Transcript - 2026 EIS Langmuir lecture

Giants, by definition they are legendary human-like beings of great stature and strength. As a kid, I thought giants were just that, enormous, mythical.

They lived in stories like Jack in the Beanstalk where you had to climb something great to reach something great.

In that particular story, a kid comes across a mysterious older man. Seeds are planted and he ends up on a path he didn't know existed. One that leads to giants, one that leads to the adventure of a lifetime. Growing up in rural South Georgia, I came to know giants in a similar way. In my hometowns of Baxley and Waycross, there was nothing giant about where I'm from, except for our sawmills, lumber yards, our rail yards, family-owned blueberry and dairy farms, and our Okefenokee Swamp stretching farther than you can see. There were no towering castles, no bean stalks to climb. No clear signs that said this is where the extraordinary begins. And yet, just like Jack, I too would meet a mysterious older man who would help me embark on an adventure of a lifetime.

Not at the top of a beanstalk, but in a place at the time that felt just as ordinary as anywhere else. And that encounter would set me on a path I didn't know existed, toward an adventure I could not have imagined, and toward a very different understanding of what a giant really is. In the spring of 2011, I was a 17-year-old senior in high school, sitting in my Health Occupations class when my teacher called me to her desk. She told me I had been selected to give a tour of our school to a group of visitors. I remember thinking, just a quick tour, a small interruption in a pretty ordinary day. But little did I know that tour would not be quick nor small nor ordinary. The visitors were Emory University Hubert Humphrey fellows, physicians and epidemiologists from around the world who were traveling through South Georgia to speak with students about careers in public health. So as we are walking through my school's hallways, I was technically supposed to be guiding them. Instead, they were guiding me. I was completely spellbound by their stories of responding to outbreaks and advancing global health. I didn't know that path was even available to someone like me. That was the moment I realized I belonged in public health and that was the moment I met my first giant. But on that day, something shifted. You see, among the Humphrey fellows, among those giants was a mysterious older man who had changed my life. Their fellowship director, Dr. Philip Brockman.

He too was a giant by every definition, protege of Alexander Langmuir. Thirty-two remarkable years of service at CDC, including as an EIS officer and director of the EIS program. A true pioneer who helped shape the field of applied epidemiology as we know it. On our tour, it did not take long for him to notice my curiosity or for me to ask far too many questions. It also did not take long for him to mention three words that would change my life's trajectory. Epidemic Intelligence Service. What started as a school tour became the first of many conversations, stories, and glimpses into a world I did not know existed. But what happened next is truly, truly what defined that moment.

Dr. Brockman made me an offer. Knowing that I would be coming to Atlanta that fall for college, he said, and very plainly, as he typically did, that he expected us to get together two to three times each semester. And he said he would make it worth my while.

As a 17-year-old kid, I did not really know what he was offering me, but I knew not to say no.

Here's the kicker. Dr. Brockman and I could not have been more different in every way imaginable. Maybe except for our height.

Yet he thought enough to bring me into his world. So over the years, Dr. Brockman became far more than a mentor. He became a door opener, inviting me into spaces I did not know existed. Spaces such as Public Health

Grand Rounds at Emory, conversations with CDC giants like doctors Bill Foege and Stanley Foster. Stories about his time in EIS and his career at CDC that made epidemiology feel not just possible but personal. What started as a single moment in a high school hallway became a pathway. And Dr. Brockman did not just open doors. You see, giants lead us forward. But they don't just do that. They also leave footprints behind long after they are gone.

So, if the giants before us show us what is possible, the giants among us show us what is required. Nearly a decade after first meeting Dr. Brockman, I stepped onto CDC's campus as an EIS officer in the class of 2022 with the division of global HIV and TB.

