Sawbones 415: Monkeypox

Published April 31, 2022
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Clint: *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: [singing] Hello everybody, and welcome to *Sawbones*: a marital tour of misguided medicine. I'm your cohost, Justin McElroy.

Sydnee: And I'm Sydnee McElroy.

Justin: That didn't really— I'll— I'll give—

Sydnee: Was I supposed to sing?

Justin: [singing] I'm your cohost, Justin McElroy!

Sydnee: [singing hesitantly] And I'm Sydnee McElroy.

Justin: Perfect! Okay, you got it. You saw exactly the resolution to the melody that I was going for there. That was great. That's gonna be the new intro, I think.

Sydnee: No, I don't think so.

Justin: Um, Sydnee, I'm so excited to be back here with you, although I wish contextually... um, I just can't believe we're back here! I can't believe we got a new [wheezes] [through laughter] I can't— I just can't believe there's a new thing, Syd!

Sydnee: Well—

Justin: Before you— before you talk— before you say anything...

Sydnee: It's not a new thing.

Justin: Before you say anything about monkeypox, can I just ask— can I just ask something to...

Sydnee: Mm-hmm?

Justin: Gaia, or the universe—

Sydnee: Okay?

Justin: —or Jesus Christ. Could we not? Just... could we not? I saw monkeypox. And they're like, "Second case confirmed." All the— all the, um... I feel like the terminology that has become so loaded. You know, cases, and confirmed cases, and all that stuff.

But it's this— but it's not about COVID, it's about monkeypox! So here's the thing I'm asking everybody and everything in all the multiverse. [loudly] Could we not? Could we just not do this one? Could we not do this one?

Sydnee: Well, okay. First of all, monkeypox isn't new. This isn't a novel virus.

Justin: Then why's Alexa on my back about it?!

Sydnee: Well, its existence—

Justin: Every morning! "Hey, J-man, did you hear the news about monkeypox?" [shouting] Stop it!

Sydnee: Well, its existence in multiple countries that we are seeing outbreaks. Well, I should— I shouldn't even say outbreaks. Cases. That is— that is new. It is in countries it has not previously been.

Justin: Yes!

Sydnee: But it's— the existence of monkeypox isn't new, I should say. I think it's important to say that, and I'll talk about it more, but there are people who have been dealing with monkeypox for quite a while. They just don't live here. So... we didn't pay as much attention to it.

Justin: Very classic—

Sydnee: Yeah.

Justin: —classic— classic America. And I'll be honest, classic me.

Sydnee: [laughs quietly]

Justin: Um, so I am— and now it is a big deal because I've been alerted to it, as I think a lot of people can relate to. Now, here's what I'm gonna say. I don't know what your research is on this. I don't know how you're gonna contextualize this. But I'm gonna tell you straight up, I'm gonna be ringing the alarm bells for the entire episode. Because— hear me out—

Sydnee: 'Cause we didn't. [laughs]

Justin: —we didn't with COVID, and we had egg on our face. I feel like this time we go hard on the alarm bells, really freaking people out. If it doesn't turn into a bad thing, everyone's relieved! No one gets mad at that person.

Who they get mad at is the person who's like, "I think by Easter the churches will be filled with people again. Wouldn't that be lovely?" 'Cause you look like an idiot!

So I'm just saying, I'm gonna go hard monkeypox. It's a very bad thing, and it's extremely bad.

Sydnee: Well, I don't think we should alarm unduly.

Justin: That ship's sailed. I'm gonna—

Sydnee: But you're right in the sense that it's interesting to see, as stories of this have been reported, one of the major themes are, like, reporters asking government officials in multiple countries, will there be nationwide quarantines or, like, lockdowns, or shutdowns? Like, is that— and it's so weird to think.

Can you imagine asking that question in 2019? Can you imagine talking about, you know, a rare virus that has occurred in, you know, not a huge number of people in a few parts of the world. Can you imagine a reporter at a press conference asking, will we have a nationwide shutdown in response to this, in 2019?

Justin: Hmm, no. But we're all very good at it now.

Sydnee: I know. Well, it's interesting, because you can immediately see that knee jerk that COVID has sort of done to us. So I understand. I understand that. And I don't think—

Justin: And knee jerk may not— maybe that's a good— a positive repercussion of it, is that it's something we're a little bit more plugged in to, which is a fun way of saying "freaked out about."

Sydnee: The interconnectedness of the world and all the people in it is something that I hope we are all much more tuned into, and how our actions or inactions... you know, greatly influence not just those immediately around us, but everyone.

Justin: Yes.

Sydnee: And in a positive way, how making good decisions for yourself and those immediately around you can have a ripple effect. A positive one. So anyway, uh, let's talk about monkeypox. It's a pox virus. Makes sense.

