CDC Ebola Response Oral History Project

The Reminiscences of

Carmen S. Villar

David J. Sencer CDC Museum

Centers for Disease Control and Prevention

2016

Carmen S. Villar

Interviewed by Sam Robson
August 2nd, 2016
Atlanta, Georgia
Interview 1 of 1

CDC Ebola Response Oral History Project

Q: Hello and welcome, today is August 2nd, 2016. This is Sam Robson of the CDC [Centers for Disease Control and Prevention] Museum here with Carmen Villar. Hopefully I didn't terribly botch that.

Villar: No, that's okay. [laughter]

Q: We just talked about the different pronunciations she gets down here in Georgia. We're talking about Carmen's experience with CDC's Ebola response in West Africa which spanned from 2014 to this year, 2016, and was just generally intense and very worth talking about.

Villar: Definitely.

Q: Yeah. So thank you so much for being here.

Villar: Sure, sure. Happy to do it.

Q: Can I start off by asking—I always ask everybody, can you pronounce your full name and tell me your current position with CDC?

Villar: My full name is Carmen Sachiko Villar. I am the current chief of staff at CDC. I work closely with Dr. [Thomas R.] Frieden.

Q: Great. And can you tell me when and where you were born?

Villar: Yeah, I was born in 1970 in Los Angeles.

Q: Did you grow up in Los Angeles?

Villar: I did. Yeah, up until I went away to college at [University of California], Berkeley, and then I came back for a little while to LA [Los Angeles], and then back to the Bay Area, and then out here.

Q: Gotcha. Who did you grow up with?

Villar: Meaning siblings? I don't have any. Just me.

Q: Okay. You—

Villar: Actually, lots of cousins and stuff like that, but my dad is one of four. He's the oldest and his youngest sibling, my aunt was only five years older than me, so we kind of hung out a lot while I was growing up.

Q: Gotcha. And what does your dad do?

Villar: My dad is a clinical social worker for LA County. Right now he works with the homeless, but while I was growing up he worked with kids and he worked in gerontology. Now he's—went back to kids for a while, but now he's working with homeless people on Skid Row in LA.

Q: Wow. Did you talk with him a lot about his work?

Villar: Oh yeah, all the time. My mom's a teacher, so we talked. It was always about working hard, but doing something that gave back. Sort of so you could help others be better.

Q: Yeah. What did you say your mom taught?

Villar: Kindergarten. She taught kindergarten for years. I can't even remember how many years. It's a long time. Yeah, she's retired now.

Q: What kinds of things were you interested in growing up, up through say, high school?

Villar: Well, for fun I did a lot of swimming. I was on the swim team. And you know, normal kid stuff. I don't know. I liked to play outside. I loved being an only child. People always ask me that question, you must have been spoiled? No, my parents didn't have a lot of money. I wasn't spoiled in that way, but I think I had all of their attention for sure, which was great in retrospect. I had a lot of friends. I studied a lot. I had good grades and stuff like that. We spent a lot of time together as a family, also with my grandmother and my aunts and all of that. Traveled a little bit with my mom as I got older. My father didn't travel, so I became sort of her travel buddy, which was good—

Q: Where'd you go?

Villar: All over. We had family in Brazil, so we visited Brazil. We have family in Hawaii, so we went there. We went to Japan. My mother, her family's from Japan. We spent time in Mexico. It's close to LA, so that's easy to do. Yeah, those were the big ones, I think.

Q: Yeah, I thought maybe there's a Japan connection because of your name, Sachiko—

Villar: My name. Yeah. You said state my full name.

Q: Yeah, I appreciate it, and that's what I want people to do. Well, great. So when you were reaching the age when you were thinking of going to college or you're thinking next steps, what did you think was going to happen in your future?

