

CDC Ebola Response Oral History Project

The Reminiscences of

Daniel W. Martin

David J. Sencer CDC Museum

Centers for Disease Control and Prevention

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Daniel W. Martin

Interviewed by Samuel Robson
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Interview 2 of 3

CDC Ebola Response Oral History Project

Q: This is Sam Robson, here again today with Dan Martin. Today is December 9th, 2016, and we're back in the audio recording studio at CDC's [United States Centers for Disease Control and Prevention] Roybal Campus in Atlanta, Georgia. This is part of our CDC Ebola Response Oral History Project for the David J. Sencer CDC Museum, our second interview. In our first interview, we discussed in depth Dan's first deployment to Sierra Leone, and we had just left off, Dan talking about how he was really welcomed back to Atlanta with open arms, although others did experience some stigma. Dan, if we can just take it from there and start talking about you keeping in touch with the Ebola response and thinking about going a second time.

Martin: As I alluded already and as I know many other people that you've interviewed have already said, the bonds that were formed between us as responders during that time were—I don't have a military background, I've never served in combat, but from what I have spoken with colleagues who have, I get it at least a little more than I did now. There was really a true camaraderie, a fraternity of brothers in arms, and I use the term completely non-gendered because I got lots of little sisters from Ebola. The closeness, the familial closeness, that was established in working together in that range is really intense. I can say now that—what, we're talking a year and a half on—remains quite powerful.

Clearly, I remained very much in touch with my friends and colleagues who were still in Sierra Leone and with those who had returned, and tried to keep tabs on what was going on, how the fight was going.

I didn't know at the time, because the epi [epidemic] curve was still sloping upward as nearly as we could tell when I left—I left on the 15th of November, and as it turns out the 8th of November was the single day that had the most lab [laboratory]-diagnosed cases in Sierra Leone. We had one hundred eleven cases that day. Although I didn't know it at the time, I was present for the peak of Ebola in Sierra Leone. But coming home in November, December, there wasn't time for all the analysis to happen for us to see that things were starting to slope downward. I was very much, very personally interested in the continuing battle. I was obviously celebrating time home with my family. Although my wife had, and continues to say, that while she was worried, she really overall was at peace in my deployment. She did not find herself ever paralyzed by fear. Certainly worried, certainly concerned—we're a religious family, certainly praying for me—but not the kind of fear that caused her any real grief or paralysis. That said, it was a particularly celebratory time for our family for me to be home, and made for a pretty awesome Christmas. Of course, it made for all kinds of extra fun for Christmas. My son got me a tie. I'm one of these old-school guys who still actually wears a coat and tie with some frequency, and I got this wonderful tie which has got the pink electron micrograms of Ebola on a black background. It actually has sort of a paisley look to it, so it works pretty well as a tie to go on a black shirt. It's this pinkish, mauvish, purplish, really loud

color, but I'm known for loud ties so that's not a problem. They gave me an Ebola plush toy which is still sitting on my monitor in my cubicle now.

Q: Is it the little string of Ebola?

Martin: Yes. It's the little curlicue—this thing is just a little too close to my face. Let me back it off a little. [laughter] It's the little curlicue virus. It's based on one of the more famous micrograms. It's a light brown plush toy with two little beady eyes. It's a pretty funny little thing. But yeah, that plush toy lives on my monitor in my cubicle. One of the cool things, my daughter is very much of a crafts, artistic person, geek person, literary person. She did her major in English lit [literature] and applied linguistics in college, and she gave me this wonderful Christmas card that she had hand made. She did a cutout design. It's a silhouette in blue paper with a black background behind it that I recognized instantly, which proves that the apple doesn't fall far from the tree. We're geeks of a kind. She started with an image of a famous statue of St. George slaying the dragon, so a knight on horseback with a lance heading down, but she had substituted that form of the curlicue of the Ebola virus for the dragon, and it made a very cool Christmas card which I kept with me on my desk in the EOC [Emergency Operations Center] until somebody cleaned house one day and it disappeared. Fortunately, I have a photograph of it, but the original is lost to the janitors of the EOC.

Q: Does that make you St. George?

Martin: Well, not really, but the allusion was there. [laughter] Ever since she was a baby, my daughter and I have been very close, and it was her way of expressing her fondness for Daddy and her pride in what Daddy did. So that was pretty cool.

Anyway, it was a very celebratory time, marred somewhat in my own emotions by the time I alluded to in our last interview where I learned that both a driver and also a contact tracer with whom I had been working closely in Tonkolili [District] had themselves become ill with Ebola. Augustine [B. Kargbo], the contact tracer, in particular was quite gravely ill, and almost didn't make it, but did live. That reminder that my peeps [people] are still suffering was very much a thing that was present in my mind. As it was clear that the epidemic was continuing, my desire to return and have another go at it did continue to remain strong. I don't recall if I had alluded in our previous interview to the fact that my branch chief was not particularly receptive to deployers in the first place. It's the "no good deed goes unpunished," "you're too important to lose" kind of crap going on there. I don't know that I would have gotten the second deployment except that a new team lead, who was then my direct supervisor, took it upon herself to advocate on my behalf. I suspect had I gone straight to the chief, I would've gotten denied. But my team lead did advocate on my behalf, and I was approved for a second deployment and sent back longer this time. This was going to be a full almost six weeks. I was sent back for what turned out to be the full calendar month of June. I was in Sierra Leone from the 31st of May to the 1st of July. I flew home on the 1st of July and arrived in Atlanta in time for the evening of my wife's birthday on July second. So, I was approved to return.

Q: The 31st of May to the 31st of June, is that right?

Martin: June doesn't have thirty-one days.

Q: To the 30th of June.

Martin: To the 1st of July.

Q: To the first of July! [laughs] Good call, good call on that.

Martin: No, we didn't have a thirty-one-day June, even in '15. [laughter] I was able to work that one a little to my advantage as well because my daughter took the winter-to-spring term of her time at Georgia State [University]—this was her junior year at Georgia State—and studied abroad in Paris. Actually, the University of Versailles at Saint-Quentin, so northeast, I believe, of Paris. I was able to work things so that en route to Sierra Leone, I took a couple days' leave, plus there was a holiday in there and a weekend. I managed to spend a week with my daughter in Paris before putting her on the plane to come home, taking the train to Brussels and bopping on down to Sierra Leone. Great way to start it off with my just-twenty-one-year-old daughter at the time—she had just had her birthday—bopping around Paris having fun with the daddy/daughter trip. And then off I went to my second deployment.

Q: What's your daughter's name?

Martin: Jaclyn.

Q: For this deployment, what did you come in thinking about what your role was going to be?

Martin: As with the first deployment, I didn't have any details. What I did have by then was the knowledge that the people who were running the response in Freetown knew me already. In fact, John [T.] Redd was at the time the response lead. John and I had traded notes previously. I already talked about the fact that John and I had become quite close in the first deployment. John is Captain John Redd, US Public Health Service. He had, as I said, been assigned as response lead by then, so we both were trading the notes that friends would about, hey, it's going to be great to see you again and have a drink when you get there, etcetera, but also he pretty well knew what he could expect out of me. Although I only learned this later in conversation with him, he specifically targeted me toward a trouble area that he knew needed help and that he thought my skill set was going to be workable in. There's a sense—I think John takes more credit for this than maybe I think even he is not as much of a genius as this sounds like, but he did know what he was doing. The political situation in the Port Loko district in Sierra Leone was actually pretty messed up before I got there. Nobody actually warned me of this because as it turned out, when I arrived in Freetown, John was up-country solving another problem. While he would liked to have briefed me, in point of fact, no briefing took place. [laughs] Things were still pretty chaotic even by mid-2015.