Justin: Yes.

Sydnee: Or the pox virus genus. It's in there with, uh, good ol' smallpox.

Justin: Good old smallpox, she says.

Sydnee: Which ba— it's bad. Smallpox is bad.

Justin: Bad old smallpox.

Sydnee: Smallpox is much worse than monkeypox.

Justin: Okay.

Sydnee: That I can say definitively. There is not a smallpox outbreak.

Justin: That's good.

Sydnee: As far as we know, smallpox exists only in a couple labs and freezers somewhere.

Justin: Maybe we should start doing episodes about the things that aren't happening. That would be kind of nice, wouldn't it? We now have a smallpox vaccine. We seem to have polio pretty well licked. Like, that would be nice. Let's do that! Those would be some good eps.

Sydnee: Polio's licked in some places. There's—

Justin: [loudly] Come on!

Sydnee: So this is a pox virus, along with smallpox and cowpox, which we have talked about extensively on the show, the history of smallpox and cowpox and their relationship to vaccines. Um, we have known about this pox, monkeypox, since 1958. There were some outbreaks of a strange illness among— there were two groups of monkeys that were in, like, captivity, and they saw this spreading throughout these monkeys.

Um, they called it monkeypox because, you know, they found it in monkeys. That's actually not the, like, reservoir of monkeypox.

Justin: Meaning?

Sydnee: The animal that carries it around. They get it, but a rodent probably carries it.

Justin: Always, my deep-seated fear of rodents. It always pays off. It's always on the money. My gut is always right.

Sydnee: You're right to stay away from rodents. The person who identified it was Preben von Magnus, was the— the, um, Danish virologist.

Justin: That's a good name.

Sydnee: Yeah, it is a— it is good.

Justin: It's a good name.

Sydnee: Um, he researched the polio vaccine, the flu, and also of course he was the first one to, like, confirm, this is monkeypox. There were actually crab eating macaque monkeys, in case you were curious.

Justin: I was!

Sydnee: Yeah. And so that— that was— we figured out monkeypox in 1948. Like, "Hey, this is a thing. Monkeys get it. It looks like smallpox. It looks like cowpox. It looks like all the poxes. It's in there with the other poxes. We get it."

And then in 1970 we diagnosed a case in a human. So that's when we figured out, like—

Justin: Uh-oh!

Sydnee: Uh-oh! Like cowpox, it can get— we can get cowpox, us humans. Uh, and so this was actually during the— this would've been during the era of, like, smallpox elimination. Remember? As we were—

Justin: Trying to wipe it out.

Sydnee: Remember when we eradicated a virus?

Justin: It was cool. Remember when we could—

Sydnee: Remember we worked together as a planet?

Justin: Yeah.

Sydnee: To rid humanity of a deadly scourge?

Justin: [laughs quietly]

Sydnee: Think about that.

Justin: You know what? It's sad, but I did think that COVID would, like, ra— I thought it would heal us, in a sense, in a way. I didn't predict it would be yet another dividing line. I really did think that there would be a... sort of like you saw after September 11th. Like, a sort of, like, "What have we been doing? Like, let's try to work it out."

Sydnee: Well, I wouldn't say that was everyone's experience after September 11th, Justin.

Justin: Certainly not! But there was a healing.

Sydnee: For...

Justin: We called 'em freedom fries, remember?

Sydnee: Uhh... yeah.

Justin: Remember? Remember there was, like, a good—

Sydnee: We also— we also— we also took advantage—

Justin: [loudly and simultaneously] Remember there was a week there when the mission was accomplished?

Sydnee: —of that to... to use the government.

Justin: Yeah, yeah, yeah, later. [unintelligible]

Sydnee: To, like...

Justin: There was a good week there.

Sydnee: In an unprecedented manner, invade the privacy, um... of citizens? And...

Justin: [inhales] There was a week there!

Sydnee: ... detain...

Justin: You all remember!

Sydnee: ... people...

Justin: We all stood on the steps!

Sydnee: ... based on perhaps their skin color, or nation of origin, or ethnicity.

Justin: Yeah, yeah.

Sydnee: Or the language they speak, or the religious practices that they follow.

Justin: [simultaneously] Yeah, yeah, I know. I know. But I was in college.

Sydnee: Do you remember that part?

Justin: I was in college, so at the time it seemed to me that the nation was healing.

Sydnee: Right. Right. Of course.

Justin: [mumbling] I'm sorry. I'm sorry.

Sydnee: Um, anyway—

Justin: You're right, though.

Sydnee: Since then— okay, so they— so they found a case in a human in 1970 when they were working on the smallpox program, and they found a case of monkeypox. And since then, most of the cases have been in certain African countries, either in the Democratic Republic of Congo, there have been some in Cameroon, in the Central African Republic, um, Gabon, Nigeria.

