

MWSP Ep 004 – Dr. Suzanne Donovan – Part 1: Outbreak

Announcer: From Curtco Media.

Dr. Suzanne Donovan: Imagine a hospital that 50 percent of the time does not have power. Many dead bodies were lined up against the wall. The floors were covered with bodily fluids. There could be a child next to a dead body in a room. There were many of the patients were naked. They didn't have clothes, there were no sheets.

Bill Curtis: That was the voice of a true American hero. Infectious disease specialist Dr. Suzanne Donovan describing what she saw on her visit to an Ebola unit in Sierra Leone. I'm Bill Curtis and I'm joined by my co-host, triple board-certified physician Dr. Stephen Taback. How you doing, Steve?

Dr. Steve Taback: Hey, Bill, it's good to be here.

Bill Curtis: This was a pretty remarkable discussion we got to have, isn't it?

Dr. Steve Taback: I'm still reeling, actually, from the impact that she's had on us. There's so many great physicians out there. But then there's the physicians' physician. There's somebody who elevates themselves to a whole other level, not just because of her expertise in her field, but because of the type of human being that she is, that she's willing to risk her own well-being, to care for others, and also to help prevent future illness throughout the planet.

Bill Curtis: You know, at a time like this, I think that our country has issues and we have some things to be embarrassed about. But one of the things that's a real sense of pride is that when someplace in the world needs truly special medical attention, they call someone here in the U.S. and we have heroes that respond.

Dr. Steve Taback: No, I agree with you. I mean, I'm a very patriotic person, so I see so much of what's good about this country. It's easy to overshadow or take for granted the amazing things that we do as a country, as a people, as a community. Suzanne Donovan really embodies those philosophies that actually make this country great. She is a truly gifted and generous human being. She's in a class by herself.

Bill Curtis: Ok. So, Steve, should we dive in?

Dr. Steve Taback: Absolutely. Let's go.

Bill Curtis: Dr. Suzanne Donovan joins me and Dr. Steven Tabak on Medicine. We're Still practicing.

Dr. Suzanne Donovan: Well, it was an interesting invitation, I got a phone call from the W.H.O. and basically they asked if I could help out with doctors and nurses who were being infected in the hospitals in West Africa. We lost an entire generation of health care providers during that outbreak. I said yes immediately. And the person on the other end of the phone call said, no, I think you should think about it for 24 hours. This is a big decision. We've had to evacuate some of our personnel. So I gave it 24 hours and I called back and said that I would go. That was after I talked to both my kids who are teenagers at the time. So when I flew over there was actually kind of interesting because I was going over there wearing a hat of being the expert and how to prevent infections being transmitted in hospital.

Bill Curtis: Actually, how is Ebola spread?

Dr. Suzanne Donovan: Ebola is spread by contact with infected fluids. And that could be blood. It could be stool. It could be vomit. The number one risk factor, though, for Ebola in West Africa was the burial practices that were going on there.

Bill Curtis: The burial practice.

Dr. Suzanne Donovan: Yes. So when someone dies in these countries, the families gather. They they bathe the body, they hug the body, they kiss the body. They take the water.

Bill Curtis: That must have been very frustrating for you.

Dr. Suzanne Donovan: Well, it it it certainly underscored the importance in an outbreak of using an anthropologist to address some of the cultural practices. Sierra Leone did.

The W.H.O. did use some anthropologists. And we were using them to try to work with the communities so that they could still follow their burial practices, but do it in a safe way. But going back to your original question, I arrived and when I arrived, the first thing you do is, you get training from the U.N. of how not to be kidnapped, how not to be shot. They gave me a badge with my blood type in big letters. And so I put underneath the blood type, do not transfuse, because I thought it would be better for me to exsanguinate than to get a transfusion during an Ebola outbreak. So during that training, I got pulled out because the hospital that I was gonna be going to, there was one doctor left, a U.S. doctor, and I was told that doctor just became infected with Ebola. So I jumped in the jeep with my buddy, who is a French physician, a Swiss physician. Fantastic. And we traveled eight to 10 hours to the eastern border, Sierra Leone. He was in the guest house. My first Ebola patient was a U.S. physician. And I knocked on the door. He answered the door and he clearly was sick. And then what ensued as he did not want to be evacuated because it was nighttime, he knew how difficult that was going to be, the evacuation. He wanted me to put him in the hospital, which I said was not a good idea, because, number one, we did not have consistent power in that hospital. And it was a very high risk situation and I had not even been in the hospital and I knew it was a high risk situation.

