

Sawbones Episode 43: Cholera

Published May 14th, 2014

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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?

Justin:

Sydster.

Sydnee:

I'm upset about something.

Justin:

What is it, babe?

Sydnee:

Well, I've been really worried that on a lot of shows like podcasts and, well, other kinds of shows like TV shows-

Justin:

Right. Basically, just like various shows.

Sydnee:

You know, things that have episodes.

Justin:

Shows.

Sydnee:

Right. Serials, if you will.

Justin:

Serialized entertainment.

Sydnee:

That they have recurring, um, bits, you know, things they do to, like, call back to previous episodes and everybody looks forward to them.

Justin:

Like the slap.

Sydnee:

And they go, "Oh, there's that funny thing they do that I love."

Justin:

Like the slap bit on *How I Met Your Mother*.

Sydnee:

Right.

Justin:

Or, uh, a general feeling of insignificance while you're watching *Cosmos* that, that's like a recurring bit.

Sydnee:

[laughs] That's, that's exactly the kind of thing... Well, I don't really wanna give people a general feeling of insignificance, but something like that.

Justin:

Mm-hmm [affirmative].

Sydnee:

I feel like we need that.

Justin:

A classic bit. Like the guy who says, "Dyn-o-mite."

Sydnee:

Exactly.

Justin:

Okay.

Sydnee:

Do you wanna try that?

Justin:

Dynamite?

Sydnee:

Dynamite!

Justin:

No, I don't think we've got it.

Sydnee:

Oh no, I don't know.

Justin:

So what's your idea? What do you, what do you, what's your...

Sydnee:

Well, there was... Um, okay, so this is what I thought might work well. You really, uh, seemed to like a certain topic that came up a couple episodes ago, and a lot of people on, like, Twitter and social media, you know, Facebook, all those places, see, they seemed to really like it too. So I thought I'd maybe call back to... Um, do you remember when we talked about cholera?

Justin:

Okay. So just to recap, you think that our hilarious recurring bit should be pooping yourself to death? That should be our hilarious classic bit that we return to, T-shirts, bumper stickers?

Sydnee:

W- well, I, I mean, I don't, I don't find pooping particularly funny, but-

Justin:

Right. You're kind of opposed to the scatological.

Sydnee:

It's never been my, my flavor of humor.

Justin:

Right.

Sydnee:

That's probably a poor choice of words.

Justin:

Indeed.

Sydnee:

But I, I found that a lot of people like it, I mean, it, it always makes you laugh.

Justin:

It does. I'm ashamed to admit it.

Sydnee:

And a lot of kids laugh when you say, "Poop."

Justin:

[laughs] Yeah, they do.

Sydnee:

And there are probably-

Justin:

Said it right there, did you hear?

Sydnee:

I know. And when I said that, I bet that there are people listening who laughed.

Justin:

No, [crosstalk 00:03:39].

Sydnee:

In spite of themselves.

Justin:

Yeah.

Sydnee:

So I thought maybe that would be a good...

Justin:

You've got a pretty good point. I will agree. You got a pretty good point.

Sydnee:

So if we're gonna, if we're gonna keep this recurring cholera theme, I thought maybe you should know more about cholera, other than that one guy who drank it one time. [laughs]

Justin:

The one guy who drank cholera. Yeah.

Sydnee:

Yeah.

Justin:

All right, Sydnee, cholera! Hit me. I'm ready.

Sydnee:

So the great thing about cholera-

Justin:

There are great things about cholera?

Sydnee:

Okay. No, there's nothing great about cholera, but one interesting thing is that it's been around, again, a really long time. It's another one of those diseases that, you know, we talked about tuberculosis, and I think we mentioned this maybe with syphilis, but there are a lot of these diseases that, um, leprosy, that we can go back into ancient times and talk about.

Justin:

Mm-hmm [affirmative].

Sydnee:

And cholera's one of those. It-

Justin:

Cholera's a classic.

Sydnee:

It is, it's a classic pooping disease. [laughs] One of the-

Justin:

[crosstalk 00:04:38] is always drinking.

Sydnee:

One of the, one of the... Well, I would say one of the three classic pooping diseases.

Justin:

Okay.

Sydnee:

With salmonella and E. coli, those would be my pick for the classic. [laughs] Oh. But then there's, there's always Norwalk, I don't know.

Justin:

That's kind of an indie-

Sydnee:

You know? Cruise ships all over.

Justin:

Indie underground favorite-

Sydnee:

I don't know.

Justin:

Pooping disease.

Sydnee:

[laughs] Um, so it probably started out in India, and it comes from the Greek word for bile, by the way.

Justin:

Hmm.

Sydnee:

It probably started out in India and it's been around, like I said, since, since ancient times. And from there, it spread basically through trade routes.

Justin:

Hmm.

Sydnee:

You can kind of trace where trade was expanding from India based on where cholera outbreaks happened.

Justin:

Hmm. That's weird.

Sydnee:

Um, a lot of these diseases early on, I mean, when you look at, like, smallpox, why did it go where it, where it ended up? It was people traveling and taking it places and giving it to indigenous populations who didn't have it before.

Justin:

Mm-hmm [affirmative].