So I arrive in Port Loko. I am assigned to be the interdisciplinary team lead. They had kind of rearranged the way in which they were structuring the response. In the previous months, and I don't know exactly when this shift happened, basically there was an epidemiology team lead based in Freetown, and would ride circuit and oversee the epidemiologists. There was a health comms team lead, same for the health communications people. There was an infection control team lead that would oversee the infection control people, etcetera. They I think correctly recognized that this was leading to some unhelpful fragmentation in the field, and so I think pretty much contemporaneous with my arrival—I don't think it had happened much before—they said, no, Dan, you are the epidemiology lead but you are also going to Port Loko to be the interdisciplinary lead of the whole CDC team in the district, which was as I recall about ten to twelve people. The idea being to get some more actual, on-the-ground coordination and a more reliable single focal point for the CDC presence in the district to balance the single-focal-point World Health Organization lead and other institutional leads that were in the area. It was necessary for there to be somewhat of a buck-stopper at the district level. And I think that decision was correct, I think it was wise, and as events unfolded, clearly necessary in Port Loko. Anyway, that was what my role was defined as when I went up to Port Loko.

I worked with Julie [R.] Harris, the previous epidemiology lead there, for a couple of days of overlap, and Julie is a brilliant epidemiologist. She had really an encyclopedic knowledge of some rather complex transmission chains that were going on there, and I mean literally, she could rattle down this person and that person and the other person and

this location and that. She had a brilliant knowledge of that overview of the epi [epidemiologic] situation. That kind of memory for detail is not one of my strong suits, and I have to confess that I was actually somewhat intimidated that there was no way I was going to be able to keep the same clear, diagrammatic knowledge of the case that Julie demonstrated. I allowed myself a little bit of “woe is me” intimidation there, although I don’t think I ever gave voice to it. But as I began to interact with the broader team, particularly after Julie left, I began to observe that there was also pretty significant tension between the epidemiologists and the leadership of the World Health Organization team on the ground and the CDC team on the ground. There was some mistrust, there was some just kind of negative vibes between the people—failure to share information, failure to communicate and so on.

Q: Were there some examples that you remember?

Martin: I remember in particular that we shared some epidemiologic data with the person who we had actually been given to understand was the epi lead designate on the WHO [World Health Organization] side, and who in fact was a very engaging young woman, got along with her real well—a woman from Zimbabwe who was actually assigned to the WHO Southeast Asia region normally but was down there, deployed for the epidemic. A great gal. Enjoyed her. But it turns out that she and a Sierra Leonean epidemiologist also working with WHO were having some collisions. The field coordinator of WHO in that location, which was the district person lead on the WHO side, seems to have picked sides on a political battle, and I don’t know if she didn’t realize it or she just didn’t realize the

outcome—anyway, there was some serious head butting, not least I think because of the WHO AFRO [African Regional Office] versus WHO SEARO [South-East Asian Regional Office]. The WHO regions are independent of each other, and frankly, rather independent of Geneva. The bureaucratic structure of WHO is rather complex and fraught with headaches. But there was some ongoing tension between the African Regional Office, AFRO element of WHO, and the Geneva and other regional office folks who were coming in from outside because AFRO frankly felt like they were being overridden, disrespected. They were not being left in charge of the process. In point of fact, there was some reason for that. They were kind of the ones—you may recall that along about spring 2015, there was an article in which Dr. [Thomas R.] Frieden was actually openly quoted in I believe it was *Time* magazine about how WHO had really screwed up in keeping us out and not letting us get in as quickly as we could. It was well known. I was actually shocked that Dr. Frieden said that in public forum and cleared it all the way through—not because it was wrong but because it was less politic than we usually are. The idea that WHO AFRO was trying to do their own thing, trying to keep other influences out—WHO Geneva second-guessing them, other agencies second-guessing them, there was this political sensitivity going on and it frequently manifested itself in a very defensive posture on the part of the local WHO leaders, particularly if they were AFRO. Now, the one who was the lead when I first got there was not. She was Canadian, but she left when I had been there only, I don't know, I don't think it was a week, and was replaced by a fellow from Kenya who is part of AFRO, so that dynamic certainly continued.

I'll get to that in a minute, but backing up a moment, after about two or three days, I called John Redd, and I also called the epi team lead, Jay Varma, who is from New York. I said, "Guys, basically, we've got a choice here. I can remain on top of the epi, or I can manage the team lead interagency relationships here, but I can't do both because the politics here are fraught enough that if I invest the time which I think needs to be invested to manage this overall interagency relationship—and my opinion is, that is the more important of the things because we've got other epis [epidemiologists]. I can manage epis, but I can't manage the epidemiology and also manage this relationship. Unless you guys tell me otherwise, I'm making the call that I'm going to take the administrative lead responsibility more seriously and delegate the epi role to the epis I have with me. And oh, by the way, send epis because I need them." They endorsed my choice. They accepted my choice, and so from that point on, I did try to remain aware of the epidemiologic situation, and I certainly needed to, but I primarily trusted our line folks to handle the nuts and bolts of keeping track of the cases and the transmissions chains and the reporting back to Freetown and everything else, and I moved from that into really an overall team lead sort of responsibility. It helped when I discovered that the new field coordinator from WHO came from Kenya because when I heard that, I commented to him in Swahili, "It's good to have you here, welcome. I used to work in Tanzania myself, love Kenya, beautiful country." Of course, to find a white guy who suddenly speaks Swahili to you when you're from East Africa is somewhat surprising. He was appropriately shocked. Started chatting with me, and we became buddies over a common fondness for Kenya and East Africa and the shared language and so on, and that completely not West African,

not Ebola thing gave me an instant entree with Collins [Owili] to gain trust where trust would not have been assumed.

Q: What is Collins?

Martin: Collins Owili is the name of the gentleman who was the field coordinator, the guy from Kenya. Collins was, is, not the easiest person to negotiate with, but because we had this completely orthogonal reason to trust each other, I was able to establish a personal connection to him which made my life, and as a result, the lives of my colleagues in the process, much, much, much easier. So that by the time I left Port Loko five and a half weeks later, although I insist to this day they gave more credit to me than was due, the WHO folks and the British DfID [Department for International Development] and military leadership who were handling the response credited me fairly substantially with turning that relationship around. Our WHO-CDC epidemiology team was actually acting like a single team, to the point that they were going out together in pairs, one CDC and one WHO epi together, on investigations. They were sharing data, they were co-writing reports, they were treating each other not only like colleagues but like friends. I couldn't have made all that happen, but I do know that by establishing these bridges, I was able to enable the process. I took what I saw at the beginning as a whole bunch of head butting, and by the time I was done, I saw a team. That's something I remain very proud of, is that I've talked to colleagues who continue to work in Port Loko after I was gone, and what I'm told is the team lasted. Both WHO people and CDC people I've talked to since have told me that that camaraderie remained pretty much as

long as anybody who was part of that group was still present in Port Loko. That's something I'm very proud of.

