CDC Ebola Response Oral History Project

The Reminiscences of

Mosoka P. Fallah

David J. Sencer CDC Museum

Centers for Disease Control and Prevention

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Mosoka P. Fallah

Interviewed by Samuel Robson
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Interview 1 of 1

CDC Ebola Response Oral History Project

Q: This is Sam Robson here today with Dr. Mosoka Fallah. Today's date is March 8th, 2017, and we're here to talk about Dr. Fallah's role in the Liberian Ebola epidemic of 2014 to 2016. I'm here for the David J. Sencer CDC Museum, CDC Ebola Response Oral History Project. I want to thank you so much for giving me your time today, Dr. Fallah, on Decoration Day even.

Fallah: Thank you for the opportunity to share part of my life.

Q: Absolutely. I'm looking forward to hearing it. Would you mind saying, "my name is," and then your full name?

Fallah: My name is Mosoka P. Fallah.

Q: Can you tell me your position?

Fallah: Less than two weeks ago—my most recent position—I was appointed by the president as the deputy director general of the National Public Health Institute, for technical services.

Q: If you were to give someone a two-to-three sentence, very short, description of your role in the Ebola epidemic, what would you say?

Fallah: I probably would describe myself like Hans Rosling would describe me, as his field marshal, his field general. I would describe—he always described me as his field general for Ebola, his Ebola general. That's one way I would describe myself.

Q: Perfect, thank you. [laughter] Can you tell me when and where you were born?

Fallah: I was born in southwestern Liberia, Grand Cape Mount County, in 1969, October 5th. It was a mining concession, an American mining concession, iron ore mining concession. So it was more cosmopolitan. People from all parts of Liberia went there for jobs. My parents had me, and when I was ten years old, we moved to Monrovia for the first time. I was in Monrovia when the 1979 rice riot happened. Then we moved to West Point, up to '82, then Chicken Soup Factory.

Q: Can you describe those early years in West Point and in Chicken Soup Factory here?

Fallah: It was a shocker. My father was—for a good portion of my life, up to probably eight years old, my father had decent—he had work. He wasn't educated, but he had worked himself up. By the time I was born and conscious, we were pretty much what you would call middle class. There was free, concession medical care and everything, and

then by the time I was eight years old, probably ‘77 or ‘78, for some reasons my father lost his job. I was coming from having an average life to nothing, all of a sudden. So the first seven, eight years were good, and ’79, when we finally moved to Monrovia to settle in West Point, it was a tough transition for me. The only experience I had, when I wanted to go to the restroom to defecate, I went on the beach and realized that men and women, everyone sat down and defecated in open defecation. It was a tough thing, but when nature comes—[laughs] After a couple of days, I realized, this is my new life, I will have to accept it. And so I accepted it. I accepted not being in school, trying to struggle as a young man to find food to eat because our parents would go to sell in the morning and the kids would be left alone to fend for themselves, so I learned to do that.

Q: What kinds of things were you interested in doing as a kid?

Fallah: Oh, for as long as I can remember, there used to be a doctor where I was born in the mining concession. His name was Dr. Boyd. I remember my friends and I, we were playing—as a kid I would play with tadpoles. Younger frogs, tadpoles, and my friends started to call me Dr. Boyd. So I grew up, I wanted to be a doctor all my life. Yes, I wanted to be a medical doctor. So I was very nice with animals. My father had a farm. Farm animals, and I had a squirrel, I had a dog, and my dog and I would sleep on the same bed. So I was very passionate about animals and animals loved me for some strange reason. [laughter]

Q: Do you remember your dog’s name?

Fallah: Actually, it was Do Good. It was Do Good. Yeah, we slept on the same bed together and everything. [laughs] Then my squirrel was called Du, it was D-U. I remember my squirrel got lost. I had to find my squirrel, [laughs] and my father would have it in the bathroom. It would leave the bathroom and come and sleep with me in bed. That would characterize my life. Many of the pets I had wanted to sleep with me. [laughter]

Q: Where did you go to attend undergraduate school?

Fallah: The University of Liberia. As I said, I left West Point, I moved to Chicken Soup Factory Community, and then went to a government school called Special Project. That was before the war. That was a public school, but it was an extremely good public school. I went there till ninth grade, and then went to high school. I was lucky enough, I got a scholarship from the American Women in Liberia. There was a group called American Women in Liberia that would sponsor smart kids in high school. So I got a scholarship from the American Women and the missionaries, and I completed high school. I graduated in ’89, and in 1990, I entered the university to study biology and chemistry at the University of Liberia on Fendell. I wanted to be a doctor, so this was a way to get ready to become a doctor. After four months, the civil war hit the university, and that dream got suspended. [laughs] After four months of undergrad, the dream of undergrad education got suspended by the war.

Q: What did you do?

Fallah: Tried to escape from place to place, we would leave our home. Recently, I was a commencement speaker at the university at Fendell, and I told the people that, "I have made a couple of memorable trips at Fendell. The first one as a young undergrad with dreams and aspirations, and the second time as a refugee by the civil war." Everyone laughed, and I said, "My water bed was the floor of the engineering building." [laughter] And everyone laughed. I said, "This is my third trip. Now, I'm honored to be called a guest speaker." I was just recently called a guest speaker at Fendell. So, I went there and tried to escape for my life, basically I was escaping for my life. And then school reopened, and we went back to school. That would continue for ten years. Every time there would be a civil war, we would run and stop and go back to LU [University of Liberia]. It took me ten years to get a bachelor's degree.

Q: And then was it straight from there to medical school?

Fallah: Yes, 2001. In 2002, I entered medical school. In 2003—2003, right? Then the civil war resumed. The one that finally ousted Charles [M.G.] Taylor. As a young, first-year medical student, I was trying to escape back to the medical school when the rocket dropped at the Greystone near the American Embassy, and I started to volunteer with Doctors Without Borders. I became a surgical assistant while a first-year student. That was 2003 and 2004. That's when I got a scholarship to go to the US. I didn't complete medical school here, I went to the US to do my first master's [degree] in evaluation, and

then did a PhD in microbiology and immunology at Kent State [University]. I went to three different schools in the US.