So sort of, like, we know where monkeypox cases have been occurring. Occasionally you would see, like, a travel related case outside of these countries, but it was very clearly, like, someone came from one of those places where they got monkeypox there, but we diagnosed it somewhere else.

So it was pretty clear where sort of the reservoir— like I said, it was probably some sort of rodent. Um, there's a couple different rodents that can get out. Uh, and then it would pass from them to, like, a nonhuman primate or to a human, and there you go, monkeypox.

The symptoms, so that you know what we're talking about... uh, so first of all, they show up within a week or two from exposure, but it can be up to three weeks. That's always tricky, was we've learned.

Justin: Ooh.

Sydnee: For, like, contact tracing.

Justin: Yeah.

Sydnee: Right? Because you got a large period of time.

Justin: [simultaneously] It's a big window.

Sydnee: Um, and you're not gonna identify somebody who's sick immediately. And the initial symptoms are pretty nonspecific. You get a fever, you get some chills, a headache, some muscle aches, some fatigue. Um, probably some swollen lymph nodes.

That's a pretty distinct thing that you could notice. But generally, you're probably just gonna think, like, you got the flu or something, until a few days after those initial symptoms, when the rash starts. The rash, and if you look up, um, pictures of a monkeypox rash, it looks very similar to if you've ever seen historical pictures of smallpox rash.

It starts on the face, typically. It can spread. It's more on the extremities in the face than it is on the central part of the body, and it has a very predictable evolution of the lesions.

It goes from macule to papule to vesicle to pustule to scab, which is something I memorized a long time ago in medical school, and have never forgotten. And it can appear on the palms and soles, which is— that's a unique feature to some rashes that can help you distinguish it from other rashes. Are you looking at pictures?

Justin: I shouldn't— I shouldn't have done this.

Sydnee: So it starts with, like, a flat. That's a macule. Something like a flat lesion that you can see, but not really feel. It goes to a papule, so a raised lesion. A vesicle is when it's filled with fluid, like, a clear fluid. A pustule is when it's filled with, like, an opaque...

Justin: Pus.

Sydnee: Pus. Yeah, purulent fluid. And then it usually will umbilicate, meaning there's, like, a little dot in the top of it. You can see that on some of them. And it's kind of firm. And then that will scab and crust over. Um, and then once the scabs fall off, that's when you're no longer contagious.

But also, it can scar. Much like smallpox, you know, famously was known to do, to scar people, these can as well. Not every single one, but they can. And it's typically pretty painful, the rash itself. It will become itchy towards the scab phase, but it can be painful initially. Um, it lasts two to four weeks. Um, historically, depending on which— there's two clades of the virus. There's another classification, basically. And—

Justin: Clade?

Sydnee: A clade.

Justin: Okay.

Sydnee: And one clade is known to be a little more severe, a little more transmissible than the other. But it can be up to 10% fatal, so that's a big, big number. Now, of course this also depends a lot on how quickly you identify it, and what other complicating factors for that patient themself, and what supportive, like, medical interventions you have. What resources you have in the area.

Justin: There are some countries in that list where medical resources are a little more thin, right? Which probably plays into that rate.

Sydnee: Precisely. So, is that— is that number related to the virus itself, or is it related to a lack of resources? It depends. Um, it's passed by large respiratory droplets. This is different than COVID. Gosh, I feel like for such a long time we're gonna be comparing everything we talk about to COVID, um, which we don't normally do.

Like, we didn't do that previously, right? It wasn't like every time we talked about a virus or bacteria we naturally compared it to one single thing. 'Cause this is so unlike COVID, it's so far from COVID, but we're gonna compare it, 'cause it's on our minds.

It is passed by large respiratory droplets. So unlike COVID, which we knew eventually you could get from just being in the same room with someone, with monkeypox it really requires some prolonged, like, face-to-face contact for transmission.

I mean, either that or, like, some bodily fluids. Um, or, like, this virus can actually live on surfaces longer than COVID. Like, it actually— you know, that was one of our concerns initially. Like, why we wiped down all of our groceries and stuff in the beginning of the pandemic.

Justin: Right, yeah, yeah.

Sydnee: With smallpo— er, with monkeypox, with pox viruses, but monkeypox in this case, if you sleep in a bed and you've got some of these lesions, some of that material can get into the bedding, and then somebody else sleeping in that bed can be inhaling some of that. I mean, you can pass it that way.

Justin: Okay.

Sydnee: So it can live on surfaces longer. And so, like, contaminated bedding is a way that you could pass this, which wouldn't be true for COVID. Um, with animal to human transmission, which obviously occurs, scratches or bites or if you're eating meat from one of these animals and it isn't prepared properly, that kind of thing.