Villar: Oh, I had no idea. I had no idea. I think I was always involved in student government and service clubs, and things like that in high school. I didn't mention that earlier, but—I really didn't know, and I think my parents were really good about not pressuring me to know. They never said, you have to be a doctor or a lawyer, or whatever. I think what they really did was foster a good environment for learning and really supported me, and when I was getting ready to go away to college they kind of said, you don't really have to know what you're going to do, as long as you finish your four-year degree. Along the way you'll figure out what you like and that you enjoy the studying and stuff. They were great about that. I ended up studying anthropology and ethnic studies at Berkeley. I didn't want to go to Berkeley actually. [laughter]

Q: Why?

Villar: Well, I was an LA kid, Southern California girl, I really grew up outside, and I loved being in the water and going to the beach and doing stuff like that. Berkeley was just not—it's the exact opposite of that. [laughter] It gets cold and rainy, and the beaches are not the ones you hang out on and sunbathe in. But we went to visit. Actually, my dad drove me up there and I loved it, so that's what happened. It was, at the time—I think it's still like this actually—when you apply to go to the UC [University of California] system

you can apply to multiple schools and just check the boxes. We did that, and my dad said, "Just check that Berkeley box, right there." [laughter] "Okay." So, I did and it turned out to be a good thing.

Q: Gotcha. So, you ended up majoring in anthropology. Why?

Villar: Well, again, going back to my folks. I think, you know—I wasn't really sure. I knew what their backgrounds were, so I—[phone rings] I thought I turned that off. I'm sorry.

Q: It's okay. [laughter]

Villar: I'll have to call them back. I liked it. You know, I took sociology. I took some history, and in the end I took anthropology—I took Anthro 3 which was cultural anthropology, and I loved it. We learned a bunch of stuff about different cultures in Papua New Guinea and all over. I just had a great experience and it was something I could actually get my head around. Sort of the history of people, and their culture, and how their cultures have developed over time and why people do what they do. It was just fascinating to me.

Q: Right on. So, what happened after college?

Villar: After college I went to work in politics. [laughter] It was not a great time on the job market. I had a job lined up, a different job. A friend of our family was running for California state assembly, and so I spent my summer working a little bit on her campaign, and then she offered me a job, and so right at the end I sort of switched gears a little bit instead of taking the other job. I spent time in Sacramento, and I spent time in her district office working for her for a little while. And then, getting back to this whole service kind of environment from my family, I went to go work at the AIDS [acquired immune deficiency syndrome] Healthcare Foundation in Hollywood. They needed some folks in their policy shop, and I had just—I was at the legislature, so it was a good way to segue to something different and still feel good about what I was doing. I did that for a while and realized I probably was going to need a master's degree, so I went back to Berkeley. I actually went to social work school—School of Social Welfare there. When I was getting ready to finish there, I applied to the Presidential Management Fellowship. Got into that, and then you have to decide where you're going to work for two years, where you're going to do your fellowship. Since I had been working on AIDS I was very interested in CDC and the history of what had evolved in the eighties, and how CDC had been involved. So I came to CDC and I've been here ever since. That's nineteen years ago.

Q: Nineteen years ago. So, that would have been in—

Villar: Ninety-seven.

Q: —ninety-seven, around there.

Villar: Yeah. Actually this month, August. So—

Q: Oh, okay. Congratulations. Next year is a big anniversary. [laughter]

Villar: Long time. But I feel very fortunate to be here. Talking about my AIDS history, I sit two offices now away from Harold Jaffe who was there at the beginning, and has all this history and does this great talk, if you haven't seen it—I'm sure you have. But anyway. It's amazing. I'm surrounded by phenomenal people who I feel make me better every day because they're just so smart and so passionate, and so great.

Q: Wow. So, what all have you done here at CDC?

Villar: Lots of things. [laughter] I started at NCHHSTP [National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention] in the policy office, and it was great. I did a couple rotations while I was there doing my PMF [Presidential Management Fellowship]. I went to cancer, I went to FMO—it's not called that anymore—anyway, Financial Management Office. And I spent some time at HRSA [Health Resources and Services Administration], which I also was very interested in because of the Ryan White CARE [Comprehensive AIDS Resources Emergency] Act at the time related to AIDS funding for municipalities. But in the end, I decided to stay at CDC. I did some work which then was a growing program around bioterrorism preparedness and response. I went back to

HIV [human immunodeficiency virus] though, and ended up there for a while and kept moving down into the branch. Then after a couple of years in the branch, I ended up out in the field. I went to Africa and lived in Zambia, and Nigeria, and then we came back for this job. I've been in this job now for six years.

