Sawbones 74: Measles

Published February 4, 2015
Listen here at themcelroy.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 music plays]

Justin:

Hey everybody, and welcome to Sawbones: A Marital Tour of Misguided Medicine. I am your co-host Justin McElroy.

Sydnee:

And I'm Sydnee McElroy.

Justin:

So we were watching the news coverage over the past couple weeks about a, uh, a measles outbreak in, uh, in California, and, uh, Sydnee looked at me and said, "Man, I wish we could just do vaccines again." But we've already done vaccines in...

Sydnee:

Yeah.

Justin:

... in our show, so we can't do it again.

Sydnee:

Yeah, I mean I would do it every episode because it's just that important.

Justin:

It's just that important. But...

Sydnee:

But—

Justin:

... we are circumventing that, uh, this week. Tell me how, Syd.

Sydnee:

Well, I thought instead of talking about vaccines, I could just talk about measles as a way for me to talk about vaccines again.

Justin:

Um, we try to be pretty accepting, open people here on the show unless you were born over a hundred years ago, in which case I tend to give you a pretty hard time—

Sydnee:

[Laughs]

Justin:

... and I accept that. Uh, this is one area where I have basically, like, zero room for— It's impossible for me to reasonably talk about this issue...

Sydnee:

The... Yeah.

Justin:

... and like, the pros and cons. This and gay marriage. Like, I just— I have very little capacity.

Sydnee:

No, there's not— This isn't— There aren't two sides to this. This is one of those cases where you don't need to give the other side a fair chance or listen to what they have to say or their argument or play devil's advocate. No. There's one side to this. We have good science to support that vaccines save lives, period.

Justin:

The—

Sydnee:

That's the end of that sentence. There's no but, or but sometimes, or otherwise.

Justin:

So when somebody gets the measles vaccination, what exactly are they saving themselves or their children from?

Sydnee:

Okay, so let's talk about measles. Uh, first of all, there were two Sydnees responsible for this measles episode.

Justin:

Mm-hmm.

Sydnee:

One being me.

Justin:

Right.

Sydnee:

And the other being other— I don't want to call her Other Sydney.

Justin:

Sydney Two is fine.

Sydnee:

Well, but...

Justin:

Sydnee—

Sydnee:

... maybe she's Sydney and I'm Sydnee Two.

Justin:

Sydney with a Y. How's that?

Sydnee:

Yes, Sydney with a Y who also suggested this topic, and I said, "You know what, Sydney, this Sydnee is gonna get you, your Syd— you, Sydney, your back," and this—

Justin:

No, yeah, you guys have the same name. I think we get it. Like, you're both Sydnees. Got it. Oh, yeah, I'm with you. I got it.

Sydnee:

I was trying to go with the jokes, 'cause, you know, you weren't, so—

Justin:

Listen, you just... Well, okay, sorry, I haven't...

Sydnee:

[Laughs]

Justin:

... busted everybody's stitches with measles gags yet. Let me reached into that vein. Oh, I got shocked. I got shocked by that rich vein of humor.

Sydnee:

[Laughs]

Justin:

'Cause it's electrified and it's terrible and there's nothing funny about it.

Sydnee:

There's the— Well, here's the sad thing, measles should be funny because we should just be able to eradicate it and be done with it, but it can't be funny.

Justin:

But no.

Sydnee:

And here's why.

Justin:

Okay, tell me...

Sydnee:

So—

Justin:

... about measles, Syd.

Sydnee:

Anyway, measles has been around a long time. It was probably initially related to a dog virus...

Justin:

Mm-hmm.

Sydnee:

... that caused, like, distemper in dogs, that, uh, spread to humans some time after humans started hanging out a lot more with dogs. So thousands of years ago when we were like, "Hey, puppy."

Justin:

Come on in. Come on in, weird wolf.

Sydnee:

[Laughs] I want—

Justin:

Let me see if you can live here.

Sydnee:

Would you like to fetch?

Justin:

Do you fetch?

Sydnee:

I think you look like somebody I could teach to fetch.

Justin:

You look like somebody I could teach to fetch. Why don't you come on in here and lay on these newspapers I invented?

Sydnee:

This was also the time that we invented the newspaper.

Justin:

Thank you, Gutenberg.

Sydnee:

Um, the first description of measles was in the 9th century by a Persian doctor, although at that time, it was thought that it was probably related to smallpox, which was much better known and understood, and we've talked about smallpox before, was kind of a bigger deal. Measles was even seen as maybe one of the phases of smallpox.

Justin:

Hmm.

Sydnee:

Maybe you got measles.

Justin:

Like a, like, pre-smallpox, you mean?

Sydnee:

Yes. Yeah, or maybe it was a different, like, in some people this is how smallpox looks and in other people, it looks like the, the worse thing, you know?

Justin:

Mm-hmm.

Sydnee:

'Cause I mean, sim— Not really the same rash, but similar enough that you get all red and spotty and, you know, I don't know, same disease.

There were probably outbreaks of it in the ancient world, but the hard thing is, uh, one, you really need large population centers to support epidemics of measles, so most of the time there would have just been isolated cases if there were some.

Justin:

Mm-hmm.

Sydnee:

And a lot of viral diseases cause red, splotchy rashes, you know? So it's kind of hard to differentiate that when we look to ancient descriptions, you know, in texts of, like, somebody got a red dotty rash, what did they have? Who knows?

