Sawbones Episode 62: Ebola

Published November 4th, 2014

Listen here on mcelroy.family

Intro (Clint McElroy):

Sawbones is a show about medical history, and nothing the hosts say should be taken as medical advice or opinion. It's for fun. Can't you just have fun for an hour and not try to diagnose your mystery boil? We think you've earned it. Just sit back, relax, and enjoy a moment of distraction from that weird growth. You're worth it.

[theme song Medicines by The Taxpayers plays]

Justin:

Hello, everybody, and welcome to *Sawbones*: A Marital Tour of Misguided Medicine. I'm your co-host Justin McElroy.

Sydnee:

And I'm Sydnee McElroy.

Justin:

Kind of a, a, a, unusual one today for us, Sydster.

Sydnee:

That's right, Justinster. [laughs].

Justin:

Kind of a weird topic today. Uh, we're gonna talk about something that a lot of people have been asking us to delve into and we have fought tooth and nail to keep from doing, I would say, but-

Sydnee:

Yeah, we try to stick with our theme for the most part, as far as our show. You know, we, we talk about medical history, about diseases or treatments or people who got it wrong in an effort to, you know, heal humanity and kind of make jokes about it.

Justin:

Yeah.

Sydnee:
So it's harder when a topic is, uh, one, not really historical, but current.

Justin:
Yeah. Happening.

Sydnee:
And two, not at all funny.

Justin:
Not really a chuckle fest with, uh, oh, of course, we're talking about Ebola.

Sydnee:
Yes. So a lot of, a lot of our listeners have emailed us and tweeted at us that we should talk about Ebola. Um, personally, I've had a lot of people ask me when we were gonna talk about Ebola? Um, and the problem with it, and I think we, we may have said this actually in our vaccine episode, which I would, would say is kind of a similar idea, is that, um, one, it's not really a history of something that we got wrong. You know, there is no, there is no long history of Ebola and all the ways we tried to treat it in the past that were, that were dumb and the crazy things people came up with. That doesn't really exist. It's a fairly current illness. I mean, if you consider the 70s current. It's been around since then.

Justin:
So, uh, not as many, uh, goofs if this is your first episode of *Sawbones*. It's, it's normally lighter than this, we assure you. Uh, but we're also not gonna be too dire. I don't think that this will be a particularly up... Hopefully not a, a, a straining episode to listen to-

Sydnee:
No.

Justin:
... with any luck.

Sydnee:
No, I don't, I don't wanna bum everybody out. In fact, I think, uh, one of my goals would be that we can calm you down if you're worried.

Justin:

Here's hoping. And Sydnee, you have a bit of a back history with Ebola. Can you talk about that?

Sydnee:

That's true. You make it sound like I have a personal interaction with Ebola, which I thankfully do not.

Justin:

No. No. Nothing like that.

Sydnee:

No. I've never had Ebola. I never knew anybody-

Justin:

To your knowledge.

Sydnee:

Well, you would know.

Justin:

You would know. You're right. That's true.

Sydnee:

I'll get into that, but you would know.

Justin:

You would know. You would know. That's fair.

Sydnee:

Yeah. Uh, but I've always kind of liked Ebola.

Justin:

That's a weird thing to say.

Sydnee:

I know that's a weird thing to say. And I used to... See, this is a problem. I used to, a year ago. I would say that a lot. I've, I've... And I tell my medical students that I love Ebola. I love hemorrhagic fevers. And that used to be funny. It's not funny now.

Justin:
It's not funny.

Sydnee:
I know. I can't tell people that anymore.

Justin:
It probably wasn't even that funny then, but like-

Sydnee:
They laughed.

Justin:
Okay.

Sydnee:
If they didn't think it was funny, they were good at pretending.

Justin:
So now your old boyfriend Ebola is back and is not at all amusing-

Sydnee:
No.

Justin:
... in any way.

Sydnee:
No. Now, this is why... Let me just say, this is why I used to love, I used to love Ebola.

Justin:
Yeah, before it broke your heart.

Sydnee:
So I decided to be a doctor when I was 12, and that was a direct result of reading the book, *The Hot Zone*.

Justin:
Mm-hmm [affirmative].

Sydnee:

Uh, you may be familiar, *The Hot Zone* is Richard Preston's, uh, nonfiction, but dramatized account of the history of the Ebola virus.

Justin:

Mm-hmm [affirmative].

Sydnee:

Uh, it covers real people and their responses to various Ebola outbreaks throughout history and kind of covers where the Ebola virus may have come from. But he definitely does it in a way that it, it reaches beyond just informational. It's to get you freaked out and fascinated by a really scary virus.

