## Sawbones 510: Triple E and Public Health in 2024

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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 try not 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:** 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:** And I'm so—listen, everybody. Ring the warning bells. Everyone freak out. We're back. Public health nightmare, crisis, super crisis.

Sydnee: No, don't say that!

**Justin:** I had to bring it to Sydnee's attention.

Sydnee: No. Don't say that.

Justin: 'Cause it's a massive super crisis.

**Sydnee:** No! No. Okay. Can I just say... that even in cases where we have had public health—I mean, crises. Like, I think it's fair to look back retrospectively and say we have all maybe collectively experienced those in even recent years, as well as distant history. It's usually not a good idea to start out with, "There is a public health crisis, super crisis."

Justin: Super crisis. I think I said a super emergency, but.

**Sydnee:** In an alarming way. Like, that's not... you should tell people the truth, always. But you shouldn't...

**Justin:** But hear my reasoning. Right? I know what you're saying. But when COVID happened at the beginning you and I were like, "Maybe it won't be so bad. Here's hoping."

But then it was. So my plan is, if we get ahead of this one early and we say, "Hey! Ring the alarm bell."

If this goes fine, no problem. If it does turn bad, even though science says it won't, then we're gonna come out smelling like roses. We're gonna look like the smartest podcast on the market.

**Sydnee:** I do not—this is—there is no one in public health who believes that this is a super crisis on the level with COVID.

Justin: What-now, Syd, technically-

**Sydnee:** No one is making that statement right now. It is something to be taken seriously. And can I just say, while yes—

**Justin:** Technically what qualifies in a medical sense, I'd love to ask.

Sydnee: Okay, I'm not gonna-

Justin: What qualifies as a super crisis? [holding back laughter]

**Sydnee:** See, you—I—

Justin: Or a mega emergency. Which-

**Sydnee:** I fell into that trap.

**Justin:** [wheezes]

**Sydnee:** I accepted the premise of the question and I shouldn't have.

Justin: [laughs]

**Sydnee:** I wish I had—this is why, by the way, doctors do so bad in depositions. I—I... the one time I've ever had to do that the lawyer gave me this advice. He said, "Listen. You doctors like to talk and talk because you think you're so smart and you never want to sound stupid, and so you just keep talking and talking, and you just need to answer the question and shut up. And if you sound stupid, you sound stupid."

And that is true, we do. We do like to keep talking. And I—no. Super crisis is not a quantifiable public health thing, and I—I will—

Justin: Nor is a mega emergency.

**Sydnee:** Nor is a mega emergency. I refuse to accept the premise of your question on those bases. Um, no. I want to talk about eastern equine encephalitis, EEE. Which you may have heard about in the news, and it is, uh—while, this is, yes, a serious thing that we should all talk about and be aware and be informed so that we can make educated choices in our lives—which, by the way, when you say, like, we got it wrong on COVID, we did think it wasn't going to be the pandemic that it was, initially.

**Justin:** We didn't get it wrong. We got it in line with medical science, which then changed. [laughs quietly]

Sydnee: Yes, we—right.

Justin: Like, right.

**Sydnee:** Well, but also I think there is something to be said for the way that our country, the United States of America, chose to handle or not handle our response. So I do think that the course of history could have been very different, had...

**Justin:** My memory is that we beat it by Easter. I very clearly remember then-President Trump saying that it would be done by Easter, and that we would be—the churches would be full by Easter. So I—in my memory, if I remember right, we had it pretty much wrapped up by Easter!

**Sydnee:** Yeah. Well, he had different graphs than everyone else.

Justin: [wheezes]

**Sydnee:** And no one was ever sure how that happened. So eastern equine encephalitis—if you live in certain areas of the country, especially right now, if you live up in the New England area, if you're in Massachusetts, if you're in New Hampshire, you're probably very familiar with this.