Q: For six years? So, back in 2010—

Villar: Yeah.

Q: —it was chief of staff? Gotcha. Okay. What were you doing right before Ebola? Can you remember? [laughter]

Villar: Well, it was summertime 2014, and there were a lot of issues that we were dealing with around—there were some lab issues going on at CDC that we were trying to address. There was a lot of work around that. Then, sort of the regular day-to-day stuff of what I usually do. But I had just hired a new deputy chief of staff, and so working with her and trying to get her up to speed. And managing Dr. Frieden's calendar and giving him advice, and working with the others in the Office of the Director and all the stuff I usually do. It was busy because of the lab stuff, but it was nothing like what we saw with Ebola.

Q: Right. So, what happened from there?

Villar: Well, we started seeing the data and the cases, and just horror stories about what was going on in West Africa. I can't remember all the chain of events and the order in which they occurred, but Dr. Frieden went on a trip to West Africa and came back very passionate about needing to do something and needing to move quickly. So we immediately—you know, it was interesting—we had people out in West Africa earlier in the year in 2014, and they were in Guinea and integrated with the WHO [World Health Organization] response. Then it looked like things were getting better and WHO kind of said, we're not really sure we need this much of a response from you all, so we backed down a little bit. And then it continued to fester. I think the world was not really as aware until we got to the summertime, our summertime months here, and so by the time Dr. Frieden came back from his visit, he realized that it was getting much worse and that we would need to increase our response in the three West African countries. So he made a commitment—it's funny now—that we would increase our responder numbers to fifty. [laughter] I'm laughing because in the end we ended up having hundreds, and probably thousands overall involved in the response in one way or another. But at the time, that was a lot, so we had to move quickly to get those folks deployed. Then he was very interested in getting other parts of government involved because it needed quick attention. Interestingly enough, the response in the US was not as passionate as we thought it would be, or compassionate maybe is the word. I'm not sure. I mean, people in West Africa were dying every day and it didn't seem to be a whole lot of pressure to move quickly. We were all really struggling with that. I think at CDC, the bottom line for all of us is that we want to save as many lives as possible, regardless of where they are.

That's something that we were all really trying hard to do, and to prevent unnecessary deaths.

Thanks to Dr. Frieden's outcry for what was happening in West Africa, I think we got a lot of attention. Now, OFDA [Office of US Foreign Disaster Assistance], the part of USAID [United States Agency for International Development] which does the foreign disaster assistance, was mobilizing in the countries. We had an opportunity to work very closely with them, and they had not been involved in public health responses like this before. So we, with our sort of epi [epidemiology] and medical and public health expertise, we were able to integrate with them and really try to work side-by-side with them as to—they had a lot of experience in procurement and mobilizing people and things, and we were able to give them advice about what those things should be and who those people should be and what the countries really could use, could benefit from. I don't remember if it was his first or his second trip, but Dr. Frieden got off the plane and the president [Barack H. Obama] called him right away. "Tell me about your trip. Tell me what's going on." That kind of stuff. So Tom did, and I think that's really when we started to see more things mobilize like DoD [Department of Defense] getting involved, and others come into the forefront with their either people or financial resources or both. That was really, really helpful. I think around the same time, or maybe—I can't remember the exact timing, but we had Kent Brantly getting sick, and his colleague. That medical evacuation from West Africa also was going on and our experience at CDC with Ebola was not great in terms of the degree to which we were hearing that these folks were sick, the Samaritan's Purse folks were sick. We really didn't know what the outcome was

going to be. But they eventually got medevacked, as people know, to Emory [University Hospital]. They came here and they recovered and now have this phenomenal story to talk about. It's really, really amazing.