Q: Sorry, I should let you drink your tea! [laughs]

Fallah: No, don't worry about it. It's okay.

Q: No, please! Okay. Wait, so you volunteered with Doctors Without Borders for a couple of years. What were you doing with them?

Fallah: This is interesting. I was in my scrubs as a young medical student. When I was an undergrad, I lived somewhere called Front Street with a group of guys, six or seven guys in one room. My parents lived in Chicken Soup Factory, and I couldn't afford the transportation, so we moved in town. What I did for work, I walked to university, walked to come back. When I moved to medical school, I moved to the dorm [dormitory], and as soon as I arrived that night, the war resumed and the guys were running the missiles and rockets. My goal was to go back to the medical school. On my way to the medical school that evening, a lot of people had gone around the American Embassy when the rocket dropped. So many persons got wounded, and so I went to MSF [Médecins Sans Frontières], Doctors Without Borders, and said, "I'm just a starting medical student, can I help you guys?" And the surgeon was there. She didn't had a surgical assistant. She said, "I need a surgical assistant, you will have to learn—have to learn very fast." [laughs] So from June of 2013 until September of 2014, I was assisting as a surgical assistant.

Q: Do you have any vivid memories from that period?

Fallah: There was, there was. The memory of amputating a leg. The memory of—the hospital, it still exists, it was a makeshift building. The headquarters of MSF was converted to an emergency frontline hospital, so we were right on the front lines. When bullets would fly, we would go down to the basement. [unclear] We're doing a C-section [caesarian section] in the midst of the surge of the rockets. The bullets flew so much, we put the woman [unclear] drop her on the floor and we escaped for our lives. So the memory is the death and everything, the wounded, the coming. It was a close experience, but it was a good experience for me that changed my perspective on what I want to do with my life. Working with the Doctors Without Borders doctors and humanitarian aid, I knew this is what I want to do with my life. It was a close—seeing what human beings do under stress, [unclear]. That prepared my whole life. I knew I wanted to do something for humanity, but that was something that really crystalized it because I saw those great doctors undergo danger and still do it daily, courageously. I could tell it too easily, but no time. What I saw the guys do, they had to risk their lives.

Q: Thank you for describing. And so you went to the United States. What did you do? You got a master's in public health, is that—

Fallah: Before master's, the last part. I did a first master's at Kent State University in measurement and evaluation, but I still wanted to do some medicine. So my thesis was on

looking at—I did a systematic review on quinine as a drug that could replace chloroquine-resistant malaria. I went to the University of Kentucky after Kent State. I got admitted in the medical program to do a PhD in immunology and microbiology, and I did research on *Streptococcus* pneumonia. Then, as I was finishing my doctorate, I was thinking about what I wanted to do but I always knew I wanted to come back to Africa. As a busy scientist, I wondered what would be my place, so I thought I should go back and do global health. So I went to Harvard [University] and did global health with emphasis in infectious disease epidemiology.

Q: Was there like, one area of infectious disease epidemiology that really got you focused?

Fallah: That was interesting. We did lots of diseases, but my own project was—Professor [Richard] Cash taught the course. We did some academics, but emphasis too was on real life. I was put in the dengue group, I was part of the dengue group, and there was a dengue—so he [unclear] to do real life. The way he simulated the conditions, there was a dengue outbreak between Pakistan and India, and I was on the go-team that went to control the outbreak of dengue. But at the same time, in the midst of the political struggle [unclear]. So you had to live it and go in, and you relive the situation, what would you do as a go-in group? There is a big dengue, people are dying, they are in the street. I didn't even know what [unclear] to prepare me for what I would see. Actually, he would create a stress scenario for us. My friends, other guys did Ebola, but I was doing dengue. I was part of the dengue team from WHO [World Health Organization]. I was put into the

country to control the vector, eliminate it, sent in, treat the sick. That's what he led us to do. [laughs] Little did I know that I would come and live the real experience. So I already knew about Ebola and most viral hemorrhagic fevers. We did it systematically and we developed outbreaks. It was a real—it was called Social, Political, and Economic Dimensions of Infectious Disease in Developing Countries. That was the course. Political, Economic, and Social Dimensions of Infectious Disease in Developing Countries. That's what the course was called.

Q: What was the professor's name? I forget.

Fallah: Dr. Richard Cash. Very famous for co-discovering oral rehydration salt. He is the co-discoverer of ORS, yes. He was the professor of that course.

Q: What year did you return to Liberia?

Fallah: 2013, January.

Q: And what did you do?

Fallah: [laughs] I wasn't thinking of coming back. I wanted to work for the World Bank. I had gone to the World Bank, had done an interview, and was waiting for the result. It was taking long, and then I had to do some project with Mass [Massachusetts] General Hospital. It was a mental health group project and they had me doing transcription and

analyzing data. Someone sort of picked up my skills, and said, "Can you send your my CV [curriculum vitae]?" And then I remember [my boss at the time saying, "We are sitting on a pile of gold."] The next thing, I got a call from Indiana University that there was a project. They wanted to develop public health capacity in Liberia, but they wanted someone like me because I was unique in the way that I was from Liberia but I had an American education. So they thought I could bridge the two in terms of efficiency, effectiveness, managing projects. That's why I came back. For the first three months, consultancy. I ended up staying five months, and then I came back. When I landed at the airport, I had a strong feeling of nostalgia. I missed it. I didn't know how much I missed the country. And then I got overwhelmed by the needs. Then I didn't want to go back anymore. My ticket kept on changing all the time. They'd say, "Are you ready?" And I kept—[laughs] So I went back June 2013, came back July, and yes, was there from July till February. I developed a curriculum for the Ministry of Health [and Social Welfare], recruited some students to train to do public health. These were nurses. They were to graduate in March. And then Ebola started, and as they say, the rest is history.

Q: So you were doing that right before Ebola started. Can you tell me about those early few days or weeks for you?

Fallah: For Ebola?

Q: Yeah.