Uh, that's not the only place that it's present. It's also—we've had a lot of cases in Michigan and Florida, so other states as well. But that's where I think all the news reporting is happening right now, and where it may even be affecting your local community in terms of public health measures and discussions that are happening. I heard one resident that they were interviewing I believe in Oxford, Massachusetts who referred to it as Triple E several times. So I wonder if that's, like, a—I have not—

**Justin:** That's so weird. That is literally the grounds that I was about to set for you and I, like, what we're gonna call it. Like, Triple E. The trip.

**Sydnee:** I guess—well, I would not call it the trip.

Justin: Eeeee!

Sydnee: Eeeee!

**Justin:** That's how it reads. That's how it scans. If we asked Cooper to read it she would say, "Eeeee."

**Sydnee:** As you might guess, there is a western equine encephalitis, so that is what—

Justin: Weee!

Sydnee: —distinguishes the eastern—

Justin: That one's fun. Weee!

**Sydnee:** —equine encephalitis. Uh, but I guess Triple E works. That's an easy way. Yeah, 'cause I don't wanna say that every time. And EEE is a weird.

Justin: And EEE-

Sydnee: EEE.

**Justin:** EEE. It's about as bad as mega emergency.

**Sydnee:** You probably know about other mosquito-borne illnesses. I feel like West Nile virus got a lot more press. Which to be fair it is more prevalent. It is present in more states across the US. I think, like, 33 different states have reported cases of West Nile. It can be similar in that it's carried by mosquitoes and it causes neurological problems.

Justin: We did—

**Sydnee:** I think a lot of those sort of overlap.

**Justin:** Let's see. We did, uh, Zika virus back in 2016.

**Sydnee:** Also another arbovirus. Arboviruses are viruses that affect us that are carried by ticks, and mosquitoes.

Justin: Yellow fever? Yellow fever, is that one?

Sydnee: Uh, yes.

Justin: We did an episode on yellow fever.

**Sydnee:** Ticks, mosquitoes, and sand flies. And if you look at them, like you break them down, there are different, like, categories. Uh, eastern equine encephalitis—and also the western version and a couple other ones like chikungunya, which we may have mentioned on the show before, are in the Togaviridae family. There's the Flaviviridae family where you find West Nile virus, and Zika is over there. Dengue you may have heard of.

Justin: Ugh!

**Sydnee:** And then there's also the Bunyaviridae. Anyway, it doesn't—the point is—

**Justin:** [simultaneously] Come on, y'all. Let's kill all the mosquitoes. We can do this. Let's work together.

**Sydnee:** And there's a bunch of 'em. And there are different kind of, like, groups. There are some that tend to cause these sort of—like, an encephalitis is inflammation of the brain. An -itis is an inflammation of something, and encepha- refers to the central nervous system of the brain. So encephalitis. It's an inflammation of the brain is what's happening. And so that can be a variety of neurological symptoms. Seizures, and obviously very severe illness, even death.

And there are a whole bunch of different—some of these viruses are more prevalent. They usually are carried by some sort of vector like a mosquito. But they don't—like, that is not where they primarily live. They live in some other animal, and then they get carried to us. And we are not the best host, necessarily, for these viruses, but they end up in our bodies.

These are—these—

**Justin:** We're kind of like a Red Roof Inn.

Sydnee: [laughs quietly]

**Justin:** [wheeze-laughs]

**Sydnee:** Now, don't... why you gotta knock Red Roof Inn? It might be there when you need it.

Justin: Yeah. [laughs quietly]

**Sydnee:** I don't know. I don't even want to say it is. It just might be. So basically, in this case with Triple E, birds primarily have this virus in them, and then a mosquito bites a bird and gets infected with it. And then the

mosquito bites something else, like a horse, or a human, or a pig, or a pheasant.

And there's a specific mosquito that we initially thought carried this one. 'Cause there are different kinds of mosquitoes, of course.

## Justin: Lots!

**Sydnee:** And different mosquitoes are hosts for—well, are vectors, not hosts—for different viruses. The Culiseta melanura mosquito is the primary vector for this, which is, like, different than we talk about malaria.

