.*

FALLAH: *The community saw that the contact tracer would lie on the form. Why would the community trust them if they lie on the form?*

SCHREIBER: So how would you try to address that?

FALLAH: *I always said something. Looking back in retrospect there is a sort of inverse correlation. The more organized the response becomes, the more experience people have with the response, the more the cases drop. There is an inverse*

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*relationship. The more you become organized, the more you provide information, the more the cases drop.*

*We got more organized with the national IMS coming together as a group and then with the help of people like Hans Rosling, who provided additional support. Hans Rosling came and said, "Mosoka, we've got to do maps." Then we mapped out Monrovia into case zones. We zeroed in. We mapped Monrovia.*

**FALLAH:** *So the first thing we did was the map, then we increased the number of monitoring teams to thirteen-- thirteen monitoring teams with vehicles.*

**SCHREIBER:** This is different from the 22 supervisors?

**FALLAH:** *Yes, then we increased the number of supervisors from 22 to 33. We created an additional eleven supervisors and made them mobile supervisors. ...We realized we needed to increase micromanagement, increase supervision. I remember, as the cases were coming down, we said now you're going to have to go to quality and not quantity.*

**SCHREIBER:** Yes.

**FALLAH:** *It was quantity at first but now it is going to be quality. We were going to have to use our very best people. Now we had to find our very best.*

**SCHREIBER:** And this is around November?

**FALLAH:** *Yes, the very best. So, in July and August, we were trying our best but it was just chaos. People were lying, people were cheating, and we were running here and there. So it was like chaos. Supervisors were cheating. There were limited resources. People were frustrated. The face of the response is the contact tracer. If there is no food, they blame the contact tracers. If the relative gets sick and they call and they don't have a response quickly, it is the contact tracers' fault.*

*There were instances when my contact tracers were taken as hostages. This is something I had to deal with nearly every day. They were taken hostage and the guy is saying we're not going to release your contact tracer until you take the dead body that has been here for two days now. We called and the team didn't pick him up. They took them hostage and they were literally attacked.*

**SCHREIBER:** Around what time was this?

**FALLAH:** *This was around August, September.*

**SCHREIBER:** This was the peak of the—

**FALLAH:** *It was the peak of the epidemic. The poor guys had to do everything, every day. So they were frustrated when other areas weren't responding. People were not coming. You don't have food? They call. There is no response. Who do they see every day? The contact tracers. I was under pressure. Everyone was looking at contact tracing. As soon as there is an outbreak, I get a call from CDC, and from the assistant minister of health calling me. So you've got to deal with that. You've*

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*got to respond. I think I was sleeping like five hours a day or less. I thought I was going to have a heart attack.*

*So the disease was spiraling out of control. The resources were still short. We couldn't build more ETUs. There were not enough ambulances. So you have the more people getting infected. Resistance is there. Distrust is added to that.*

SCHREIBER: Okay, so that sounds like a nightmare scenario. What is the shift that addresses that?

FALLAH: *West Point happened. West Point, I will tell you, was a blessing in disguise. The first and most important thing West Point taught us was that the top-down approach was not going to work. Quickly we realized that. West Point taught us that.*

SCHREIBER: Up until then you would say it was a top-down approach.

FALLAH: *All the time it was a top-down approach. Even after West Point it took a while for us to convince people that we had to reverse the model.*

SCHREIBER: I see.

FALLAH: *And the reason we had to do that was because West Point was so serious that the assistant Minister of Health (Tolbert) called me one day and said, "Mosoka, you can't have a repeat of what happened in West Point." So now you've got to rebuild everything.*

*It has to work with the community and people. We created a second layer of people called the CBI (Community-Based Initiative). The goal was to do active surveillance. They would be the ones who would knock on the doors and look for the sick. They would be the ones that would do horizontal communication, neighbors to neighbors.*

*They would be the ones that would go from the neighbors and give education like don't hide the sick.*

SCHREIBER: So this is not contact tracers, these are social mobilizers?

FALLAH: *Not contact tracing, active surveillance. Contact tracing by nature is a passive surveillance. Contact tracing is passive surveillance. Why is it passive surveillance? First of all, there has to be a case; there has to be an alert. There has to be an investigation. There has to be long listing. Right? That's passive surveillance. We realized that can't work. You need guys who know their community to go out, literally go and find the sick.*

SCHREIBER: I see. So the model here is shifting from passive surveillance to active surveillance?