Justin:

I haven't seen you rereading that actually around the house.

Sydnee:

Well, I have because I haven't, uh, read it again for a very long time, especially not since I've become a doctor. And I will tell you this, it's, I mean, it's a great book. It's thrilling. Uh, if it was, you would think it was nonfiction in the way that it was... Or you would think it was fiction, sorry, in the way that it was written. So it, it's definitely, I would say an enjoyable read if you like that kind of thing. But as a physician now when I read some of the descriptions of kind of the medical end of it, it's a, it's a little, it's a little out there. It's got me rolling my eyes some like, "Well, I mean, I guess you could call it that."

Justin:

So, Syd, well-

Sydnee:

I guess that's true.

Justin:

... give us your, your non-flowery straight up, what's the... Give me the straight dope on this Ebola thing.

Sydnee:

Okay. So Ebola is a virus. It's in the, uh, Filoviridae family. Um, they, because they look like filaments. Filo is filament. They look like strings, these viruses. The genus is Ebolavirus. There's one other virus related to it

you may have heard of called Marburg, named from Marburg, Germany, where it was isolated. And, um, Ebola itself there are five different strains of. So the-

Justin:
Flavors, if you will.

Sydnee:
Yeah. Five flavors of Ebola. The, the worst flavor I'd say. Well, the worst for us. The best, if you're Ebola would be the current strain that is-

Justin:
And if you are Ebola, by the way, just stop listening you jerk.

Sydnee:
What are you doing?

Justin:
Buzz off.

Sydnee:
Disappear back into the jungle, please.

Justin:
Yeah.

Sydnee:
Thank you.

Justin:
Get outta here.

Sydnee:
Uh, so the, the current outbreak in west Africa is due to the Zaire strain of Ebola.

Justin:
Mm-hmm [affirmative].

Sydnee:

Um, named for formerly the country of Zaire, now the Democratic Republic of Congo.

Justin:

Right.

Sydnee:

There's also the Sudan strain. And the Zaire and the Sudan strain make up the majority of outbreaks that we have seen in the past. There are a couple, um, less common ones. The Thai Forest and the Bundibugyo, Bundibugyo strains that have had some isolated outbreaks. And then there's, interestingly, there's a Reston strain, which is actually named for Reston, Virginia.

Justin:

Oh!

Sydnee:

Uh, reason being is that it was isolated there in monkeys that had been imported to the US for various laboratory research. Um, and they, they found the virus there. It only infected monkeys though, which is thankful because, um, it was airborne unlike what I'll talk about with these other viruses.

Justin:

Now, Sydnee, we have, uh, uh, we have talked a lot about how Ebola doesn't necessarily have a long history. Is that, is that true?

Sydnee:

That's absolutely true. So when we go back to the first outbreak of Ebola, the first cases that we are aware of, we're going back to 1976. Uh, if there were isolated cases in humans before that, we don't know about them. So in 76, it's kind of interesting at the same time... Well, not the exact same time, but in that same year, I should say, we have two outbreaks of two different strains of Ebola. The first one occurred in the Sudan. Um, and it, it spread so quickly that we barely had time to even kind of research it or trace it or try to figure out what was going on before it burnt itself out. This was followed by one, a, a f-, a few months later in Zaire. And this one... Then Zaire. And this one we were actually able to send researchers, several different countries, uh, and kind of try to figure out what this virus might be, what might be causing it and what we could do about it. Um, the Sudan strain killed about half of the people who got it and the Zaire strain during that outbreak killed almost 90%-

Justin:

Wow.

Sydnee:

... of the people who, who got it. So as far as what we know a lot of the, uh, epidemiological work, it, it gets sketchy because we're dealing some very rural areas in Africa where people don't necessarily have addresses where you can trace them to, you don't always know where they work or what they've been doing or who people are. Um, it's, it was difficult to track people down. But as far as we can tell, the initial outbreak started in Sudan after a cotton factory worker became ill and went to a hospital. Um, and this is a common theme you'll see in these outbreaks. So how he got ill we don't know. There was a theory that there were a lot of bats who, uh, who had kind of nested in, in this factory where he worked. Could it have come from a bat? We don't really know. The point is he got to a hospital and it probably spread from the hospital-

Justin:

Right.