Q: Do you recall how you got up to speed on how the relationship was kind of fraught?

Martin: Running into walls. Basically, the way you always hear it. Somebody is mad and you can't figure out why they're mad, so you start asking questions, and it's only three or four questions into it, if you're lucky, sometimes more than that, that you realize that somebody felt they were undercut by this thing which went from person X to person Y without passing through person Z. It was one of those sorts of things. It was also people talking smack about each other behind their backs.

Q: From both CDC and WHO or where?

Martin: I heard it more from the CDCers obviously, because that's who could talk to me. As I mentioned, there was conflict between the WHO teams as well, and one of the WHOers who trusted me unloaded a fair amount about another WHOer as well. So yeah, I realized after a little bit that part of the problem was that our people, a number of whom were fairly junior frankly—I mean, not everybody that we sent on the response had as many years experience either with CDC or just with life in general. We weren't all guys with gray hair. Some of our younger folks had simply got caught in the crossfire of a war that was not their war, and through whatever combinations, they picked a side because they had a friend, they'd had somebody that was friendly, and sometimes they picked the

wrong side politically speaking. Nobody's fault really. In that kind of chaos, those sorts of things happen, and not everybody is accustomed to standing back and watching where the arrows are flying and where they're flying from. I've been in enough uncertain situations that observing that dynamic is part of how I eyeball a situation I land in. So I just, through some combination of luck and skill, was able to see, here's something that's negative that doesn't have to be, and if we'd just dial it back a notch, talk to some people about stuff that has nothing to do with the work at hand, start establishing some trust, maybe we can get beyond it.

Q: Do you think there was a larger conflict between CDC and WHO maybe even beyond Ebola that was manifesting itself in some ways in some of those—

Martin: There was at the national level. I'm not sure how much that bled down to the local level though. The local level kind of was its own microcosm that only occasionally intersected with the national and international battles. It did. As we get into the story, I'll tell you about some places where it did, but I think a lot more of this was just basic interpersonal dynamics, complicated not least by some people being put in leadership who frankly didn't have much in the way of leadership skill. I'm sure you've seen in other interactions, when someone is in charge of something and are personally not sure they've got what it takes to do it, you can react one of two ways. That's broad stroke oversimplification, of course. On one hand, you can do what I try to do, which is find out who does know and make sure that you're friends with them and learn from the people who know. Or the other thing you can do is try to self-justify and self-defend, and as a

result you wind up gumming a lot of works up. And the latter is what I saw happening in some cases. I think people who in their heart of hearts wanted to be in charge, wanted to have authority, and yet knew that maybe they didn't quite have it were exacerbating the situation by trying to protect their own reputation, position, whatever. The best thing you can do with somebody like that is let them know that you're not a threat to them. Give them more respect than they deserve. I take great pride in a lot of these situations if I start to work—again, I've worked in Africa a bunch of times. I'm used to the dynamic of dealing with low-level authorities in an African setting, and I have managed to get rid of my old American idea that I've got to get my agenda done in the next five minutes. I'm willing to slow down, I'm willing to talk about nothing relevant for a while, I'm willing to build those bridges and get my thought in along the way, because I've learned that while it feels like it's taking an awful long time while you're doing it, it's a whole lot shorter than having to go back and revisit the same territory weeks and weeks later.

[laughs] You bang your head against the same wall, sooner or later, you may realize it's a wall.

Anyway, I take great pride that in many of these situations, I can sit down and start talking with somebody and introduce a thought and have it shot down and keep talking and getting around, and by the end of the conversation, they're advocating to me as though it was their idea the thing that I mentioned back an hour ago. When it's their idea and not mine anymore, I feel like I've won something. I don't have to remind them, you know, I did tell you that. In fact, it's somewhat of a point of pride for me to just note in the back of my head, yeah, I told you that. [laughter]

Q: Is there an example of one of these times that you can think of?

Martin: It happened with—probably the most egregious example was my third deployment, which we’re not talking about yet, but yeah, it happened a couple of times in my advocating of the way we might train our case investigators, get them out in the field doing active case finding, which I think I alluded to already in our last interview as well. We use the term “active surveillance” in CDC, and when we say active surveillance, we mean not just waiting for case reports to happen but actually getting out and looking for disease symptoms, syndromes, whatever in the population. Well, somehow, the term “active surveillance” among the people that I was dealing with in Port Loko and later in Kambia, too—active surveillance got twisted in their minds to mean we really work hard to get out there and find the contacts of the cases we already know and bring them in, and we really work hard to make sure that people know that if they have a case, they should report it to us, and because we’re moving around a lot, we’re active and that’s our surveillance. But the idea that we were actually looking for disease where disease had not been noticed, that we were looking for the other person with diarrhea or the fever or the burial that happened or those other things, was outside of what people were thinking of when they thought active surveillance. So I shifted my own language and started talking about “active case finding,” just to use different terminology that more closely described what I was really talking about, which is what we at CDC call active surveillance, which is, get out there and find the disease that wasn’t already detected by somebody else. The activities to do that was something I had to repeatedly promote among the epi, the

broader epi community we were working with because outside of CDC, it did not seem to be as much of an automatic thought as I would've expected it to be.

I would propose to our WHO field coordinator that we really ought to take some of our case finders, instead of having them simply interview the cases to find out about what's happened to the already-named contacts that we don't happen to have quarantined in the house, that we might actually have them walk around, talk to other people in the village, find out who else might be sick, find out what other kinds of things are going on, look at the people that aren't obviously associated with a known case, see what's out there. That got a very automatic pushback when I first mentioned it, but a couple of times, by the time I was done with the conversation, "You know, we ought to get some of our case finders and get them out there not just talking to the contacts, but seeing who else in the village might be sick." When I heard that coming back at me, I knew I was getting somewhere.

Q: [laughs] Gotcha. What was the state of the epidemic in Port Loko during your time there?

Martin: Actually, it was one of only two districts in the country that still had ongoing transmission by then. While I was there, it popped up again in Western [Area], but at the time I arrived, Port Loko and Kambia District to the north were the only districts that had active ongoing chains of transmissions. Port Loko was particularly—well, Kambia is troublesome in another way, we'll get to that later, but Port Loko particularly had two

transmission chains going on that were really, really problematic, and they were actually related to each other. There was a family down in the southern part of Port Loko along what we call Airport Road, because it is right past the [Freetown/Lungi International] Airport. The Freetown airport isn't in Freetown. The Freetown airport is on the other side of that big estuary that we talked about before, a big old bay you've got to cross by water taxi. It's actually in Kaffu Bullom [Chiefdom], which is the not really a city, but kind of an urbanized area at the south end of Port Loko, on the peninsula near the estuary and near the Freetown airport. A very populous area, lots of transit from people by boat, by car—air is for mostly expats [expatriates]—but huge markets, lots of activity, bustling with people. A lousy place to have a disease like Ebola because there's lots of places for it to go from there both into and out of Freetown, both into and out of the surrounding areas.