FALLAH: *No, to run in parallel to each other.*

*So the guys in the community will be the ones looking for the sick. Once they find the sick, the contact tracers move in and the case investigator will move in to investigate.*

*It had gotten to the point where we realized that after the case investigator did the long listing, it would be three or four days before the information reached the Ministry of Health. By the time we got back to the house we lost the contact. That guy became a potential source of further spread.*

*So the new development was contact tracers and investigators move literally today. When there is an alert the investigator goes there. The supervisor moves there. He investigates and long lists. The contact tracer goes there and begins his investigation immediately.*

SCHREIBER: Okay.

FALLAH: *In October/November we introduced that method that had them move together.*

SCHREIBER: So you were essentially pairing up different parts of the response.

FALLAH: *To operate as a unit.*

FALLAH: *Yes. So now the template is that it is active surveillance now. But that can only be led by community leaders. So our strategy is to engage the community in a town hall meeting. The first thing we do is we apologize that we did the top-down approach, we are sorry.*

*The second thing we do is we listen to them. We don't say a single word in this meeting. They vent their frustrations, and we write it down. We are doing CBI. Then we group the comments into themes. So you guys say the ambulance didn't come on time. Then we ask them, what do you suggest? These meetings are happening regularly. We give a sense of empowerment, a sense of 'we are in control.' So our philosophy became the community leads and we follow.*

*I literally wrote the training material for CBI from my head. There was no existing material for active surveillance. I had to use the TB (tuberculosis) model because in TB they do active surveillance. It came from research on TB. I took the original material and developed it for training.*

FALLAH: *The active surveillance now had the key job of house-to-house search, doing house-to-house education now as a neighbor telling a neighbor. When a contact is missing or going into hiding, they will be the ones who help to find that contact. They will take care of resistance because they are in the communities.*

*We hired Imams, we hired pastors; local leaders became part of us. So now we had the CBI active surveillance in the community. Contact tracers were here, contact investigation now moving in, each one complementing. If by chance there is a case that is not picked up by the investigators, the active case finders—one of them has to comb forty houses every day, go from house-to-house.*

SCHREIBER: So the team all together or just active surveillance would go?

FALLAH: *Active surveillance would do house-to-house search.*

SCHREIBER: Okay, and they had the requirement to do forty houses?

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FALLAH: *Every single person did forty houses. At the height of the epidemic we hired 5400 people for Montserrado County.*

SCHREIBER: These would be called active surveillance officers?

FALLAH: *ACF, active case finders.*

*They were out in the community. They shared their frustration with us. They'd bring their solution to us.... But when we developed it in West Point, there was nothing written down. I remember the current minister, all of us, sitting there. We had a big town hall meeting. How many zones should we have? We have 7 zones. How many committees should we have? Four blocks in each zone. Okay, let's get three persons, you guys each get a zone and decide. So they selected who they wanted. They decided their leaders. All we did for them—they would come in, and we would give simple training.*

SCHREIBER: So the community could select—

FALLAH: *Who they wanted as their active case finders; it was their selection. Our job was to come and do the training. Once we gave the training, we gave them an ordinary notebook to write, for example, 'four sick.' Guess how I got that information? The supervisors for that area would summarize and send it to me as an SMS. Then I would compile it for the minister.*

FALLAH: *They worked so successfully in West Point, the minister called me and said we have to scale this up.*

SCHREIBER: But you surely can't receive SMSs from 5400 people right?

FALLAH: *That's a good point. That is where the Yale School of Public Health came in. The Center for Infectious Disease Modeling and Analysis from Yale came in with that. It was the arrangement. Two PhD students came from the US; they came to see what they could do. They saw our concept and developed a separate platform, a mobile app. A mobile app was developed by them. They brought it on 25 ordinary cell phones. We bought the phones and gave them to our people and trained them, so they could enter it for us. Total innovation. So the guys would climb a tree to find a signal and they sent the information to us.*

SCHREIBER: So through that app, the information would go to you?

FALLAH: *Then we would analyze the information and develop a response. We would pass the information to the case investigators, but it would also help us develop key policies. For example, we started seeing how many persons would die. How many deaths in the community, how many dead were buried by the burial team. We could now tell the IMS gentlemen that of fifty persons who died last week, only ten were received for burial. There were 40 dead who had not been buried. If you don't do this, Ebola will not end. We now had the power with data to influence policy.*

SCHREIBER: So I want to ask you about the data management a bit more, but the way I'm approaching the story is you have a big problem here which is the community distrust. How do you build trust with the community?