Fallah: It's like, most of all, I didn't know much about what was happening. I knew some fundamental of Ebola, I knew it was an epidemic disease, I had done it with the course. Those early days were days of lots of talks and people were confused. They didn't know the core—they didn't know the extent to which the issue was happening. In March, there were lots and lots of discussions here and there. Finally for us, I got involved. It became personal for me when the first case left Lofa [County], the lady that left Lofa ended up spending the night in Chicken Soup Factory. She ended up dying [unclear], but she spent the night in Chicken Soup Factory. I remember standing up in that meeting and saying to the guys, "Gentlemen, this Ebola has now left Lofa. It is now in Monrovia, gentlemen." I can remember one of the ministers saying to me, "Mosoka, here at this level, we discuss policy. If you want to do outbreak response, go to the county." And I packed my bag and I went to Montserrado County, and I said, okay, this is what I want to do. I called the CHO [note: county health officer], Dr. Amagashie. I said, "Dr. Amagashie, do you need someone like me?" He said, "Of course." I got involved and started organizing communities and training them. The [unclear], community health workers. This was March and April. It came up and went down. That was my job.

Q: What were those meetings with community members like?

Fallah: Initially, I was—[unclear]. I was doing trainings, I was creating awareness, training them. People were confused, there was disbelief. Few of them were coming forward. Yeah, those early meetings in March. We had trained a group, we had played Montserrado out, going there to train people in anticipation of a bigger outbreak. And all

of a sudden, March ended, and April, went back in April. [unclear] went to zero and there were really zero cases. Meanwhile, when the cases began in May, I had a friend of mine, we came together on the USAID [United States Agency for International Development] project. His name was John Berestecky. He and I were [unclear] the development in Guinea and in Sierra Leone. I can remember one day writing to John and saying to John, "John, the way I see the outbreak spiraling out of control in Guinea and Sierra Leone," I say, "it's a matter of days and it's going to be in Liberia. It's laid out perfectly [unclear] to when the case started." I wrote to John, I said, "John, by all indications, this Ebola is going to come back to Liberia." I said, "What I've seen in Guinea, and I'm following the outbreak in Sierra Leone in May. It's spiraling." I said, "It's going to be a matter of days." And it was like I was prophetic. A week later, it came, it hit. This time on June 28th, it hit, and I got a call that morning. "Mosoka, Ebola is back here."

Q: What happened then?

Fallah: We met the woman, the community leader, who first discovered the case. She said she saw an unusual death, someone died and they buried the person. She alerted the Ministry. One of my colleagues went, Adolphus [T.] Yeiah. He's not, he's—Montserrado County. He went and got, picked up the first two sick persons. Took them to ELWA [Eternal Love Winning Africa Hospital]—one of them died in the car—took them to ELWA, and the next morning it got confirmed that this is an Ebola case. But then we were not prepared because ELWA actually was not meant to be an ETU [Ebola treatment unit]. ELWA was meant to be the transit point for the JFK [John F. Kennedy Medical

Center] ETU, but the JFK ETU had just been torn down. After we dropped. So that [unclear] make the mistakes we made. Then we went back to discussions and discussions. I went back now to help them to organize a training, and then the ten public health students that I had trained, followed them, were asked to go to the epicenter in Lofa. So I sent the five public health students that I trained—the five of them were under my control—and we were trying to get a sense of Montserrado County, trying to understand the disease. Maybe at the time, there were four or five zones. Initially, the WHO took over contact tracing and was doing tracing based on districts, health districts. It became very obvious that you will not be able to manage Montserrado County by health district; we had to go one more unit beyond the health district, called the "zones." Basically, that's what was happening, and then I got a job with—of course, all of it—at this time, I was doing everything voluntary. My contract with USAID had stopped. I couldn't go back to the US and I was working voluntarily. In June, I got a job with Action contre la Faim. They hired me as—they had small money from SIDA [note: the Swedish International Development Cooperation Agency]. They said, Mosoka, can you help us—organize contact tracing for us? One thing I had done was quickly I went to work and I put all research materials I could find on Ebola: the Gulu outbreak, the Ugandan, I put them all and I started to read and read and read and read and [unclear] to read. This thing has happened before. There are things we can learn. So that's one other thing I started to do. And then I read on contact tracing, [unclear] through the critical nature of that. And then ACF [Action Contre la Faim] asked me, so basically I recruited people from all of the twenty-two zones, trained them in contact tracing, and I told them what we'll do is if a zone is not on, if it's not active, we provide education, awareness. Those who have

active zones—so I carried the two zones. At the time, we had cases in about nine to ten zones of the twenty-two zones. Then I did a first day of field visits with a friend of mine from MSF, we went in the field together, and I realized quickly that there was a lack of logistics, coordination wasn't there. I have the report I wrote, my own impression that we needed to build logistics, we needed to build a support system, communication, there had to be a way to get the contact tracing form from the center, administration, to enter the database. I [unclear] all of the challenges that way. So that's how my work began. Then I was with ACF. ACF was sort of supporting the Ministry of Health in contact tracing.

Q: You did so many trainings over those months. Was there anything you learned about coordinating these trainings, about doing them, that you can recall?

Fallah: Yes. Originally, all our training was PowerPoint presentation, review and review. People were forgetting, people were making mistakes. So a couple of things I learned—and I can remember, this is one of my friends from CDC, Susan Wang. Susan Wang was a friend of mine from CDC. Susan Wang and I were talking, and I told her one time, "Susan, I'm getting frustrated with all the training [unclear]." She said, "Mosoka, at this level, what this thing needs, it needs mentorship. It needs field-level, practical mentorship. You see them, you debrief, you brief them." So my training took a different turn and I realized it was critical. I would go in the field and I will see the mistakes and I will work with them on those mistakes. And that was much more effective than the other training we were doing in classrooms with PowerPoint. It's just different. It's a skill, it's an art, it's a finesse that someone has to grab. It can't be got in a classroom with lecture,

so we had to change the strategy. So I would go in the field with them, literally pick up their form and see the mistake. "Okay, this is a mistake. I'm not going to tear you apart, but what can we learn from the mistakes? Let's review this, A, B, C, D. If you do not see your contact, what do you do next? When you go to do contact tracing, why is it that you keep your head down and ask the person, 'Fever?' 'Yes, yes.' That's not the way to do it. You build the face contact, you build relationships, you build confidence. Most importantly, you look at the face because if the person is lying to you, their face will not lie to you. I had to do all kinds of physical training. Okay, so someone made a mistake: "I came and saw the baby's mom but I didn't see the baby." "Why?" "I didn't think about the baby." "Ah-ah, the baby is a contact, right?" So I had to go through letting them pick up this point, and it couldn't be done from the office. At one point in time I had two offices. I had one with AC [air conditioning], and I never sat in the offices, I was in the field. And I think that was a frustration.