Sydnee:

Syphilis, again, same kind of thing. So since then there have been, uh, depending on what you read, probably seven major epidemics, unless you count the one in, most recently, in Haiti after the earthquake.

Justin:

Oh, there was a bad outbreak there.

Sydnee:

That was a really bad outbreak, um, following the earthquake just because of sanitation issues.

Justin:

Sure.

Sydnee:

And so that may be the eighth, depending on how you look at it. Really bad outbreak versus epidemic. So either way.

Justin:

All right.

Sydnee:

Um, it was also the first reportable disease in the US, which is kind of interesting.

Justin:

Mm-hmm [affirmative].

Sydnee:

Now we have a whole list of diseases, I don't know if you knew that, that we have to report to the CDC if we encounter them.

Justin:

If you, so if you run into a case of cholera, which I'm assuming you haven't.

Sydnee:

No, no, I have not personally seen cholera.

Justin:

That's good.

Sydnee:

No, it's, it's very rare, um, in this country and it's not impossible to see it, but very, very rare.

Justin:

We got one thing going for us.

Sydnee:

Yeah. There's no... There used to be.

Justin:

Oh, man.

Sydnee:

But now there's not cholera here for the most part. Um, but it has been responsible for killing millions of people through history. So it's a pretty big deal.

Justin:

Recurring bit you think? Kind of a classic recurring goof.

Sydnee:

I mean, if you're talking about diseases and, like, the, the, the important ones, that's kind of part of their job. You know, it's like that ancient battle between man and bacteria. Man versus microbe, who wins?

Justin:

That's what *Clash of the Titans* was about. Spoiler, microbes.

Sydnee:

See, but the microbes always win for a while, but then we get better at it, and sometimes we can win.

Justin:

Yeah. That's true.

Sydnee:

Take that smallpox.

Justin:

That's what makes it a good-

Sydnee:

Screw you.

Justin:

Good battle. Stuff it, smallpox.

Sydnee:

So it's caused by a bacteria.

Justin:

Suck an egg, polio.

Sydnee:

[laughs] It's caused by a bacteria. You, um, ingest it mainly. So it mainly comes through what we would call a fecal oral route of transmission, that's what we call that in medicine. Did you know that?

Justin:

Uh, why is that even a road? Why is there a route for that?

Sydnee:

Because it's you... Fecal, you poop it out and then it gets back in your mouth. Well, not in your mouth, in somebody else's mouth. And when you fec- fecal oral, you know?

Justin:

There really doesn't need to be route there.

Sydnee:

It's like... Like, contaminated water is the big thing.

Justin:

We should just board-

Sydnee:

Like, poop gets in water and then you drink it.

Justin:

We should board the fecal oral route up. We should just board it up, and put up a sign that's like, "No entry. Dead end. Hazardous."

Sydnee:

It's a very popular route of transmission, especially among little people, little kids, you know?

Justin:

Oh, yeah. They love to eat poopy.

Sydnee:

Babies and kids. Yeah, they're always... That fecal oral stuff? Whew. Can't stop it. Um, it causes, like I said, massive watery diarrhea.

Justin:

Cool.

Sydnee:

Uh, and it looks like rice water after a while, because all you're really losing at that point is just water with flakes of your intestinal lining, So it looks like you put rice grains in a cup of water.

Justin:

That is hugely, hugely unpleasant.

Sydnee:

And basically the goal is to maintain hydration. If you can keep somebody hydrated, they can survive cholera. If you can't, then unfortunately they'll die.

Justin:

Hmm.

Sydnee:

Uh, we also, there-

Justin:

So it is one of those where sanitation is massive, right? Because otherwise you... I mean that, that suddenly becomes at a premium, clean drinking water.

Sydnee:

Oh, exactly, because it's... The reason you get it is 'cause you, you had poor sanitation, you were exposed to it in the first place.

Justin:

Right.

Sydnee:

And then the only treatment for it is to, you know, hopefully through oral rehydration, so just drinking, we can keep you rehydrated, or at least if we have to through IV hydration, one way or another, we can keep you hydrated. And so if we don't have access to that, you know, we're kind of screwed. There are, there isn't, um, there are antibiotics that will work, but we usually don't use them. They might cut down on the duration, but most of the time, if we can just get people hydrated, that's really what we need.

Justin:

Hmm. Okay.

Sydnee:

I know, such an easy treatment, right?

Justin:

Yeah. Right.

Sydnee:

Now, as far as what, what was thought to cause cholera...

Justin:

Probably everything.

Sydnee:

Oh exactly. Of course!

Justin:

We, we, we don't discriminate when we're guessing, what causes things.

Sydnee:

It's... A lot of it initially was kind of our humors theory. There's some kind of imbalance in the body, um, some sort of internal forces are out of whack and we need to bring them back into balance, um, which is usually done by, you know, bleeding people or causing them to puke, or... We don't need to give them diarrhea.

Justin:

They've got that under-

Sydnee:

They've got... [laughs].

Justin:

"No problem, doc. I got that one under control for you."

Sydnee:

"I'm just gonna give you something that's gonna give you some more diarrhea to get this out." "No."