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*FALLAH: When we started shifting to the communities through the engagement meetings, community meetings we realized that there are two types of leaders, the formal and informal leaders. There would be guys who were not elected, selected by government, but people listen to them. We had to bring them on board. Some of them were young students, college students, teachers, all ages. But because the community was looking to those people to lead them, we were working with the leaders and we started working with them. Resistance started to go down because of that.*

SCHREIBER: So you could see that based on the meeting? Is there a town hall meeting?

*FALLAH: West Point taught us everything. Seeing the chaos—West Point is quarantined; the military is confused.*

*We [hold a town hall in the community] and we begin to realize when this guy speaks, people listen. People listen to this guy; this guy should be our friend. So he would be better than us to do the speaking. So we developed that approach.*

SCHREIBER: Then you would approach that guy?

*FALLAH: Exactly. Would you come and lead for us? Then we will follow him. Then we would say let's take it to Caldwell, let's take it to (Dorbor) Jallah. So that is what is happening. No textbook. You learn on the spot because it's moving fast; there is chaos.*

SCHREIBER: This model is different from the Montserrado IMS. How did you integrate the two?

*FALLAH: Four sectors.*

SCHREIBER: Yes. Did that improve the system even further?

*FALLAH: Oh yes. What happened is at the beginning—I became the head of case detection. What happened there was that I have contact tracing, active case finding, and case investigation all under my direction.*

SCHREIBER: Okay.

*FALLAH: These are guys that I worked with. They have some respect for me, and my work. So it became much more coordinated.*

SCHREIBER: Right, because you were in control of all those—.

*FALLAH: All the four guys. We had our own leadership and team. If things went out of control, I could go in for the bigger issues now. We had a system. It got a bit difficult with the partners coming in. When the partners entered, there were more cooks in the kitchen. So it was a good problem we had. Instead of having two cooks, we now had five cooks. I think that's the reason for the tension.*

SCHREIBER: So was that solved because of the zones? You could then say, MSF you focus on zones two and three?

*FALLAH: So sectors were made up of zones.*

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*Twenty-two zones were put into four sectors.*

SCHREIBER: So how did that improve your work?

FALLAH: *Because we had geographical center. The center let you do like this—.*

SCHREIBER: So decentralizing.

FALLAH: *My role at that time becomes handling major outbreaks. If there is a major outbreak—it was more a reinforcement team, I was helping them. During that time there was a big outbreak in New Kru Town. I would go with the team. Then I'd go and see what was happening. But then the contact tracers had become responsible. We got smart caseworkers that could do the job. I remember this young kid who kept track of the percent dead in his book. It was like this guy had been an epidemiologist, but he had no schooling. He would tell me this case came from here and here and here. I was so impressed with this young man. So we had one advantage there.*

*We also had regional responders. We promoted people from within. The better team members were becoming supervisors, so the competencies and skills had increased. So those ones worked independent of much supervision, but also don't forget we increased to more monitors. We increased the number if supervisors. So supervision quality got better at the government level, yes.*

SCHREIBER: So shifting to the data management. The story as I understand it is that there was some data management going on but by September essentially the thing had collapsed; it was clear it was not working.

FALLAH: *It was not working.*

SCHREIBER: So let's hear about that.

FALLAH: *We got to the point where we were developing parallel data systems.*

SCHREIBER: Parallel data systems?

FALLAH: *The Ministry of Health had its own data units, right?*

SCHREIBER: Yes.

FALLAH: *But we had an information system within Montserrado Country. Montserrado County had a separate data unit. So there was another data unit, but there was no cross talk with the community data.*

SCHREIBER: So the county health team had their own—.

FALLAH: *Yes. Sometimes the case investigators would give the data to the data unit directly and sometimes the guys in the field—because now that they were doing contact follow up and contact tracing and case investigation, they would have data for us too. Something also happened. People were not going directly to the ETU by themselves right? They are investigated, but the case investigation form sits in the ETU.*

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*The burial team got their funding from USAID and grew to 27 burial teams in Montserrado. The case investigation team is at 8. In a normal response, you want the case investigation team to go and trigger what happens. The case investigator should go in and say, "This is an Ebola death, therefore burial team move in." This is a suspected case, the ambulance moves in and takes the person to the ETU. It should be led by the case investigators, but you have eight case investigators and 27 burial teams.*

SCHREIBER: So they were taking over then?