In this area, one of the families that gets infected by Ebola is quarantined, the house is quarantined. The uncle, who is sort of the patriarch of this particular family, at least in his own mind—I don't know in anybody else's, but at least in his own mind—should have been the paramount chief of that area. But one of his nephews had the unmitigated gall to run against him and was elected paramount chief instead, and this obviously—I suppose obviously—created a rather painful schism within the family. Paramount chief nephew guy who is there is definitely pushing for people to be quarantined if they have the disease, pushing for them to cooperate with the authorities, etcetera, etcetera, etcetera. And uncle who has got a real, real bad vibe for nephew who stabbed him in the back, says, you can have the contacts in my house when the new paramount chief comes over

here and personally apologizes to me for dishonoring me. Which is essentially other words for, it will be a cold day in hell before this happens. So this local, village-level political spat becomes a touchstone for a grieved elder refusing to allow his family members to be taken to the Ebola treatment center, the kids to be tested. There are kids in this group who are being exposed because there are ill people in this compound who he will not allow to be transported to the hospital. It becomes this big, political back-and-forth that incidentally never was properly resolved. But the Kaffu Bullom cluster—there's no way to know for sure, but it's impossible not to accept that there are probably, at least—I'm going out on a limb to say half a dozen to a dozen people who got sick, and some of whom died who probably never would have contracted Ebola had this situation unfolded in a more ideal, normal pathway. This was not a situation like some of the others that we had throughout the outbreak where people were avoiding the authorities because they didn't want to be buried far away, all the stuff that I talked about with you last time. This was not about the traditional health beliefs, the traditional beliefs around death and dying. This was about political and cultural offense. But the result of it was a number of people who were exposed and got sick, and some of them died from Ebola, because of the refusal to cooperate with the family in that situation.

The situation was compounded by the fact that there had been several elements of travel associated with it, and I'm a little murky now on some of the details. Some of the other epis would do a far better job of sketching out all the details than I can, but what I do remember is that one of the early cases in this family was a young, I believe ten or eleven-year-old child who was the heir apparent to a fairly powerful traditional healer

from up north—I believe actually outside of the Kaffu Bullom area outside of Port Loko up in Kambia District. I’m blanking on the name of the place [note: the Meni Curve health center]. I even have a photograph of it from last time. Anyways, this kid had gotten sick probably from participating in the funeral of the elder to whom he was the heir apparent, although that part is inferential and I don’t think we’ll ever know for sure. He had come down to Port Loko to be treated by another relative and traditional healer down there in the Kaffu Bullom area, had died, and was in all likelihood the one who transported the virus that started this particular cluster—which if my memory serves, before it was done, we had over thirty people involved. It was a mess.

Part of the complication, besides the political stuff I already told you about with tracing out this cluster, had to do with some of the sensitivities around revealing the links in this traditional healing network. It was pretty much one of these situations where if you had designed—and we said this later in Freetown—if we had designed a tabletop exercise—well, we said this a number of times. At least two or three of the last groups of the disease that I dealt with. If you would sit in Atlanta or in Freetown and design a tabletop exercise to test the response system, and you threw at them all the things that actually happened to us in this cluster, they would come back and say, “Dude, you’re just making this up. You’re adding crap just to make it mean.” [laughter] A sadist would not have created a scenario as nasty as what happened. But that was our life.

As if it wasn’t good enough—and I mentioned this political, familial dispute element we never did solve. But related to that, one of those people had been treated by, as I alluded

earlier, another traditional healer in the Kaffu Bullom area. A fellow, if my memory serves, by the name of Pa [name withheld]. “Pa” being an honorific that is applied to an older man. Pa [name withheld] got sick, was treated at the hospital—one of the two local hospitals—but not recognized as potentially having Ebola right away, so treated in the general population. Eventually recognized, oh, dude, this guy probably has Ebola—tested, yes he did. He was isolated while they were testing him, isolated in an “isolation ward,” we use air quotes here, in the hospital, and eventually turned out to be positive and taken to an Ebola treatment unit, whereof more in a moment. But while he was in the isolation ward, another dear friend of his who was sick with something entirely different, a hydrocele as I recall, was hospitalized in the same private room in the isolation ward with Pa [name withheld]. As friends, they shared—one of their family members would bring in some food, they shared the food bowl together. They helped each other out, they interacted as friends will. This poor schmuck who went into the hospital for something completely other than Ebola contracted Ebola and died from it, too.

Meanwhile, the ambulance driver who transported one of the two—and I think it was Pa [name withheld] himself, from the hospital to the Ebola treatment center—whenever you transported a patient with Ebola, there was at least a nominal disinfection of the ambulance that took place. Spray it down with chlorine, wash it down, da, da, da. But after that process was done, he went back to the dispatch area, and friends later reported that they had noticed that he had found Pa [name withheld]'s head turban, head rag, whatever, in the vehicle after it had already been nominally cleaned out. Took this thing out with his hand, disposed of it, whatever—totally unprotected. Anyway, the ambulance

driver some couple of weeks on is feeling a little dodgy, figures he's probably got malaria, asks one of his friends, nurses, in the hospital to give him—first, to give him a malaria test, then later to give him a transfusion, which is a popular treatment for malaria because malaria often makes you anemic. And even later, to maybe run a test—or somebody decides to run a test for Ebola. None of this happens in the normal hospital setting. It happens in the workers' lounge where the ambulance drivers have their little lounge. He's treated for all these different medical conditions by a nurse in the hospital—tests done, blood drawn, transfusion done, all this stuff completely without the precautions you'd expect in a non-patient area of the hospital. I failed to mention, this is not the hospital Pa [name withheld] had been treated in. This is the other of the two hospitals in Kaffu Bullom. The ambulance that served both was based at the other hospital.

If you haven't put two and two together already, we're going to paint it in bright lights right now. By this point, I have now described massive infection control breaches in both of the only two hospitals in a major metro and trans-communication, transportation area in South Kaffu Bullom. This breach has involved the treatment staff—uncertain numbers, but a significant element of the treatment staff of both hospitals, and this is before anybody realizes there's a problem.

Dirty little secret is that the infection control lead for the district had done an infection control review of one of the two hospitals literally that very week and gave them a good bill of health. Which is why the infection control analysis of the situation I just described,

which ultimately resulted in about twenty nurses being quarantined, as I recall. The analysis and write-up of that infection control situation, which was done by Dr. Chris [Christopher H.] Hsu, EIS [Epidemic Intelligence Service] officer from CDC, brilliant guy. If you haven't talked to Chris, you should. Chris wrote this up. Did an excellent job with the investigation. A couple other of our epis were also involved in it, and it will never see the light of day. Chris Hsu did an excellent job with this investigation. I did what I could to support him. I did what I could to back him up when he was not being well supported by some other people. He and a Sierra Leonean epidemiologist, Ishata Conteh, with whom I also worked—Ishata by the way, wonderful woman, love her dearly—Ishata had lost her own husband to Ebola. He was one of the more renowned physicians in Sierra Leone, in Freetown, one of the early casualties to Ebola. One of the ways she dealt with her own grief was to channel it into working hard to fight the epidemic in her country. She was a contract epidemiologist with WHO in Kaffu Bullom when I was there. Brilliant person, excellent. She and Chris did the investigation here. She was not the one who did the infection control screw-up I was just talking about. But like I said, their excellent work, while it exists in written form—I have a personal copy—it's not going anywhere and it can't. It's too bad because it's a solid documentation of a really egregious set of infection control failures that resulted in quite a number of cases, deaths, and people b—almost closed down two hospitals. That was the kind of chaos I was dealing with in Port Loko in those days.