Justin:

"That would be impossible. Unless you can teach my poop to poop, I really don't think I could get additional diarrhea."

Sydnee:

Did you say, "Teach my poop to poop?"

Justin:

"Yo, dog, We know you love to poop, so we put some poop in your poop so you can poop while you poop." Xzibit, Pimp My Butt. Yeah, dawg.

Sydnee:

[laughs] That was the, the unsurprise... Not so... Surprisingly, that was not the lowest rated show on MTV.

Justin:

[laughs] Believe it or not.

Sydnee:

Pimp My Butt [laughs].

Justin:

It still beat out *Teen Moms*. I don't know.

Sydnee:

Uh, the, uh, the Europeans and then eventually the Americans, when it spread there, thought it was, uh, and we kind of referenced this a couple times before, a miasmatic disease, a miasma.

Justin:

Mm-hmm [affirmative].

Sydnee:

Do you remember when we talked about that?

Justin:

A little bit of everything.

Sydnee:

Kinda like in the air, like, floating around you. It's not so much that it's coming from one source, it's just, if you are surrounded by gross stuff.

Justin:

It's like a vibe. A feeling.

Sydnee:

[laughs] Exactly. It's like an aura.

Justin:

A cholera vibe.

Sydnee:

And, and it's specifically an aura around filth or waste or dirty stuff.

Justin:

Oh, no.

Sydnee:

So it releases this cloud of something and then you, everybody gets cholera. And it's also been a disease that was associated with a lot of, um, racism and prejudice for, for lack of a better term. Uh, usually you would blame it on some other group of people, who was different than you, and say that they probably brought it here.

Justin:

Yeah.

Sydnee:

So it was constantly blamed on different immigrant populations.

Justin:

They look kinda cholera-ish. They have that cholera look.

Sydnee:

Yeah. "I mean, we didn't always have this, and now we do. And we've lived here for 10 years and they moved in nine years ago. It's probably them."

Justin:

Yeah. The Doozers b- blame it on the Fraggles. "They come in to eat in our buildings and they leave poopy everywhere and then we get cholera. I hate the Fraggles."

Sydnee:

The Fraggles probably had cholera.

Justin:

Fraggles definitely have cholera, no question.

Sydnee:

Yeah. They have that look.

Justin:

That's why they can't eat-

Sydnee:

The cholera look.

Justin:

All the Doozers building all time. They're dehydrated.

Sydnee:

[laughs] They dehydrated.

Justin:

And then they had pica. That's the other thing you didn't know about Fraggles, they had pica, that's why they try to eat the buildings.

Sydnee:

That's a good... Do you wanna tell everybody what pica is?

Justin:

Um, it's like a disease where you want to eat lead chips or ice.

Sydnee:

Or something that you're not supposed to eat.

Justin:

Something you're not supposed to eat.

Sydnee:

Yeah, like couch stuffing.

Justin:

Yeah. It's uh, it's usually when you have iron deficiency, anemia.

Sydnee:

Yeah. Good job, Justin.

Justin:

Thanks, Syd. NBD.

Sydnee:

So it was also thought that, not only did various immigrant populations... So not one specific, you know, race or nationality, it was blamed on everybody at some point in time, but people who, who engaged in what was thought to be immoral behavior, um, and also it was considered a disease of the poor. So it was thought that if you're wealthy enough, you probably wouldn't get cholera. Um, and some of this was consistent with the living conditions of the time. The lower socioeconomic classes probably had poor, even poorer sanitation than the higher classes.

Justin:

Mm-hmm [affirmative].

Sydnee:

Even though nobody was particularly clean.

Justin:

We were all getting kind of silly with that, throwing the stuff out the window and whatever.

Sydnee:

[laughs] It was, it was not believed that you could transmit it from person to person, um, and that was mainly us doctors' fault.

Justin:

Wow, really? Good job guys.

Sydnee:

Well, they thought if it was easily transmitted from person to person, then th- the good doctor, who went door to door, taking care of everybody when they were sick from cholera should get it, right?

Justin:

Right. Makes sense.

Sydnee:

Well, the doctor usually didn't, so...

Justin:

So why?

Sydnee:

Well, part of it was just that a lot of the, the initial outbreaks were spread by contaminated drinking water, so unless the doctor had a, a glass of water at your house, while he was there, he probably wasn't drinking the same water that you were.

Justin:

Right.

Sydnee:

'Cause he probably lived in a different part of town. And then the other thing is just, I think you see a lot of these diseases, this kind of instinctual fear, "I'm gonna stay away from that person, I'm probably not gonna touch them very much."

Justin:

So can you spread it-

Sydnee:

So even as the doctor, you'll show up and you'll kind of explain stuff and then leave.

Justin:

So can you spread it person to person?

Sydnee:

You can, but not through like coughing or breathing or touching, it would really have to be like, well-

Justin:

Yeah, I got it.

Sydnee:

You know.

Justin:

Human centipede stuff.

Sydnee:

So I... Which is why maybe from a... Yes, by creating a human centipede, that is the only way.

Justin:

It's the... It's nature's most efficient-

Sydnee:

That-

Justin:

Cholera delivery system.