Sydnee:

... through healthcare workers and through the use of probably, uh, not clean needles or other contaminated, uh, hospital equipment. That's our theory. We have a little more grounding for the following outbreak that happened in Zaire. So a teacher who worked in Zaire was touring the, the northern part of the country, which is actually along the border of Sudan. So did this start in Sudan and then mutate and spread to Zaire? That's very possible. We don't know. They returned back to a village called, uh, Yambuku, and it was at this time that the teacher started becoming ill. Again, where did it come from? We're not completely sure. There was a report that the teacher had bought some antelope meat off-

Justin:

Yeah.

Sydnee:

... off of from a roadside stand.

Justin:

It's always the most delicious meats too that have been ruled out for me by Ebola.

Sydnee:
[laughs]. You know what a fan Justin is of antelope.

Justin:
Ugh, can't get enough of that stuff. Fry it, bake it. Which way isn’t good? I actually don't know.

Sydnee:
Which to be fair it probably didn't come from the antelope meat, but one of the teacher's friends did buy some monkey meat from that same stand.

Justin:
Again.

Sydnee:
And that's, and that's a common theme, bush meat, or, or the meat of wild animals that is, uh, first of all, the animals are killed so you come in contact with their, their flesh and their blood. And then secondly, eating that meat may be a source of the virus possibly. So this teacher went to the local hospital thinking that he had malaria, which was a, a fair bet. That's usually you got a fever, you out a headache, you start to feel lousy in many parts of Africa, you probably do have malaria.

Justin:
Right.

Sydnee:
That's a fair, fair guess. So he went to the local hospital symptoms of malaria. They gave him an injection thinking that he did in fact have malaria. And unfortunately that was not, that was not what was wrong. Uh, later he did die from the virus that at that point was still unknown. And unfortunately at this hospital as well, they had the practice of when they would give injections, they would rinse the needle off in water.

Justin:
Ooh.

Sydnee:
But then they would reuse it.

Justin:
No. Well, that doesn't help.

Sydnee:

So at this point, uh, an epidemic exploded from this hospital. Uh, the, unfortunately one of the most common things that was being done there were, um, like multivitamin injections given to young pregnant women.

Justin:

Oh.

Sydnee:

So those needles were reused and reused. Many people came in seeking treatment for malaria. Those needles were reused. And once, you know, one needle was dirty. I mean, it started spreading from person to person and you can kind of see how this happened.

Justin:

And, and what I imagine is gonna be a recurring theme, it feels like the, the lack of proper, uh, like medical resources is really at the heart of it becoming a, a, a giant issue.

Sydnee:

Absolutely. Absolutely. Uh, this, this hospital was almost certainly understaffed to begin with and they didn't have enough equipment, they didn't have enough doctors. Um, it was, it was mainly being run... It was a mission hospital, mainly being run by Belgian nuns who were nurses, uh, but they never had enough of the, you know, other medical personnel at this kind of facility. And they didn't know that this was a danger. They didn't know that, you know, this was, we're talking about a pre-HIV era, uh, just pre, uh, but people didn't know the possibility of disease.

You know, how severe that could be from needle to needle. You know, you wouldn't know that just rinsing it off might not be enough. Um, so everybody at the hospital began to become sick. Uh, and the, the epidemic spread from there. It actually only slows down during this particular outbreak when the hospital staff pretty much either all was either sick with Ebola or had already died from Ebola, um, or had just taken off out of fear.

And once the hospital shut down, this actually kind of helps to diffuse the outbreak, which is a sad, a sad statement. And, and again, just re-emphasizes what the problems are. They isolated it though. So at this point, we don't know what this virus is. We're trying to figure it out. Um, they start sending samples, you know, doctors and, and researchers at the site start sending samples back to, uh, the CDC, um, Belgium, you know, the UK, several different countries and samples of, of blood from one of the Belgian

nuns who died and saying, "Can you figure out what's here? What is causing this? What the heck is going on?"

Um, it's interesting 'cause when you read accounts of this, and this is both, uh, from *The Hot Zone* and then from an interview I read with one of the researchers in, in Belgium, when they sent it back samples of the blood, they were just two test tubes in a thermos full of ice that were shipped, you know, to other countries. So by the time that this thermos reached each of these labs it was reported that first of all, the ice obviously had melted.

Justin:

Right. Right. Because it's a bad way of doing that.

Sydnee:

And secondly, uh, in both accounts, one of the vials had broken.

Justin:

You know, again, I haven't like the proper resources to transport it, but you think at the very least, somebody could just, "Oh, you know what, I'll drive it myself. I'm not gonna go FedEx this time. I'll just go ahead and put that in the cup holder and get that bad boy to you right away."

Sydnee:

Well, that'd be an awful long way to drive from Africa to the US and also impossible.

Justin:

And also impossible, I guess. Get your own plane, maybe? I don't know.