Bill Curtis: When you went to visit him, were you protected at the time?

Dr. Suzanne Donovan: No. So. So I think what it's really important when you talk about highly fatal diseases that are infectious, is my approach is I do a risk assessment. Although we talk about using the highest level protection when you're actually taking care of a patient, touching the patient particularly in the advanced stages. If someone is, you know, five feet away from me and I'm talking to them, there is really not an immediate need for what we call PPE, personal protective equipment. So how did these doctors get infected? So you have two populations of doctors. You have the nationals who have the risks in the hospital, but they also have the risk in their community. So where did they get infected? And then you have the doctors who are coming from Europe and from the U.S. to help. Ebola is a very unforgiving disease. So the infectious dose of Ebola is like six to eight virions. It's tiny. If it landed on your skin, you're not going to get infected. But if you have small abrasions, if you have irritations, if you touch a mucous membrane, that would be enough for you to get infected.

Bill Curtis: So is it transferred by like sweat? Could someone, the doctor that you went to visit, if he had just opened his door and you touched the doorknob, is it something that.

Dr. Suzanne Donovan: No, and you can see we don't we didn't have really any sustained transmission in the U.S. with the cases that we had here. When transmission occurs, it occurs at the very end of the illness, when the the amount of virus or what we call the viral load is very, very high. And so the highest risk are going to be the health care workers, which is why the health care workers are always the canary in the mine for Ebola and other hemorrhagic outbreaks and then the second part is handling the body, which is teeming with millions of copies of virus. Which is why these burial practices were so high risk.

Bill Curtis: You got there. You had one fairly disappointing conversation.

Dr. Suzanne Donovan: So I'm very persuasive. It's very hard to say no to me.

Bill Curtis: I get that feeling already.

Dr. Suzanne Donovan: Yes. I convinced them it was in his best interest to be evacuated by me and my buddy. The journey back to Freetown was quite interesting because you can't go in the ambulance with him because it's a highly infected environment. So we followed him and we had a police escort because there's police stops all along the way and our escorts kept on stopping. And so this guy's, this physician is critically ill and we are both wondering, my buddy and me, Frederique Bosch, why do they keep on on stopping? And so I finally asked, like, have you been drinking? And they admitted that they had brought alcohol on the front of their police car because it was cold, it was about 75 degrees. And they needed to keep warm. So they had to keep stopping so that they could go to use the bathroom.

Dr. Steve Taback: Oh, my God.

Dr. Suzanne Donovan: So we finally got to Freetown and we got this very brave U.S. physician into the hospital there where he was evacuated. The next morning to the U.S., he was in the ICU at Emory for many months and survived.

Dr. Suzanne Donovan: So what is the treatment that he was given in order to survive?

Dr. Suzanne Donovan: Well, that's such an excellent question, because we talk about the mortality rates for the mortality rate for health care workers in Africa who get Ebola is 70 percent. The current.

Bill Curtis: Meaning, the death rate for those listeners.

Dr. Suzanne Donovan: YSo seven out of ten individuals who get Ebola that are health care workers are going to die, if they're in Africa. You have no supportive services in Africa. You don't have oxygen. You don't have ventilators. Very difficult to do IV's. So you don't have the support or services. But the death rate, if you are evacuated to Europe or to U.S. or developed country is much less. I'm not minimizing it. Almost everyone who had Ebola was in the intensive care unit. They were critically ill. Many of them developed kidney failure and failure with their other organs. But many of them survived. This type of support is not available.