I suspect two things. One, I got very frustrated with the meetings. There were meetings from nine to twelve. They would go for two hours, we would come back from one to four. Ebola was in-the-street fighting. Simple things like logistics. How do you get an ambulance fuel? The ambulance will park there and wait around 1:00, 2:00 pm before, for getting fuel. And they will go in the field [very late and just do a few hours of work before it gets very late and dark and they would stop working]. I said, "This does not require rocket science, gentlemen. We've got many private gas stations. Let's hire them." Those meetings are going, but in retrospect, many persons said to me actually, the reasons those meetings were being held were out of fear. People didn't want to go in the

field. They didn't want to say it to any of us. They had to find a general excuse. Some posed to me confidentially, "Mosoka, we are too afraid we're going to get infected and die." So I think most of the meetings were really held because of fear. The extreme I had, more than most of them was because I was in the field, honestly, I'm breaking my head so well. I learned it on the ground. I understood—there was a way—the minister and deputy would trust me is that they could call a case to me and I would tell the case, I would tell the source, I will tell where it went because I wasn't in the office. Then I read a book by Peter Piot and other guys who saw Ebola. I realized him and the guys from CDC at that first outbreak in Congo, they were in the field. They slept under terrible conditions. And I realized if I'm going to control it, if I'm going to do anything to make a change, I have to be there.

That was one. The other reason was that I'm sending these men into harm's way. I will be hypocritical if I send these men into harm's way and they don't see me being a leader. So I had to be there with them. Yes, it was being in the field and seeing it. That's when I realized that contact tracing was inadequate. I told them that contact tracing was a passive process. In contact tracing, you go there for [unclear], and then the investigator goes in and investigates, and then they investigate. The investigator does not tell the contact tracers. That's when I developed the active surveillance. I actually developed the concept of active surveillance, where we would recruit local community people during the crisis in West Point. There was an outbreak in West Point. We developed a concept of active surveillance where we have community who go from house to house to search. That was much more proactive than waiting for them to call you.

Q: That makes a lot of sense. How did it go?

Fallah: Again, it started by—something happened by accident, right? The week before West Point, I was with Nestor [note: Ndayimirije], WHO Respresentative (WR) person. He said, "Mosoka, how is West Point?" I said, "West Point is one of the zones, we have our supervisor covering West Point. We have no news of the Ebola outbreak." I remember him saying to me, "Please keep Ebola out of West Point, Mosoka. If Ebola enters West Point, this thing is over." A few weeks later, I called him and said, "Nestor?" He said, "Yeah?" I said, "The worst thing has happened." He said, "What do you mean?" I said, "Ebola has entered West Point." He said to me, "You've got to get the leaders because there have been long secret burials going on since July." The first time we got to know—early in July, they had a case. I think West Point had two sources—Ebola came through two major ways in West Point. One, they came through the Kissi people, and they used to go to Sierra Leone to buy and sell opium weeds. She got sick and brought it into West Point. In fact, it was the case that I discovered when they called me. The second way it came was there was a group of sisters, whose sister died from Ebola in Virginia, [Liberia], outside Montserrado. They went to the burial and came back. Ebola entered West Point these two ways. But that was sort of the tip of the iceberg. It was going slowly, there were secret burials going on, and then it exploded. There was this seventy-eight-year-old Kissi governor who got tired of doing secret burials, but they had made an agreement that if anyone told the authorities, they would jump on you, they would beat you. So when she called the burial team, she literally had to escape for her

life. It was [unclear] I got invited. I got on the scene, and I realized the Ebola treatment unit was shut out, there was no space. So I called Minister [Chea] Sanford Wesseh. I said, "Minister Wesseh, there is a need for us to open a transit center where a dozen [of the contacts can go]. So I had the transit center started. You know the story about how it got looted, and then it got quarantined, and the government called me in because I had met the leaders initially. Actually, the first meeting with the leaders was at a secret location. I had to take them out and take them to a secret location up on Benson Street in the dark room so we could talk. They were afraid for their lives. That's when they revealed to me the entire thing that was going on at West Point. Then we had a second meeting at the Montserrado County office together with WHO. So they knew me. So when it exploded, I had to be the conduit between the government and the people at West Point. The first time I went, it was like a warzone. Having come from the civil war, what I saw was so reminiscent of a warzone. The military chaplains were there. Every time they would stop me, I would have to call the minister of information, Minister Lewis [G.] Brown [II], the minister of information. He would tell the military, "Let Dr. Fallah go." So I would go in and I would get the local leaders and I would bring them all to GSA [General Services Agency], and then we would have negotiations. One of those negotiations was, how can a local boy at West Point help us ensure a commitment that they wanted to end Ebola? It was in one of those meetings that we agreed that one of the things that needed to happen was, something had started in Lofa they called, "case detective." We thought we could bring it to West Point. We called them "active case finders." That's how we went in the school building, the current minister of health and myself. We went in the building, we chose them. There were seven zones. We put fifteen persons in each zone. They would go

from house to house, check for the sick and the dead, and they would text it to me in the evening, and I would send an email to the minister, she would send it to the president. Then the cases began to drop, and one day the minister called me, "Mosoka, can you give me a justification why I should convince the president—the president wants me to give her a justification to de-quarantine West Point. And I had to write a letter to tell the minister that West Point should be de-quarantined. The people have joined us, they are committed, they have restored the site, there is no need to quarantine West Point, and I'm afraid that if West Point is going to be quarantined, it's an enclave, it will explode into violence. She sent that to the president. The president said we're de-quarantining West Point. The president and Peter [J.] Graaff, me, the minister of health, had to go into West Point and negotiate. By then the active surveillance and the contact tracers were linking the two. The model had worked so effectively in West Point that the current minister, Dr. [Bernice] Dahn, called me up and said, "Mosoka, can you replicate this thing in trouble spots?" That's how we left from West Point. We went to Caldwell, we went to New Kru Town. It worked so successfully. Then [unclear] asking, "Mosoka, can you guys repeat this? And so that's how we started repeating it in hotspots. We would get the contact tracers and the active surveillance to work together.