Justin:

Right. We obviously didn't call it that, so—

Sydnee:

No, we didn't know that it was measles. You know, it could've been a lot of things. Um, the Greeks probably didn't have enough large population centers to support big epidemics of measles, which is why you don't really hear Hippocrates writing about it or, um, read, I guess, Hippocrates writing about it.

Justin:

Gotcha. He didn't do any audiobooks.

Sydnee:

He didn't do a— You know, why didn't he have a podcast. I think—

Justin:

Where was his podcast? I'd listen to that.

Sydnee:

I don't think it's— It's not fair that I get one and Hippocrates didn't. He probably ranks higher.

Justin:

Pauly Shore has one. So let that sink in.

Sydnee:

[Laughs] You'd think, you'd think Hippocrates—

Justin:

Nothing against Pauly Shore. I mean, he's done a lot of great work. It's just, like, Pauly Shore gets a podcast and Hippocrates doesn't. I don't know.

Sydnee:

He'd agree with that assessment, I think.

Justin:

Time's a cruel mistress.

Sydnee:

Uh, there is, uh, some people will point to the Plague of Athens as a, um, representation of early measles, but this is actually a big point of debate as I was reading about it. So there was a plague that ravaged Athens during the time that it was at war with Sparta.

Justin:

Mm-hmm.

Sydnee:

I guess one of the many— Weren't they always, like, at war?

Justin:

Uh, there's—

Sydnee:

I don't know.

Justin:

There's at least two 300 movies, so at least twice I think.

Sydnee:

Okay. I know nothing about history. Well, I know something.

Justin:

I know when I think about those 300 movies—

Sydnee:

I know very little about history.

Justin:

But, I know about the 300 movies apparently 'cause those are Persians and Spartans, but hey.

Sydnee:

Yeah.

Justin:

Let's just roll with it.

Sydnee:

Close.

Justin:

Close.

Sydnee:

Yeah. Uh, see, I didn't minor in history. I was one class short, so I can't claim any history knowledge.

Justin:

I tell people I minored in Spanish, but I barely made it out of Spanish 4 with a D.

Sydnee:

I did minor in Spanish.

Justin:

Okay.

Sydnee:

Anyway, so, there was a plague that ravaged Athens, and it probably contributed largely to its decline. Uh, and what happened is that they were fighting the Spartans and they were the people who lived like within the Athen— The walls of the city of Athens, the Athenian walls, and then there were kind of these people that lived out in the middle, you know.

Justin:

Mm-hmm.

Sydnee:

And when the war started, they kind of rushed in on the city of Athens to live closer to the city central, you know, to be, uh, to be more protected. And during that time, a huge plague erupted, probably just because there were a lot of people living in close quarters, and kind of, like, in a refugee, kind of, camp situation.

Justin:

Sure, yeah, yeah.

Sydnee:

You know, they didn't have clearly defined borders as to who lived where and who, you know, peed where and who...

Justin:

Gotcha.

Sydnee:

... sneezed where and what they ate.

Justin:

Not that they even knew that was a thing...

Sydnee:

Exactly.

Justin:

... uh, to worry about.

Sydnee:

Uh, so some sort of horrible plague just spread through Athens like wildfire at this point, and when you read descriptions, they definitely had a red splotchy rash, um, but then they talk about the rash like ulcerating and people are bleeding everywhere and their tongues are coming off in their mouths, and their eyes are bleeding.

So at this point, this starts to sound a little less like measles and either, one, like, people got some really awful bacterial infections of some other kind of sore.

Justin:

Mm-hmm.

Sydnee:

Maybe it was smallpox. It could've been typhoid. It's really not clear. So I don't know. This may have been a description of the first major measles outbreak, or it may just, you know, be something else.

Uh, the Romans probably did have big enough population centers to support big outbreaks of measles, but again, the outbreaks of measles sound like outbreaks of anything else that has a rash back then. So we're not sure.

Justin:

Gotcha.

Sydnee:

In this, in the 13th century, we get the word measles, which is actually is, like, mezils, me—

Justin:

M-E-Z-I-L-S.

Sydnee:

Yeah. Measles, literally, this is how, like, a little kid spells measles.

Justin:

Like a— Like street. I think that's, like, what measles prefers. Like, if measles was tagging, that's what he would use.

Sydnee:

Mezils.

Justin:

He or she. I don't want to assign a gender to measles. Who can say?

Sydnee:

When I see measles spelled that way, it reminds me of when you call pretzels pezels.

Justin:

I do call pretzels pezels sometimes.

Sydnee:

You do.

Justin:

That's true.

Sydnee:

So—

Justin:

I say salt me up some pezels, Syd.

Sydnee:

Say spot me up some measles. [Laughs]

Justin:

Spot me up some measles. Got it.

Sydnee:

Um, that word actually means, when you spell it that way, it means either leprosy or measles.

Justin:

Oh, really?

Sydnee:

Yeah. So they thought that they were maybe closely related. We're still kind of unclear on exactly what measles is at this point. And again, at this point, we're still thinking that things are caused by the— We talked about this before, miasmas. Like, they're in the air.

Justin:

Right.

Sydnee:

Something in the air that makes you sick...

Justin:

We don't know exactly what it is. It's just sort of, like, a bad vibe.

Sydnee:

Seeps into a room and the next thing you know, everybody's sick.

Justin:

Like Smylex gas basically from...

Sydnee:

They...

Justin:

... from the hit film, Tim Burton's Presents The Batman.