Dr. Steve Taback: What percent would you say actually survive once they've gone into multi-system organ failure? Is it typical for the rest, Is it commensurate with the rest of the data relative to multi-system organ failure for standard septic shock that we see in the First World?

Dr. Suzanne Donovan: I think it is. And if you look at actually the death rate in the U.S. of the Ebola infected health care workers, I don't know one health care worker who died. The only individual who I believe died in the U.S. was the African patient.

Bill Curtis: If they survive, are there ramifications having had the disease?

Dr. Suzanne Donovan: Absolutely. Absolutely. We're, much of this we don't even recognize, we're recognizing now that there's reservoirs where this virus may persist. We know that there's long term impacts on your eye. I evacuated or helped evacuate three of my colleagues. So it shows you the number that get infected. These were people I worked with.

Dr. Steve Taback: Are you seeing reservoirs within the body that then cause ongoing inflammatory damage?

Dr. Suzanne Donovan: Yes

Dr. Steve Taback: Or reservoirs, vis-a-vis a Typhoid Mary, where you can be infectious and be infected, or but not be sick from the disease

Dr. Suzanne Donovan: Both, both both.

Dr. Steve Taback: Once you've been infected and you have developed immunity to the virus and you have survived, you no longer can be reinfected.

Dr. Suzanne Donovan: With that subtype.

Dr. Steve Taback: I see

Dr. Suzanne Donovan: So it's a subtype, its very similar to a kind of dengue.

Dr. Steve Taback: So there are multiple subtypes,

Dr. Suzanne Donovan: Multiple,.

Dr. Steve Taback: I see.

Dr. Suzanne Donovan: So to go back, I think to your your your your original question. You're not out of the woods if you walk out of the hospital. We know that a month out, you still can detect the virus. And we're learning more every time. And it's probably different per the individuals, right? because there's probably a little bit of a different immunologic response. I think there's a lot more that we don't know about Ebola. We kind of look at Ebola that everyone dies or they get very sick. I personally think that there's a lot of subclinical infections that are going on in Africa. And we really, I wanted actually to check all the health care workers and I wanted to check the dogs because there were dogs going through all the Ebola units. And I wondered about other

mammals besides bats, which are a big reservoir for Ebola. You know, are they also carrying this virus?

Dr. Steve Taback: So let's step back a little bit. Just from the very beginning. The W.H.O. came to you and you said you didn't even think about it for 24 hours. Have you always had this kind of courageous. Right, that you're going to walk into the lion's den and without even much consideration, you say you're going to be there because in this permissive society where everybody gets an A. And everybody is a hero because they helped an elderly person walk across the street. The fact that somebody would actually put themselves in harm's way, which to me is the definition of a hero, for a greater cause, it is truly heroic. And yet it's something you did with almost no thought whatsoever. You knew right away instinctively.

Bill Curtis: Over and over and over again, Steve. She's been back to these kind of outbreaks many times.

Dr. Steve Taback: Indeed.

Dr. Suzanne Donovan: Well, I thank you for those thoughts. But this is what I would say is, you know, this is kind of what I do. I'm an infectious disease physician. I'm a specialist in infection control. How diseases are transmitted. So, and also,.

Dr. Steve Taback: I'm sorry. I know lots of infectious disease doctors and I love them. They're great physicians. I rely on them every day. But to have the courage, truly the courage and the dedication to walk into such a dangerous environment is truly amazing and inspiring.

Bill Curtis: We have to take a short break, but when we return, Dr. Donovan's going to describe what it's like to enter one of the most dangerous places on earth. Stay tuned.

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Bill Curtis: We're back with host Dr. Steven Tabak and our very special guest, infectious disease specialist Dr. Suzanne Donovan.

Bill Curtis: When you were there in the hospital. Tell us about what you saw. How many patients were there? How did you handle so many patients?

Dr. Suzanne Donovan: So the first first day I walked in with my buddy, because you always enter in a unit with another health care provider.