Q: Could you tell me a little bit about these contact tracers you were working with who were texting you all of this information late at night? What kind of people were they? Like, what were their attitudes about the whole thing? Were they afraid?

Fallah: They were young people. They weren't always, but the majority of the contract tracers, they were young people, idealistic, that we recruited. They were from the local communities. You had a few persons that were reckless, but the bulk of them were really committed in what they did.

Q: What would a reckless person do?

Fallah: Some of them would cheat and lie, and I caught many of them and I would dismiss them on the scene. Some of them were lying. They would be sitting at home and say they have gone and seen the person. I would go behind them and say, "Where are you?" I said, "Come and meet me on the spot." They would come [unclear], so I said, "Thank you, you can go. You don't need this job." But there were the ones who were doing it because they felt that their country was at stake. It was an honor to work with them.

Q: Do you remember about when it would have been that you expanded the West Point contact tracing, active case finding, to New Kru Town and—

Fallah: It was August 29th. August, we established a system; by the 22nd, 23rd, we established it in West Point. By September 4th, we were going to Caldwell and New Kru Town. We had built political will with the representative. We would have a mass meeting, and I had gone with the minister of health. She would speak and she would call me to come and explain the process. Then I would meet the local leader, tell them it's

simple, we'd have a town-hall meeting, find out what is going on. Your proposal [unclear] solution. We do basic training for you and give [unclear] notes. You go from house to house and do four things: check on visitors, the sick, the dead, and give messages. Neighbors giving neighbors messages. No more top-down messages.

Once we found the sick, their goal now was to inform the contact tracers. These were—imagine a warzone where these are the troops that go in front. Their job is just that. They have the numbers, they find the sick and then they [unclear] the response. The contact tracers come in and do the follow-up for twenty-one days. We had to [unclear] them like that. So the point in time came where we took the contact tracers, the case investigators, and the active case finders and made it one team, we called it "case detection." And I became the head. And the reason why I had to do that coordination was that sometimes they would call a case. The case investigator would go on the scene, they would investigate, and they would write an address or phone number. Not a US, like, I was living once on 179 Leader Avenue when I was in the US at the University of Kentucky. Someone could get me into 179. But the only address would be "behind the palm tree after the three bridges." Now, if the case investigator left, then they will give the case investigation form from which we developed the long list and the contact tracing form. But if the guy decided he doesn't want to be found and you call him on his phone and he doesn't answer, where do you go find the three bridges behind the palm tree? We had to—literally, the system we developed was the case investigator, the contact tracer sometimes would go at the same time so they physically know the house. There were no longer waiting for the information to come first to the Ministry of Health to enter the

database and then send it back to line listing. We had to make it get integrated because the reality was that these people were all scattered. They were not living in one place. So by doing that, basically, we would not allow the error rate to be. There was a point in time when we became so good, by November, December, we became so good, we could account for one hundred percent of all contacts being on the contact list coming from the boarding town where we were only able to account for twenty-five percent of contacts. It was a slow, painfully growing process to come from a point down twenty-five percent of all the contacts have been contacted, [unclear] seventy-five percent started a new outbreak, to the point when we went to the St. Paul Bridge outbreak and the resurgence, we could account for one hundred percent. It was a long, painful, learning experience every step of the way.

Q: So I guess we've gotten through about November, December of 2014. Can you take it from there with your involvement in the response?

Fallah: Yes. We got involved with developing Montserrado. There was a national IMS [incident management system]. Montserrado became too complicated to manage, so we had the national IMS respond to the rest of the counties, and Montserrado County became our focus because of the complexity of Montserrado became—the Montserrado IMS, for a couple of reasons, and we clearly saw the behavior epidemic. Whenever Montserrado got hit with Ebola, what it tended to do, because people are mobile from Montserrado, they concentrated the outbreak and disappeared across the counties. So we had to narrowly focus on Montserrado. By October, November, we had contact tracing meeting.

Hans Rosling had come. There was this girl from CDC, I forgot her name. Literally, we reduced the whole of Montserrado County into maps. I can remember—I will never forget Hans. Oh, my God. He came to me one day with his pen on my head, "You have this entire response here. I don't need to here, I need it on the maps." [laughter] "That what you have. The entire Montserrado response is in your head, I don't need it in your head, I need it on the maps." He said, "You know what, the enemy [unclear] is pens and maps." I came and they had a whole Montserrado, filled the entire room with maps. And so this girl from CDC, I forget her name, literally we broke down every case by suspect [unclear] different colored pen. We had a red for confirm, so we literally were seeing it real time. What I did for her is I would go no way, and we will go in there and we circled it and then crossed it off. That's what I was doing by October, November. And we developed an algorithm for who was a suspect contact, so we reduced the contacts. Went for quality, not quantity. By August, September, we were going for quality of contacts. But we'd go back we'd [unclear] on the contact list, we wanted quality. Put our energy, we expanded it. I remember starting the contact tracing from twenty-two supervisors, two monitoring teams, to thirty-six supervisors, thirteen monitors. We expanded the team. So we had a force and we could go in the gates. And the active case manager came from at first two hundred to one thousand to 5,600. You have men on the ground and you can imagine trying to coordinate them so that this girl was talking to [unclear]. She had a friend, Don, he asked me, "Mosoka, how do you manage working two forms in your hand and trying to coordinate the monitor, the system?" But I hate to take the credit alone. I had a lot of adolescent, young men that were working. They were the zonal coordinators, they were the leaders. Every time I talk about them, they were so amazing,