Around that time—well, I guess this was September 2014, and President Obama had come to visit, so that was a huge undertaking in terms of the planning, and the logistics, and those kinds of things. But also a critical turning point because during that visit is when he announced the DoD deployments for the MMUs [Monrovia Medical Unit], these facilities getting established to take care of people in West Africa. That was I think a critical turning point in the response, at least from the US government side. And I think for the world, too, because other people were more willing to pony up if the US was involved in a larger way.

Q: Were you involved in a lot of that planning for him to come down?

Villar: Oh, yeah. My staff and me, we did it all. [laughter]

Q: Yeah?

Villar: A lot of folks from around the agency were involved, but my staff were point and we spent, I remember—I'll never forget—all of the weekend prior to his visit, going through the manifest of who's going to be in the room and logistics planning. He had an advance team that came and they set up—they brought all the equipment and lights and

all this stuff. We worked very closely with them and they set up the entire few days before—he came on the 16th of September, I think. If memory serves me correct. It was a lot of work, but it was a great show of support for the staff. And it was, like I said before, a real turning point to the world in terms of the response to this horrible situation that we were seeing in West Africa. That was around the middle of September.

Not long after that, however—later that month—we had the case in Dallas. We had [Thomas Eric] Duncan in Dallas, who was eventually admitted to the hospital, and then some nurses getting infected. I think we were making lots of great progress in West Africa and we had the president's support, and all the partners' support. Then Dallas happened, and that was tough. That was really intense, and we had to get people on the ground quickly. We had to try to message appropriately, which was tough. Texas is a complicated state, as are usually most states, but in particular in Texas. You have a city government, and county government, and state government. Working with the multiple levels of government and working obviously with the hospital, and trying to make sure that all of the providers were safe. Nurses to custodians, and everybody in the hospital, making sure people had proper protection. Making sure that our guidelines were updated. Making sure that we had staff to support Texas on the ground. It was a very, very complicated time and very, very busy. I mentioned before, I spent my entire weekend getting ready for the president—well, after that I spent all of my weekends dealing with the response both domestically and globally. I'll never forget all the meeting and calls, and then we had to ramp up the number of staff involved, and it went from the extremes of—I don't even know—updating our guidance for PPE [personal protective equipment]

in hospitals to the very basic things of making sure that our staff at CDC who were working in an EOC [Emergency Operations Center] were being fed because they were working so hard and so many hours and weren't taking time to eat lunch or dinner, or breakfast for that matter. Many of them not seeing their families for days on end—those deployed, obviously, but those also working here who were going home for three or four hours at night to sleep, then coming back to work. It was a pretty intense time.

Q: How did you help to remedy that situation?

Villar: There were lots of different things that we did. We worked very closely with the CDC Foundation to buy some healthy food [laughter] for the EOC. Because it's really easy for people to pick up a candy bar. That kind of stuff. I remember walking through in the month of October and all you saw was Halloween candy everywhere. So we did that. We worked closely with the [CDC] Foundation, and that was even a tough sell at the time because the response was so critical, and what was happening in West Africa and here was so critical, that to be working with the Foundation and to be thinking that they would spend some of their donor money on food to feed people who were getting a paycheck and working for the federal government—that was not something people could really even get their heads around, but it was necessary in the end. We took up collections. We bought crates of apples, and we did all kinds of—I baked banana bread. I mean, whatever we could do to keep people going. It was a crazy time.

Q: Oh my gosh. I'm sorry, I'm a little confused still, but just probably because I'm new to CDC, about what the chief of staff does and what the chief of staff is. [laughter] It sounds like you had so many different responsibilities across so much. Is there an easy way—probably not—to define how you were involved in the response?