FALLAH: *They were taking over more than burial. That is what happened. Whatever data is generated there does not come back. Guess what happened. Which means more dead bodies are picked up with a good percent of Ebola deaths, but the contacts created are not established, and they've not been followed.*

SCHREIBER: Because that is not the job of the burial team.

FALLAH: *No. That's one. So you have two major issues. I think I sketched this in a report, and I made a prediction. I may have presented this. I made a projection and I said if A, B, and C are done, Ebola will be controlled.*

FALLAH: *Right. But there are not enough ambulances. So guess what, people are using private vehicles as ambulances. People use private ambulances to get there, but no case investigation is done. So yes, in Ebola response, two things happen. Think about it in terms of source and contact. By using private vehicles, the source is in a private ambulance, the source is going to the ETU, right? But the contacts here are not being picked up and not being investigated.*

SCHREIBER: Right.

FALLAH: *So guess what? This contact gets sick, creates more contacts. Then you have a dead body. You have 27 burial teams, and they respond quickly but the data would then not go back to the epi (epidemiology) guys, who would then send a case investigator to go investigate. I drew a graph and I said that this is a cycle. About 60% of our contacts are not accounted for.*

SCHREIBER: Sixty percent are not accounted for?

FALLAH: *Accounted for, at one point in time, yes, contacts. Until we seal this up, we will not get to zero. So we had to turn to an innovative way to do this. How would you do it? ...We formed a consortium. A friend of mine, she is now at IRC (International Rescue Committee), said what we see that is happening in Monrovia, we need a group of NGOs to take care of different aspects of the response, so then they would think as a group. So IRC decided to take care of case investigation; ACF does contact tracing.*

SCHREIBER: Okay.

FALLAH: *Global Communities does dead body management.*

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*This is in Montserrat County. So what we did here was since we have 27 burial teams, we decided that we would embed a case investigator within the burial team. So that our policy is now accounting for where the body is coming from.*

*Secondly, we embedded case investigators at the ETUs. So now we are very, very convinced that if someone will come, you will generate contacts. So this is taken care of; this is how we solved the problem of the data.*

*But I remember a day when I saw a hundred case investigation forms from one ETU. I said how long have they been there? One month. I said do you understand the implication of keeping case investigation forms for one month? All these contacts, we don't have them. So we had to create—we even had to develop our part to quickly enter, take a copy of the data, and send the data to the control center.*

SCHREIBER: From the ETU?

FALLAH: *From the ETU. Then it would go to Hans working with Luke (Bawo). We had a focal person now, a smart guy, just as unassuming, working with the forms—Dikena Jackson. I liked him.*

*Dikena Jackson's job is to scan all ETUs for us and get the data for us. Dikena Jackson sends the information in like 10 seconds when I ask please check this for me and let me know. Secondly, Dikena is able to alert me, tell me there is a confirmed case in Red Light. So we have someone now who is responsible.*

*Then we also developed what constituted ETU discharge, two negative tests plus the clinician's impression. That constituted discharge because there was a big confusion there.*

*Another point: Not all dead bodies were really Ebola dead bodies. But that was because of the lack of a quality algorithm to establish what true suspect cases were. Also, when the lab results went for suspect cases, the labs did not get communicated back, so that would mean a lot of the long-listed contacts were still being followed up. We were having huge contact follow up when essentially maybe only 40% of them should be followed.*

SCHREIBER: Right.

FALLAH: *So you're straining your manpower and you compromise quality.*

SCHREIBER: So following too many contacts?