Sydnee:

It... [laughs] While engaging in a discussion about cholera, bringing up human centipede is the, is the absolute most disgusting thing we can possibly have done.

Justin:

Sorry, I'm sorry about that.

Sydnee:

Uh, but I mean, I... Probably from child to adult would be more likely, you're changing their diapers or something.

Justin:

Mm-hmm [affirmative].

Sydnee:

That could be a, that could be a source. Um, now of course, with the germ theory of disease that we, we've talked about before, Koch's postulates, when he figured out that there was a bacteria, and that a bacteria probably caused, you know, germ spread illness, in the late 19th century, that changed most of these beliefs for the most part. But as we talked about before in that, in that previous episode, not everybody was convinced, even by the isolation of the bacteria.

Justin:

Hmm.

Sydnee:

Uh, like your buddy Max Joe.

Justin:

Oh yeah. Oh, Max Joe, you let me down.

Sydnee:

Who-

Justin:

Eating your chol... Drinking cholera water.

Sydnee:

Yep. Drank cholera water to prove that that wasn't how you got it, that it... You had to both be exposed and be dirty.

Justin:

Hmm.

Sydnee:

And he was very clean, he was a hygienist. Um, it was also thought that maybe, maybe the disease caused you to form the bacteria somehow.

Justin:

Mm-hmm [affirmative].

Sydnee:

Which is such a bizarre...

Justin:

Yeah.

Sydnee:

Like, people who are sick have this bacteria. So it's probably the-

Justin:

We didn't know anything back then Syd, we were just trying to figure it out.

Sydnee:

And I will say that part of the confusion is that not everybody who, uh, carries cholera actually gets sick with cholera.

Justin:

Hmm.

Sydnee:

You can be in an asymptomatic carrier state. So they would isolate cholera from the, um, stool of people who didn't have disease and then you didn't know what to make of that.

Justin:

Hmm.

Sydnee:

Um, the... It's actually a pretty low rate of people who are exposed, who actually get sick. Like, you can get infected with cholera and not get sick.

Justin:

Huh.

Sydnee:

And it's a very... Even of those people, it's a much smaller percentage, who actually get so sick that they might die from it, which just shows how many people actually ended up getting cholera that we've had millions of deaths.

Justin:

Huh. Wow.

Sydnee:

Um, and, and like I said, this was a big deal. There was a world conference in 1851 called The International Sanitary Conference and it was purely... Well, it wasn't just about cholera, but that was really the, it was the big thing. It was about cholera.

Justin:

It was the hot topic. It's all anybody wanna talk about.

Sydnee:

Um, so at the end of the 19th century, a lot the major epidemics were subsiding, probably just because of better sanitation methods.

Justin:

Right.

Sydnee:

We didn't know we were doing it, but we were eliminating the conditions that breed cholera.

Justin:

Almost by chance.

Sydnee:

Um, and at, at the same time, the doctors really started to embrace the bacteria theory. But we were still trying to figure out, like, how it was all, like, how all these people were getting it. And this is where an interesting story comes into play about a guy named John Snow, who was a doctor, an OB-GYN.

Justin:

And also a bastard from House Stark.

Sydnee:

I don't know who that is.

Justin:

Well, see, uh, from House Stark, uh, he was, um, Ned Stark's bastard son, Jon Snow. He went to the wall to defend us.

Sydnee:

Who, what are you talking about? Who is this?

Justin:

It's from *Game of Thrones*.

Sydnee:

Oh, you know I don't watch that.

Justin:

I know, but I was talking to the people at home about Jon Snow on the wall.

Sydnee:

What if they're behind?

Justin:

This is pretty early stuff.

Sydnee:

Oh, okay. Well, I don't know.

Justin:

They are all right, they're all right.

Sydnee:

Did... Has winter come yet?

Justin:

Nah, I think winter's still on the way.

Sydnee:

Okay.

Justin:

In some parts it's there, and some other parts it's like, "I don't know, it's still hazy."

Sydnee:

Well, I just see, like-

Justin:

"It kind of feels crisp, like fall."

Sydnee:

Sometimes there are commercials and it looks like, you know, cold.

Justin:

It does. I mean, there are parts where it's, winter's just, the winter just chills. No, no pun intended, but winter is there, in some places all the time, when you go, like, north of the wall. This is not a pertinent.

Sydnee:

Well, I hope you and everyone who watches that are enjoying that show [laughs].

Justin:

Okay. John Snow and the Broad Street pump.

Sydnee:

Now this, some people are right now, uh, saying like, "Well, of course we all know this story."

Justin:

But, okay. I do wanna say something. Uh, speaking of people saying, "Of course we all know this story." I get nervous whenever I talk about anybody on *Game of Thrones* specifically, because I have watched every episode of that show and I am still certain I'm gonna mess it up. I still, like, I still... That's how confusing the show is. I'm still like, "Jon Snow was, yeah, he was Ned Stark's kid, right? Yeah. I mean, he was, I think he was the guy's bastard son. Yeah. He's at the wall. Yeah. It's Jon Snow, yeah. Yeah. I got it, I got it, I got it, I got it. Say it, go ahead, say it, go ahead, say it. No, she won't get it, she didn't watch it, like, somebody will get it. Say it!"