I knew I was stepping into a fast-moving world, but I did not know just how fast. Within the first month of EIS, I deployed to Tanzania to support a pretty massive project that would define my entire EIS experience. It was a national household-based HIV surveillance initiative. It had been roughly five years since the last HIV surveillance campaign in the country. So the pressure was on and the urgency was real. And before I knew it, I was no longer on the ground. I was climbing up the beanstalk, traveling across Tanzania to Dar es Salaam, Mbeya, Morogoro, Dodoma, Mwanza to support our surveillance work. I initially leaned into what I knew best, methods upon methods upon methods of applied epidemiology. And, then came my biggest challenge yet, leading an Epi-Aid investigation of Tanzania's pediatric HIV testing program.

What followed was months of delays, miscommunication over priorities, misaligned timelines, funding constraints, an ethical approval that just did not come on time.

At one point we had to pause the entire Epi-Aid and leave the country, but that is quintessential global health.

In essence, it felt like getting stuck halfway up the beanstalk. It was challenging, frustrating. I was nearing the end of my EIS fellowship and I did not want to leave that work unfinished. Now, here's the thing about mentorship. It doesn't just open doors. Sometimes, like Jack in the Beanstalk, it hands you seeds. Seeds that don't really look like much at first. A conversation, a suggestion, a pivot, an opportunity you don't feel fully ready for.

Before you know it, you're climbing. Now, when you first start climbing, at times you cling and hold tight to what feels familiar. But over time, I learned you cannot climb something like this alone. No one makes it to the top of the Beanstalk by themselves. I soon realized you must exhibit more than expertise, more than technical skills, but also emotional intelligence and teamwork.

What changed the trajectory of that Epi-Aid was not more reliance on methods. It was mentorship. Leaning on the giants around me, my EIS supervisors and mentors. Mentors like Rebecca Laws, Christine West, Drew Voetsch, Italia Rolle. Mentors who did not climb the beanstalk for me but made sure I didn't fall. Who sharpened how I was thinking, who pushed me to ask better questions, who helped me see what I was missing. Mentors who created a safe space where mistakes are expected, respected, inspected, and corrected.

Because of them, because of those giants, I changed how I led. Aligning with partners, delegating by expertise, letting local leadership, well, lead. In short, I stopped trying to climb along. Throughout my time in EIS, mentorship was the true beanstalk. It is how we rise into spaces we didn't know existed. It is how we navigate those spaces once we reach them. It is how this field moves forward and how it survives.

So if we are shaped by the giants before us and guided by the giants among us, then we have to ask an important question. Who will be the giants after us? When I joined EIS, I was part of quite a historic class. We all had different backgrounds, perspectives, came from different disciplines, had different pathways into the field of applied epidemiology. I remember thinking this is what public health looks like. Differences made us better. It sharpened how we interpreted data. It grounded how we served communities. It strengthened how we approached problems. It meant that when we entered a room, not one of us saw a problem in the same exact way

and that made our solutions stronger. You see, it's the priority of CDC to protect the health, safety, and security of the American people. Having an EIS that represents all backgrounds,

an EIS that is encompassed of people who can speak to all the different communities we serve is a CDC priority.

An EIS that reflects all Americans can serve all Americans and it leads to a stronger and better EIS and a stronger and better CDC. And my EIS class reflected this. However, I looked closer. Where was the structure, the system to sustain it? A few of my fellow EIS officers and I decided to build one. We really wanted to plant seeds for the next EIS giants from all walks of life. So for the two years of our EIS experience, we would convene amongst ourselves with EIS alumni and with EIS and CDC leadership to intentionally strategize approaches to recruit, support, and retain the best and the brightest into EIS and at CDC. To the table, we brought more than just statistics. We brought strategies and solutions, and change followed. For that, EIS leadership should be applauded.

As in Jack and the Beanstalk, we must be like the giants before us and the giants among us, planting seeds for the giants of the future. How amazing is it that EIS is celebrating our 75th birthday? How much more amazing would it be and how amazing of a birthday gift would it be to plant seeds for the next generation of giants for the next 75 years to help them climb the Beanstalk and have adventures of a lifetime? Because in the end the most powerful force in public health is not a pathogen. It is people. It is us. Giants.