FALLAH: *Many that should not be followed. So we had to sit down and redefine when a dead body constitutes a confirmed case--when to follow up and when there is no need for further investigation.*

*We started to follow up before the test results were available. We began to list contacts for all dead bodies. When the results come, if the report is negative, we drop the contacts.*

*We recorded contacts until the results came from the labs. The labs were from all around, so we had to have someone like Dikena, who would compile the names*

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*and tell our guys do contact tracing. Fifteen dead bodies--of the 15 only three are positive for Ebola. Now we had associated name and lab results. So we could see only three are positive and drop further contact tracing and monitoring for the other contacts.*

*Number two, suspect case. A suspect case may not be Ebola, right? But we are still following suspect cases in the field. I would say, above everything, Hans Rosling pushed and pushed this. By doing that we reduced the number of new infections. Then what?  
But we have quality now, not quantity. Normally you lost quality because you're stretching the system.*

*The key was to streamline and to follow up regularly with the people we decided to follow. We adopted two new policies. One, no contact was to die in the community. Once that happened we investigated and if errors were made we dismissed people. If effective contact tracing is occurring, the contact's symptoms should be picked up. The ambulance should be called. It should be investigated and the person should be taken to the ETU. If a contact dies in the community, it is a failure of contact tracing. So we had to make that positive claim.*

SCHREIBER: Interesting.

FALLAH: *The second thing was that no contact should go to the ETU on his own because going through a private vehicle increased a lot of problems. They should all go by ambulance. The level of exposure was created so we offered new guidance: No contacts who are symptomatic should go to an ETU on his/her own. They should go by ambulance. You find the sick person. Initiate a response by calling the case investigators, who will come and investigate, and then call the ambulance to go to ETU.*

SCHREIBER: Okay. So with those two things you were able to capture the leakage.

FALLAH: *Exactly, the leakage. We take the sick for the time, seal the dead bodies, seal the ETUs, so basically we just sealed the gap.*

SCHREIBER: By what time was this starting to work?

FALLAH: *By December now we were getting there. We were really getting there in December.*

SCHREIBER: Right.

FALLAH: *Then by January, the cases started going down. What we were trying to do now—we had Ebola Montserrado maps. We had red for confirmed. Whenever there is a red, we are going to start in on that case with what Hans would call a laser-sharp response. That is going there with a very specific response. We go around an area and switch it off.*

*Even though I was one of the co-founders for CBI, ...I have to admit by August and September, the seriousness of the outbreak jolted the communities into reality. I have to say that to you. We did not have to explain and start building*

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*from the ground up. Some communities already taken action themselves and had some of that structure going. Then when we trained them, there was more order.*

SCHREIBER: So it means that there was some autonomous action from the community?

FALLAH: *I'd say that, yes.*

*I think that people in poverty, in urban slums, don't trust people in authority. They hate institutions because they've been denied things all these years. So they don't trust authorities, they only trust themselves.*

SCHREIBER: Whereas maybe are you saying in the rural areas that would be less of a problem?

FALLAH: *Rural areas and better suburbs were organized.*

SCHREIBER: That's interesting.

FALLAH: *I think it comes from the rural culture. But I will say to you yes, what I saw essentially, as I drove around town, circling, there was a lot of organization going on. I have to admit I met a young group of university students who were working on their own with downloaded material before I met them. They were there. I met a guy who had a little shack. He said "work with me." He led a volunteer operation in the field and with his little shack. I have to admit the politicians, the legislators, they started organizing their people. Everyone was jolted into reality.*

*We wanted to create a network, to merge, to bring everybody together on the same standards. If we did anything, it was to take all of these communities under the surveillance program. Some were doing it on their own already. Natural leaders rose among them. Some of them were school teachers.*

SCHREIBER: But certainly you empowered those natural leaders, that's the key thing.

FALLAH: *Yes. Found them, empowered them.*

SCHREIBER: Gave them information to also know what to say.

FALLAH: *Exactly, giving them feedback and helping them get results. We began to build trust in the system and us. We started helping them.*

*I will tell you a story from when I was in West Point. We got into West Point. There was resistance. We met the people. Things were going fine. This family lost a relative and they called. They did the right thing. They called; they left the house. We did not respond for two days. I'm driving to West Point, they came to me, and the guy said to me in dialect because he speaks my language. He said to me, "You deceived us; you lied to us. We called the dead body team two days ago, we still have a dead body in the house." I was just crying. I went home and said to myself I want to quit. I said I quit.*

SCHREIBER: At what point was this?

FALLAH: *This was the end of August, August or September.*

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*I said to myself I quit. So the next morning one of the young guys called me and said "Doc, where are you?" I said, "I'm home." He asked, "Are you not coming?" I said I've got to do it. He said, "You'd better come." I told myself—I've got to do it. Then I called the Minister of Internal Affairs, I got angry. I started to blast at him. I said, "You put my life at risk. We need to send an ambulance so the people trust me, and they trust also authority." He said, "Mosoka, I'll come down, I'll send an ambulance and I'll send a dead body team." Then I passed that street. One of my friends, from More Than Me, she bought an ambulance for West Point.*

SCHREIBER: So the communities did some of that themselves.