Sydnee:

Somebody's gonna correct you.

Justin:

Yeah. I'm sure. But sorry.

Sydnee:

So are you saying that, like, somebody... That I shouldn't tell this story 'cause it's so well known, 'cause clearly everybody knows this story?

Justin:

Not like *Game of Thrones* level well known.

Sydnee:

Okay.

Justin:

Probably not this John Snow story, but you go ahead.

Sydnee:

So in 1854, Dr. John Snow, um, he wanted to know... He wanted to figure out, once and for all, how an outbreak of cholera was spread. And everybody was trying to figure this out, you know, we, we had this idea about this bacteria, but where was it and how were people getting it? And his idea was contaminated water. Uh, he, he lived in London in Soho, and at the time people, uh, businesses, you know, individuals, would dump just raw human and animal sewage into the Thames river.

Justin:

Good job businesses.

Sydnee:

Not a good idea. There were also a lot of, um, like, the... And this was all unofficial, they supposed to do this. They had pumps and, and you know, sewage pipes and stuff, but a lot of them were leaky and so they would also leak into the river. So even unofficially, there was constantly sewage being dumped into the river.

Justin:

Awesome.

Sydnee:

Um, and the problem is that this same water from the Thames river was then being used for public wells and water pumps, so a lot of people didn't have running water in their homes, they would go get water from a local pump.

Justin:

And jet skis. I would imagine.

Sydnee:

Right.

Justin:

Where else are you gonna go jet ski?

Sydnee:

Except the Thames river.

Justin:

Except the Thames river.

Sydnee:

Is there a lot of jet skiing there?

Justin:

Except the Thames river in 1854.

Sydnee:

[laughs] So he wanted to prove that there was cholera in the water, and he had the perfect opportunity. There was an outbreak of cholera, uh, in 1854 around Soho, and so he started going around and interviewing cases and drawing a map. This is epidemiology is what he was doing.

Justin:

He invented epidemiology?

Sydnee:

This is a great example of it.

Justin:

Okay. He maybe didn't invent it.

Sydnee:

[laughs] But he went around and he interviewed all these people, and he kept kind of zeroing in like, "Here... Where are all these cases clustered?"

Justin:

Do you think he knew there was epidemiology? Do you think he knew he was making up epidemiology, in part?

Sydnee:

I think, I think, I mean, I, I think he kind of knew. Like, it was a science at the time.

Justin:

It wasn't like that time when I was in elementary school and I thought that I invented the riff of, uh, Black Sabbath's, uh, Iron Man?

Sydnee:

[laughs] No, no.

Justin:

I thought I came up with that.

Sydnee:

No, actually John Snow did.

Justin:

Jon Snow.

Sydnee:

Dr. John Snow.

Justin:

Okay. A, a different John Snow.

Sydnee:

Uh, so what he did is he, you know, he interviewed all these people. He, he drew a map. He zeroed in on this one hand pump on Broad Street, the Broad Street pump. And he figured out that everybody who got cholera, one way or another had drank water from this pump, which is pretty cool. So he knew, so... Well, he thought-

Justin:

He's-

Sydnee:

The water coming from this pump must be contaminated.

Justin:

He's gonna, he was like, "I'm gonna fix cholera." And then he marched right on to that pump, and he put a sign on it that says, "Please do not drink. It has cholera in it." And also... And then there's another sign below that that says, "Please do not remove above sign. It is important."

Sydnee:

[laughs] And there's a sign below that that says, "Don't remove that sign."

Justin:

Right. It's like a whole... It gets very-

Sydnee:

It's a whole...

Justin:

It gets very, uh, Roadrunner, Wile E. Coyote.

Sydnee:

It was a... This was the beginning of *Loony Tunes*.

Justin:

Yeah. That's how *Loony Tunes* were invented. There was cholera signs.

Sydnee:

So, uh, I think along, before I tell you what else happened with this, along those, along this storyline, there's one really funny thing. There was one lady who almost ruined the whole thing. So in order for this to work, he interviewed people who got cholera-

Justin:

Thirsty Bertha they called her. She drank from every fountain in town.

Sydnee:

He interviewed people who'd got cholera and asked them what, you know, what they, what pump they drank from, and they all drank from the same place. And then he interviewed clusters of people who didn't get it, to prove that they didn't drink from that. You know, 'cause then he would interview like-

Justin:

Right.

Sydnee:

Everybody at this pub, and this pub gets their water from this pump, and they're all healthy and everybody at this pub... You know, that kind of thing. Um, well there was one woman who lived way outside the range of the pump that was the culprit. Um, and she got sick and so did her niece who lived even further away. The problem was that they died, so we couldn't ask them these questions.

Justin:

Huh. That if maybe they were in town or something?

Sydnee:

Right. And so it was very, it was very confusing. So he, he eventually found her nephew and he interviewed him. And apparently this particular woman, while she did not live on Broad Street at the time of her death, had previously, pre- previously lived in that area.

Justin:

Oh.

Sydnee:

And just really liked the taste-

Justin:

Of cholera water.

Sydnee:

O- of water from that Broad Street pump. It's-

Justin:

"I don't know it's more refreshing."