Villar: Sure. Just to back up for a second. I think that "chief of staff" anywhere is a little bit different, it depends who you're working for. In my case, I work for Dr. Frieden ultimately. Everything I do is for the benefit of the agency or to help the agency do its job, but ultimately, he's my boss. A lot of what I do reflects what his agenda is for the agency or his vision for the agency. In this case, Zika—I mean, Ebola became the number one priority for CDC. There were so many people involved, and so many staff involved, and so much of our expertise was needed in the field that it was natural we would be so involved. So it became his top priority. It became my top priority. We had never seen a response like this before in terms of the magnitude of people and hours and effort that it took. My role became more one of liaising between the response and incident manager and the staff in the EOC with Dr. Frieden, in making sure that folks understood his priorities and that they were able to not only understand the priorities, but then able to execute on them. Therefore, if they needed more money, we would work with the budget office and I would go to our COO [chief operating officer], who would help. Or if we needed more staff, I would talk to some of the senior leadership around the agency, saying, we need more staff. We need these kinds of people. We need that kind of stuff.

I think in the end, what ended up happening was CDC came under a lot of fire after Dallas, and there was a lot of pressure to—I think one of our disadvantages too at CDC is that we're based in Atlanta. It also can be an advantage, but I think at that point in time people were having a hard time understanding all that we were doing. There was a lot of pressure to do more and lean in, and people felt like we weren't doing some of those things. In the Office of the Director, we established what we called the liaison office, or an ODLNO [Office of the Director Liaison Office]. We brought in somebody who basically was a very senior policy person to run a small group of people, not a SWAT [Special Weapons and Tactics] team, but a small group of folks who could help put out fires and triage questions that we were getting from all sides in Washington [DC], but also from partners and so forth. The hope was that it would buffer the response a little bit and be able to handle things up and out of the agency that were not necessarily operational to the response in nature, meaning they were questions or they were planning or policy issues that needed to be addressed, whereas we really tried to insulate the response from some of that so they could actually focus on the deployments and the people and the labs and all that stuff that we needed to do. That's kind of what we did. I ended up overseeing that, and so all of the work around any sort of hospital plan or state preparedness plan, those kinds of things, my office would help coordinate. The response would produce the work, we would work with them on the politics of getting that through some kind of clearance system and out into the public and available for all those that needed it out in the world. With guidances and—not MMWRs [Morbidity and Mortality Weekly Report] so much, but with guidances and documents and plans and things like that. We ushered a lot of that through to help them try to stay focused on the core of the

work, which was really about the field and continuing to stay focused in West Africa, and really trying to contain what was happening. I think in that regard that we were able to do things, like mobilize staff in Nigeria when we thought things were going to go bad in Nigeria. But our staff and folks that we had trained on the ground in the FETP [Field Epidemiology Training Program] program really responded in Nigeria well and were able to contain that. Which I was personally very nervous about. I had lived in Nigeria. I mean, you know how big the country is, it's just—that could have been scary. But I think we were able to focus on those kinds of things and the response, and my folks and myself had to deal more with some of the bureaucracy and the politics of what was going on.

Q: Right. Can you give me an example of something that you worked on that was bureaucratic that you wouldn't want the response to have to deal with?

Villar: Oh, yeah. We had lots of calls, conference calls to update people and to share information, mostly with folks in Washington, and they were endless. At one point, for example, I said to the person I had brought in to work with us in the ODLNO, I said, "Go over there and track how many calls, who's calling, who's convening the calls, how many meetings in a week." So she did this matrix, and I can't even remember the number of calls. It was obscene. We were able to share that back to them, mostly HHS [US Department of Health and Human Services] but there were others involved as well, and say, look, this is not manageable. We can't do our work and do all of this. We were able to put in more of rhythm—we're going to have this many calls a week, or whatever, video conferences, whatever it was. That was one example. The IM [incident

management] structure is set up to respond, but there was this lack of a larger coordination mechanism for all of the agency to respond to others who had questions. So, there was that. We also developed a pretty good relationship with folks at NSC [National Security Council] at the White House. If we knew they were going to have questions about certain things we might be producing or they had opinions about things we were working on, we could convey that—[phone rings] I'm sorry. I thought I turned all that off.

Q: It's okay.