Sydnee:

You're right, though. There definitely was not much caution being taken because you know what, what must have occurred in both cases that a laboratory worker reached into a thermos filled with broken glass.

Justin:

Broken glass. Right.

Sydnee:

And-

Justin:

And Ebola.

Sydnee:
And Ebola blood, to fish out the other vial.

Justin:
And since we had no idea, he probably just dumped it out and washed it out and was like, "Cool, cool, coffee right in here."

Sydnee:
No, but-

Justin:
"Free. Hey, check me out. Free thermos."

Sydnee:
"Look, it's for some Campbell's later." So, uh, they started trying to isolate what, what virus may exist. Um, in Belgium, they, they took a picture of it. They found what would be known as the shepherd's crook because it's like a long curly string that kind of looks like a shepherd's crook.

Justin:
Right.

Sydnee:
Um, it doesn't always take that shape, but it does often. Um, but it was actually our CDC, the Centers for Disease Control in Atlanta who figured out that it was not Marburg, which is initially what everybody thought. So they look at this virus, it looks like the then known virus Marburg. Um, and it's funny 'cause you, you read, you read accounts of the researchers running to libraries and looking at Marburg in books. Can you imagine going to a library and looking at a book now?

Justin:
I can't.

Sydnee:
I mean like the computer's right there.

Justin:
I would rather get Ebola, honestly. I would not. That was a joke, I'm sorry.

Sydnee:

The CDC figured out that it was a brand new virus. Uh, they still hadn't named it. The naming of Ebola is actually interesting. So at this point we've deployed researchers and doctors from all these different countries to go to Yambuku and try to figure out what's going on and how can we help? Um, while they're there, they're up late. This is the account told by one of the scientists from Antwerp, um, Peter Piot, who was up late with a group of researchers in a tent drinking and trying to come up with a name for the new virus. Uh, everybody thought, you know, "Maybe we should name it Yambuku, 'cause that's where we are." But then they thought, "Well, that's a, a pretty terrible way to stigmatize an area, right?"

Justin:

Yeah. I imagine this is one of the very few, uh, times in which researchers weren't like falling all over each other to get it named after them.

Sydnee:

Yes.

Justin:

Like, no one's like, "Hey, maybe we call it Dave."

Sydnee:

"No, I'm good."

Justin:

"Maybe Dave the virus maybe."

Sydnee:

"I don't... I think I'm okay with this one."

Justin:

"No, I'm good."

"Dave, do you want it?"

"No, I'm good. Just name it something else, I guess. That's fine."

Sydnee:

[laughs]. They, uh, they looked at a map. So they're, they're all sitting there debating. They look at a map on a nearby wall and uh, see, you know, a map of the area and they see that there's a river, not too far from that site that's called the Ebola River. There is in fact an Ebola river. It's actually mislabeled on this particular map, so it wasn't the closest river. So it was just kind of random that they picked that.

Justin:

Boy, howdy though? I bet, uh, I bet tourism to that old Ebola River certainly died down. No, no more, no more fishing exhibitions there.

Sydnee:

Nobody's rafts on the Ebola River anymore.

Justin:

"Come, come experience the thrill of whitewater rafting down the Ebola River!"

Sydnee:

This is, this is actually really interesting if you ever, uh, if you like this kind of thing. Um, if you read the history of another virus, the Hantavirus, which existed out in the Western part of the US, there was a similar problem trying to name this one, um, 'cause they almost named it the four corners virus for the four corners area of the country where the four states come together. But then that would've killed tourism to the four corners.

Justin:

Right.

Sydnee:

So, so there you go.

Justin:

There it is.

Sydnee:

If you like that kind of history.

Justin:

If you like this, that's true.

Sydnee:

There's a whole story there.

Justin:

Yeah. At least half of this podcast loves stuff like that.

Sydnee:

[laughs]. At least half of our listeners must.

Justin:

Here's hoping.

Sydnee:

So, um, all told from this outbreak, you know, we figured out the Ebola virus, we figured out this Zaire strain. They eventually were able to, you know, kind of differentiate between that and the Sudan strain. About 600 people between the Sudan and, and the then Zaire got Ebola, all told. And then it kind of vanished. Uh, there were a few more cases, some sporadic cases in 79. Throughout the 80s, pretty much nothing.

Justin:

Hmm.

Sydnee:

There's no Ebola. So where did it first pop up? Was it from, you know, a bat in a cotton factory? Was it from eating monkey meat? Uh, who knows? Where, where did it, where did it come from? It was living in the jungle. It, it burst out, unfortunately killed many people very quickly and then vanished… until 1989. And this is where the Ebola virus makes a really strange appearance in Reston, Virginia.