those young men. So I can't take the glory. I had a lot of young men who believed the things that we believed. Every day, they were working. I mean, they would not sleep all night. So we had it under control. We had a system now, we had a command center in the Ministry of Health, a whole room, we could enter the data, we developed a strong data unit, and the data was coming real time, we could map them on the wall with pins. The better we could coordinate it, the better—you could see there was a correlation. The better it became coordinated, Ebola couldn't stand up. Ebola started to fly away because we [unclear] more coordinator, move through a little bit of force, contact tracers are getting more experienced, we had hands-on supervision. So, yeah, that was it. Then, we had everything going downhill like this. One last time in December, we had the St. Paul Bridge outbreak. That was an outbreak that would've broken our back and turned us around. It started by one woman who traveled, came and got sick. She was taken to the Island [unclear] treatment unit. People thought because Ebola was an interesting disease. She and her husband were taking baths from the septic tank, and the septic tank broke and it went in. So people thought it was because of the feces and stuff, and Ebola just slipped through it. [unclear] When she died, they did a ceremony with her, when she was sick they cared for her, and all these people became contacts [unclear] didn't pick-up. [unclear] People began to die. We went to St. Paul Bridge, it was a tough, tough experience. I can remember going to the St. Paul region, these young contact tracers asking me, "Dr. Fallah, can you buy us one or two bags of rice?" I said, "Why should I buy you a bag of rice?" They said, "Dr. Fallah, you don't understand. Since the outbreak we don't go, we come at eight and we leave at eleven o'clock." [pause] These are young

children, right, [unclear]. They said, "We want the rice so we can cook. We can't go home, we just want to cook and eat and stay."

Q: That's incredible.

Fallah: It's that kind of determined people we were working with.

Q: When you think about those youth who were working for you, are there a couple individuals or one specific individual who floats to the top of your mind who you can describe for me?

Fallah: The girl that was in the group in St. Paul Bridge. Her name is Dorissa. Actually, now, she's a surveillance officer. I recommended her. Dorissa is a surveillance officer. She's now with the Montserrado County team as a surveillance officer. The girl who asked me for the rice, yeah. She's a surveillance officer right now. One of them, after he graduated, after that, the money we gave him, I had to pay his school fees. He's completed college, and right now he's working at LRA [note: Liberia Revenue Authority]. The thing he taught me was that he has so much potential. These young people are the ones who were our leadership. The second thing he taught me was there is so much potential that if they could change Ebola, they could change all of the things in this country. What these young people wanted was leadership, someone that could lead from the front. That's what they wanted, someone that would be trustworthy that they could trust, that was like them. Maybe there's some way I provided that. I don't know if I

did that, but they trusted me. They trusted me, they were willing to risk their lives. Many of them, even before I came, one of them called me and said, can I visit your home? I just wanted to say, my house is open to them. I wish I can take some of their energy and transfer it into something else to address the issues we have. These young people stood up. I can show you [unclear]. But everywhere, if you want to talk to some of them.

Q: I would love to. It sounds like it would be a privilege.

Fallah: These guys are the hope for this country. They took the risk, they were determined. One of them, I think—one of them is doing mining now. He's there right now. [laughter] Small, very smallish, unassuming, but extremely brilliant. He was in Caldwell. This young man understood the outbreak like he was an epidemiologist. You could call at 2:00 am, and you just got a name for him. He would tell you the source, where it started from, without even looking at a book. [unclear] Smallish, extremely smart. We had them like that in many areas. Very determined young people. Some have managed to find jobs. The guy who led in St. Paul Bridge, Emanuel Lasana, is an OIC [Officer in Charge] for Redemption Hospital. He's an older guy. He was a nurse. I can describe him, yeah. He's still around. I still try to keep in contact with many of them. Sometimes they come to me and say, "Doc, we want you to visit us." I say, "Gentlemen," my response—[unclear]. There are four hundred twelve communities, you guys. Every time you feel bad, I'm no more seeing—[unclear]. I see when you are two, three communities, I could visit. It's four hundred twelve communities. They all want to see me. [laughs] But now with my responsibilities, I'm too busy with the national. They all

say, “I know you’re busy, but on weekends come and visit us.” They think I’m their leader but I think they taught me more. They taught me [unclear], young people idealistic. And then the leaders. But I think the core of what we did was the young people. [unclear] I would have to admit, eventually, the elders got involved, teachers, but the core of them were these young guys.

Q: Thank you for describing them. I would love to speak with some of them if it’s possible. Can you describe the end stages of the Ebola response?

Fallah: The endgame?

Q: Yeah.

Fallah: I have a reason for calling it the endgame. [laughs] The endgame strategy was very interesting. I did a presentation and I said, “You guys”—everybody at the EOC. My friend [Frank J.] Mahoney. “Gentlemen, in this endgame, if it means that we spend ten thousand US dollars on every single case we find, it’s far better than the ten million that will cause us to have a new outbreak.” What I meant was if we found a home, we took them rice, we took them food, we provided them everything they needed. I said, “Gentlemen, it is the endgame.” The word we used, instead of trying to avoid a political word, “quarantine,” we called it “precautionary observation.” That was the word we used. That was the key for the endgame, precautionary observation. Basically, this was a negotiated quarantine. It was a negotiated quarantine. You can have a case [unclear], we

want to quarantine you because of the good of this country. But in return, what do you want? I want a generator, I want a television set, I want rice, I want to listen to radio. You have it. We will move it there and give it to you. That was the critical endgame. Yeah. The quarantine to our hospital, but no one felt it. We moved food in, we gave them Cokes, we gave them television, whatever it took us to give. That was the endgame. [unclear] You know Frank—I don't know if you heard the story about, "we are the VIPs [very important people]." Have you heard the story of the VIPs?

Q: I've heard the story, but could you tell it to me again?