Thanks, Danielle. You know, we have a lot of visitors that come to CDC and a lot of programs and they often come here, they want to learn how to replicate EIS in their countries and it's a real challenge and that's because most places can't get the level of support that we get for this program from our alumni, from our staff at CDC, and from all of our partners at state and local health departments who volunteer their time to help us recruit, to serve as supervisors and mentors and ambassadors of this program and Danielle's story is a great example of that care and appreciation for EIS that has passed on from generation to generation. So, thank you Danielle. Our next story is emblematic of our legendary involvement in outbreak investigations. From Legionnaire's disease to toxic shock syndrome to a more recent outbreak as told from EIS alum Julie Thompson, class of 2023 and Laboratory Leadership Service alum Maureen Ty from the class of 2021. Julie and Maureen.

Thank you so much for that story, Daniel. That is a tough act to follow, but I couldn't agree more that meeting people in this program, these giants, and hearing their stories, particularly about these legendary outbreak investigations, can truly guide the trajectory of your career. And, for me personally, I've heard many stories about anthrax hippos and various animal outbreaks that I found so interesting, but one that really stuck out to me was in 2023, I was an incoming EIS officer going through the recruitment process. And, so, as part of this process that many of you are in right now, kudos to you. It is exhausting. But I went to these talks that were being given by current EIS officers so that I could learn more about the work that their branches were doing. And one of those talks was by Julia Petrus who was the EIS officer in the Bacterial Special Pathogens branch at the time. and she's giving a TED talk and she starts off her TED talk saying on day one of EIS she gets the dreaded Microsoft Teams meeting invite and this isn't just any invite, it's a briefing with the FBI because there is a multi-state melioidosis outbreak and I'm an incoming officer I'm thinking what the heck is melioidosis I've never heard of that before and she goes on to describe this. Melioidosis is a disease that is caused by a bacteria Burkholderia pseudomallei. It's common in the soil and water in tropical and subtropical parts of the world like South Asia, Southeast Asia, northern Australia. And most people in the United States who get this disease have traveled to those parts of the world usually after they have contact with contaminated water or soil. It's also possible to ingest the bacteria and also inhale it. Fortunately, most people who come in contact with B. pseudomallei never get this disease, but among those who do, your symptoms can range pretty broadly from a skin abscess to things that are more severe like pneumonia, sepsis, central nervous system involvement, and death in some cases. And so, I'm sitting in the audience. I'm listening to Julia talk about this outbreak and it was just such a compelling story and, I think that's one of the benefits of you and strengths of people in the EIS program is their ability to tell these incredible stories that stick with you. And I ended up just being smitten with this group and ended up matching with the Bacterial Special Pathogens branch and I've stayed on as staff since and this is still one of those stories that is prevalent throughout our lore. Because in this outbreak there were four cases of melioidosis. What is this map? Okay. All right. Well, that's fun. We'll go back here for now. But there are four cases of melioidosis. Not in that map that is projected there, but in four different states. So, Georgia,