Justin:

Okay.

Sydnee:

So as I mentioned, uh, there were some monkeys that were brought to the United States to do some laboratory research and they were dying of an illness that researchers eventually figured out, looked very similar to Ebola, you know, with the, the hemorrhaging and the, the very dramatic symptoms, which we will, we will go into. The problem with this strain of Ebola was that the, there were monkeys caged in the same room, but who had no physical contact with each other who were all getting Ebola.

Justin:

That's bad.

Sydnee:

Which was very scary as you can imagine to the scientists involved.

Justin:

Right.

Sydnee:

Uh, because although they didn't prove it, they, they theorized that this indicated there was airborne spread of this particular strain of Ebola. But thankfully, the humans who were in direct contact with the monkeys, all of them never developed any symptoms, although some did develop antibodies to Ebola. So they, you know, they took blood from the people and checked it later and it looked like they had survived Ebola.

Justin:

Hmm.

Sydnee:

They had developed, you know, little antibodies which are body-

Justin:

So what, what had happened there? Is it just harder for that particular strain to infect, make the jump from monkeys to humans or?

Sydnee:

Ex- exactly. For some reason this particular strain is just not very adept in infecting humans.

Justin:

Huh?

Sydnee:

It's good at infecting monkeys. And certainly it could, it, it'd gotten to the human bloodstream, but as far as actually causing disease, making people sick, it didn't do that. Um, which again is a great relief since it may well have been airborne.

Justin:

Right.

Sydnee:

Um, throughout the 90s and then going into the 2000s again, we saw little outbreaks here and there, uh, in different parts of Africa. Again in the Sudan, in the, in the DRC and then in Uganda and Gabon. Um, and then we

discovered the two, the other strains. But up until currently, the single largest outbreak of Ebola virus anywhere had been about 400 cases.

Justin:

So how did, how did Ebola get its start with us, Sydnee?

Sydnee:

Well, Justin, I need to keep talking about this very important topic, but before I do that, I'm, I'm gonna have to insist you go visit our billing department.

Justin:

All right, fair enough. Let's go.

[ad break]

Justin:

So, Sydnee, I ask again, how did Ebola make the jump to us?

Sydnee:

Again, it's really interesting. And if you, if you like this kind of thing, uh, although *The Hot Zone* is a dramatized version of events, uh, Richard Preston paints a really interesting picture of being able to trace the Ebola virus back, uh, to a cave, a theoretical... You know, well, an actual cave that he theorizes maybe the origin and that there are bats that live there. And did the first person who get it, uh, go hiking on this mountain and stay in this cave and maybe got bat guano in a cut, and that's where it came from? Um, it probably though is more than anything the result of our incursion into, you know, untouched, rural spaces.

Justin:

Hmm.

Sydnee:

You know, the more, the same kind of idea with HIV is we begin to invade parts of the planet where humans have never been, we're gonna keep getting, um, these kinds of scary, awful diseases that, that had sent... You know, had been unknown to us previously. So what are the symptoms.

Justin:

Uh, I know this.

Sydnee:
Go for it.

Justin:
I think the media has prepared me well for this.

Sydnee:
Probably.

Justin:
Uh, I know that you're gonna get symptoms that are sort of like the flu.

Sydnee:
Yes.

Justin:
Fever, chills, body aches, stomach pains. Quick sidebar, by the way, get your flu shot. Kills a lot more people in the US than Ebola has for sure.

Sydnee:
Absolutely. Go get your flu shot.

Justin:
Get your flu shot. Anyway. Uh, flu-like symptoms. And, uh, um, there are... There's fevers, I know that. And then when it gets really bad though, there's, there's weird bleeding, like you bleed from your eyes and your, your bottom and even maybe your pores, right?

Sydnee:
That's a really good... Yeah, that's a, that's a, that's a good description of the symptoms. And I think it's because of the bleeding that comes that it gets so, uh, publicized. I know when I was 12 and I read *The Hot Zone*, I was, uh, horrified and fascinated by the descriptions. And the descriptions in the book I'd say are overly dramatic of, of what can happen to the human body from this virus.

And I think that's also why it's so highly publicized in the media, 'cause they say things like your organs liquefy, which is not... Medically, I probably would never use that terminology, but people hear that and it's kind of like a car crash. You can't look away. You hear that and you wanna hear more, even though it's horrifying to you. Um, and, and I think that's why Ebola gets so publicized even though, like Justin said, we're coming on flu season now and the flu is certainly gonna kill many more Americans this season

than Ebola is. But ultimately this can lead to multiple organ systems shutting down.