Fallah: The last, St. Paul Bridge outbreak, right? I told tell you about the husband and wife who fell in the well. His wife died, and he started to develop symptoms. But apparently he was having some hallucinations, and being an African guy, he thought that he was seeing his wife's ghost. So he took a car and went to the Red Light—it's a rough district—to go and see his wife's sister to explain the situation to the wife's sister. On his way going, he fell down, he fell sick, and these local drug addicts, for once in their lives they did a good thing. They held him up and took [unclear] he was having Ebola, to his sister-in-law's house, and they brought him in the car and took him back to St. Paul's Bridge. One of the drug addicts became sick but he still went to the gang and decided to get high. He and his friend had an argument. He took a glass bottle and gashed his friend. The rest of the gang said, we've got to penalize him. They lie him down, took a sharp razor blade, and gashed him in the back, not knowing that this guy is an Ebola guy. The guy goes to the hospital where they suture the wound, and the health workers died.

[unclear] the guy died in an old building. But as far as we're concerned, he has scars on his back, he's dead, it's got to be he was stealing from someone, mob justice. So the police came on him, everyone came on him. I'm in Margibi investigating a case. I went to Margibi, and I got a call. In the night, we realize it is the gangsters. [laughs] Talking about the endgame, the endgame was more proactive with regard to GSA. As to Mary Broh, I said, "Mary Broh, we need food." I said, "We're going to do field-level work. We're going to take the food to the field. We're going to use it," I said, "to bridge the confidence. So we will meet you. As part of this, you will get a bag of rice." We kept on doing it. One of the local community leaders, talking about active—so the active case [unclear] mix of community leaders because one of them had to give us entry into the community. So I went to the gang, got to the gangs, went to the house and saw the house. It's scary, entering a gang—a ghetto. So we met the gang. The head of the gangsters, her name is Big Mama. She's huge and big. As we were speaking, she was high, literally [unclear] and she was stark naked, squat before me and urinated. I said, I'm in it now. [laughs] I said, "We're looking for this kid." They said, "No, we don't know anything." But one trick I learned when I was doing Ebola was the eyes of people tell you those that are hostile and those that will help you. Those that are afraid, those that want to talk. The thing I tended to do was there was a [unclear] effect. Some people want to talk, but not when others are around. So I took two aside, I said, "Listen." In fact, we had a meeting the day before. I said, "There will be no arrests, there will be no police, don't be afraid." Fred also said that. Fred said, "No police, no arrests." The goal we want to do, these guys [unclear] is now a business. I will go to find these guys, all of them, isolate them and notify them that this is no arrest. So we spoke to the chief of police, they agreed that there

will be no arrest. So I said, "There will be no arrest [unclear]." All of a sudden, we have these little tents, that's where the guys [unclear]. There were like, twenty guys. Yes, I was part of that, this is what really happened. "Okay, guys, as a good will of our friendship, you guys will have ten bags of rice, oil, and beans. We're going to come back tomorrow to negotiate, okay?" In the night, they called me, they gave me the list. [unclear] Frank. Basically, those are the guys who wanted to build a tent in the community for them to be, because these guys were homeless. Our fear was if they went somewhere and become symptomatic, it will be a problem. We managed to convince them to go to the ETU, one of the old, abandoned ETUs. But they agreed they wanted [unclear] their families, they wanted ten dollars per day. Yes, guys. So we put them in two buses and we bused them to the ETU and gave them the ETU. The other thing, I don't know if you heard, but these guys were drug addicts. [unclear] We had to get them what they needed to keep them— Those were the endgames. Those were the ones that were the last cases in the endgame for us.

Q: I had the privilege of talking with Dr. Alex [N.] Gasasira this morning, and he was describing these men, and he said that after you guys had worked with them, they told you, "What can we do to find a better life?"

Fallah: Yes. Soka Moses was the ETU director. Soka and I would work with them. The eve of their departure, we asked them if they wanted to have haircuts. Soka and I, we paid. We had a barber go give them haircuts. They were looking so nice, and they asked us. "Gentlemen, what do you want to be after here?" "Someday I want to go back to

college." "I want to be a [unclear]." They wanted to change their lives. There's a guy, a friend, another, called [Stewart Coulter US-CDC, and Stephen from Nigeria-CDC]. We went there, we bought them clothes, t-shirts. The guys wanted to leave. After we kept them for the days, they wanted to leave to start a better life. We met a group that could detox them for nine months, or detox them and also give them treatment for nine months. The budget was under four thousand dollars. Couldn't get it from anywhere. The goal, wanted to take them from there back to some kind of center where they would go to detox, and then they would go through special skill training, and they were going to use them to reach other gangsters. We couldn't get the money to support them, to support this project. So the day we left, we took a car. It was a solemn moment. They came that morning, I have some photos. Call Stewart. If you speak to—call Stewart. Desmond [Williams] wasn't [unclear] his name was Igwi. I-G-W-I. Igwi Stewart. Desmond will tell, Desmond is a good friend. Stewart and us, we would put them in a pickup, we got some clothes for them, and as we took them back home, the joy from their parents, they really would welcome them back from the dead. We took them home, we gave them rice and clothes and they went back home. Sadly enough, they went back to drugs. One of our last days, I can remember Frank saying, "How many more days?" Five. He said, "Okay, [unclear]. We're almost there, Mosoka." One day, Frank came to me at seven o'clock in the evening. "Mosoka, do you know, we have to phone Time Bomb," I said, "Yes." "We have to take food to Time Bomb. "Frank, it is seven, we are going to the ghetto." "We make a promise, we've got to keep the promise." I got in the car, got rice. He, me, and Stewart. [laughs] Got lost in the bush. We got there about nine, no light. Frank has a bag of rice on his shoulder, I have a bag of beans on my shoulder, Stewart has one, and the

guy put a light to us to see us, this is an indicator. [unclear] But, you know, even those guys in the ghetto, if someone cares for them, they respond. They shined the light on us, they came and helped us to take the rice, and we gave them the rice, and me and Frank said to them, "Hey guys, this is a bargain. We've met our part of the bargain, we brought you rice, you have a young baby, we gave you milk for your baby. But what you do for us is stay home, eh? If someone gets sick, you call us, allow the contact tracer. Can you do that?" "Yes." Those were the endgames. Narrowly putting resources where they need to be. They don't feel cheated, they don't feel that we don't respect them for who they are. That was the endgame. [unclear] main phase of the response. That's what we're doing now.