Q: [laughs] Throughout your month there, did you feel like—and I know you said you spent most of your time managing and bettering these relationships, but were you able to make some progress on transmission?

Martin: Oh yeah, oh yeah. There's a whole new area on that, but let's hit the pause button and take a break.

[break]

Martin: Actually, I do have to add one funny story, or at least somewhat amusing. A story to the business about this hospital cluster. At one point, shortly after it became clear that a large part of the hospital staff had been exposed—or potentially exposed, I should say, at risk enough that they should be taken out of direct patient contact—one of the CDC senior folks who I will neglect to name, for they don't need to be dissed by this, showed up to check out what was going on and why we were having such a mess up here and basically wanted to find out what all was happening. At the same time that this person was there, Bruce Aylward from WHO Geneva was also present, seeing what was going on. Everybody knew this was a mess. Bruce actually explained a little bit to us about how some of the WHO structures were going and how that was creating some of the impediments. It was helpful, frankly, for me to get some of his insight on that. But our trusty CDC friend was very upset that we had not immediately issued a quarantine order on the whole hospital. Did not seem particularly concerned about the potential ramifications of shutting down the only primary treatment center in the area that was still

accessible. Kind of came on like a freight train and came very close to ordering me to override whoever—if necessary, he would take it back to Freetown and escalate it with the WHO leadership in Freetown. We were going to get this hospital shut down. And I said to this individual, “Hey, I’ve just spent the last week and a half, two weeks, trying to mend already difficult relationships with these people. Please don’t jack it up by going over heads, let me see what I can negotiate first—give me at least a few hours here, see if I can’t get this thing with honey instead of vinegar.” Reluctantly, the individual did agree to cool their jets for just a little bit and give me that chance. I sat down with Ishata, the Sierra Leonean epi that I alluded to earlier, who had been one of the ones with whom some heads had been butted so far. She had already felt like the external folks were not giving her the respect she deserved, and she was to some extent right. This was not just somebody pulling an emotional game here. I said, “Ishata, look, it may look like we’re fighting one epidemic here but we’re actually trying to fight two outbreaks right now. One of them is an outbreak of Ebola in this hospital and the other is an outbreak of CDC epidemiologists who are going to descend on us if we don’t do something. We don’t want either one of those epidemics to happen. Let’s see if we can’t work out a way to get this at least minimal quarantine established, get these people under some kind of observation so that I can call off the dogs that will invariably come down on both of our heads if we don’t.” And she was amused enough by my allusion to the epidemic of epidemiologists that it broke the ice between the two of us and we were able to get the situation under control. We were able to satisfy our superiors that things were going to be going okay. And it established a relationship that allowed me to continue to work with her not only then, but in future times that I returned to Sierra Leone. That’s an illustration also of

where I played that sideways social game. I played a little bit of good cop to bad cop, and won a friend out of it, frankly. It was one of those situations that definitely smoothed our relationship with that team from there on out. Just a little anecdote of how it works.

Anyway, as that cluster continued to happen, I mentioned to you at the beginning of this bit of story that at the time, Kambia and Port Loko were the only two districts in the country where ongoing transmission happened. His Excellency, the President of Sierra Leone, [Ernest B. Koroma], issued a decree that we needed to shut it down in these two districts before it tried to explode again. He actually put one of his senior leaders in charge of getting with us in the districts and pushing us to develop a plan for what they dubbed Operation Northern Push. The two districts are both north of Freetown, northwest of the country. The intent of Operation Northern Push was, tell us what you need—resources, personnel, material, time, whatever—to shut this thing down so it doesn't break out again. We were directed to develop plans for Northern Push to do this and to make the request necessary. When I say “we,” it was the whole district management team, which was a fairly large cast of characters that I haven't yet really alluded to. I've talked about CDC and WHO working there, but unlike my first deployment in Tonkolili where it was CDC, it was Concern Worldwide, it was the local health authorities, and that was it, we were a small, lean, and mean team; when I got to Port Loko, there was an active disaster management DERC we called it, the District Ebola Response Center, which had been set up. The lead for the DERC was actually the British military, with significant assistance. In fact, the commander was not himself military. The commander was a contractor, an ex-military working for DfID [Department for International

Development]. I don't remember what the DfID acronym actually stands for, but it's essentially the British military's non-military aid division, is the way I understand it. They're the disaster response and relief agency of the UK [United Kingdom] military.

Q: They're kind of the USAID [United States Agency for International Development] counterpart.

Martin: Yeah, except for they're more military than USAID. USAID works under [US Department of] State. DFID actually works under the British military command. It's more—if USAID answered to DoD [US Department of Defense], that would be DfID. They're almost like a mixture of our Defense Threat Reduction Agency and our Office of Foreign Disaster Assistance, which is actually also under AID and State. But it answers to the British defense minister. At least that's my understanding of the political chain. But these guys are all ex-military themselves. They're contractors that work in garden spots like Pakistan and Afghanistan and Iraq, and they're used to working in places where bullets are whizzing, not just viruses. These guys are pretty tough. The DfID commander was the incident commander at the DERC. Under him, and during the time we were there, a number of British uniformed army fellows came in to oversee the logistics and the actual command structure of the DERC itself. In fact, the day-to-day management of the DERC was taken over by a battle captain in the uniform of the British military, and although there are people who criticize the militarization of the response, my personal experience on the ground in Port Loko was those guys from the British army were brilliant at helping us to get logistics under control, helping to get supply chain

straightened out, helping to actually have the reporting and tracking of data coherent and going to all the right places. I have nothing but good to say of the British army guys that I worked with in Port Loko. They were absolutely a value added to the response.

The DERC included DfID, the British military, and then representatives from all the lead agencies that were there. I was the CDC representative. We had a guy from UNICEF [United Nations Children's Fund], we had a guy from—actually, I think it was a woman from World Food Programme. We had people from all of the various different NGO [nongovernmental organization] and UN [United Nations] auspices agencies that were involved in the response. Our morning DERC meetings usually had a dozen and a half leads involved in them, I would say.

Q: Were there also representatives of local agencies?

Martin: The District Health Management Team, the DHMT, had representatives there, which is, of course, the Ministry of Health [and Sanitation] entity at the district level. They were actually a bit sidelined in Port Loko, and to what extent that was their own choice to step aside, and to what extent they were marginalized, I never quite figured out. They never seemed at all hostile to me, so I didn't get any vibe that they were feeling cut out, but I was a little uncomfortable with how little presence of the local people there was in the response at that period. Now, we did see people come through from the National Ebola Response Center, the NERC, particularly as the Northern Push plan unfolded,

because they were the ones tasked with holding our feet to the fire to make sure it happened. But the plans were to be developed at the district level.