So, uh, you can start hemorrhaging in, in, you know, your internal organs. You can actually clot off some of your internal organs and you can lead to kidney failure, liver failure, and you need respiratory support, you know, maybe with like a ventilator by being intubated. Um, and you need constant lab monitoring, lots of fluid replacement. You'll dehydrate. So as you can see, not only is this a very, uh, severe deadly virus, but in order to care for a person who has it, it requires a lot of equipment and a lot of intensive monitoring.

Justin:

What about people catching it? Like once you get it, how, how easy is it to spread to people? I know the media certainly made it seem like, you know, it's waiting on every flat service.

Sydnee:

It's not. It's, it's not very contagious. Thank goodness. Uh, it is spread by direct contact with a symptomatic person or their bodily fluids. So you actually have to have contact with someone who not only has the Ebola virus, but is already displaying symptoms of Ebola, which is critical. That's why they talk about people coming back from West Africa don't necessarily need to be placed in a, in a room, you know, and quarantined and not allowed to contact anybody if they're, if they're healthy, because even if they end up having the Ebola virus, they are not infectious until they start showing symptoms.

It's not yet been demonstrated that you could pass it by what we, what we call a fomite, which is just any non-living object. So, you know, a table surface, a door handle. Um, there, there's no evidence at this point that if I have Ebola and I touch a table and then you come touch the table later that you're gonna get Ebola.

Justin:

Hmm.

Sydnee:

And as I said, this strain is not airborne. Um, one infected person, you know, when we, when they do like analyses of how infectious and illnesses, they come up with a number of an R-naught, which is how many people are you likely to spread the virus to? Um, and for something like measles, that number can be quite high. I think it's like 16 or so. Um, but for Ebola, it's about 1.5.

Justin:
So one and a half people.

Sydnee:
Yes.

Justin:
And I feel bad for the person that gets half Ebola. That's terrible because you can't get any of the sympathy 'cause everybody's like, "Well, you've only got half Ebola. That's not even a thing." And other people think you're making it up 'cause they've never heard of half Ebola. Pity that person. The other person is gonna get a lot of media play, maybe a book deal. I'm just kidding. That 1.5 is like a statistic.

Sydnee:
I know.

Justin:
I know that.

Sydnee:
No, on the positive end.

Justin:
I'm not like an idiot. I get it.

Sydnee:
On the positive end, half Ebola is probably not as bad.

Justin:
Probably. Maybe not. Maybe that's true.

Sydnee:
Um, and that number, that number 1.5 can drop to zero very easily if you just use monitoring and when necessary quarantine effectively.

Justin:
So if I, uh, if, if I do suspect I have it, how do I figure out if I do? Obviously, probably not at home.

Sydnee:

No. If you think you have Ebola-

Justin:
There are no home test kits.

Sydnee:
... you go to a hospital-

Justin:
Right.

Sydnee:
... immediately, um, and tell them that you think they have a... That you think that you might have Ebola. um, there's a lab test. There's several different ways that we can test for Ebola. Your local lab probably can't. Uh, that's okay. We don't need, you know, for instance, here in Huntington, we don't need our local laboratory-

Justin:
Listen, I'm all about keeping jobs here in the Mountain State. I'm with you on that. On this one, we could probably outsource.

Sydnee:
Exactly. It's fine. Your local health department can take care of things. They will become involved. There will be lots of people involved. There's no need for every laboratory in the US to be able to test for Ebola immediately.

Justin:
Okay. Let's say I have Ebola. What, what can you do for me?

Sydnee:
The main treatment for Ebola is supportive care, and that's probably why when we think about the, the doctors and healthcare workers who've been brought back to the US to be treated, why they've done so well is that they were given immediate supportive care as soon as they were manifesting symptoms with fluid replacement. Um, you know, if their potassium got too low, they could... First of all, we knew 'cause we could draw labs and find out. And then secondly, we could replace it effectively. These are little things that, um, you know, if your potassium's too low, you can, your heart can go into an abnormal rhythm.

They can't check potassium in, you know, a hospital way out in the brush in west Africa. Uh, they can't, uh, give you blood products as soon as you

might need them, need them. They can't give you medications that will keep your blood pressure up if you're going into shock. They can't necessarily put you on a ventilator or do kidney dialysis if you need those kinds of things. So those are the main treatments for Ebola is to keep you alive while your body's fighting off the virus on its own. Um, and certainly here in the US, we have the resources to do that easier. There is, you've probably heard of the experimental Ebola drug that they, that they gave to, uh, one of the doctors. To the two that-

Justin:

The secret drug that only Americans are allowed to have. I've heard about it. Yeah. I've heard a thing or two. Illuminati.