Sydnee:

[Laughs] They get current.

Justin:

Yeah.

Sydnee:

Timely.

Justin:

Current. Current, timely 1989 film references for you, folks.

Sydnee:

We're also a film review podcast. [Laughs]

Justin:

Yeah, we do that too. We're The Flop House now.

Sydnee:

Uh, there were also theories that it was spread by seeds that you could get from person to person, that would cause disease, which kind of is close.

Justin:

Mm-hmm.

Sydnee:

You know, it's not too far off. I'll give them credit for that.

Justin:

Tiny, tiny, tiny seeds.

Sydnee:

Uh, in the 16th century, we actually began to recognize measles as a distinct entity that is, uh, in and of itself measles, you know.

Justin:

Right.

Sydnee:

This is, uh, some kind of disease that people get, and it causes a rash, and they get sick. But in Europe and Asia, the death rates were relatively low, so it wasn't something that people spent a lot of time...

Justin:

They had bigger...

Sydnee:

... focusing on or worrying about.

Justin:

... a bigger proverbial fish to fry.

Sydnee:

Exactly. There were a lot of other diseases that were killing lots of people. Measles was low on the list. What really changed that was as people began exploring, they carried along, and most notably smallpox with them, but also measles.

Justin:

I was about to guess that straight white men got it in great amount 'cause that's usually what turns these things around.

Sydnee:

[Laughs] No, it's already affecting a lot of straight white men. It's, um, what really— Measles really made a name for itself in the untouched populations of, you know, the new world, so the Native Americans, and then as explorers went to places like Fiji, Samoa, West Africa, Hawaii, uh, as they would explore, they took along...

We all know they took smallpox with them. Well they also took measles. And at this point, you're seeing outbreaks of measles, and we know this is measles, not smallpox, killing 20% to 30% of people each time there's an epidemic. So I think we began to see at this point that, you know, measles does have a nasty side that we tend to forget about...

Justin:

Mm-hmm.

Sydnee:

... especially now since it's been such a long time since any of us have seen measles.

Justin:

Gotcha.

Sydnee:

Uh, it was thought for a while that measles was just part of growing up, that, uh, you just— Like, it wasn't even something you got. It wasn't something external. It was just internal to—

Justin:

Like super puberty, basically?

Sydnee:

Yes, like you went through puberty and then you got measles, and you went through your measles phase. Uh, you know, sorry.

Justin:

Listen to that voice saying you can tell me.

Sydnee:

Leanne's in her measles phase right now.

Justin:

She's in measles—

Sydnee:

She's just, she's in her room. She's listening to that moody music.

Justin:

Listen to that boy sing, "You can tell he hasn't had his measles yet."

Sydnee:

[Laughs]

Justin:

It's beautiful and angelic.

Sydnee:

[Laughs]

Justin:

Like a star out of hope, he continues to keep his clear complexion.

Sydnee:

There was also a theory, uh, there is a goddess of measles, a Hindu goddess of measles, Sheetala, and there's—

Justin:

Jenny McCarthy.

Sydnee:

Jenny McCarthy is the American goddess of measles. Uh, Sheetala inflicted measles on people as punishment. Um, I mention this because one of the things we'll talk about in a little bit is the idea that measles might be a gift from a goddess, and let me just clarify at this point that, since we're still talking historically, it is a punishment from a goddess inflicted on people when they displease her.

Justin:

Got it.

Sydnee:

She gives them measles, like it's a—

Justin:

You don't... so just to be clear, you don't want measles?

Sydnee:

No, it's a bad thing.

Justin:

Got it.

Sydnee:

It's not a gift.

Justin:

I'm with it.

Sydnee:

No. Um—

Justin:

So what... I'm a little confused. What— We've talked a lot about the history of measles, but like, I'm gonna be honest with you and say that I've never, uh, you know, obviously I've never seen in my lifetime. So, like, can you tell me, like, what it actually is?

Sydnee:

Sure. I think that's a good idea because I also have not seen measles. Um, and I am a doctor, for real. I don't just play one on a podcast, but measles is something that I learned about in medical school as, um, kind of an academic note.

There is a thing that was called measles. Other, in some parts of the world, people are still getting measles, certainly. You know, we have not eradicated it, but you won't see it in your career, Sydnee, because we don't have it in the U.S. anymore. Wrong. So it's a paramyxovirus.

Justin:

Mm-hmm.

Sydnee:

It's also known as Rubeola.

Justin:

Right.

Sydnee:

Um, so like I said, it's a virus. You get it and then about 7 to 14 days after you've been exposed, you start to get symptoms. Um, we were taught in med school that you get the three Cs first, cough, coryza, and conjunctivitis. You probably know what two of those are.

Justin:

Yeah, I know cough and conjunctivitis. In case people don't know what conjunctivitis is though, what—

Sydnee:

Like red eyes.

Justin:

Right.

Sydnee:

Like, inflammation of the eyes.

Justin:

Gotcha.

Sydnee:

And you can also get coryza, like, runny nose.

Justin:

Oh, okay.

Sydnee:

Like cold symptoms.

Justin:

They just...

Sydnee:

So, it sounds like—

Justin:

... they just said coryza so there would be three Cs.

Sydnee:

Yeah.

Justin:

Basically.

Sydnee:

There's also a K but it sounds like a C called Koplik spots, which are these little white spots you get inside your mouth.

Justin:

Okay.

Sydnee:

But they're, but it's a K technically.