Those could all be ways that it can be— that you can get it. But again, all of this is harder to get. Like, it is harder to get monkeypox— much, much harder— than it is to get COVID.

Justin: Okay. That's good.

Sydnee: You can pass it human to human, but not as easily, by any stretch, as other viruses like COVID. There is no specific treatment at this time for monkeypox. I lot of it would be supportive. And I should say, most people are gonna have a self-limited course.

Justin: Meaning?

Sydnee: They're gonna get sick, they're gonna get better, that's it. Okay? For most people, they won't require a lot of medical intervention or support during

that time period. Um, some are going to have more severe disease. It could be because they have an underlying illness or immunocompromise, that kind of reason.

There are some things that we've used in these cases, like medications that were developed for smallpox can work for monkeypox to an extent. They're not specifically for monkeypox, but you can use them. Um, and again, a lot of supportive medical care can help to prevent this from being a fatal illness for the majority of patients.

Um, there is a vaccine!

Justin: Oh!

Sydnee: Interesting, right?

Justin: Yeah!

Sydnee: That's why this isn't novel. There is a vaccine. Uh, it is a vaccine that is probably around 85% effective. We haven't had these large-scale outbreaks of monkeypox, right? But, um, it's a smallpox vaccine! It's a vaccinia virus, which is what we used for the smallpox vaccine. It's all in the same...

Justin: Is vaccinia the same root? Do you know?

Sydnee: It was called the vaccinia virus 'cause it was used for vaccines.

Justin: Oh, okay.

Sydnee: Yeah. So— or well, or vaccine came from the vaccinia virus, I should say.

Justin: Okay.

Sydnee: Vaccinia vi— reverse that. I said that wrong.

Justin: I got you.

Sydnee: Vaccine is named for the vaccinia virus.

Justin: Got it.

Sydnee: Yes. So anyway, um, they're all in that same orthopoxvirus genus, all in there together. And, uh, you can use the same vaccine to protect you against both.

Justin: Huh, okay.

Sydnee: But, um, most of us certainly haven't gotten the smallpox vaccine. Some people have, depending on what your age is. You know, some people were vaccinated as children. We wouldn't have gotten that. And, um, it's important to know that, like, unlike— *unlike* the COVID vaccine, which is incredibly safe and effective, the smallpox vaccine, which can be extremely effective certainly, does have some risks for some people.

Um, and this monkeypox vaccine, in deciding— like, the reason we don't just vaccinate everybody, right? Why don't we just keep doing this? If we have a vaccine and a virus exists, let's just give everybody that too.

Well, one of the reasons you might not decide to do that other than, like, it's not very common there, would be, are there any risks to the vaccine? And in this case, there are some risks to the vaccine.

They're extremely rare, but there are some pretty serious things that can happen in specific patients. And so it's a conversation, right? Now, if you've been exposed to monkeypox, it's not as much of a conversation. If you've been directly exposed to someone with monkeypox, you probably should— there's a time— like, there's a window in which you can still get the vaccine.

Justin: You're kidding. Really?

Sydnee: Yeah.

Justin: That's interesting.

Sydnee: Unlike COVID, which you need to be vaccinated before you're exposed, with monkeypox you can actually get vaccinated after you've been exposed, and it is effective and protective.

Justin: Wow.

Sydnee: Yes! Um, because it has such a long incubation period, there's a window there. Um, also just because of the nature of this vaccine, it's a live attenuated virus vaccine.

Justin: Ah, yes.

Sydnee: So this— but this is really helpful when trying to stop the spread and prevent illness and death, um, that you have that window. And that's— some other vaccines work that way, but that's a pretty helpful, unique thing. That's why we can give somebody a tetanus shot after they maybe have been exposed to tetanus, right?

Justin: Oh, right, okay.

Sydnee: You step on a rusty nail. We tell you you need a tetanus shot?

Justin: Yeah, that makes sense.

Sydnee: It still works, even though perhaps you've already been exposed.

Justin: Hm!

Sydnee: This isn't the first time we've seen monkeypox in the US.

Justin: Okay.

Sydnee: And I wanna tell you about a time that we did before, and how that worked out. But before I do that, I do have to take you to the billing department.

Justin: Oh! Let's go!

[ad break]

Jesse: Hi, I'm Jesse Thorn, America's radio sweetheart.

Jordan: And I'm Jordan Morris, boy detective.

Jesse: Our comedy podcast, *Jordan, Jesse, Go!* just celebrated its 15th anniversary.

Jordan: It was a couple months ago, but we forgot.

Jesse: Uh, yeah, completely. Our silly show is 15 years old. That makes it old enough to get its learner's permit.