Sydnee:

That, that is, that is I think how it's being billed in the media. Uh, it's called ZMapp. It's, uh, it's made of antibodies that basically bind to the virus. Um, it has not been tested in humans, so it is not available for purchase, although it was bought, uh, privately, not by the United States governments. Everybody stresses that. The CDC is very... They, they will tell... That's all over their website. They didn't buy it for anybody. Uh, but Samaritan's Purse, the private organization through which the doctors were working did buy it for, for them. I mean it has shown... I mean, I don't know if you can say it shows promise because it's helped a couple people. That's, I don't think that's a big enough number.

Justin:

It's not statistically significant as they say.

Sydnee:

No, but they're gonna start doing human testing on it soon. Um, and then there are also experimental vaccines. Again, no human trials have been started, but they're going to start trying those soon.

Justin:

So, Syd, I want to know how frightened of this I should be. I, I've been watching a lot of the news coverage of it and I feel like I already know that the answer is super duper freaked out about it, but, um, I wanted to get a second opinion, if you will.

Sydnee:

So I think if you're asking me how scared you should be, my answer would be not.

Justin:

Not scared.

Sydnee:

Not scared. Uh, unless, unless you are listening to this podcast from one of the countries where the outbreaks are ongoing, Sierra Leone, Liberia, Guinea. If unless you're there, I would not be concerned. Uh, you can't get it unless you have direct contact with a sick person who is sick from Ebola. Uh, this is why we hear about cases among healthcare workers, 'cause who has contact with sick people?

Justin:

Healthcare workers.

Sydnee:

Yes, exactly. Um, it is not... You are not going to be, you know, on a flight with somebody who has Ebola and get Ebola. You're not going to be in the same city as somebody or have visited the same restaurant. Uh, these things just, they're just not gonna happen. I would be concerned if I've been to West Africa to an area where an outbreak is occurring and had contact with people who were sick. Otherwise not.

Justin:

Right. Well, so why is it so bad there?

Sydnee:

Uh, sort of what we've talked about. Their healthcare facilities don't always have the same, um, kind of hygienic standards that we routinely practice in the US. So needle reuse may happen. I don't... And I don't have evidence that these things are happening, let me say that, in these hospitals in particular, but these are the kind of issues that exist. Um, you know, if we reuse equipment, reuse, uh, linens, um, people, patients are close together. A lot of it has to do with cultural issues, burial practices, you know, family members bury their own. Um, and so they may, uh, clean their own family members' bodies after they've died, um, kiss them, you know, wash them down before they bury them, that kind of thing. Not using appropriate equipment, you know, not wearing the, the space suits you always see on television.

Uh, there's a poor understanding of the virus, how it's spread in a lot of these areas. The education isn't there, and it's hard to in the middle of an outbreak stop and get everybody to calm down and sit down and teach them about the virus because everybody's terrified. So it's a very chaotic

environment. And then there's also the lack of, of doctors and, and public health workers. Um, in the, one of the statistics I read I think in, in 2010, there were like 51 doctors in all of Liberia. I mean, that's, I, I, I, when I read that I made the comment to Justin that I have been in rooms here... You know, I work in, in an academic facility. I've probably been in rooms with 51 doctors in Huntington, West Virginia. So, you know.

Justin:

Syd, I, what I wonder is why don't... And I don't actually wonder this. I know the answer. Dig me. But uh, why don't we just shut down the airports to not let people from West Africa come here? That seems pretty smart.

Sydnee:

Because first of all, the best way that we can stop it from becoming a problem in this country, because it's not, is to stop the outbreak in Africa. So if we start limiting travel back to the US, if you are a doctor or a public health worker or an epidemiologist, what... A nurse, why would you ever go help people who need your help if you don't think you can get back home afterwards.

Justin:

Right.

Sydnee:

Um, aid from the US would almost certainly dry up in other countries if, if they just started quarantining the whole area. Um, it would be a, it would be a health disaster if it's not already in, in those countries if we just basically locked everybody in and said, "Good luck, we're not going to help you anymore. We're not gonna let you get out of there. We're, we're definitely not gonna send anybody else 'cause we're not gonna let 'em back." It would just intensify the outbreak there. And the, the more severe it gets it eventually will spill over if we don't do anything to stop it. It's going to spill over to other countries in Africa, which makes it more likely that we will have sporadic cases here at home. Not outbreaks, but sporadic cases.