Bill Curtis: You you use a buddy much like when you go scuba diving.

Dr. Suzanne Donovan: So I'm a diver. So to me, when I would train people, I said, you know, your approach to going into Ebola unit is very similar to going scuba diving. You have to be very compulsive. You have to go through your checklist. You do things the same way every time. So when you don, where you put on your PPEs, you put them on the same way, the same sequence. And when you doff, which is taking off of it, you take them off in the same way. Very meticulously and you dive with a buddy. So the buddy is checking you and you're checking the buddy and you try to stick together. It was a little tough in this unit because when we walked in. Imagine a hospital that 50 percent of the time does not have power. It's during the rainy season. To get into the unit, you have to cross a little wooden bridge with running water. You're gowned up with a mask that is now fogging up because you're in the tropics.

Bill Curtis: You're just gowned up. This is not like a space suit.

Dr. Suzanne Donovan: I mean, it's like a space suit. Yeah, that's a Tyvek suit. I'll send you a picture.

Bill Curtis: Sounds good. Well, actually, You know, anyone who who sends us an email will send them a pictures of you in your getup.

Dr. Suzanne Donovan: And in our our get up, we put our first name so that everyone knew I was Dr. Suzanne. So that the patients, because it was very frightening. Many of these patients were from remote villages. We looked like we were from another planet. And the unit was filled with about 120 patients, which is really was the largest unit that I know of, many dead bodies, because once that physician was infected, no one went back in that unit. So bodies were lined up against the wall. The floors were covered with bodily fluids.

Bill Curtis: Oh, my goodness.

Dr. Suzanne Donovan: The wards were co-ed. So there, there could be a child next to a dead body in a room. There were, many of the patients were naked. They didn't have clothes, there were no sheets. And so when we went in there, no one had been in there for for a couple days. We brought in what's called ORF like a Gatorade, a cheap Gatorade, because one of the reasons you're you die, to answer your question, is there is such profuse diarrhea that there's a lot of disturbances in things like, um, potassium, potassium and magnesium And I I actually think a lot of these individuals died just from a arrhythmias. And Emory published their data of how difficult was to keep up with the potassium and magnesium,.

Could you measures the potassium and magnesium..

So there was nothing. So you're just guessing it was we know we we we we don't have renal failure. You have no idea of potassium.

Dr. Suzanne Donovan: We had three lab tests. We had an Ebola test. We had a test for another hemorrhagic fever called Lassa fever. And then we had the ability to do a rapid malaria test.

Dr. Steve Taback: Does it matter, though, what they have? If you're just treating symptoms anyway, why bother having even any of those tests? You have somebody who's bleeding, having diarrhea, having fever. Are you going to treat them differently?

Dr. Suzanne Donovan: So that that that's a great question. The Ebola test was critically important for two reasons.

Dr. Steve Taback: Epidemiologically,.

Dr. Suzanne Donovan: Epidemiologically, if we had a confirmed case. Every contact of that individual had to be followed up, and that is how you stop an outbreak. That's not what's going on right now in the Congo. Number two, the PCR test, which is a very sensitive way to detect the virus. Once that test became negative. You could leave. And so these patients could be trapped there for a long time, so these tests were very important for morale and getting patients out of there. And hopefully back to their villages, although many of them were shunned. So I think that was the moment when I realized I was in a situation that I had not encountered before. I've been in a lot of dangerous situations, but when I was in that unit with patients surrounding me, you know, trying to ask for help with bodies lying on the floor, part of you could feel a little bit of, you know, this is not a good situation, Suzanne. And also, I'm a single mom. And I thought to myself, how did I get myself in this situation?

Bill Curtis: Well, what was what was your goal? Was your goal actually to to save the people in the hospital, to save the town from future outbreaks, to get them to stop burying their parents by hugging them and washing them with,.

Dr. Steve Taback: In other words, what he began. What he's asking on behalf of your friends and family. What were you thinking and what has been wrong with you?