Jordan: And almost old enough to get the talk.

Jesse: Wow, I hope you got the talk before then. A lot of things have changed in 15 years. Our show's not one of them.

Jordan: We're never changing, and you can't make us!

Jesse: *Jordan, Jesse, Go!* The same forever! At Maximumfun.org, or wherever you get your podcasts.

[ad ends]

[music plays]

Jackie: I'm going first! It's me, Jackie Kashian.

Laurie: Man, she's always this bossy!

[all laugh]

Laurie: Uh, hi, I'm Laurie Kilmartin. We're a bunch of stand-up comics, and we've been doing comedy, like, 60 years total of both of us—

Jackie: [laughs]

Laurie: But we look amazing. And—

Kyle: [laughs]

Jackie: It’s all working out. We drop every Monday on Max Fun, and it's called *The Jackie and Laurie Show,* and you could listen to it, and learn about comedy, and learn about anger management, and all the things.

Laurie: And Jackie is married but childless, and I'm unmarried but childful, so together we make…

Jackie and Laurie: …One complete woman.

[pause]

Kyle: [through laughter] Is that just where that one's gonna end?

Laurie: Yeah! Yeah!

Kyle: [laughs]

Jackie: And we try to make Kyle laugh just like that and say "Oh my God" every episode.

Kyle: It's a good job.

Speaker Four: *The Jackie and Laurie Show*. Mondays, only on Maximum Fun.

[music and ad end]

Justin: Alright, Sydnee. As I understand it, we have... battled [laughs quietly] this— the monkey— now is it—[mumbling] have there been cases in the US of monkeypox?

Sydnee: Yes. So, okay. Uh, the first major— I mean, the first cases that we really saw outside of Africa were in the US. Like, certainly the first outbreak in 2003. Um, basically all around the same time, we saw people in multiple different states, um, actually Illinois, Indiana, Kansas, Missouri, and Ohio, and Wisconsin.

Justin: Wow.

Sydnee: People in all these areas got sick around the same time. Um, and again, like, when you start with those initial symptoms for the first couple days... most people probably wouldn't even go to the doctor. Or if they did, your doctor certainly wouldn't be thinking monkeypox.

But then, the rash. And the rash is so distinctive that that pretty quickly clued people in, especially health departments in these states, that uh-oh, something— something is going on.

So what they were able to do fairly quickly is figure out that, um— and there would be 47 people in all, by the way, who got sick— that all of these people had come in contact recently with prairie dogs.

Justin: Another rodent! Pops its head up, if you will. Uh, on *Sawbones*. And is, uh, the villain, yet again!

Sydnee: Prairie dogs, carriers of plague and pox viruses.

Justin: Yep.

Sydnee: What was discovered was that there was a shipment of 800 animals sent from Ghana to Texas. Mostly, like, small mammals, and included a number of rodents. Um, some of these, like— one of them is called giant pouched rat. I have to imagine you don't ever want to look at that. Like, you probably shouldn't...

Justin: Sorry, what is it called?

Sydnee: Giant pouched.

Justin: Well, now that you said it...

Sydnee: Like, has a pouch, pouched.

Justin: Pouched, oh no!

Sydnee: Rat.

Justin: For carrying more smaller rats inside of it? Aww.

Sydnee: Are they cute? You like 'em?

Justin: He's not— they're not ba— look at— they're kinda— they're heroes! They— they go, uh— you know what they do?

Sydnee: What?

Justin: They hunt for land mines.

Sydnee: Aww!

Justin: They sniff out land mines.

Sydnee: Well, they are heroes.

Justin: They're heroes!

Sydnee: They are heroes that can carry monkeypox.

Justin: Well, everybody's got their strengths and weaknesses, Syd! [wheeze-laughs]

Sydnee: Hey, but listen. Some of us are heroes that can carry all kinds of...

Justin: Yeah!

Sydnee: ... like, you know.

Justin: Yeah. I'm a—I'm a notary—

Sydnee: Many of us got COVID in the last two years, and we can still be heroes! [laughs quietly]

Justin: I'm a no— I'm a notary public and I could probably still catch COVID. I haven't, but I could, I bet.

Sydnee: So there were some of those in the shipment. There were some dormice. There were some rope squirrels. Uh, anyway, a bunch of different—

Justin: I'm not googling any more of these.

Sydnee: [simultaneously] Nope, okay.

Justin: I got lucky with this big boy. [laughs] I'm not— I'm not taking this another spin.

Sydnee: It should also be noted that Justin's fear of rodents is, um, indirectly related to the size of the rodent.

Justin: Yes, thank you.

Sydnee: So the smaller the rodent, the greater the fear.

Justin: Right.

Sydnee: Yes.