Justin:

So stop Ebola in its tracks?

Sydnee:

Right. If you, if you wanna find a way to help, you know, keep you or someone you know from getting Ebola, the best thing we could do is worry about the people who live in West Africa who are actually getting Ebola and

do something to stop the outbreak there. I mean, would you go help if you thought you weren't allowed to come home afterwards?

Justin:

I wouldn't go help in a bajillion years. I am a coward. But I get your point. By the way, those people who are coming back and maybe are infected with Ebola, uh, uh, I've seen them get a lot of crummy treatment in the media. Hey, maybe they're like heroes, so like buzz off.

Sydnee:

Yeah. They're, they're heroes.

Justin:

They're like heroes, and so like actual, real heroes, so maybe like don't rush to be a creep when you're complaining about a guy going bowling because also, side note, he's like a hero. So maybe cut him a little slack.

Sydnee:

Yeah, here's the thing they're doing what I wanted to do when I read *The Hot Zone* when I was 12 and decided I would be a doctor someday. This was the kind of thing that I had, had wanted to do. And I'm a wimp because now I have a three month old and I don't want to leave.

Justin:

There it is.

Sydnee:

So there it is. They're braver than me and they're heroes. Um, just so you know, travel, there are new restrictions on travel. Um, but again, you can still come back. If you decide to go help, you can still come back to the US at this point. Uh, when you do come back, you're put into a risk category and it depends on how much exposure you had. And these are the brand new things they just came out with in the last three or four days. And then you're monitored depending on your risk level, whether you're high, some, low or no risk. Um, if you are higher risk, you may actually have to be like have someone from the local health department lay eyes on you once a day. So like you have to stop by or they come to your house and check on you, but you're not like held in a room. Um, and they check your temperature twice a day.

Uh, or if you're lower risk, they might, they may just direct... They may just indirectly monitor you by phone. And then if you have any symptoms whatsoever, you have to immediately report to a local, to a local hospital. If

you are high risk, you may not be to travel from here to other places for a while. If you're within that 21 day window. Um, and then of course, if you do have symptoms at that point, you would be quarantined, but not until you're actually manifesting some kind of symptom.

Justin:

If you're freaked out about Ebola and I myself have done my fair share of fretting about it. I, I instituted a policy for myself that I would encourage anybody else to, to do. Uh, every time you get freaked out about it, donate some money to the people who are, who are fighting it. I donated to MAP International, they have an Ebola fund set up, but there are lots of charities that are doing great work there that deserve your support. Like it is so hard to dismiss panic, dismiss fear, but you can turn it towards productive things by actually doing something to, to help stop this, this virus and this outbreak. Um, so, so put that energy towards good use.

Sydnee:

Absolutely the best way to prevent people here from getting Ebola, if that's your concern. If your concern is yourself or your family or your loved ones or your friends, the best way to prevent that eventuality is to help stop the epidemic in West Africa. Because again, up until now, the largest case number had been about 400 and this is I believe over 5,000, the last I checked. And those numbers may be wrong. It's really hard. You know, like I said, it's a chaotic environment. It's really hard to count people, so.

Justin:

So thank you so much for, for, for listening to this episode. Uh, uh, hopefully you understand Ebola a little bit better. I know I do. Uh, we have a lot of other episodes about medical history, everything from, uh, uh, gosh, insomnia to spontaneous combustion.

Sydnee:

Warts, to hiccups, to, um, bloodletting and-

Justin:

They're all there for you on iTunes. Uh, you can go download there, maybe leave us a rating or review or subscribe if you haven't done that already. And, uh, uh, thank you to folks tweeting about the show. Thank you to the Maximum... We are @sawbones on Twitter, by the way. Thanks to the Maximum Fun network for having us on. They've got a great... Ton of great podcasts like *Jordan, Jesse, Go! Stop Podcasting Yourself. Lady to Lady. Baby Geniuses.* Uh, uh, uh, *The Flop House*.

Sydnee:

My Brother, My Brother and Me.

Justin:

Thank you dear. So many others, so go check those, uh, totally out. Thank you to The Taxpayers for letting us use their music for our intro and outro, the song called *Medicines*. Go, uh, go buy it. And, uh, thanks to you for listening. We'll be with you next Tuesday. Until then, my name is Justin McElroy.

Sydnee:

My name is Sydnee McElroy.

Justin:

And as always don't drill a hole in your head.

[theme music plays out]

Maximumfun.org.

Comedy and culture.

Artist owned.

Listener supported.