Texas, Minnesota, and Kansas. And there are two children that were affected and two adults. None of them had traveled internationally. And among these four people, three had central nervous system involvement, and tragically, two of them died, including a child. And then among the two surviving patients, they are still currently permanently disabled for the rest of their lives. So, it was a really tragic, awful situation, and there was a concern because with B. pseudomallei it is a tier season select agent and has the potential to be used as a biological weapon. Given that all four of these people never traveled internationally and that they were clustered in such a short period of time and none of them knew each other, there was a concern for bioteterrorism, hence the involvement of the FBI. And so, the group also had some additional hypotheses for how these patients could have gotten sick. One hypothesis is that this could have been a locally acquired environmental exposure, but at the time B. pseudomallei had never been detected in the environment in the continental United States. Another hypothesis was maybe this is an imported product, possibly an animal or a plant or a household product. This outbreak was coming off of the tales of a case of melioidosis after an imported fish was brought to the United States. So, one of the tools that CDC can use is full genome sequencing. So, we work closely with our Zoonoses Select Agent lab and the state and local health departments were kind enough to be able to send bacterial isolates from these patients to CDC for sequencing. And what was interesting about these results was that the bacterial strains from all four of these unrelated patients were genetically identical. They also clustered very closely with sequences from South Asia. Again, none of these people had ever traveled to that part of the world. So, the team is scratching their heads. How did this happen? And so, they start digging down into um possible routes of exposure or shared products. And we're going to skip this slide, but so the team at CDC works really closely with the state and local health departments to review medical charts from these patients. They asked the families questionnaires and reinterviewed them and interviewed them again to potentially find any shared source of exposure among these four patients. In parallel, our Zoonoses and Select Agent Lab is testing serology from um the patients families to see if they had exposures and they were also testing hundreds and hundreds of household products to see if any of these were positive for B. pseudomallei. And the lab described this like finding a needle in the haystack. They're testing hundreds of these products. Nothing is coming up positive. Meanwhile, the FBI is beating down the door asking questions. There are media stories about the pediatric death, the death of the adults, and then these permanent disabilities. And the pressure was really rising to find an answer. And so, the team literally goes back to the drawing board. What is known about these four cases? And we know that three of the four have central nervous system involvement which is uncommon for B. pseudomallei. Typically 5 to 10% might have central nervous system involvement. And in this situation the proportion was much higher. So they refined their search and focus on potentially any products that could be inhaled. And they want to go back to the homes of the families to collect more products for testing. But like Danielle mentioned, on the ground investigations are not just methods and statistics. There is real world empathy and challenges. And the family of the Georgia patient, this was a 5-year-old child who had just died. They didn't want CDC in their home. In our conversations with Julia she said that they didn't want anyone in the bedroom of this child because they were still in such an active process of grieving that it took a number of conversations and a number of times just listening to the families process this loss and ultimately they also wanted an answer. They wanted to know why their child was no longer with them. And so, they agreed and graciously allowed the investigators into their homes. And sure enough, a bottle of Better Home and Gardens aroma therapy spray was identified and tested positive for Burkholderia pseudomallei. And this strain that was isolated from this bottle was genetically identical to all four of the patient isolates. And so, literally the next day, Walmart issues a product recall. They pull thousands of these products off of the shelves and off of online stores. And because of this huge collaborative effort between state and local and federal governments and spanning across epidemiology and laboratory sciences, there were no additional cases that were identified or at least so we thought.

So, the family of a Texas patient reported that seven months before they had a family pet that knocked over the same spray and walked all over it. Two weeks later, that pet developed neurological symptoms and died. And of course, they buried it in their backyard in Texas. What's the big deal? Well, if this pet died from melioidosis and they buried it in their backyard, there could be, it could contaminate their environment and the last thing we want is for this tropical bacteria to establish itself in Texas. So, what do you do? You call an Epi-Aid and this is where I come in. LLS officer assigned to Dallas and we teamed up with the EPA. So the plan, they said it was simple. When they told me to do the Epi-Aid, they said, "Oh, you're going to go to the area. You're going to collect soil, water samples, pack it up properly, and ship it through Dallas to the CDC." And I said, "Of course I can do that. I just took a two-day shipping course, and I have this brand new certificate to prove it." So, I was so ready. And then Julia said, "Oh, and we're planning to dig up the pet and determine if it died from melioidosis." And I thought about it and I was like, "I don't know if I can dig up a pet, but Paris said in our summer course classes to say yes to everything." I'm like, "Yeah, I'll do it. I'll do it." And then EPA was brought in to

decontaminate everything. But there was one big thing we weren't sure about. There were conflicting reports if the pet was a cat or a raccoon.