FALLAH: *Yes, they said we can help ourselves. They set up checkpoints. They have different means. We wanted to work and put them together. We had someone else—those guys who are leaders. They can do anything. They can use their energy for anything. Liberia can do anything; I saw so much potential. The lack of action at the extreme of the outbreak jolted them into reality. I think that the extremity of the Liberian outbreak led Liberia to be the first country to go to zero.*

SCHREIBER: What kind of metrics did you use? Let's go back to contact tracing, surveillance, and active surveillance. What things were you looking at to see that the system was improving?

FALLAH: *We engaged communities in focus group discussions about that. We engaged them, we talked to them and we listened to them. They called us and reported to us what happened.*

SCHREIBER: I see.

FALLAH: *Someone would report the contract tracer did not come to our house today. Someone would call and say I did not see a contact person today. We gave them the power to call and to report. Also we looked at the form, the quality of the form of the tracer. We said no erasing. You fill the form. Did you fill the form? When there is something, we did close supervision. Tell me what you know about this contact. Explain the contact. We did that.*

*If we saw erasure fluid, it raised suspicion for us.*

SCHREIBER: And you mentioned that you would sit down with the contact tracer and ask him in detail about a case?

FALLAH: *Of course, yes.*

*It improved over time. We removed some supervisors; we dismissed some contact tracers.*

SCHREIBER: This was only after you became the head in Montserrado right?

FALLAH: Yes.

*I think also I managed expectations. I never promised what I couldn't deliver. I could tell them no. I wouldn't want them to expect what I couldn't give. Can you give our houses buckets? I said I can't promise you buckets; I don't have*

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*buckets. What I can promise you is we'll build a latrine. If there is support, I'll let you know. I would say no, we can't do it from the get go. I managed expectations. Let them know what I can do. We never promised anything we couldn't deliver.*

*Some of the things we promised, we fought to get done. I can remember, it was November or so when there was an outbreak among the criminals in West Point, the drug addicts. So the contact tracer went in first. They said they were lacking food. They said without food, they would not allow themselves to be traced. I had to go to get them food.*

SCHREIBER: You delivered them?

FALLAH: *Yes. They said, "Dr. Fallah, now you are here with the food. Because you kept the promise, we will keep the corridor open for five days. After that we will reclose." I said fine with me.*

*It was about communication skills.*

*That was a key thing. The first time I entered West Point quarantine I had a huge military car going with me to protect me. I said general, I can't do this. I said no, the only currency I use is the currency of trust. He said the car sent with me is to be close behind me to protect me. I said no general.*

*The one thing I will always do—because I'm in West Point, every day I met a criminal. They come to me and say, you know, you are a true friend of West Point, you never left us. That's true. From the 20<sup>th</sup> to the day West Point got opened, I was there every day, every day.*

SCHREIBER: With this criminal gang situation?

FALLAH: *With the criminal gang, until they finally resolved the situation. I never stopped going there.*

*Every time I engaged the group, I looked people in the eye. Somewhere I picked up a skill— when I'm working in a hostile environment, I watch for the eyes. If I see some sort of peace in someone's eyes, I will call that person aside. I will do that and talk to that person one-on-one. When you go around you pick it up. When you discuss issues and you talk to the group you have this group dynamic that influences it. But when you take one or two persons and take them aside and convince them, you can convince the others. So I look for those.*

SCHREIBER: So it is kind of similar to what you did with active case finders, you look for individuals who may have some influence and will listen to you.

FALLAH: *Yes, who listen to you, exactly. The hierarchy system among the criminals is even more powerful than in the government. If you win the boss, you win everybody. If he says "gentlemen we're not going to listen to this guy," it's over. Whatever he says. No school teaches you that. No textbook teaches you that.*

*It is boots on the ground, learning every day. We learned all those survival skills on our own. I think the strength of that was I refused to sit in my office. I just*

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*refused to sit in the office. I'd sit down with them. I don't think it is unique to me. Many of those who did a great job were field guys.*

SCHREIBER: One person told me a story about a lady who had died toward the end of the outbreak. She died in Montserrado and she told her family that she wanted to be buried outside in a rural area. They washed her, they dressed her up, and they actually used their hands to warm her head up so she would pass the scan.