A subset of about half a dozen of us from within the DERC, which included my buddy Alex Tran from GOAL—GOAL is an Irish NGO that was working heavily with us on the response—and Alex Tran and Sam [Samuel] Boland were two GOAL guys that I worked with very closely. Actually, I just had lunch with them on Monday. They were blowing through Atlanta. Became dear friends, but they were the NGO that was doing the most help for us on a lot of data management and mapping. Alex is a GIS [geographic information systems] guru, and they were doing a lot of work with that. But GOAL and World Food Programme and, let's see, who was the other NGO that was there? World Vision wasn't really visible there. CARE was. Oxfam was. Oxfam was involved in a lot of the buckets for hand washing and stuff like that. Anyways, a large cast of characters. But the emergency plan was developed largely by the WHO lead; myself; the DfID lead, who was the commander of the whole shebang; another WHO epidemiologist; the guys from GOAL; and then Bruce Aylward actually came back through and worked with us on that plan as well. I've got one picture of a bunch of us gathered around Bruce's computer in a conference room while we're doing some stuff related to the Northern Push plan. But the bottom line behind the Northern Push plan was, get more boots on the ground doing that active casing finding we were talking about, and also, do what we can to make the quarantining of folks in houses less egregious.

Quarantining of homes is actually somewhat of a controversial issue when it comes to Ebola control in general, and a number of CDC experts, not least Pierre Rollin who I'm sure you've talked to, are not particularly impressed with the effectiveness—I'm not either, frankly—of locking people down in their houses and restricting their movement in that way. Frankly, if you can win their trust and just get them to check in so that you know that they're healthy and you can take their temperature twice a day, restricting their movement when they're not symptomatic is not actually accomplishing anything for disease control because a person who may be incubating Ebola but is not yet symptomatic is not dangerous. Scaring them away so that they get sick out in the bush or in somebody's house where they're hiding bloody well is dangerous. I share the reluctance to really tout the quarantine too strongly as a good thing. However, the West African nation's choice tended to be mostly to shut these people down, tie them down, hold them down. It was more coercive than I would've preferred. But we weren't calling the shots here. What we did try to do—and Mick [Michael G.] Robson, the incident commander, the DfID guy I was telling you, was a strong advocate of this—was, you know what? If what it takes to keep people in quarantine is to supply them with all their groceries for their family and friends and relations for a month, that's a pretty small price to pay for not having people run into the bush. Let's stop getting all grumpy around the corners of whether we're spending an extra hundred dollars or not when we're trying to shut down an outbreak that's costing us all millions. Let's make quarantine as non-negative as we can make it, and if that means an extra bag of beans, if that means an extra this or that or something else, buy them a radio or a TV [television] so they can watch movies while they're stuck at home, so be it. It's a rounding error in the budget. That was

another element of Northern Push, was let's get supplies to make quarantine less egregious and painful than it was. Now, I will say that was not as successfully implemented, but it was something we put in the plan, and we got some additional supplies and the improvement of supply chain about that. It was never as good as it could've been, but at least some improvement did take place.

Another aspect of the Northern Push which we advocated, but got only marginal success with—the government had issued fairly coercive and punitive bylaws that basically, someone who harbors someone who may be sick was liable to prosecution or fining themselves. There was a number of fines and so on that were always differentially enforced and tended to be enforced more when it was somebody that the local authorities already had another beef with. Rule of law was not as consistent as one might hope. But we appealed to have some amnesties to the bylaws to get people into the system without the fear that they would get fined, imprisoned, otherwise punished, if we could just get them to come in out of the woodwork. That was variably received. We did in fact get a couple of seventy-two-hour amnesties at different times. Because they were so short, I'm not entirely sure how well they worked, but that was another element we pulled together. The ultimate thing being, let's get as much resources brought to bear on this as possible to try and bring these last clusters to a close without having them break out and start more cases. Mostly, it was implemented after I left. I was mostly around for the ending of the creation of the plan, the submission of the plan to the commander of the NERC, the National [Ebola] Response Center, and the early implementation, but I was not around long enough because this lapped into July-August. I was not around long enough to see a

lot of the fruits of the labors. Was Northern Push actually instrumental in bringing the epidemic to a close? I don't know. The jury is out on that one. I would guess if it was, probably the most likely place where it was effective was in the fact that we were able to get more trained investigators out in the field. That did happen, and I believe that did have a beneficial effect. Some of the other things, we could discuss. They may have had help around the margins, but getting more trained investigators in the field did matter, and I think that is one thing where we actually did accomplish some benefit.

Q: So you wrap up your second deployment at the end of June, first of July I think is what you said.

Martin: Correct.

Q: What happens then?

Martin: I come home again. I should take a discursion actually on this. While I was in Port Loko that second time, I'm very conscious—now, this is Dan's emotions' part of the story—I'm very conscious that even though we're still fighting disease in the district, the overall cloud that's hanging over the country is clearly lifting. As I mentioned, ongoing transmission is only happening in two districts. Unfortunately, it broke out again in Western District around Freetown while I was there—so three. But two to three out of fourteen. There's really nobody in the country by this point in time who doesn't recognize that, yeah, the war's not over yet, but we're going to lick this thing. The fear

that we don't know how big and how bad it's going to get is well passed by the time I'm there in the middle of '15. Comparing the vibe that you just get in interacting with people from my October-November '14 experience to my June '15 experience, the difference is palpable. It's palpable in your relations with everybody, and I noticed it in my own emotions as well. I'm feeling a whole lot more light, just my own—I don't even know what the word is for it—the weight of my psyche, it's not as heavy. This is a very positive observation because frankly, as I came home in '14, I certainly remembered some dark things. I had some painful images. I've shown you some of the photographs. I have friends who got sick after I got home. I certainly knew that there's definitely some pain there, but it's only in comparison with how much more comfortable I'm feeling in '15 that I actually start to realize some of the baggage I was carrying from '14. I'm giving voice to this one day as I'm having a conversation with another dear friend of mine. It was actually the first day I met her. She's a dear friend now, but Nicole Hawk, who is our communications lead over there now. I'm talking with Nicole about this the first time we ever meet. She's out, I don't know, she's riding circuit, visiting the districts, finding about health comms' needs while we're there. As I'm relating this to her, I just suddenly am overwhelmed and I break down in tears and I'm racked with sobs for a few minutes here, just somehow not because of a clear thing that I can do, but just suddenly this release happens, and I confront in a way that I hadn't actually given voice to myself what I said just a minute ago that I'm dealing with some emotional trauma back there that I had not actually realized, and I can't to this moment point to places and times that are why. This is not a classic PTSD [post-traumatic stress disorder], I know this happened and it was haunting me. That wasn't what it is at all. But I recognized that there are some

symptoms going on here. There's something going on here. I'm carrying some bags. And so part, for me, I now realize in retrospect of looking back on the second deployment is that it was a beginning of a real catharsis of the first deployment because I'm seeing the country begin to emerge out of the shadows and into the light. Now, this happens much more as I come back to the country in later times and I see the recovery, and there's no question in my mind now. I've been in Sierra Leone eight times. I've been back for the ordinary work, the ongoing recovery work, the "Ebola is over, what are we doing now" work of Sierra Leone. There's no question in my mind that having been able to be part of that process was an important part for me of dealing with the emotions of the early days of the epidemic. That's the other element that I think is probably important to time two, is that it was the beginning both of my realizing that there was something I needed to deal with, but then with dealing with those emotional issues and coming to a more comfortable, stable emotional place with regard to what I saw in the early days of the epidemic.