Sydnee:

No, I can only imagine the-

Justin:

"It's hardier. The, earthy, body full bodied."

Sydnee:

The taste of raw sewage that she liked-

Justin:

"Crisp."

Sydnee:

'Cause that was it. 'Cause she would have it bottled and brought to her.

"Bottle me up some Broad Street water."

Justin:

"You know if you go up... It's just hardier. I don't know. It's earthy."

Sydnee:

And so her niece had come to visit her from out of town.

Justin:

"Try... You have to try this water."

Sydnee:

And to celebrate, to celebrate they'd popped open a bottle.

Justin:

"So glad you're here. You have to try my special water."

Sydnee:

[laughs] Sparkling cholera water.

Justin:

"It's full, it's full bodied."

Sydnee:

Um, now of course, with all this great epidemiology work, the, the city council didn't believe him at all.

Justin:

Sure.

Sydnee:

Yeah. Nobody in, in authority believed him. They wouldn't shut down the pump. They wouldn't warn people, nobody wanted to change anything. There was actually one man in particular, a Reverend Whitehead, who believed very strongly that cholera was a punishment from God and wanted all of the citizens to believe that, so that they would come to church and repent. And so he set out to interview people and prove John Snow wrong, and in doing so he actually ended up supporting his case. So he went around interviewing victims. Because John Snow couldn't, could still not prove that it was the sewage in the water that-

Justin:

Right.

Sydnee:

Led to the cholera and all that.

Justin:

They didn't have tests.

Sydnee:

Right. We didn't know why, that was just his theory. Well, he interviewed... This Reverend Whitehead interviewed one woman who lived on Broad Street. And she said, "Well, you know, my baby actually got sick with cholera before anybody else did." And so the Reverend was interviewing her in hopes of finding out some horrible, immoral thing that she'd done that could prove, you know, where it all came from. But what she revealed is that when her baby got cholera, it obviously went through a lot of diapers really quickly, so she would wash them off in water, in tubs of water in her home-

Justin:

That she would take, yeah.

Sydnee:

And then go dump the water-

Justin:

Oh man.

Sydnee:

In a cesspool, a leaky cesspool, that was three feet from the Broad Street pump.

Justin:

Baby zero.

Sydnee:

That was baby zero, that's where the cholera came from. Baby, baby zero diapers, so...

Justin:

What a jerk.

Sydnee:

Thanks for that, lady.

Justin:

Yeah. What a-

Sydnee:

A pretty significant cholera outbreak.

Justin:

Thanks, lady. Oh man, that's the pits. Syd I, I want to know, um, how, what, what other sort of, like, alternatives we had in treatments and stuff like that?

Sydnee:

Well, again, Justin, I'd really love to give you that information, but unfortunately you can't afford it right now. So you're gonna have to go settle up your accounts.

Justin:

All right. Let's go to the billing department.

[theme music plays]

Sydnee:

So do you wanna hear about treating cholera?

Justin:

Hit me. I'm ready.

Sydnee:

Early on, there weren't a lot of treatments, the main thing was quarantine.

Justin:

Sure. Logical.

Sydnee:

You know, and, and, again, I think that this is kind of instinctual and makes sense. Stay away from sick people, I don't wanna get sick. Uh, ships, if somebody on board of a ship got cholera, which actually happened fairly regularly, they had to fly a certain yellow flag-

Justin:

Hmm.

Sydnee:

And that would indicate, as they docked, that they had cholera on board. And you had to stay, uh, everyone on the ship had to stay aboard in dock for 30 to 40 days before they would let anybody come ashore.

Justin:

Hmm.

Sydnee:

Basically the idea being, that way, if you were gonna get it, you would die. And then if you didn't die, you got to come on shore.

Justin:

Yeah.

Sydnee:

Kind of brutal.

Justin:

Yeah. That's rough.

Sydnee:

Um, there was an outbreak in New York City in 1832. So it, it ended up spreading to the US, we did have cholera here. Um, and of the... At the time the city had a population about 250,000. 100,000 people fled the city.

Justin:

Yikes.

Sydnee:

Yeah.

Justin:

It's like Godzilla attacking or something.

Sydnee:

I know. 100,000 people took off during the outbreak. So getting away from sick people was very popular. And of course everybody, uh, I think, remembers that in 1849 along the Oregon Trail-

Justin:

You have got cholera. You have died.

Sydnee:

Of course, you got cholera. School children forever will know. They didn't know what cholera was... Did you know what cholera was when you played Oregon Trail?

Justin:

No, no. That... Yellow fever, That was my first exposure to like, to those diseases. I did, I thought they were imaginary.

Sydnee:

Do you know that my, my sister Taylor, when she was little, told her stuffed animals that one of her other stuffed animals got cholera? She could only take one with her on a trip.

Justin:

Mm-hmm [affirmative].

Sydnee:

Our parents used to limit the stuffed animals we were allowed to take on trips, 'cause other-

Justin:

Smart, smart lie.

Sydnee:

It would get pretty crazy otherwise. So she only took one, and she was afraid the other animals would get jealous, so she said, she told them that, it was her Simba, her stuffed Simba, that Simba had cholera and had to go away for a while. Thank you.