Justin: Yes. The smallness of it is what freaks me out. If I— like, yesterday we saw— who was that big boy in our yard?

Sydnee: I believe it was a groundhog.

Justin: A groundhog is a rodent, right? Probably? I don't know. It's not an animal show. Watch *Just the Zoo of Us*. Um, but like, he didn't scare me 'cause he was a big boy.

Sydnee: He just hung out in our backyard and ate clover.

Justin: Ate clover! Come on, bud!

Sydnee: [simultaneously] I think that's all he was doing.

Justin: No problem! Get yourself a snack! No big deal!

Sydnee: Um... this is how West Virginia I am. I said, "Aww, let's eat dinner out on the porch so that we can watch the [snorts] groundhog eat clover!"

Justin: Aww.

Sydnee: That's me. Anyway, so there were some dormice, some rope squirrels. They were sent to different facilities, including some that were put in a facility in Illinois with other small mammals, including some prairie dogs. So what they found is that some of these, like, pouched— giant pouched rats and dormice and whatnot had already gotten monkeypox in Ghana.

They had been sent over to Texas and then spread to these other states, um, and infected prairie dogs in these sort of housing facilities, and then the prairie dogs were sold as pets to people, and they got monkeypox from their prairie dogs.

And they were pretty quick to, like, figure this out, and then start— they did note, by the way, that most of the people who got sick actually had direct contact with the animals as opposed to contact with the people who had contact with the animals. That can happen, but for the most part it was people who had, like, direct contact, holding these animals. And especially if they had some sort of, like, break in the skin or something.

Justin: Sure.

Sydnee: So, like, they were able to see that really it required a lot of close contact to get it from the rodent or from another person, whatever.

Um, the response from the government was pretty quick. The CDC kind of led the USDA, the FDA, State Health Departments, they all worked together to, like, find all the people, all the pets, all the contacts of the people and the pets, um, test everybody, quarantine everybody. Um, they stopped allowing the import of these animals for a little while. Um, there was one family who had gotten two of them for Mother's Day. Like, I don't know. [laughs quietly]

Justin: And they centered Mom. It's fine.

Sydnee: Um, and of course they all quarantined. And one of their, um— one of their prairie dogs was able to survive the monkeypox, Chuckles, and stay, I guess, part of the family. That's nice.

Justin: That's very nice.

Sydnee: Chuckles lived to tell the story. Um, and then— and they used the smallpox vaccine they had available at the time to, like, vaccinate other people who had been exposed to stop the spread. It's like this ring vaccination sort of method. They used this to eradicate smallpox, where you create a ring of immunity around an outbreak to stop it from spreading any further, if you can kind of visualize what they were doing.

Justin: Yeah.

Sydnee: So they did the same thing. About 30 people all-in-all received the vaccine, so not a ton of people had to get it. Um, there were a couple of cases in the US back in 2021, actually, just last year. Uh, again, very clearly related to travel. The current outbreak— so, what is happening right now? Why are we talking about monkeypox?

Because there have been clusters of cases outside the usual parts of the world where they occur. Um, 20 other countries so far that we know of, between 2 and 300 cases, somewhere in there, including Australia, multiple parts of Europe, the US of course, Canada.

In the US, there have been 10 cases in 8 states. So, California, Colorado, Florida, Massachusetts, New York, Utah, Virginia, Washington.

Justin: Okay.

Sydnee: That is where it is currently. And in each of those states it's either one or two cases so far.

Um, like I said, there are the two clades of monkeypox. One clade being the Central African clade, and one being the West African clade. The Central African clade is the one that is considered generally to be more severe and more transmissible.

The ones we are seeing currently around the world are part of the West African clade, which we think probably doesn't have that 10% fatality rate. Probably something lower than that, so less severe, less transmissible. That's a good thing.

And, uh, why are we seeing them? We're still figuring that out, right? Like, they're still in the middle of trying to investigate, how is this happening? Why is this happening? Um, is it just some sort of... bizarre one-off thing, or what's going on?

There probably was some travel at the beginning of this, right? Someone traveled somewhere, but we don't know. You know, sometimes with outbreaks, if it's a small enough number, we figure it out, right?

Justin: Yeah, right?

Sydnee: We figure out the index case.

Justin: It's kind of wild that people can do that.

Sydnee: Yeah. Who went from where to where to carry this? We don't know that answer. Um, but probably there was something like that that then has spread to household contacts and close contacts and things like that. There's been a lot of information publicized about the risk specifically to men who have sex with men.

I don't know if you've seen that, that that is sort of, uh, what they're reporting as the population where this is spreading currently. Um, which is, you know, always concerning when you start to hear that sort of rhetoric. Something that is being publicized as just a problem for the gay community. I think we have historically seen enough danger from that sort of thinking.