Q: Before we move on from the second deployment, is there anything else you'd like to share about it or anyone from that deployment who stands out in your memory who you'd like to describe a little more? Or should we continue?

Martin: Yeah, there is at least one more story I should tell you, yes. I mentioned the fact that the CDC and WHO people became teammates during the deployment and during that time in a way that had not been the case when I got there. The example of that which stands out in my mind forever is one of our epis, a Public Health Program Specialist

fellow, PHPS fellow, Jessica Goodell, and a WHO epi from Australia by the name of Anna [note: Anna-Lena Arnold], and I'm blanking on her last name at the moment—the two of them could've been sisters from different mothers anyway. Both late twenties, early thirties, I think late twenties probably, fairly slender, blondish but not super blond, European extraction, vivacious young gals who became a team who often went out together. They hit it off, and really, truly, they were behaving like sisters. It was fun just to watch them because they clearly loved working together. I'm in the CDC office in the district health area where we have our office one afternoon. Jessi's in there working on some emails, whatever she was doing, she was doing something to do with her work, and Anna comes bounding into the office just busting her buttons saying, "Jessi, I found it, I found what we need!" Jessi jumps up off the table, and she's immediately celebrating. What I find out is that they've been dealing with this one poor guy who was quarantined—he was not in his own village, but he was in another village where he was exposed and quarantined. I forget actually what his route of exposure was. The poor guy was stuck in an empty—they'd quarantined him in a house that was under construction. He was there in bare walls, bare floor, nothing there. And Jessi and Anna had taken it upon themselves to see whether they couldn't find something to make the poor guy's life a little more comfortable. Anna had been walking by the British mil [military] supply tent and saw that they had a new shipment of mattresses, and said, "Hey, can I scam one of these for our quarantined patient who needs it?" And they were actually there to be supplied to quarantined homes, so that wasn't even a misappropriation in anybody's mind. They said, "Sure, take one, this is who they're supposed to be for." Anna gets the mattress, she and Jessi go out to the market and buy a radio and some candy or cookies or

something, a couple of things. Now this is already after work hours. I think it's like five o'clock, and they should be going off to dinner or whatever, but they get a vehicle and go out and deliver this stuff to the guy. And Jessi tells me later that he was just tears of gratitude when they showed up. Turned on the radio, got some music, started dancing a little happy dance and was very, very grateful—and after that, was far more willing to talk to them about contacts and locations and everything else. But the thing I took such joy in was seeing this camaraderie crossing the division, crossing the agencies, two very good epidemiologists. They were technically really sound. They knew their stuff and they did it well. What gave me the greatest joy was seeing that they had formed this bond. Actually, I talked to Jessi just last week. She still stays in touch with Anna and they remain good friends as a result of this work they've done together. That's the sort of thing I look to, and I feel like my role in Port Loko was not the direct disease control work itself. My role there was actually what I think a leader's role is supposed to be in most places. It's to empower the people that are working nominally for you, under you, to shine and do their work and do their work well. The fact that Chris did that brilliant hospital-based investigation and did a couple of other things he was able to get public credit for—the fact that Jessi and Anna did this excellent work with reaching out to the population—the fact that Kirk [D.] Henny, one of our health comms guys, did a proposal to reach out to the motorcycle riders, which got adopted, and I've seen it in print in a couple of places since—unfortunately, not always with credit to Kirk, but I try to remind everybody I see that he's the one who wrote it first. The fact that these people who were working with me, I was able to empower them to do things that mattered for disease

control, and the fact that agencies that were acting like enemies when I got there were acting like friends when I left—that's what I take away as my success in Port Loko.

Q: Thank you for describing that. Tell me what happens after Port Loko.

Martin: What happens after Port Loko is apparently, the country director decided that was a success, too, and I told you before that John Redd put me up to this, and I only learned how much he put me up to this later. But it was following that second deployment that John Redd and Sara Hersey, the country director, put in a good word for me and encouraged me to look for opportunities to actually come into the Center for Global Health properly. It was largely on their recommendation that Barb [Barbara J.] Marston hired me into the Ebola Affected—well, what at the time was the International Task Force, and became the Ebola Affected Countries Office in CGH [Center for Global Health], in the Division of Global Health Protection of CGH. John's and Sara's good word, based mostly on their judgment of my conduct in Port Loko, gave me the opportunity to finally break out of domestic public health in CDC and get an actual day job in CGH. That was quite gratifying because that was something I'd been wanting to do for a long time anyway. I told you back in our first interview that I did my master's in international health. That was my goal and my agenda, anyhow. It turns out that Ebola gave me the opportunity to do that, and I moved in October of 2015 formally into CGH into the Ebola Affected Countries Office as a technical officer for Sierra Leone.

Q: What does technical officer for Sierra Leone mean?

Martin: Nobody ever formally defined it as a written position as far as I know, but bottom line is I did whatever they needed me to do to make the process of setting up and running the country office in Sierra Leone, doing the transition from response to recovery. I wound up being heavily involved in the development of the Global Health Security Agenda, GHSA plan for Sierra Leone, and I deployed to Sierra Leone an additional six times after, starting with October when I began there. October was mostly a GHSA and USAID visit, so that was the first time I was working with people at the national level instead of the district level. In January of this year, January 2016, I went back to Sierra Leone expecting to basically facilitate the main, national GHSA meetings, and the day before I got on the plane, what we now know to be the second-to-last case of Ebola in Sierra Leone crops up in Tonkolili and dies a couple of days later. Even as I'm getting on the plane, I'm telling myself, you think you're going for GHSA, but no, you're not.

[laughter] So I was shocked exactly zero when I landed in Freetown a day and a half later and I turn on my BlackBerry and I have an email from Sara Hersey, the country director, saying "You're a field epi in Kambia, you're welcome." [laughs] Because Sara knew me very well by then and knew that I'm much happier being on the ground doing epi than I am in the capital city in meetings. She also knew that Kambia is a legendarily frustrating place, and she needed somebody who was going to be able to adapt. So yeah, I nominally went there for GHSA, but wound up on the response again. That was my third response trip, but overall this year, I've been in Sierra Leone five times, the most recent being just this past October. Yeah, I went in January, I went in March, I went in May, I went in July and I went in October. I would've gone in August-September timeframe too, except that I

got tapped by the rapid response and wound up in Angola on yellow fever instead. But yeah, I got pretty familiar with my friends in Sierra Leone, racked up a few frequent flyer miles this year.

Q: Can we go back to the third deployment when you're transitioning to the Global Health Security stuff, and the transition from response to recovery? You were based then in Freetown that deployment?

Martin: Yeah. We took one field trip to Kambia, but other than that we were in Freetown the whole time. This was meeting with—mostly we were working with some representatives from one of the offices in the US Agency for International Development, USAID, because the GHSA plan is an interagency plan. Frankly, it's actually made to be multiple countries, but the US GHSA work is Department of Defense, USAID, and CDC mostly. Some Department of Ag [Agriculture] also. We didn't have any Department of Ag people there, but in USAID, even it was Office of Foreign Disaster Assistance, OFDA, and another international program's office whose name I'm blanking on at the moment. It's a multi-agency thing, also including the US Embassy there, meetings with the ambassador [John Hoover], a variety of interactions to assess where the country was at and where US government assistance could best be channeled to help Sierra Leone with the three major areas of preventing, detecting, and responding to outbreaks and disease. Prevent, Detect and Respond is the rubric of GHSA under which there are these action packages that are the various health areas into which intervention can be poured.