FALLAH: *That story is true. She passed away and they dressed her nicely. It actually happened around Somalia Drive. They dressed her nicely. You're going to laugh when I tell you the story. She got dressed nicely. They put her there and someone sat on either side.*

SCHREIBER: They scanned her and she was normal temperature?

FALLAH: *And she passed. What that told me is the power of culture. Ebola hits culture. When you hit people's culture, you hit the very fundamental of what holds them together. That's why they were doing these things. So you've got to find in the culture what you can take and shift around.*

*I can tell you a true story from Caldwell. It's predominantly Muslim. We went to the Imams and we hired a Muslim burial team. So the burial was still happening, but the Muslims were doing, respecting their ritual and their culture. This is such a passport to the culture. It is what I was telling you about why people would take desperate risks. In the West African culture, burial is a sign of large respect. It is a known sign of your worth. Nobody wants to compromise that, so you have to work with them, work with them along that. That's what it was.*

*Now I can't forget, her husband was talking to me. He said, "Mosoka, I want to see your President. I have two things to say to your president. Ebola will never end if we don't end cremations."*

SCHREIBER: If we don't end cremations?

FALLAH: *If we don't close cremations, he said, the Ebola will never end. I'm going to tell you something. I said right now Liberians are willing to accept the reality of their relatives dying from Ebola. What they are not willing to accept is their relatives are being cremated.*

SCHREIBER: So it means they kept hiding people because of the cremation?

FALLAH: *Exactly. They kept hiding people. He said if this Ebola will end, tell the president we have to end cremation. I remember this one time he went to the President to make this proposal, and they agreed to give them 25 dollars to buy the burial land. When we got to the house of the body, he said he was going to handcuff himself to the minister.*

SCHREIBER: At the end of the day that's right. So you're saying that the resistance to cremation never really went away.

FALLAH: *Until the end of cremation*

SCHREIBER: When did this story with the lady happen?

FALLAH: *This was in December.*

SCHREIBER: And cremation was still happening?

FALLAH: *Yes. Cremation was happening a lot, but here's what I, and one girl did, we had a secret pact. We had a meeting. I said you know what, sometimes you have to do civil disobedience. I said we have to do civil disobedience. I said certain communities in Liberia, in Montserrado, if they have a dead body and they find a burial ground, we'll bury the body for them. We made that the official position in West Point, New Kru Town. When there was a dead body and they called us and they found a burial ground, we took the body and buried it, the burial team buried. Finally, a compromise. So the tension went from before official burials started happening. So, two weeks before cremations were ended, we started that process, we would do it.*

SCHREIBER: So how many people do you think were buried like this?

FALLAH: *Before Global Communities came, we buried maybe close to 200 persons like that.*

*Global Communities did that same thing. When they came, they worked in rural Montserrado because urban Montserrado was Red Cross territory. Red Cross was very by-the-book. They wouldn't budge. We can't follow the book all the time. If we follow the book, the community is going to be secretive. So we started working with Global Communities in rural Montserrado.*

SCHREIBER: If you had to take one or two key lessons from your experience, how do you address the challenges of culture and trust-building? What were some of the key things that got people to cooperate?

FALLAH: *There were two things I would say. One, in any response, listen. Listen to the people. I tell people, take away all your training and listen to the people. I would rather lose two days listening than say this is an emergency, let's do this in one hour. You end up losing more days. Because what happens when you're in emergency mode? You want quick answers. So you miss things. That's what happened to me in West Point when I landed from MV Massaquoi and the holding center.*

*My intentions were right but it was misguided intention. It was misconstrued. The first step, listen.*

*Two, the communities have the power to change anything; they are resourceful. They existed before us. If the day we put that into practice, we listen to the community, we work with them, help them see what is right and what is wrong and they see you as their true partner, I don't think there is anything we can't do. The power that lies within the communities, how do you listen to them? How do you help to find the good in them? How do you find the true leaders in the communities, to help them dispel the wrong people? How do you help them feel empowered to respond? I think that is probably the most important lesson. The power of the communities is so, so critical.*

*Use the community to shift the culture. That would be my take home. At the end of the day, if you're going to find the sick, if you're going to find the contacts, the community has to talk to you. They can only talk to you if they trust you and they respect you and you treat everyone as an equal. That's my message.*