Villar: —we could convey that to people in the response in a way that was translated into CDC-speak, I guess. [laughter] For lack of a better way of explaining it, so that we could try to get ahead of the curve a little bit in whatever it was we were writing or producing for them, so that they had some insight into what was expected. That made things a little bit easier, but the whole thing was really intense and really complicated the whole time. We updated our PPE guidance a couple of times, so then you have to explain, why are we doing it again? And why didn't we get it right the first time? That kind of stuff. It's not that we didn't get it right, it's that we're learning more every day about responding to Ebola. We need to communicate that with hospitals and providers and people all over the world, and the way we do that at CDC is by putting out these updated guidance documents and so forth. So, those are a few little examples. [laughter]

Q: No, that's really helpful. Thanks.

Villar: Sure.

Q: It reminds me—I had the great opportunity to interview Barb [Barbara J.] Marston—

Villar: Oh, she's fantastic. Yeah.

Q: Yeah. And she talked about some of the same things. About kind of managing communication between—well, for her, it was Dr. Frieden and the field. I guess you're kind of in a similar position of trying to blunt the massive amount of attention that's put on CDC, and the demands of that, against the fact that this is a working agency and we have to do things.

Villar: Yeah. It's an interesting, actually, place to be in because we are a technical agency and people kind of pooh-pooh that sometimes, but really we have some of the foremost experts in the world on different topics including hemorrhagic fevers. And so really trying to insulate those folks so that they could actually think, and do some work, and look at the data, and work with the labs to see what the latest and greatest was coming out so that we could then adjust our response accordingly. You can't do that when you're on fifty conference calls talking to Washington a day. You just can't. We really tried to help so that the folks who actually understood or had much more understanding than we did around viral hemorrhagic fevers could work on Ebola and could actually focus on getting it right. In the beginning that was really hard—I think over time we got better at it. But it

was long days and nights and weekends for a good—I don't know—six to twelve months there in the heat of it.

Q: Who were some of the people you worked with from, say, the NSC or other agencies who were really important for you?

Villar: I guess I would back up a little bit and start with HHS. The secretary [Sylvia M. Burwell] was very involved, and she had a senior advisor at the time who's not there anymore, Leslie Dach. But the key person, I think, was Dawn O'Connell. She was sort of the coordinator for all things HHS. So if FDA [Food and Drug Administration] or ASPR [Assistant Secretary for Preparedness and Response] or BARDA [Biomedical Advanced Research and Development Authority] or other parts of HHS somehow needed to be involved, she was the point to coordinate all of that, and she's great. Always kept calm and very focused. She helped us stay on course. I spent a lot of weekends talking to Nicki [Nicole] Lurie, the Assistant Secretary for Preparedness and Response. I spent lots of nights and weekends talking to Leslie Dach. When Thomas Eric Duncan was infected and admitted in the hospital, my phone rang about four thirty in the morning and it was Leslie asking if I'd seen the news, and did I know what was going on, and do we have the test results from this guy? It was that kind of stuff. Beyond HHS, like I mentioned before, we did a lot of work with OFDA, so staying in good communication with them was important. Then people at the White House, at the NSC. Amy Pope came in a little later, and she's our primary contact now on Zika and things like that. They brought in Ron [Ronald A.] Klain, if anybody remembers the Ebola czar. [laughter] Who in retrospect—

well even during the time, I think—brought a lot of closure to some issues that were swirling in the ether, and he was able to either get decisions or put things to rest. He was, I think, in that regard a really good leader. He didn't always understand public health, but I think he made a real effort to, and where he could help, he did. In the end, I think we were—well, at least I was, and I know Dr. Frieden was very grateful that he was there and that he was put in that position to help coordinate the government's response. And then there were a bunch of staff that worked with Ron in the response, and so we had daily interactions with them. We even sent Lyle [R.] Petersen, who is now in charge of the Zika response, but at the time—up to work at the NSC and sort of embed there to try to do some translation for us in CDC-speak on that side. He was very honest with us in saying, this is not what they're looking for. This is what they're looking for, and can we produce that? How can we get them what they need to brief the president? I had lots of interactions with NSC and got to meet the president several times during that time period. [laughter] Which I'm not sure is good or bad. I mean he's a great man, but you know, its—yeah, you just don't know. Is it really good news that you're meeting the boss or really not so great news that you're meeting the boss? The big boss anyway.