Justin:

Gotcha.

Sydnee:

You also get a fever, and you get these symptoms first.

Justin:

No way to, no way to spin that with a C, I guess?

Sydnee:

I don't ... um, no. Calor?

Justin:

Calor.

Sydnee:

Ah, calor.

Justin:

Calor en mi cabeza.

Sydnee:

Heat. Ah, the... See, they missed that one.

Justin:

Yeah.

Sydnee:

I got it. I'm all over you. Um, anyway, so you get these symptoms, and then 3 or 5 days later you get a rash. And we were taught that it's kind of like a, a bucket of paint rash.

Justin:

Mm-hmm.

Sydnee:

You think about it as like somebody dumped a bucket of paint over your head because it starts at your head and works its way down to your feet. So you start the spots up around your hairline and then slowly they work their way down.

Justin:

Like a Jackson Pollock disease.

Sydnee:

[Laughs] No, wouldn't that be like splatter slashes, like, all over you?

Justin:

Yeah.

Sydnee:

Yeah.

Justin:

I'm with you. I—

Sydnee:

This is a little more orderly.

Justin:

It's like you said, I don't know, on You Can't Do That on Television. Somebody dumped a bucket of measles on your head.

Sydnee:

[Laughs] Exactly. That would—

Justin:

Got it.

Sydnee:

That should would have been a lot less pleasant if that was—

Justin:

No, it was, uh, you know, you remember, you don't— You Can't Do That on Television, it lasted three episodes and everybody on earth watched it. It was the greatest, shortest running television program ever. And Nickelodeon has, is still in court.

Sydnee:

[Laughs] Measles, and you may have heard this, uh, on the news, is very, very infectious. Unlike Ebola...

Justin:

Which—

Sydnee:

... which we mentioned is not.

Justin:

Right, it has a rate of, if I can remember this correctly, the average for Ebola is like 1:1, right? For...

Sydnee:

Mm-hmm.

Justin:

... one person that gets it, one other person will get it.

Sydnee:

Exactly.

Justin:

Which is—

Sydnee:

You're gonna infect, like, one other person.

Justin:

Which is easier to control.

Sydnee:

Yes, much easier to control. Measles on the other hand, if you are infected, you're likely to give it to 16 to 18 people, which is a lot.

Justin:

Mm-hmm.

Sydnee:

And a lot harder to control. It's spread by respiratory droplets, but it also hangs around on surfaces and in rooms for two hours after you've been there.

Justin:

Yeah.

Sydnee:

So this really is a case of, you know, if somebody with measles is in the same bowling alley as you and you're not immunized, you really do need to worry. So this is a lot scarier in that sense.

Justin:

Right.

Sydnee:

You know, certainly not as dramatic as Ebola, but much easier to get. Most people get better in a week or so. Most people get those symptoms, they get the rash, they're probably gonna give it to some other people, and then they get better.

Justin:

Is this one of those scenarios where otherwise healthy adults tend to fare the best?

Sydnee:

Exactly. Most of the time, you or I, Justin, would probably, probably do okay for measles.

Justin:

Okay.

Sydnee:

Most likely we would. Um, however, we won't get measles because we were immunized.

Justin:

MMR, right?

Sydnee:

Yes, that's right, MMR, which stands for measles, mumps, rubella...

Justin:

Mm-hmm.

Sydnee:

... 'cause those are the three diseases that you're immunized against when you get it. And we'll talk a little bit more about the vaccine, but some people don't get better. There are some complications, and I will say this. We are not the most likely group to not get complications. We're not the safest group.

Justin:

Hmm.

Sydnee:

The safest group are people between five and 20.

Justin:

Really?

Sydnee:

Yeah. They're the least likely to get complications. We're still pretty unlikely 'cause we're healthy and relatively young, but the little kids, especially little kids who haven't gotten their immunizations yet.

But little kids in general and then older people, and people with other, you know, illnesses, things that would, uh, suppress their immune system, make it harder for them to fight off any disease, can get the following complications, and here are some numbers for you.

One in 20, that's not a small number, one in 20 kids with measles get pneumonia, which doesn't sound like a big deal, except the most common cause of measles death is pneumonia. One in 20 kids will get it.

Justin:

Mm-hmm.

Sydnee:

Uh, that does not mean that one in 20 kids will die, but one in 20 kids with measles get pneumonia. One in one thousand kids with measles will get encephalitis, which is inflammation of the brain, which is kind of a big deal.

Justin:

Right.

Sydnee:

One to two out of every thousand people with measles will die.

Justin:

Got it.

Sydnee:

And 4 to 11, and we don't have great numbers on this because we're not seeing it, measles as much now, 4 to 11 in a hundred thousand will get something called subacute sclerosing panencephalitis, SSPE, which is a long-term condition, uh, that affects the central nervous system and doesn't usually show up until maybe 10 years after you had the measles.

Justin:

Ugh.

Sydnee:

But will impact your neurological function for the rest of your life. So with these numbers, you can see why some people were interested in fixing measles.

Justin:

Right.

Sydnee:

'Cause for a long time it was considered, you know, even after we knew it wasn't a phase of growing up, it was considered just part of what happened when you grew up. Kind of like when we were little, everybody got chickenpox at some time.

Justin:

Right.

Sydnee:

And now they don't 'cause there's a vaccine.

Justin:

That's weird, isn't it?

Sydnee:

It's really weird.

Justin:

It's weird.