It is probably coincidental that that's where we saw it. It's just there were certain close contacts among these index cases, and they also happen to be, you know, men who have sex with men. So I think it's important to remember that before that becomes part of the narrative.

Because again, we know how quickly that can become part of the narrative, and be incredibly damaging to both the people who it's about, men who have sex with men, and everybody else who may be at risk who no longer thinks they are at risk, because they're not part of that community.

Um, the CDC recommendations for the public mention that specifically. Again, um, which— what they say is that you should be concerned if you've traveled to a country where monkeypox cases have been reported. Although, man, that's such a wild thing to say 'cause, like the US?

Justin: Yeah, like here?

Sydnee: Like the entire country of the United States of America? It's a big country.

Justin: I went to Cincinnati a few months ago. Does that count?

Sydnee: Uh, if you have contact with a person who has a similar rash or a diagnosis of monkeypox, of course. And, um, if you're a man who has close or intimate in-person contact with other men in the past month, including through an online website, digital application— app— or at a bar or party. [laughs quietly] Thank you, CDC.

Justin: Wait! Is the CDC—[laughs quietly] is the CDC saying—

Sydnee: [simultaneously] Thank you, CDC!

Justin: —that— that dudes are catching monkeypox through Grindr?! Is that what it's saying?!

Sydnee: I know that's not what they mean. I love the CDC. I know they're smarter than that. I know that's not what they mean. But that could probably reworded. Also, you don't have to say digital application—

Justin: [simultaneously] No, no! You can't— no, you tell me what—

Sydnee: [loudly] What they're trying to say is—

Justin: [simultaneously] It's a loca— it's a location.

Sydnee: —if you are having anonymous sex with someone through an app is what they're trying to address.

Justin: Yeah. You meet people through— they know you meet people through the app, and then you have sex with the usual stuff, right? Like, it's not...

Sydnee: I— yes.

Justin: You're not getting it from cybering, right? They understand that?

Sydnee: This is— this is a— this is a classic scientific problem in which, like, the people behind this know! Yes, they know! They're smart people. They're scientists. Communication isn't always the strong suit of the scientific community!

Justin: But there's— when this is being—

Sydnee: I think I have said that many times on this show! [laughs]

Justin: This is why... I mean... I always say that I think you're the best science communicator on the planet, and I think that you've backed that up many times. I do have to say, it's not the highest bar. [laughs] Like, do they not have a person who's like, "Y'all. This sounds like you are saying monkeypox is communicated

through, like, Tinder or Grindr or whatever. You have to stop. Eharmony is going to sue us [through laughter] because you are saying that this disease is communicated digitally as, like, a cyber virus!"

Sydnee: I— it is weird— it— I think it is— I think that this—

Justin: [simultaneously] Oh, I got— oh me? I got cyber monkeypox. It's even worse.

Sydnee: —is unnecessary to mention. Because, like, I don't think we need to know, like, the meet cute that led to you guys doing it, right?

Justin: Yeah, who needs it specified? Like—

Sydnee: We don't need the story.

Justin: "This doesn't apply to me. I met a guy through Grindr, and certainly that doesn't count!" What do they mean?! Ugh... you need to get over there, Syd.

Sydnee: I— I included it because I found it concerning.

Justin: You gotta get over there.

Sydnee: [laughs quietly] To the CDC.

Justin: Just get— there's a direct flight. You can get one from Yeager down to Atlanta.

Sydnee: This is not me throwing shade on the CDC. I like— you know— you know I'm a—

Justin: [simultaneously] Go to the Coca-Cola museum. I am! This is what I'm doing over here in this mic!

Sydnee: I'm a defender of the CDC in many instances. Um... but this— this probably could be reworked, here. Um, my— my science friends. There has been renewed government interest in purchasing smallpox vaccines. Recently— they deny adamantly that this has anything to do with the current monkeypox outbreak.

Justin: [wheezes]

Sydnee: That this was already something that was, like, ongoing. Like, we were gonna buy these smallpox vaccines anyway, and this is just— like, the deal is just closing now, and the timing's weird, we get it. But... [laughs quietly]

They're not currently offering the vaccine to someone who's been exposed in the US, like, routinely. I'm assuming that's about to change as we see more cases, I would guess. They're already doing that in the UK, I've read.

But, um, there's a thought that if you got the smallpox vaccine as a kid that that probably provides a little bit of protection, limited protection, not complete. But you would still need, like, if we were going to vaccinate people, it's a two-shot deal. If you got the smallpox vaccine as a kid, you probably just need one now. Like a booster, basically.