Dr. Suzanne Donovan: Well, my my first goal. I'm a passionate advocate for health care worker safety. When those health care workers, when those nurses in Dallas became infected because they were not provided the appropriate protection and education, I was incredibly angry about that because I think we failed them. And I think we take health care workers for granted. Health care workers in the emergency room or in inpatient units can be beaten, can be hit. They're exposed to communicable diseases. They sometimes put their life on the line. And so when I initially went there, my goal was whatever help health care workers were left, I wanted to protect them. And by the way, not one health care worker while I was there during that first, my first deployment got infected.

Dr. Steve Taback: Congratulations.

Dr. Suzanne Donovan: Thank you.

Dr. Steve Taback: That's amazing.

Bill Curtis: I'm sorry, First deployment?

Dr. Suzanne Donovan: Yes, I was there three times. So that was my first goal.

Bill Curtis: Amazing.

Dr. Suzanne Donovan: My second goal was to come up with some creative solutions and out of the box solutions, because remember, I didn't work for the W.H.O. I didn't work for the CDC. So I didn't have to listen anyone. And so one of the things that I implemented was using survivors to care for the patients there. Right, so you were limited. ,

Bill Curtis: that is a great idea.

Dr. Suzanne Donovan: Yeah Thank you.

Dr. Steve Taback: They're predominantly immune, correct?

Dr. Suzanne Donovan: Yes and we paid them. And then the last thing I did was close down that hospital, which I felt was way too dangerous. And the way it was set up, the hybrid model, but also the setup. When you're dealing with a highly infectious disease, we have a certain approach. Kind of what I'm talking about was scuba diving where you don't want patients leaving, you don't want them mixing, you don't want suspects with confirmed cases. And we just had no control. We had no security. We didn't have really a very good engineering plan. And so when you deploy with the W.H.O., you give your recommendations at the end. And one of my recommendations was to close down K.G.H. was called Kenema General Hospital. And it's kind of like My Lai, when people, when I'd go back, they'd say, you work KGH because it was known as such a dangerous place. And it closed. And I was told WHO will never invite you back. You're

putting, you're basically closing down their model. And I said, well, you know, what do I care? I'd rather do what's safe for their health care workers there.

Bill Curtis: Did, did you convince the townspeople to stop burying their dead in that fashion?

Dr. Suzanne Donovan: So that was not my role at that time. We had many people. And so that was, you know, the CDC partnering with a lot of the epidemiologists and that while we did hire an anthropologist. And so part of what we would do is we would allow them to do a burial where they could see the body because they didn't trust the body was actually in the coffin. So they wanted to see the body was in there. We had kind of at a distance so that they wouldn't hug the body or have intimate contact. We'd allow them to put like a blanket from their village or something personal in the coffin. We would bathe the body with bleach. You know, Ebola's a very fragile virus. Bleach was kind of, you know, the currency we used, but we could have used other types of disinfectants. But bleach is cheap.

Dr. Steve Taback: Hand sanitizer effective or not?

Dr. Suzanne Donovan: There's no hand sanitizer there. So we use bleach and water.

Bill Curtis: But would it be effective?

Dr. Suzanne Donovan: Alcohol would be effective. Yes.

Bill Curtis: So, Dr. Donovan, you've been around the world in some of the strangest places that I can't even spell. I wonder if you could tell me how you compare your experiences with governance in other countries, some underdeveloped, some developing, some even industrialized, like Singapore, the U.S., Finland, France, Canada. Tell me what your observations are about how these governments are handling your field.

Dr. Suzanne Donovan: That's an outstanding question. And, you know, I think that really depends on the country that we're looking at. In general, I spend most of my time in under-resourced countries and those countries do, just do not have the ability to have

an effective public health response without external aid or an effective clinical response. So I just returned from Nepal, where there are two outbreaks going on. The main outbreak is a Dengue outbreak. And, you know, there is a very, very large clinics that we're calling fever clinics where there's thousands of patients being seen, very little clinical support. If you don't have resources as a patient, you don't get treatment at most of the institutions. It's always difficult for me to see people die from vaccine preventable diseases in these under-resourced countries when they would really benefit from being immunized. And many of these vaccines are being declined by our communities here in the United States.