Sydnee:

Yeah. People don't get chickenpox anymore. Um, for a long time measles was just part of what happened. You know, every couple years, we would have a big epidemic. People would get measles, you hoped you didn't get too sick, but everybody got sick.

Justin:

Is it one of those where you get it once and you're done?

Sydnee:

Yes.

Justin:

All right.

Sydnee:

Yeah, for most people.

Justin:

Right.

Sydnee:

Usually, yeah. Now there were, of course, some weird cures here and there tried, and I should note, there is no cure for measles. There is no, like, specific treatment.

Justin:

Just supportive care.

Sydnee:

Just mainly supportive care. Uh-huh, and get your vaccine so you don't get it would be my main, um, recommendation.

Justin:

Yeah.

Sydnee:

But some cures that have been tried, there was some religious cures. So we talked about that there was a goddess, Sheetala, who could give you measles.

Um, there was a tree, you could take leaves from the neem tree and then you could rub them all over you on your rash and then spread them out under your bed.

And then you would take a can of wet cow dung and leave that in your doorway, and when visitors came to see you, they would have to dip like a leg in the wet cow dung in order to purify themselves before they came in to visit you.

Justin:

Excellent. Excellent. I'm so... in case you needed another reason to not visit your friend with the measles, now you have one.

Sydnee:

[Laughs] 'Cause they have a can of...

Justin:

They have a can of dog poo-poo.

Sydnee:

... cow poop.

Justin:

Or cow poo-poo...

Sydnee:

Cow.

Justin:

... for you to put your leg in.

Sydnee:

Wouldn't a vaccine be easier?

Justin:

I have a—

Sydnee:

Just keep thinking that as I'm telling you these things.

Justin:

Gotcha.

Sydnee:

Uh, in some of the Japanese traditional medicine, uh, beliefs, you can first use a strict diet, which actually nutrition is important when you're healing from anything.

Justin:

Mm-hmm.

Sydnee:

Uh, with a lot of wheat, I don't know about that, or there were some specific talismans, um, like, horses worked well against measles and—

Justin:

'Cause of the majesty.

Sydnee:

Uh, the majesty of horses, or Mount Fuji talismans.

Justin:

Also majestic, equally majestic. Anything majestic, bald eagle, American flag. Whatever. Uh—

Sydnee:

Justin.

Justin:

Rock You Like a Hurricane.

Sydnee:

A talisman of Justin.

Justin:

A talisman of myself.

Sydnee:

He's very majestic.

Justin:

Very majestic man, yeah.

Sydnee:

Justin with a single tear and...

Justin:

Just like a flannel shirt.

Sydnee:

... like a— Yeah, with, like, another shirt underneath it that has, like, a wolf on it.

Justin:

Yeah. That's a—

Sydnee:

And howling at the moon.

Justin:

I'm getting a little teary-eyed right now just thinking about that majesty.

Sydnee:

[Laughs] Maybe like an American flag in the background of it.

Justin:

Two of 'em.

Sydnee:

Ooh.

Justin:

Yeah.

Sydnee:

Uh, of course, as everything else we talk about, bloodletting was tried for—

Justin:

You got to try it, just to see.

Sydnee:

Who knows?

Justin:

You don't know. You're not a doctor.

Sydnee:

It— One of the descriptions I read of bloodletting mentions specifically that you shouldn't hesitate to bleed even the tender infant.

Justin:

Cool. They got loads of blood, nothing but.

Sydnee:

I would hesitate to bleed a tender infant myself.

Justin:

I don't want to meet the doctor that doesn't hesitate to bleed a tender infant.

Sydnee:

[Laughs]

Justin:

Oh, baby, huh? Bring that bad boy over here. [makes sound effects] Got it. No problem. Didn't even think about it, really.

Sydnee:

[Laughs]

Justin:

It's, like, reflex at this point. Got any other babies? It's like my fave.

Sydnee:

They're my favorite to bleed. They're so easy.

Justin:

They're so easy, especially when you don't hesitate. You just got to go, "Whoa, I just bled another baby. For no— I wasn't even looking. That's a no look. I no-scoped that baby."

Sydnee:

Uh, especially for the diarrhea that little kids would get, bleeding was great for that.

Justin:

Sure, right.

Sydnee:

Uh, there was a long time belief that measles breaks out on the inside first, which kind of makes sense 'cause you think about people got the other symptoms before the rash, so you had to do things to make the rash comes out, and this is one of those cases where whatever you did would work 'cause the rash was coming.

Justin:

Right.

Sydnee:

So somebody would get sick, you knew measles was going around, so you would do one of these weird things to bring out the measles and then the rash would come and you'd go, "Yay," and you didn't want it to go back in on you, which was the— That's what they called it, go back in on your because then it would— You'd get measles of the liver and stuff like that.

Justin:

Oh, right. That's a big problem.

Sydnee:

And so in order to bring them out, you could drink some sheep dropping tea.

Justin:

Mm.

Sydnee:

Or nanny pills. I found it called that a lot, some nanny pills.

Justin:

They're called nanny pills?

Sydnee:

Nanny pills. I guess a sheep is like a nanny.

Justin:

Wink.

Sydnee:

And then I— Pills? Anyway, um, garlic seeds seeped in whiskey.

Justin:

Um...

Sydnee:

Sure.

Justin:

... sure. Go for it.

Sydnee:

Um, there was also a tree. It's called the gumbo-limbo tree, and this is interesting. We talked about the Doctrine of Signatures before.