So remember at this point it's been a year since the pet died and was buried. And we were thinking, well, if we ever find it and dig it up, it's going to be bones. And so the first time I met Julia, we were having dinner in Texas. And we were looking through, we were going through Google comparing the bone structure of a cat and a raccoon. Just in case we find it, we can determine what it is. The next day, we go to the site. We take soil samples, water samples, and then we manage to find where the pet was buried, and we dig it up, and then we set up a field lab. So, we got this carcass. It is wrapped in a blanket and towels. And when we opened it up, we were so surprised. It was intact. And it was a raccoon. Like I didn't need the knowledge of bone structures. It was still, it still had fur. It was very clear. And now we needed to determine if the raccoon died from melioidosis. And to do that we had to take samples from the brain. And I said before that the carcass was intact. Yes. Outside it was intact. But when we started cutting in the inside was for the lack of a better term soupy. And here we are like Julia was a nurse. That's was her background. And I was a bench, and I'm a bench scientist. And we weren't safe to say we weren't vets but we metaphorically rolled up our sleeves because you can't literally roll up a Tyvek suit. Well, you can but you shouldn't and decided that as long as we have the swab and we swab it through the eye that we'll get to brain tissues and guess what we did hit brain tissue and guess what that swab came back positive for B. pseudomallei we also found that there was no there was no contamination to the environment and I really want to give a shout out to the lab at VSPB because they did everything They gave us the swabs. They packaged everything. They tested everything. And we sent so much samples. Like you have no idea how many samples we sent. So after several media interviews and Julia and publications from the New England Journal of Medicine and MMWR, Julia decided, well, maybe she's ready to retire as a first year EIS officer. I was also ready to retire. I mean, what a great way to end your LLS fellowship, right? Like, I dug up a raccoon. But she was far from done. We were both far from done. Because shortly thereafter, we got a call. She gets a call from the Mississippi State Health Department. Another confirmed case of melioidosis with no history of travel outside the United States. And the next thing you know, Julie and I were together again on another Epi-Aid driving the government car down to Mississippi, which is, to tell you the truth, is another great story, but for another time. Spoiler alert, this is the Epi-Aid where we found a B. pseudomallei in the continental US. So, you should check it out. But safe to say that the work of a EIS and LLS officer is never done.

What a great story. Thank you, Maureen. Thank you, Julie. Now, we have a we've heard extraordinary stories about our people as well as outbreak investigations. Our next story highlights when those things come together. EIS and CDC are often the first to respond when there are major outbreaks, disasters, or public health emergencies. This is where our people and their outbreak expertise and experience are so valuable. EIS alumni Victor Eboh, class of 2017, and CDC scientist Ben Dahl, an adopted member of the EIS class of 2005, will share a story about connections now.

So in 2014 during the Ebola, West African Ebola outbreak, I was stationed in Sierra Leone where I worked as a case management officer at the Ebola treatment unit. For a period of two years. For any of you, for those of you who remember, that was one of the largest public health outbreak in the world at that time and across West Africa, Sierra Leone, Liberia, Guinea. I was a clinician working in Nigeria. had responded to the outbreak we had in Nigeria, and, we had 20 cases, and within three months we had contained the outbreak, and I remember working with partners who had supported us in Nigeria at the time. They were like oh you only had 20 cases. Do you want to go where you have about 50 to 100 cases reported daily in Sierra Leone, Liberia, Guinea? So I volunteered with the African Union and moved to Sierra Leone. At that time I felt okay I was going to be part of a system that was already working, and I arrived there, and you know it was devastating. There was almost nothing in place especially in the rural areas. So we helped set up an Ebola treatment unit and working with amazing healthcare workers from across the world. Public health experts from everywhere you could think about CDC inclusive. It was a very life-changing experience for me in Sierra Leone. One particular story I always remember was that there were several stories and several experiences that we had. We lost a lot. Some officers, some healthcare workers along the line. I remember there were no vaccines, there was no definitive treatment. All we relied on was our basic clinical knowledge and willingness to ensure that we contain the outbreak and saved as many lives as we could. But I remember at the same time we had a cohort of pregnant women who had been exposed and we had to set up a maternity ward within the Ebola treatment unit. And if you understand the epidemiology of the Ebola virus, the pregnant women have the worst outcome. So it was daring, it was innovative. We came up with, different ideas of how to transfer them. When they're in labor, we have dedicated ambulance, bring them over, have them treated, tested, and then sent back sent back home. You