Q: Are there any times when you met President Obama that really stand out in your memory?

Villar: Yeah. When he came here, it was fascinating. People always say, you look at a person when they go into the Oval Office versus when they come out of the Oval Office, and physically how they look so different. He was great. He was very engaged, very

thoughtful. He is a smart guy, I mean, really really—you could just see him following all of our technical briefs and stuff. He really was amazing. But he also to me, personally, he looked tired, and I thought, wow! This is crazy. And he asked for a cup of tea or something at some point—I thought it was coffee—later on I found out it was tea because he needed caffeine. [laughter] I guess? I'm assuming that, but anyway, it was great. He is a very smart man, and it was clear to me. Also, very interested in knowing everything that's going on and trying to figure out how his administration can help.

Q: Neat. So what happens with your part in the response after Mr. Duncan in Texas and subsequent to the nurses, that all gets crazy—

Villar: Yeah. It gets crazy because there's a lot more shift on the US. People are saying, are hospitals really prepared to handle Ebola patients? My god, we had to deal with a lot of planning with state health departments. What are their emergency plans if they should see more Ebola patients? What are the hospitals' emergency plans? Are they prepared? Do they have the resources they need? As you probably know, we had a limited number of high containment facilities who could manage infectious Ebola patients. There was all this discussion around that network, and did we need to ramp that up, and what did we need to prepare a regular hospital to do that, and did they have that? There was a lot of talk around that and a lot of planning around that and working with partners in hospitals and states mostly around that. And then there were issues like screening at the airports because there was a huge cry to close the borders, quite frankly, and not let people from West Africa or Ebola-affected countries into the US. There was a lot of discussion around

that, and I think that's one of the areas, for example, Ron Klain was really helpful. Recognizing that that's a very difficult political stance to take and that helping us get to a point where we were training people—CDC was training people in the West African countries to screen passengers before they got on the plane and then working very closely in the US with CBP [Customs and Border Protection] and others to try to survey folks and identify folks who might be sick coming in. My office developed this PUI form—person under investigation—which is another thing that our liaison office took care of, working with the clinical folks on the response to develop a form and a system that would alert people. Basically, somebody comes in from X country into an airport, New York somewhere, and they have fever and this and that. So they're going through an interview process and it's been determined based on their interview and the clinical assessment of the doctor at the airport that they need to have an Ebola test. That immediately triggered this system where we have to notify the White House and HHS and everybody that there's a person under investigation in this city, at this hospital. We'll let you know what the test results are. I would say that 80% of the time it was malaria. [laughter] I think that was an eye-opener for a lot of people in the United States who don't necessarily realize how huge of an issue malaria still is in other countries. So, that was that. And then, as a result of some of that, if a person went to a hospital where they were being tested, they were often isolated in a room or some place away from other patients until we knew what the result was. The problem with that was if they had malaria, for example, they weren't getting treatment as expeditiously as they could have because people didn't want to touch them until they knew it wasn't Ebola. So they would just kind of get stuck in this room. That was not good clinically because people, other people who had come through had GI

[gastrointestinal] issues or things where maybe they could need hydration or they could need to start anti-malarial medications right away, and that kind of stuff. These were the side effects of some of the panic and worry in the United States that we were seeing. So, really having to work with clinical groups and hospitals, and again the public health world, to try to educate people and to help them understand, so that they wouldn't suffer from other things unintentionally.

Q: It did not escape my notice that at one point you accidentally said "Zika" instead of "Ebola." [laughter] Which brings to the fore that we just went from one response to another from Ebola to Zika, and I'm wondering how the—do I have it right? ODLNO—

Villar: Yeah, LNO stands for liaison, so the Office of the Director Liaison Office.

Q: Gotcha. Has that kind of continued with Zika, or transformed in any ways? How is it now?