Justin:

Mm-hmm.

Sydnee:

The idea that nature gives us clues to what can cure something by it looks like the thing you want to cure. So I guess this tree has a red, rough bark that peels off and kind of looks like a rash. So the bark of this tree was good for measles, also for sunburns and anything else that looks red and peely.

Justin:

Got it.

Sydnee:

Um, the usual things that cure everything in, you know, kind of a, um, natural view of medicine. Lavender, chamomile, peppermint tea, catnip, echinacea, vitamin C, and vitamin A, which there's actually a little bit of truth to this. Um, measles is really rough on people who are malnourished and specifically on people with vitamin A deficiency.

Justin:

Hmm.

Sydnee:

So that has been a recommendation for a while in underdeveloped countries. When kids get measles, we very often would give them a couple doses of vitamin A right away in order to prevent some of the really horrible complications of measles and, uh, to improve their mortality. So there's a little bit of truth to that.

Justin:

So now that I know what it is, Syd, how do we start making some progress against it?

Sydnee:

Well Justin, I'm gonna tell you all about that, but before I do, why don't you head on down to the billing department with me?

Justin:

Let's go.

[theme music plays]

[ad break]

Justin:

Okay, so how did we start making some progress against the measles?

Sydnee:

So first of all, in 1757, there was a Scottish doctor, Francis Home, who showed that there was in fact something in your bloodstream that was infectious so that it could be passed from person to person that was causing measles, which was a big breakthrough.

Justin:

Mm-hmm.

Sydnee:

So now we know it's not just like, oh, you've got your— It's the time of, you know, your voice is changing, you got acme, you got boobs, and now you got measles. [Laughs]

Justin:

Right.

Sydnee:

Um, by 1912, so we get, you know, there's a long time period there where we're studying and not figuring much out, measles is a distinct reportable disease in the U.S., but we have no idea what to do about it.

We know there's this virus, we know everybody's getting it, we know it's

very infectious, but every year in the U.S., uh, over that next decade, 6,000 people died every year of measles in the United States, 6,000 people. In 1954, we had a big breakthrough when we actually isolated the virus itself.

So instead of just kind of like we know there's something in the blood, we know how it's passed from person to person, we looked at it under a microscope, probably electron microscope and said this is the virus, this is what is causing measles.

They got it from the blood of a 13-year-old boy named David Edmonston, who had the measles obviously, um, which is important only because the Edmonston strain vaccine is what was then created from it.

Justin:

Hmm. Is there anything special about that kid, you think, or...

Sydnee:

I mean—

Justin:

... they just finally figured it out?

Sydnee:

They just figured it out from that kid.

Justin:

He had just really huge measles.

Sydnee:

[Laughs]

Justin:

And he, I know, they could see them with the naked eye, practically.

Sydnee:

And now he's famous for it forever, for having the measles.

Justin:

For his huge measles.

Sydnee:

Uh, in 1963, we made a vaccine, and then in 1968, we perfected it, and this is still the same vaccine, the one we made in 1968 that we are using today in combination with mumps and rubella or rubella is also known as German measles in the MMR.

Justin:

Hmm.

Sydnee:

Um, in 1978, so we are armed with this vaccine, we're gonna give it to everybody, and this is, you know, we talked about we're kind of in the same time period when the World Health Organization said, "Hey, why don't we eliminate smallpox," and then we...

Justin:

Right.

Sydnee:

... you know, we did. The CDC says, "Hey, we're gonna eliminate measles, and we're gonna do it by 1982." We don't quite hit that deadline, in part because we realize that initially we were only giving kids one shot, but they probably need a booster.

So then we add a booster shot, and everybody starts getting better, and we're doing a much better job, and then in the year 2000, we declare measles eliminated in the U.S.

Justin:

Yay, mission accomplished.

Sydnee:

Now this is important to know. Unlike when we completely eradicated smallpox from the face of the earth with the exception of a couple labs, hopefully just a couple labs, hopefully nowhere else, well and then that one that was found in like a library somewhere or some archive.

Justin:

Under somebody's chair or something.

Sydnee:

Yeah. Somebody left some behind somewhere. Um, measles was still killing people worldwide, still is now, still was in 2000. Uh, as of 2013, about 145,000 people are dying from measles worldwide.

So that is important to remember. We didn't eliminate measles from the face of the earth. We thought we eliminated it from the U.S., but it's still out there and can come back, especially if people aren't vaccinated.

Justin:

Hmm.

Sydnee:

So this is where everybody starts getting it so very wrong. Measles should be a historical footnote. The vaccine isn't perfect, so there are a handful of people who are gonna get vaccinated and still be susceptible to getting the measles, but we have this great thing that we talked about on the vaccine episode called herd immunity. Do you remember what that is, Justin?

Justin:

Yeah, it's when a population of people is, I think the stat is like 80% to 90% vaccinated against something, then because the disease can't get a foothold, the entire community is basically immune, looked at holistically.

Sydnee:

Exactly. Now it's a little higher, I believe, for measles. I think it's like 95%. 90%-95%.

Justin:

Wow.

Sydnee:

It's different for every disease. That's a good, you know, threshold to think about. Um, but, uh, when you look at what happened at Disneyland recently where a bunch of people got the measles, when you have a population that

starts choosing not to vaccinate and then you introduce people who aren't immune to it for some other reason, and then you take the fact that there are gonna be people traveling from other parts of the world where measles is still being passed around, is still endemic, you have a recipe for disaster.