This was an early stage planning meeting to flush out the target areas that would become the US plan for GHSA assistance to Sierra Leone.

Q: So other agencies have their own plans for Sierra Leone?

Martin: Yeah, yeah, yeah, US DoD and USAID both provide funds and assistance to Sierra Leone as well. As I said, I understand that the Agriculture Department is doing some, too, although that came later. One of the buzzwords in a lot of the work with GHSA is what's called One Health, which is the idea that animal and human health have a lot of interactions between the two. Surprise, surprise. Ebola is a good example of that. It comes from animals to people before it gets started. Involving the veterinary and the environmental elements of animal health is important when you're dealing with emerging infectious disease. All of that stuff wraps together. GHSA could be a whole set of interviews by itself, but the bottom line is it's the focal program under which we're defining the recovery aid that we're providing to the affected countries and to a variety of other countries in the developing world.

Q: With this project, of course, CDC's Ebola response and just Ebola in general is just a fascinating, huge, important topic that will be looked back on, but I see GHSA also interlinks between that and what Ebola has done for GHSA. I kind of wish I could, like you were saying, do another set of interviews.

Martin: Totally, totally, because GHSA as a thing, even the acronym was developed before Ebola ever happened, or before this outbreak happened. The GHSA program has its roots in treaties that happened in 2011, 2012, but it really got a kick in the pants from Ebola for obvious reasons. That actually is an issue where I have very strong opinions that we as CDC need to do a better job of marketing ourselves, particularly in what is obviously a growing conservative political climate. Most of us who work in public health got into public health from somewhat, more-or-less liberal reasons. We're largely a bunch of bleeding hearts that want to save the world, and I say that with utmost respect. I'm one of them. But we don't often recognize that there is a conservative—if you want to be negative about it—self-serving, national security, national defense side to the work we do, that we really ought to do a better job of promoting than we do. The fact is you and I and anybody else in the lower forty-eight is far more likely to die from an imported virus or an imported bacterium than we are from a terrorist bomb or bullet. The numbers are there. Dr. Frieden likes to say that every disease on the planet is two plane rides from your front door, and he's not wrong. But we as an agency are, I think, deeply deluded in the idea that the liberal, do-good-to-the-world motivation which drives us is enough to sell our services to enough of the population to keep voting more money for CDC, to put it crassly. We have got to be willing to engage our conservative partners, funders, taxpayers, legislators, president-elect, everybody to help them to understand the extent to which the Centers for Disease Control and Prevention is a national defense, national security agency, and we need to have the funding, the flexibility, the personnel, the legal underpinning, the authorization to respond as quickly and with as much force to the next emerging disease outbreak as we do the ability to dispatch special forces or a carrier

group to the next place where a bomb goes off. That recognition, we have not sold, and so we can't really blame the other side of the aisle for not having gotten a message which quite frankly we've failed to convey. I can, as you imagine, get fairly impassioned about this because I pride myself in straddling a lot of conservative-liberal divides in a variety of areas—science and faith, the interaction between people of different faiths and those of no faith, conservative and liberal politics. I have dear friends and close personal relationships that are poles apart in all of those axes, and I feel really strongly that we do ourselves a disservice by not trying harder to bridge those gaps.

Q: Focusing more specifically on that third deployment, October 2015, can you just tell me how it proceeds, what gets decided, what the takeaway is from that deployment?

Martin: Not a heck of a lot, frankly. It's a lot of meetings and some paper reports come out of it. The main thing that comes out in the way of actual output is the recognition that CDC, because CDC offices are the strongest element on the ground there and the US Embassy has a very good relationship with CDC. The ambassador trusts Sara Hersey, the country director, implicitly. It's clear that CDC is going to be the lead agency on GHSA in Sierra Leone. The early assessment of where the needs are, where the gaps are, where the strongest needs in Sierra Leone that we as CDC can help are, gets defined then. We really come down to what we call the CDC Core Four, and I don't know if that term is just unique to us in Sierra Leone or if it's outside, but when we talk about GHSA and Sierra Leone, we talk about the Core Four. By that we mean out of the eleven action packages that GHSA has—strengthening laboratory services; strengthening surveillance;

workforce development, particularly in the area of training lab and epidemiology people; and emergency operations are the four areas where we're going to channel the majority of CDC's assistance and expertise. That means that moving forward, we're working with Integrated Disease Surveillance and Response, IDSR. We're working with a project for a mortality surveillance called CHAMPS [Child Health and Mortality Prevention Surveillance]. We're working with developing the surveillance systems, including use of electronic means of communication where possible in Sierra Leone. All of that is around the surveillance side. We're developing a Field Epidemiology Training Program, the FETP, as part of workforce development. We're facilitating some lab training for some of the lab people, which is a combination of the lab and the workforce. We're facilitating actual renovation of some of the labs, training them in specific diagnostics, to get more laboratory capacity in Sierra Leone, more public health diagnostic as opposed to medical treatment diagnostic capacity available in the national reference labs. We assist with the setting up, and we actually fund some of the actual bricks and mortar for setting up the emergency operation center in Freetown and the training of the EOC staff in disease response. Frankly, in all hazard response, not just disease. Those focus areas are CDC's contribution to GHSA coming out of this whole thing. But also, we wind up being the de facto lead agency in making sure that Defense and AID's contributions get added into the same document that goes through the embassy. We provide some of that coordinating role as well.

Q: You mentioned that you were in a lot of meetings and that you also prefer to be in the field.

Martin: Oh yeah. Plans need to be made before you can do stuff. I deal well working with high-level people too, and in fact, a number of the high-level people in Sierra Leone now count me as friends, and I them. Facilitating, it's not that it's a negative thing. Sitting in meetings and taking notes and wearing a jacket and tie when you're in a hot, humid climate, it's not my preferred way to operate, but it's part of what's needed to move on. We're not going to be in the shoe leather response forever, and we shouldn't be, and we should be glad that we aren't. But yeah, it doesn't have the same compelling urgency. Frankly, I don't think I could survive that level of adrenaline forever anyway, so that's not all a bad thing. But there's no question that it's a different pace. Frankly, it's a lot less stressful. You're not working as long hours, you're having more time to actually decompress with people. There's a lot of good around this. It's not at all a universally negative thing. But yeah, sitting in national meetings with all of the introductions and "Mr. Chairman's" and everything else, it's not my favorite part of life. [laughter]

Q: I notice that we're about noon, and I don't know what your day looks like, and when you have to be getting back to things.

Martin: I'm going to have to get back to things, as I've got a hard meeting with Zika at one. I'm going to have to grab lunch and also get my thoughts together between now and then. Gosh, we can talk for a long time.

Q: This is going really well. I would love to hear about Kambia.

Martin: You need to hear about Kambia. We need at least to schedule one more for Kambia. I think based on where we've come, I think we can cover it in one more session, but I think we do need one more.

Q: Me too. We can coordinate that with our calendars.

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