Villar: So, a couple of things we learned from Ebola. One is that the way the ODLNO started in Ebola was that we actually just put one person in the EOC and we just called it the OD [Office of the Director] desk. Their job was to help us understand in real time what was going on so that we could inform people up the chain. That then turned into two people, and then when it got really, really busy, we then moved it into this group of people and moved it upstairs to the twelfth floor, which is where our offices are, and that became a more regularized function over time. Then there were a lot of after-actions and

reports on Ebola, and that's still—it's still ongoing actually. [laughter] There's still meetings and so forth, but one of the things we realized was that that was a very valuable function and that we probably needed to maintain that in other responses. So going forward, we hit Zika, and we still have that function. It's not as intense or as large as it was for Ebola. Part of our challenge with Zika is that a lot of what we're looking at is infection in pregnant women, and that's a longer process. At least nine months as I understand it [laughter], we hope, anyway, before the babies are born. Anyway, it's a longer process, so it's not as intense in that regard. But there are a lot of similarities in that there's so much about Zika we don't know and we are learning every day, and so things are changing and evolving all the time. So, making sure that we communicate that clearly and that we are on top of all of the changes in terms of supporting our health departments, partners, and that we have the right people involved at CDC so we can actually add value and help coordinate. And one thing I didn't mention about Ebola, but which is true in the Zika response as well, which is having folks that speak Spanish and who—or Portuguese if we're talking about Brazil—but, so Brazil and Puerto Rico, and then Colombia, and so folks that are culturally appropriate to be responders and can speak the language. I mentioned Ebola—one of the big challenges we had there were French speakers. We had a hard time finding—after time went on because it lasted so long—finding French speakers to go to Guinea. We ended up asking folks from the DRC [Democratic Republic of Congo] to come in, who did and did a great job. Asking folks from Quebec and Canada to come in, and they did a great job. Anyway, I'm not sure how I got on that tangent, but I think that the answer to your question about the ODLNO is

that the function is still there. It is a little different, but there are also a lot of similarities to what we were doing in Ebola.

Q: Gotcha. Well, that's neat. It's two thirty now. I want to let you know because I'm sure that you have another thing to run off to—

Villar: Yeah.

Q: —but I do want to ask if there's anything else when you look back at Ebola, any memories you have or any reflections you'd like to give?

Villar: Sure. Well, there are many. I think I've alluded to this about the staff at CDC. It was an amazing, amazing thing to just see what people did. How they pushed themselves to do more and more in very difficult circumstances. Everything from taking canoes in and out of very difficult places to access so that they could do contact tracing in a small village somewhere, or—I have a really good friend who for months on end was—she was kind of scared to go and be deployed. And she was an EIS [Epidemic Intelligence Service] officer at the time and there was this expectation that all the EIS officers were going to go to the field and be deployed, and she was nervous. It took her awhile to gain the courage to actually go, and when she finally did—it was probably three or four months in—she was phenomenal. She did a great job and she came back so invigorated by her work, and feeling so positive about what she could contribute, but also that she could see firsthand that the countries were actually making progress and that things were

getting a little bit better. She went back again, and now she's decided permanently after EIS to work in global public health. Watching things like that happen, which are small to some people or in the bigger scheme of things, but actually this changed people's lives, the response to Ebola at CDC. I think there was a point where it got really difficult for me personally where I sort of said, I don't know that I can do this anymore. I'm going to walk away. [laughter]

Q: When was that point?

Villar: That was some time in the fall of 2014, I think. And a good friend and colleague of mine here at CDC basically said, "I hear you. This is very hard. We're all feeling under the gun and not sure what to do." But then she said, "You just have to finish this and then you can do whatever you want." She helped me get through that really tough time, and she was right! Finish what you started, and then the next thing comes—Zika or whatever it might be. [laughter]

Q: Right. No doubt. Okay. Well, thank you so much for sitting here with me—

Villar: You're welcome.

Q: —Carmen, it's been a pleasure. All right.

Villar: All right. Thank you.

END