Justin:

[laughs] Just needs some time in the sun.

Sydnee:

Thank you, Oregon Trail, for that excellent excuse. Um, so some other treatments that were tried, uh, a lot of the Indian treatments, um, sought to kind of rebalance the, the humors so to speak, the different forces in the body and calm spasms, and heavy metals were very popular.

Justin:

Sure.

Sydnee:

Like mercury. Again, and I think we've talked about that before. Mercury was a very popular treatment. Um, replacing the bad smells with good ones was important, so...

Justin:

Take out the angry stink and you put on the right purty stink.

Sydnee:

Exactly. With, so with some essential oils or some spices.

Justin:

Yeah. Why not?

Sydnee:

Um-

Justin:

It's certainly more pleasant, even if you're not healthier.

Sydnee:

Heat was a popular treatment. You can get heat by taking a warm bath, that sounds nice.

Justin:

Mm-hmm [affirmative].

Sydnee:

Uh, friction. Rub them really vigorously.

Justin:

Rub your cholera.

Sydnee:

Uh, cauterize your heel.

Justin:

What?

Sydnee:

Like, you know, with a hot iron-

Justin:

Oh, wow.

Sydnee:

Just cauterize it, you know? The callus part of your heel-

Justin:

Yikes.

Sydnee:

So it won't hurt too bad.

Justin:

Yikes.

Sydnee:

Or even try to ligate the limbs, like, cut off blood flow to the limb, so it gets all red and hot and...

Justin:

That's hugely unpleasant.

Sydnee:

Yeah I know.

Justin:

None of this is pleasant.

Sydnee:

No. Well, I mean...

Justin:

This is killing me.

Sydnee:

I think the idea was cholera isn't pleasant, so we've gotta do, you know, we've talked about that, so we've gotta do something even more unpleasant to get rid of it.

Justin:

Right, right.

Sydnee:

There were also cholera belts that, uh, members of the British Indian army wore, and they were basically just these flannel belts that would keep you really warm.

Justin:

Very stylish, I'm assuming.

Sydnee:

Yeah. Probably not.

Justin:

Yeah.

Sydnee:

Uh, in the outbreak in Naples in 1854, camphor was the most popular treatment, and in North America, tomato soup.

Justin:

Okay. That's a little better.

Sydnee:

[laughs] Was a very popular treatment. So tomato soup, good for skunk, uh, sprays and cholera.

Justin:

And cholera.

Sydnee:

There you go. Uh, and in the UK, there was a really popular herbal remedy called horseheal.

Justin:

Hmm.

Sydnee:

I don't know. Yeah, I guess if it's named horseheal, you think maybe-

Justin:

Maybe.

Sydnee:

Heals horses. I'm smaller than a horse.

Justin:

I've only got two legs.

Sydnee:

Uh, and of course I've mentioned, bleeding was always popular if all else failed. And then, uh, later it was replaced in popularity by opium, but then, what wasn't replaced in popularity by opium-

Justin:

Right.

Sydnee:

At the time. Uh, there was one treatment account that I found, um, that I actually really copied verbatim 'cause I thought it was pretty funny. Well, in my sense... I think cholera is kind of funny so I guess-

Justin:

Right.

Sydnee:

It gives you a peek into my mind.

Justin:

But you need... You mean that with all, like, the care and consideration in the world.

Sydnee:

Exactly.

Justin:

Right.

Sydnee:

Exactly. Um, you gotta, you gotta laugh at this stuff.

Justin:

Right. Especially if you don't have it.

Sydnee:

It's either that or cry.

Justin:

Right.

Sydnee:

So this treatment involved putting a paste of lemon juice, iron oxide, and alum over a person's eyes. And then I guess leave it there and they'll get better?

Justin:

Maybe.

Sydnee:

So this was the account of one of these treatments that I found. This is, this is... I did not write this, I'm quoting. Uh, "The pain it produced vexed and enraged the sick man and he attempted to strike those around him. The vomitings became more frequent, his attendants fled to avoid his blows. He pursued them, passing by a reservoir of water, which served, served for the purposes of the garden. He plunged into it, drank with avidity for several moments. They surrounded him, but he remained tranquil. The enormous quantity of liquid he drank was followed by fainting. He was then removed from the reservoir and put to bed. He slept for 11 hours and when he awoke the vomitings- vomitings, and dejections..." That's diarrhea, "Had ceased."

Justin:

Huh.

Sydnee:

"But he was blind."

Justin:

Oh no.

Sydnee:

So-

Justin:

Oh, twist.

Sydnee:

So what probably fixed this guy was that he drank large amounts of water.

Justin:

But he was blind.

Sydnee:

But he was blind. So I mean, I guess, I don't know. It was a trade off, he lived. I thought you would find it interesting that James K. Polk died of cholera.

Justin:

Ah.

Sydnee:

I don't know if you knew that.

Justin:

Napoleon of the Stump.

Sydnee:

I knew you were a fan of James K. Polk.

Justin:

Yeah. I can... You don't wanna hear the song, do you?

Sydnee:

Do you want... Well, I don't know that we have enough time for you to perform [crosstalk 00:35:10].

Justin:

Maybe after. Okay, yeah.