know, everything looked good on paper at the emergency response center. And 2 days after at 3:00 a.m. I got a call. Oh, one of the ladies she's in labor. I was like, "Oh, okay. So, get the ambulance and bring her over to the ETU." Like, uh, no. She's actually delivered. The baby's on the floor. And everyone was running helter-skelter and like, "Okay, you know what? We have to dress up, suit up on a PPE, head out to the treatment to the location." We got there. It was hysterical. People were panicking but were able to safely take the mother and child out back to the ETU, treated them; ensure; tested them; they were not infected and then subsequently we reviewed our strategy, our protocol and we safely delivered about five pregnant women afterwards. It made me realize that during an emergency response and preparedness nothing ever goes to plan, but you always have to be ready to be innovative, to think quickly on your feet and be willing to work with people as quick as possible. That was my experience in Guinea, but I know Ben also he had quite amazing stories as well in Sierra Leone he was in Guinea so maybe he has some stories to share as well. Yeah, thank you Victor. In March of 2014, I was on a plane to Mauritania with our EIS officer in the Global Immunization Division, Jenny Harris, and we came across Pierre Rollin and a team from viral special pathogens who were headed to Guinea and she was like, "Ah, why am I going to Mauritania? I want to go to Guinea." And she ended up going four times. So, it's careful what you wish for. In Guinea we had a number of challenges. It was a Francophone country. There are not many French speakers here at CDC as we've found. And this outbreak from what I understand like the entire classes from 2014 and 2015 participated in this outbreak. The EIS class either here in headquarters or many in the field. This picture is KP Djawe and Candace Johnson. When I was showing this picture to Victor, he said, "Wow, KP, he looks so young." Sometimes that can age you. But I think one thing we found is that there's a lot of different opportunities one can get if you say yes. So here's a picture of Dr. Frieden, Candace Johnson and I headed heading to the field. And sometimes you might be a little afraid like we're this was a scary outbreak. And yet one thing that really impressed me about CDC, impressed me about this class is just so many people saying yes and yes again and again being taken away from one's family. This picture is we had three other EIS officers, Jenny, who I mentioned first there in the in the red. We had Max to her his right and then Lisa Moorhouse was a public health adviser is a public health adviser who was really integral in this and then Negar Aliabadi. We had just so many EIS officers standing up and going again and again not maybe for one opportunity to say okay I worked on an Ebola outbreak but saying we need to get this this done. This is a picture of Mike Kinzer and I in August of 2014. This is when there had been cases like kind of spreading throughout in March of 2014 it looked like it was going to be a traditional Ebola outbreak isolated in a rural area but by the time Victor was working on it and by the time I was working on it, it was spreading throughout the countries it really almost no end in sight. I remember during this visit Dr. Frieden came and was doing a tour of the three countries and Guinea was the last country and he had been I think hosted by Pierre Rollin and then hosted I believe by Tom Ksiazek in Sierra Leone and then he got to Guinea he's like whoa who are you guys you're looking kind of junior here but we were and but we still we made the most of it. One thing that I found too is that with the opportunities, you never know who you're going to get a chance to work with. So here, this is Fatima Coronado, who was one of our Epi leads. She's doing just kind of real simple basic epidemiology, planning out a campaign in the Peninsula of Conakry. We had Christine Dubray, who's in the room, who became an Epi team lead. She ended up supervising her EIS supervisor. So, you never know what's going to happen, who you're going to be able to boss around. So, be nice. But,