Especially when you consider that there are some people who can't get the measles vaccine. You know, there are always gonna be people who might be allergic to some component of a vaccination, or for some health reason are not eligible to receive the vaccine because it would be harmful to them.

There aren't a lot of these people, but they do exist, and part of the reason that I get vaccinated and you get vaccinated and you do, Justin, is to protect these people who can't. In addition, there's somebody else who you're protecting when you get your measles vaccine.

Justin:

Who?

Sydnee:

Charlie.

Justin:

Our baby.

Sydnee:

My baby.

Justin:

Well, your baby, but my—

Sydnee:

Okay. Your baby too.

Justin:

Yeah, our, okay.

Sydnee:

Our baby. It sounds more impactful when—

Justin:

That's—

Sydnee:

My baby.

Justin:

Yeah.

Sydnee:

Protect my baby. Our baby is six months old. She doesn't get her measles vaccine yet. You get your first when you're 12 to 15 months old and then you get a booster probably when you enter school, but somewhere between the age of four to six.

So Charlie doesn't have her measles vaccine yet, and measles is particularly devastating in the young, less than two population who hasn't gotten their vaccines or at least both of their vaccines at this point. So that's also who you're protecting when you get your measles vaccination.

Um, some people out there, uh, this is crazy because we're talking about, this is not an ancient belief. Some people think that measles is important to get.

Justin:

What?

Sydnee:

That it makes you stronger. That after you get measles, your kid will be more vigorous and more energetic and will be stronger afterwards.

Justin:

Are you kidding me?

Sydnee:

Nope, that is a belief, that it, you— We don't want to protect our kids from measles with a vaccine because it's an important trial they'll go through so that they can come out the other end tougher.

Justin:

What kind of weird, like, vision quest BS is that? Like, follow your spirit wolf across the ridge and you'll return a man? Like, what is that nonsense?

Sydnee:

Is the same kind of nonsense that interpreted ancient Sanskrit to mean that measles is a gift from the goddess, and so therefore, we shouldn't vaccinate because we're refusing a gift from a goddess.

Justin:

I just want to say, uh, I hope that my previous comment was not offensive to anyone who believes in vision quests or spirit animals.

Sydnee:

[Laughs]

Justin:

I think that that's wonderful. I think that that's fine. I know that it's a cultural issue. I was specifically trying to insult people who don't get vaccinated, and I think that they are criminals and they should go to jail.

Sydnee:

Yeah, if you go on a vision quest in order to avoid getting measles instead of getting a vaccine, then that's the problem.

Justin:

Then you're the problem, right.

Sydnee:

Yes. Um, this is what's most frustrating. So why aren't people getting vaccinated? And I think, you know, I'll say it, but I think most people know this. So there has been a perception that, and we talked about this in the vaccine episode, that vaccines are dangerous, that there's some sort of plot perpetrated by the government to harm people, and specifically that they're causing things like autism, other learning disabilities or problems in children.

This is wrong. It's just wrong. It's not true. There's no evidence for it, and in fact, there's tons of evidence against it. Um, look this up for yourself.

Research this topic. There is nothing to the link between any vaccine and autism, specifically the MMR.

Uh, the former Dr. Wakefield who perpetrated this myth is a criminal. He has the blood of children on his hands, and so does Jenny McCarthy while we're at it, and there is...

Justin:

And Rob Schneider, put him on blast. [Laughs]

Sydnee:

[Laughs] And there is no link between it, and what's frustrating about this is even as I say these words, I could quote to you studies and I could show you the links and I could give you all the information, studies are showing that trying to educate people about vaccines only makes them more entrenched in their belief that vaccines are bad.

Justin:

The best we can hope for, folks, is herd immunity from dumb. Like, talk to people. If— Don't let this stand. Like, don't— And moreover, please, I'm begging you, don't let politicians turn this into an issue which insinuates that there are two sides.

If someone says that it should be a personal choice, please show them a picture of our baby, and say that you're an idiot and you'll never get my vote. I understand there's gonna be things that we're politically divided on. I get that.

Please don't let this brainless, stupid reactionary nonsense be one of those issues, please. For me. Thanks. And I know we're probably preaching to the choir here. I have a hard time imagining the person who's captivated by the history of medicine and yet refuses to embrace any of it. [Laughs]

Sydnee:

Uh, one interesting suggestion that I saw in Forbes was maybe we should start suing people...

Justin:

Okay.

Sydnee:

... who don't vaccinate their children.

Justin:

Fine.

Sydnee:

Specifically if their children make our children sick. I'm all for that. Whatever it takes to stop them. Um, you know, it's interesting, Justin and I live in one of the two states that are left that don't allow religious exemptions from vaccines, um, which actually they're trying to overturn that...

Justin:

Please don't.

Sydnee:

... within this legislative session. Uh, which is probably a good thing because here's the thing, if you're gonna get vaccinated, if you're not— Well, I shouldn't say this. If you're not gonna vaccinate your children shouldn't be allowed to attend school.

Justin:

You should have to keep them at home.

Sydnee:

But then where do we stop that? Because obviously then your children can still go to Disneyland and give everybody measles.

Justin:

Right.

Sydnee:

And that's a big problem. So just vaccinate your kids, and then they won't get sick and our kids won't get sick, and we can all be happy in the fact that as a species, we have advanced to the point where we can protect ourselves

from awful infectious diseases that still kill people. Somebody's kid is gonna die from measles.