Sydnee:

Maybe after, or as a special thing at the end.

Justin:

For you. Just for you.

Sydnee:

Just for me. Yeah, oh good.

Justin:

Yeah. I'll stop the recording and stuff.

Sydnee:

Great.

Justin:

Just private.

Sydnee:

Excellent.

Justin:

Perfect.

Sydnee:

Uh, I thought you would think this is interesting. There is an avian cholera.

Justin:

Hmm.

Sydnee:

I found an account of an avian cholera, uh, that struck a duck pond, uh, this year, in January of this year, in Redwood City, California. Um, it killed 200 of the ducks.

Justin:

Oof.

Sydnee:

And as a result, the pond, there was a manmade little lake where they all lived, um, began to smell very bad.

Justin:

Right. Because of all the duck diarrhea.

Sydnee:

Right, 'cause of all the duck diarrhea.

Justin:

Ugh.

Sydnee:

Eventually it got so bad that bird watchers couldn't go there anymore. Nobody wanted to hang around this-

Justin:

Absolutely not.

Sydnee:

This beautiful little lake.

Justin:

I wouldn't go within a block of that place.

Sydnee:

And they ended up having to drain it and scrape several inches of duck poop off the bottom of the pond.

Justin:

Oh, god. That's brutal.

Sydnee:

And clean it up.

Justin:

That is brutal.

Sydnee:

Um...

Justin:

So what's it, what's it, what's it look like now, Syd? What's the, what's the cholera landscape?

Sydnee:

Unfortunately, cholera is still around today. As you mentioned, you're not gonna see cholera in the US for the most part. Um, uh, there hasn't been a big, uh, giant outbreak, as I mentioned since, you know, 2010, but there are still sporadically three to five million cases of cholera each year, and still between 100,000, 200,000 deaths, mainly in developing areas, uh, places with poor sanitation. And then you always see outbreaks of cholera anytime there's social upheaval, so you need to think about that. You know, we talked about after the Haiti earthquake, so anytime when there's some kind of natural disaster that would move people out of their homes and disrupt clean water supply, but also wars and refugee camps and that kind of thing.

Justin:

So just to reiterate, we... Uh, this is obviously still something that's very serious and, and, a, a blight on the, the populace of the earth, absolutely. We don't mean to make fun of people who actually have contracted cholera, but, you know [crosstalk 00:37:05].

Sydnee:

No. Absolutely not. This is something you can do something about, because it's really easy, uh, to treat. You don't need any special drugs, you don't need, you don't really need a medical degree, you just need clean water.

You just need to get water to people, oral rehydration solutions and salts, um-

Justin:

Pedialyte.

Sydnee:

Yeah. And that's something that you can help do, get water, get clean water to people. That is an easy thing, you don't need a medical degree to do it. Um, and it saves, it can save a lot of lives so, so there's a positive thing there. There's actually something we can all do.

Justin:

I just want to give a big thank you to everybody who has been uh, uh, tweeting about our program. We are @sawbones on, uh, Twitter. Thanks to Sarah Blanchard. Big thanks to Allan, uh, who bought a *Sawbones* T-shirt. I don't know if we told everybody, there's *Sawbones* T-shirts at maxfunstore.com. Uh, they're blue and I, I think you'll really like them.

Sydnee:

Just check out Allan 'cause he looks great.

Justin:

Yeah, Allan, you're looking, looking dope. Uh, thanks to other people tweeting about the show, like Megan, Maureen, Nicole, [inaudible 00:38:07]. Nicole got a, a, a, got a *Sawbones* T-shirt too, wanna see pics. Uh, thank you to Theresa McElroy for tweeting you about the show, Tyler Madison, and Jenny Haynes, Anthony Wright, Kristin Aarons, [inaudible 00:38:20] Ryan, Thomas, Jeremy, Frank, Cody [inaudible 00:38:23] Uh, John, Thomas, Mason. So many others. You're all the best. Thank you very much.

Sydnee:

And you can always tweet at us, @JustinMcElroy.

Justin:

And she's @SydneeMcElroy. S-Y-D-N-E-E. I think that's gonna be everything. Remember to go over to maxfun.org, listen to all the shows on the Maximum Fun network. If you get a chance, and you got a few free days, got some vacation time coming up, uh, in July, you wanna go on the Atlantic Ocean Music and Comedy Festival. It is gonna be a huge cruise with a ton of musical and comedy guests. I know our friend, uh, uh, John Roderick is, is, uh, gonna be out there. W. Kamau Bell is gonna be out there.

Uh, uh, Tony Camin, Chris Fairbanks, who's hysterical. Lake, Natasha Leggero, Morgan Murphy, like a ton of, a ton of people. So go to boatparty.biz, get your tickets now.

Sydnee:

Go have a drink for me, 'cause I will be-

Justin:

'Cause Sid can't.

Sydnee:

Hugely pregnant and very hot.

Justin:

And that's gonna do it for us here on *Sawbones*. Be sure to join us again next Tuesday for another episode of *Sawbones*. Until then, I'm Justin McElroy.

Sydnee:

I'm Sydnee McElroy.

Justin:

As always, don't drill a hole in your head.

[theme music plays out]

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