Bill Curtis: Suzanne, tell us about something good that's happening in this world when it comes to communicable diseases, infectious diseases. Clearly, you've taken your last 30 years and dedicated to diseases like AIDS.

Dr. Suzanne Donovan: So I you know, I saw my first AIDS patients in nineteen eighty five in Tanzania, Dar es Salaam. And you know, it was wards and in Moon Belly, which was the hospital there filled with people dying with HIV, most of them also with tuberculosis, which is probably the most common infection internationally that complicates HIV. And I'm old enough that I was there when AZT was introduced and then we had two drugs and then we introduced in '96 '97, the cocktail which totally changed the face of HIV, all of a sudden we had a disease that progressed in one direction which is really into the hospital, and then people would die, where people were getting their lives back. They were going back to work. Having children, really have normal lifespans. And it's incredibly gratifying to see the advances of what really our country has done with a lot of the expedited medication approval through the FDA to get these new drugs out there and to people with or without insurance, because remember, HIV has been carved out by the federal government. And so if you don't have insurance, you will in most states have access to care for HIV treatment. Definitely in California. If you have no insurance. You're documented, undocumented. You will get treatment for your HIV. And that is a very important thing to do irrespective of the insurance coverage, because treating someone with HIV means it's not going to spread to their partners. So it's a public health intervention. It's not only going to keep them healthy, it's going to break the chain of transmission because this epidemic is driven by untreated individuals. Treated individuals, if they're taking their medication, do not transmit this disease for the most part. I've been taking care of women who are

pregnant for the last 20 years. Hundreds of women I've had no infected babies, zero at my institution. All those individuals I treat during the pregnancy. We treat the babies after they deliver. I've not had one infected baby. This is huge from an infectious disease standpoint and this is something that can occur in resource limited countries. The Gates Foundation and other foundations have been incredibly supportive. In addition to the U.S. and providing access to care in countries like Africa, that have a very high rate of infected women and infected pregnant women are providing therapy to prevent transmission.

Bill Curtis: Well, Doctor Suzanne Donovan, I have to say that. The way you have dedicated your life to making our planet a better place and helping the rest of us and being so selfless and diving into some of the most dangerous areas in the world. Well, there's a special place in heaven waiting for you. And we want to thank you very much. You are a hero. Tell me if someone wants to follow you and learn more about you. Where should they go?

Dr. Suzanne Donovan: I have no idea.

Bill Curtis: There's no Web site. There's no.

Dr. Suzanne Donovan: I am the most unsavvy person about any of that.

Dr. Steve Taback: I think that speaks volumes as to the type of human being that you are. And let's not edit that out at all. I think that's an important statement right there, which says it all. Absolutely. You are a person for the people and you're not about marketing in any way. I want to echo what Bill says. I'm just actually in awe and and honored to have had this time to spend with you. And it's been a real pleasure meeting you and talking to you as well. I mean, really a wealth of information both.

Dr. Suzanne Donovan: Thank you.

Bill Curtis: Dr. Steven Taback and Dr. Suzanne Donovan. Thank you for making this such a special episode of Medicine. We're still Practicing. Next time in part two of our conversation with Dr. Donovan, we'll talk about the importance of immunization and how the anti-vax campaign may be putting us all at risk. You don't want to miss it. If you like

what you hear please tell your friends. And let us know how we're doing by leaving a comment. It really helps if you give us a five star rating and we really appreciate it. You can also subscribe to the show on Apple podcasts, Stitcher or wherever you listen to your favorite podcast. This episode was produced and edited by Mike Thomas. Audio Engineering by Michael Kennedy. And the theme music was composed and performed by Celeste and Eric Dick. Thanks for listening.

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