we did basic epidemiology. In this picture of when we were doing some contact tracing, you can see cases in the lower left of this picture. We're in a village and trying to just track down where cases were. And this reminds me of John Snow. Reminds me of the basic idea, we didn't need fantasy computers. We just needed to find where the cases were and it was in a difficult environment. I mean there was a lot of fear and violence. This is a picture of an ambulance that was being meant to transport patients and the villagers said no. They burned it down. They said, "You're bringing Ebola to us where you'd have a a land cruiser show up and they were saying, "Okay, you're the association here. You're bringing it." We always had to be on edge and we had some EIS officers literally chased out of villages by people with machetes. And so it was a tense period and yet we had to listen to the community. We had to do a lot convincing people that it was real. And so we're in this meeting in the village and then we had our community health workers all saying Ebola's real and then this person in the back showed up in this mask. I'm like what the heck is going on here? Like, am I going to make it out of here? But we had to keep our hopes up too. And I think that's one spirit within CDC and we're letting ourselves drive each other and through difficult periods finding ways to to make the most of it. And so there was hope. And it was dangerous, but as I said, there was hope. This is from an ETU at an Ebola treatment unit that they would have the patients who were leaving sign their name or initial their name, and it was also shown to those going who were in the units because there was a lot of fear early on there really was not much survival if you were, the one reason why they burned that ambulance is if you went into an ambulance you weren't coming back. And so we had people like Victor working in these clinics and trying to offer hope. And I was wondering Victor if you could talk a little bit about like how did you go from being a clinician and treating people to joining the EIS program? Yeah,

thanks Ben. And so during the outbreak in Sierra Leone I interacted with a lot of CDC EIS officers and in one of the interactions we had; at that time I had never heard about EIS. One of them asked, "okay so tell me more about your background". I am from Nigeria I work as a clinician. It's what I do. And she just said, "oh, I'm an EIS officer", assuming I knew what EIS was. I was like, I haven't heard. What does EIS stand for? And she said, oh, Epidemic Intelligence Service fellowship. Oh, and you know, she explained there's a two-year fellowship program. You have, presently you have a class and everyone comes out for about four to six week rotation. Like interesting. Okay, tell me more about it. I went online. I looked it up. I searched. I was like, okay. So, I'm eligible to apply. And then I went ahead and applied. This was in 2016. We didn't have the option of Zoom. There was no hybrid option. You had to fly down to Atlanta for an in-person interview. And, I came for the interview. It was exciting for me. It was my first time in the US, and I went through the process and I was accepted I matched with GID, Global Immunization Division. I was in the Polio Eradication Branch, and it was an amazing time. Two years. I was involved in domestic and international response. During that time, I learned a lot about outbreak response investigation, surveillance strengthening, communication, and working with other partners. Even at the time Ben was also at GID. We interacted, shared our stories about working in different countries, Sierra Leone and Guinea. After that, I transitioned to the task force for Global Health. I continue with Polio Eradication where I still lead a team of epidemiologists that have responded to Polio outbreaks in about 21 countries, globally. In the last seven years, EIS officers have been part of our outbreak response activities in many countries. Often times they're even the first to arrive when there's an outbreak declared so it's been a very interesting process. We're working on vaccine preventable diseases with Ben in GID even though I'm not CDC but at the Center for Global Health, we still have a lot of programs together, so speaks to the connections of how you might not know where you end up meeting and working together. So, it's always good to like be respectful to work harmoniously with each other and be open to learn as much as possible. Yeah. And I think that's a a great trait of CDC and also, have fun, maybe have some disappointments. My greatest disappointment from Ebola was when the Joint Information Center said I could not be interviewed by People magazine, and I had images of being like the sexiest epidemiologist alive, and they said that's not our audience. I said who are you kidding? Like, who wants to read the MMWR? They want to read people, but, whatever. But, still, having fun. And so, we did have to do a lot. It was a lot of reporting. There was things we have to do and be professional, but there's ways you can also have fun with that too. And so, I would have to do weekly reports for Dr. Frieden and Barb Marston. And one thing I started to throw into my reports was like how can I be efficient with words? And I I love haiku. So like five syllables, seven syllables, five syllables. And so I started having an Ebola haiku in almost every report. It's a great way to go, I think. So such a NIH vaccine escape of suspected case concrete campaign. Hey 575 gets the points across. And Barb who is a good friend of Eric would also respond to me sometimes in haiku. And it was a way to again stay professional but also have those connections. And I think one thing I also noticed when Eric was asking to do this talk, there just were some unexpected connections. So Danielle was talking about Dr. Brockman.