And this was anecdotally observed during the 2003 outbreak. They tended to notice that younger patients had a little bit of a worse time with it, um, and they thought it was because perhaps some of the older patients had gotten the smallpox vaccine as a kid. Like I said, it's a live attenuated virus, vaccinia virus. And it's called Jynneos, in case you're interested in looking it up and reading about it. It was just approved for monkeypox in, like, 2019.

Um, US officials are debating at this moment, like, should we— because people are getting sick. They're gonna go to doctors and hospitals and they're gonna expose staff there, perhaps. And, you know, you can wear your personal protective equipment and all that stuff, but should those people get vaccinated? Like, the healthcare workers.

I think we're gonna hear recommendations about this pretty quickly coming out, because we didn't have any, 'cause we didn't have monkeypox here in this country.

A couple other issues, which I have alluded to. Scientists and doctors in the parts of Africa where this exists have been trying to get people to pay attention to it for a long time, and have been doing research on it without a lot of outside support or resources, or interest, or anything. Because it didn't affect them.

Now, all of a sudden, everybody's very interested in monkeypox, which I can only imagine is incredibly frustrating for the doctors and scientists in Central and

Western Africa who have been saying "Yeah, thank you." Um, who have actually said for a while, you know, like, there could be outbreaks of this.

Like, I know that we're not seeing a ton of it right now, but all it would need would be a little shift to become a little bit more transmissible, and, you know, it's— even if it's not incredibly fatal, you do get very sick. And as we read with smallpox, the scarring that can be left behind by some of these rashes can be pretty, you know, in terms of just, like...

Justin: Sure.

Sydnee: Your— your— your feelings about yourself and your body image, and all those things, can be pretty devastating. So, um, there are a lot of African scientists who would say we should've been paying attention to this, like, a long time ago.

Justin: [quietly] It's frustrating. Some of my favorite podcasters have recently been acting like this is a new thing that has just started happening, when really, me and some other conscientious podcasting friends have been saying, like, no, this is— this is, like, not a new problem.

It's just, you know, we're finally paying attention because it's affecting is. And I just think that's really sad. But I'm— you know, I guess, uh... that's just human nature, I guess. We can't be too mad at people about that, I guess.

Sydnee: Uhh...

Justin: [quietly] Or tweet at 'em or anything. I think we can all agree on that. It's a time to heal.

Sydnee: Uh, what I would say about monkeypox is that we understand this virus a lot better than we did at the beginning of the COVID pandemic, certainly. Right? We didn't— we knew about coronaviruses, we knew about related coronaviruses, we didn't know what we were dealing with yet with COVID, you know? It just— it was brand new. It was novel. It's in the name.

So this, this we definitely have a little bit of an advantage, in the sense that we already know about it. We have a vaccine. It is not as transmissible, certainly, as COVID. Um, and we have a history of containing these outbreaks pretty quickly in the past.

Um, there was a recent— like, I saw a very recent article that was released suggesting that if you're sick with monkeypox— which I can't imagine— like, so few people are worldwide that if you're listening to this podcast, you probably don't [laughs quietly] have monkeypox.

But there was a recommendation to stay away from your pets, because that could be an issue. If you do have, like, small rodent pets, and you give your monkeypox to your pet, then your pet could give it to other pets or to other people. You know? We could— that could continue the outbreak.

And that's always a problem with, um, any sort of virus that can exist in both humans and animals. You've got multiple reservoirs to kind of trade it back and forth. So, um, that's been a recommendation. And, uh— and again, because of surface transmission, that's another issue with bedding and stuff like that.

But all in all, if we act quickly [laughs quietly] and we are smart about it and do things that science has shown us and experience has shown us work, we can respond to this in a very responsible, helpful, humane way. And not stigmatize any specific communities or allow... I don't know. Fear over vaccines, quarantines, government overreach, whatever your particular flavor of concern is, to get in the way of keeping people healthy and safe.

Justin: Thank you so much for listening to our podcast. We hope you have enjoyed yourself. Thanks to The Taxpayers for the use of their song "Medicines" as the intro and outro of our program.

Hey! Uh, if you wanna share the show, we would really appreciate it, especially when we're doing a topic that I think people could be a little bit more informed about. Um, this is a great time to do it. So just, you know, tweet about it, share it on Facebook, rate and review on your podcast platform of choice.

I know people always say that, but it would really help us out, and if you could do that, I think you'd be doing a little bit to help us, which is huge, obviously. Appreciate that. But also, you know, science education. If that's important to you, share the show. Appreciate it.

Thanks to the Maximum Fun network for having us as a part of their extended podcasting family, and thanks to you for listening. That's gonna do it for us. Until next time, my name is Justin McElroy.

Sydnee: I'm Sydnee McElroy.

Justin: And, as always, don't drill a hole in your head!

[theme music plays]

[chord]

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