Justin:

In America.

Sydnee:

[laughing] Which doesn't make it more important...

Justin:

No.

Sydnee:

... than in any other country.

Justin:

No, I don't mean that, like, it's happening here in our home. I mean, like, in a country that, like...

Sydnee:

Eradicated...

Justin:

... eradicated it, like—

Sydnee:

... it in 2000. That's insane.

Justin:

It's insane. Please.

Sydnee:

This vaccine has saved millions of lives since it was created. Literally million— They, then there are this... I'm not making this number up. The calculations are that we have saved millions of lives by using the measles vaccine.

We are saving millions of lives in other countries. You know how far mothers

walk in places, in Sub-Saharan Africa to get their child a measles vaccine? Do you know how far they walk to have access to these vaccines? They're free at your health department. Your pediatrician will give them to you or your family doctor.

Justin:

Please, I know—

Sydnee:

Please don't take this for granted. Vaccines have saved millions of lives. It's completely safe. Get your vaccines.

Justin:

I, I—

Sydnee:

Unless you're one of the few people who can't.

Justin:

I know we're getting preachy guys. Sorry about that. I don't mean to be. It's just— [sighs]

Sydnee:

It's so easy.

Justin:

Just get the stu— I mean are you afraid of shots? Is that?

Sydnee:

[laughs]

Justin:

'Cause I get that. I do. They make a— There's a syrup you can drink. You don't have to get a shot.

Sydnee:

Well, no.

Justin:
They got measles—

Sydnee:
No, you got to get a shot.

Justin:
They got measles syrup.

Sydnee:
No, you got to—

Justin:
No problem.

Sydnee:
No, that's not true.

Justin:
Have them squirt the shot in your mouth, you'll be fine.

Sydnee:
No, no that doesn't work. No, get the— Just get the—

Justin:
It's worth a shot.

Sydnee:
No, get the shot.

Justin:
Maybe it does work. We don't know.

Sydnee:
Just—

Justin:

We've never tried it.

Sydnee:

Here's the thing guys. There's a lot of stuff in medicine that's really difficult, that's really complicated, and that I struggle with and I'm still learning about every day. This is not one of them. Vaccines are easy. Just get them.

Justin:

Thank you for listening to our admittedly a little preachy podcast, uh, Sawbones. Thanks to people tweeting about it, uh, @Sawbones. Want to make mention of some unfortunate news here if you are, uh, coming to the, um, L.A. show that My Brother, My Brother and Me is doing, uh, this weekend. We will not be able to attend that, unfortunately. Uh, it's just, we couldn't. We thought the baby could do it.

Sydnee:

We just can't.

Justin:

The baby can't right now.

Sydnee:

No.

Justin:

Sorry.

Sydnee:

She's just little and we're just not ready for this.

Justin:

We're not quite ready, but, so we apologize for that, and, uh, we do hear they have a, uh, a substitute podcast of some sort, so we are apologizing for that, but we did want to let you know, because...

Sydnee:

Yes.

Justin:

... didn't want to leave you hanging.

Sydnee:

And we will miss you.

Justin:

And we will miss you very much. Thank you to people Tweeting about the show, like Katie Ferina, Tiana, Zach Weekly, Hans, uh, Han Starbuck I guess is what we'll go with. Uh, Rahan Zingara, Hannah Craig, Lizzy Care, Paul Minone. Uh, Lavalley, Kayla Mislick, uh, Joan Christensen, Meredith M., Graham Roat. Uh, Missed in History, Nicole, uh, Graham's wife Kate Baldwin was, uh, very nice and promoted our show on the Listen podcast.

Sydnee:

Hey, thanks.

Justin:

So thank you, uh, Kate. Thank you Broadway's Kate Baldwin who I would always make people refer to me as Broadway's Justin McElroy if I was on Broadway. That's just me.

Sydnee:

Do you want me to call you that?

Justin:

I would appreciate it, yeah.

Sydnee:

Okay.

Justin:

Broadway Justin McElroy. Uh, but, thank you all so much for Tweeting at us. We're @Sawbones on Twitter, so you can just tweet about the show. Tweet a link to our iTunes page. It's iTunes.com/Sawbones. You can review us, rate us, um, you know, all the good— Subscribe, all that good stuff. So thank you for that.

Thank you to the Max Fun Network for having us on as part of their, uh, Max Fun family. There's a lot of great shows, uh, all waiting for you for free at MaximumFun.org.

Uh, there's the hilarious Judge John Hodgman. You can listen to Stop Podcasting Yourself, Memory Palace, uh, Risk, Wham Bam Pow, One Bad Mother, Lady to Lady, Destination DIY. Um, there are so many that you could be enjoying right now.

Sydnee:

My Brother, My Brother and Me.

Justin:

And, uh, thank you, dear. That's the show I do with my brothers. But there's a lot, so go to MaximumFun.org and you can listen to all those, uh, shows. Thanks Taxpayers, for letting us use their song Medicines as the intro and outro of our program, and thanks so much to you for, uh, for listening, and thank you Sydnee.

Sydnee:

Thank you, Broadway Justin.

Justin:

It's catching on already. Until next Tuesday, I'm Justin McElroy.

Sydnee:

I'm Sydnee McElroy.

Justin:

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

[theme music plays]

MaximumFun.org.
Comedy and culture.
Artist owned.
Listener supported.