Dr. Brockman was my advisor for my master's thesis and without him, I wouldn't be here. So he, I was a very enthusiastic student in his Parasitic Disease class, and he introduced me to Dave Addiss. I came here as a work study student, and it's in 2000 and haven't left. Julie and I worked just a couple months ago on a Marburg outbreak. And again, it's these connections that can happen through a lifetime. And so, I think one thing I love, and I'm so happy to be here on the stage today, especially after the trauma we've been going through, is that we have this lifelong connection, and it's, I think one thing, I'm not an EIS member, but, and I feel that we are connected, and it's something that when Eric asked me to do this, I of course said yes. And I think, Eric, you want to close with a few words. Before

we speak to the entirety of the panel, I just want to comment on, Ben and I were talking about it a bit, and trying to recollect our memory on this, about something that really brings together the people, the connections, and the outstanding experience that comes to bear in really hard situations like everyone was describing. And that was about Barb Marston. Barb is an alum of EIS from 1990 and as we were working to, with the last cluster and chain of transmission in Guinea and Ben at this point was basically a resident of the country. He'd lived there for so long. We had a family that had been really torn apart by Ebola and there was a mother who was pregnant and she went ahead and delivered the child and died either during childbirth or immediately after and the baby was exposed. And I just remember Barb spent the entire weekend just going into overdrive, calling on every possible connection, talking with the FDA and the pharmaceutical industry until she was finally able to get an experimental treatment and was able to get it to Guinea in time for that newborn baby who survived. And that then was the end of that final cluster in Guinea; and as we track data over time ended up being the last country in the outbreak to be named to declared Ebola free in the end of the outbreak. And so, that has just always stuck with me. So, many of you are either alumni or know alumni and work with extraordinary people at CDC who do

extraordinary things and many of the people that do great things are not EIS alumni but we work together on these things and you probably have stories like Barb or like Danielle. You've helped someone come to CDC, and you can see in the link with Ben as well with Dr. Brockman. You, whether you're an officer, or an LLS officer, some other capacity. You likely supported some outbreak that we've responded to or EIS officers have been involved. And for responses, we know everybody at CDC plays a role to make this possible. So, it's really, it is about the people, and it is about the connections that extend well beyond EIS. So, if you could please just join me in congratulating again the full panel for sharing their stories with us today.

And I want to thank all of you for being with us at the conference and for being with us at the Langmuir session. And a special thanks to our EIS alumni association and the CDC Foundation for their collaboration in the EIS oral history legacy project. We're thankful that this week we're capturing a lot of other stories from alumni to preserve and share about our incredible people, outbreak investigations, and connections that have benefited CDC and public health in so many quantifiable and unquantifiable ways. And from our session today honoring our 75 years, I never had the pleasure of meeting Dr. Langmuir, as I was told this week I should call him Alex. I think he'd be really proud of EIS continued evolution and ongoing legacy of great people at CDC doing really great things. So, happy 75th anniversary to our alumni, to our current officers, to all our staff at CDC, and to all our partners at state local health departments and ministries of health around the world who have helped make this program so special and CDC so special. So, thank you to all of you and happy 75th anniversary.