Q: I want to be respectful of your time and I know that you scheduled something for seven thirty, it's seven eighteen now.

Fallah: Let's go ahead, I will wait until he comes.

Q: Okay. Can you tell me what has happened since then with your life?

Fallah: Oh, okay. [laughs] It ended basically on May 5th, May 9th, Liberia was declared Ebola-free. I decided my work with Ebola probably was over. Somewhere in between there, a friend met me one time in August and said, "Mosoka, there is a team that wants to come for vaccines and I wanted to take them on a tour." NIH [National Institutes of Health] sent somebody, Cliff [H. Clifford] Lane. We went to West Point to do

perceptions about vaccine. The vaccine team comes. Eventually, I got recruited by NIH to work for preventive vaccine. So I'm going on about my business, I think Ebola is over, and I'm having lunch on June 28th, and my phone goes beep beep. A new Ebola case. I said, this can't be true. And then Tolbert [G. Nyenswah] called me and said, "Mosoka, where are you?" He said, "There is a new resurgence of Ebola case. CDC is on the team. As a senior epidemiologist, I want you to go with them. I said, "I was just about to have lunch. Can I have my lunch? I can come." He said, "Have your lunch because this is going to be maybe your best lunch for the next couple of weeks." So that's how the Needowein outbreak started. I wrote my boss at NIH, Cliff. I said, "Cliff, an outbreak has started, can you give me—?" He said, "Mosoka, our job is to support you to help your country." So that has been my job. I work with the NIH, the project to support the response, and then one day Tolbert called me and said, "They want us to start the National Public Health Institute. I want you to take the lead to help form it." So that was my job, working with PREVAIL [Partnership for Research on Ebola Virus in Liberia], the survivors study. And then working to start the whole—from a small, simple idea to a few weeks ago when the president signed it into law. So that has been the survivors study, and then taking the Public Health Institute and building it into something, to a dream come true. That has been my work. Then, international travel started. I got called to serve with international partners, the global health partner from London, Harvard, I got called, and I got to go to conferences to share my experiences. That has been my life since Ebola up to present. All of the three resurgences, I was called upon to be the lead from the management system to those counties. So the one in Margibi and the two in Montserrado, I was the liaison between the central ministry and incident management

system in each county. [unclear] I will do my normal job. Whenever there is an outbreak, we shift back into different gears, hit the response, and go back to our normal job. That has been my present job.

Q: Thank you. I do have one question still. I read in a *New York Times* profile of you, which I thought was really well written, that you were starting a maternal health clinic right before Ebola. I also, when I was in Gbarnga over the weekend, heard you give a very impassioned, moving speech about the importance of stopping maternal mortality in childbirth. Can you tell me a little bit about what maternal health means to you?

Fallah: As a young medical student, when I got involved with Doctors Without Borders, and then when I left and went to Redemption Hospital, I was in the OB [obstetrics] ward and saw babies dying, sometimes women dying. It affected me greatly. Actually, when I went to Harvard, my concentration was to do maternal and child health. When I built the NGO, it was maternal and child. When I came to Liberia under the USAID project, basically the primary goal of the program was to use health records to reduce maternal mortality. My whole goal was maternal mortality there. I became passionate about it. The issue of intergenerational poverty, the effect it has on girls, losing their mom. For me, it's a passion thing. I built it with that concept of reducing it. When I came to Liberia to work on the project, when I rolled out—my first exposure to the power of communities was when I rolled out, the students, we went in communities, we lived in communities to increase facility [unclear] project. So I have been very passionate on the issue that [unclear] some women who died during childbirth. Not only that, but the long-term

consequence of losing your mother. The issue of poverty, the grinding poverty, the children have less—and I have a mom, I know what it looks like to have your mom around. It's the center of love, the center of everything. And all of a sudden you lose that person. That's what it means to me. To lose an innocent child who hasn't begun a life, who hasn't even had an opportunity for anything. For me, it goes beyond that. It's the biggest threat. Every time I read the weekly surveillance report and I see the data, I say, this isn't data. Someone lost their mother today. This family is shattered for life. You know, those children are scarred for life. To grow without a mother. So it means a lot to me. And that's why the project started. We have grown a lot. We have had [unclear] maybe a thousand deliveries, we have high antenatal care. I built a model where GCHV tracked every pregnant woman to make sure they do that [unclear, sounds like "ENC"] visit. Before Ebola took my time, I told my [unclear] I'm going to do maternal. Maternal and child health. When Ebola came, I went. But that is the core of me. Every time you get into public health, you think about populations. You ask me the core of the thing I want to do. When I started an NGO—today you ask me. My NGO, the vision is to spread across Liberia and the three affected countries. If you ask me the one good thing I want to do, it's to be able to attack maternal mortality [unclear]. It can be prevented. If anyone can't do it, then we can raise our hands. But these are the things we can prevent. That's what I'm so passionate about. And our country has not done a—I pray that I will do a good job. We need to do a good job. We must do a good job.

Q: Was there anything else that you wanted to say before I end the recording?

Fallah: Ebola challenged our being. But it also tested our resilience as a people. As bad and horrible as Ebola was, there were too many lessons as a people we need to learn. We need to understand the power of culture and people and choices, the power of grassroots people to take over their destiny. And we saw it happen in October when the community became aware, when they took over. Long before the big support people came, I saw neighbors providing for their neighbors. Psychosocial—[unclear] had it. It's something we need to think about as a people. The power of the grassroots. The power of resilience. And the need to always build a—and that people can do good in this country. That's what I consider it. We need to make use of it. That's why I like what you are doing, and in Liberia, we need to do the same thing. There are too many important lessons—the bad, the good, and ugly—that we can pick up to make our future better. And it's what I want to be part of. Thank you.

Q: Thank you so much, Dr. Fallah. This has been excellent.

Fallah: Thank you so much.

END