But we've also found evidence that there are other kinds of mosquitoes who have adapted to carry it as well. Which, I mean, like, these things change over time. And the spread of mosquitoes change, and the kinds of mosquitoes that carry them change. And so this is—that's expected.

Humans are actually considered dead-end hosts for this virus.

**Justin:** Meaning we're not gonna transmit it to other people.

Sydnee: Exactly.

**Justin:** Or other stuff.

Sydnee: To other stuff. Uh, and this is—

**Justin:** It stops with us. We're the Balrog.

**Sydnee:** Which is interesting, because if a—if I have—let's say that in this case I have Triple E, and a mosquito bites me, and then bites you, are you gonna get it?

Justin: No. Because...

**Sydnee:** Do you know why?

**Justin:** ... you're a dead host.

**Sydnee:** But do you know why? 'Cause you would think—I mean, like, why not? It's an interesting question.

**Justin:** So you've got it. The mosquito doesn't.

Sydnee: The mosquito bites me. It gets it.

**Justin:** I understand conceptually, but I don't know mechanically.

**Sydnee:** Well, the mosquito would bite me, and you would think you would get it, right?

Justin: Right.

**Sydnee:** That's what you would think.

**Justin:** Like, they can't catch it from us.

**Sydnee:** No. Because we do not enough of a viral load in our bloodstream to efficiently infect a mosquito. So a mosquito biting someone with it, just the chances that the mosquito would then ingest enough of the virus to carry it and give it to someone else is just not happening.

**Justin:** Viral load is one of the wildest concepts that I walked away from COVID with. I did not have an awareness of this idea of viral load before COVID. And I'm sure you, I hope, knew about it before COVID.

Sydnee: [laughs quietly] Yes, I did.

**Justin:** Uh, but it's really interesting to me. Like, I think I always thought of it as a much more binary thing. Like, you either have something or you don't. The idea that you could have some of it but not enough of it or whatever is a very new concept for me.

**Sydnee:** Well, and I mean, I think that—I think we have an easier time with bacteria. Because we can, like, see them on a petri dish. Like, we probably all at some point have seen bacteria growing on a petri dish in, like, a

picture or in a science class or something. And it feels like something tangible.

And so when we talk about, like, how much bacteria—like, you've got bacteria in your bloodstream. Like, we picture something. I think viruses are harder for us because they are—we've talked about this a lot on the show. They walk that line between a living and dead organism.

**Justin:** And they look wild, like space alien ships.

**Sydnee:** And so it's—I think it's harder to imagine, like, a viremia, which means virus present in the bloodstream, is a weirder concept to us for some reason than a bacteremia is. I don't know. They're also smaller, so maybe it's just that.

Justin: You're drawing a-

Sydnee: They're just smaller. [laughs quietly]

**Justin:** Hey, love. Love. You're drawing a distinction that I'm not sure the layman is drawing on a day to day basis. This may be down into sort of more of a doctoral thinking pattern at this point.

Sydnee: Okay. Well, the only-in the-the point I was gonna make-

**Justin:** I, too, have oft wondered why the bacteremia is confused with the vi—vi... sorry.

**Sydnee:** The only point I wanted to make is that the one human to human case, the only human to human transmission that I found was an organ transplant, which isn't what we think of as human to human.

Justin: [simultaneously] You can see how that would happen, yeah.

**Sydnee:** But yes, there was a case in 2017 of somebody getting Triple E from an organ transplanted from someone who had it. So you could give it to someone that way. But generally speaking, you're not gonna give it to household contacts. It's not gonna spread in a classroom or something.

**Justin:** Kind of like when you get a gift from your granny and she's a smoker and it's like, "I really appreciate these pants. But... I wish they didn't smell like smoke quite so much."

**Sydnee:** The incubation period after the mosquito bite is, like, four to ten days. And the reason we're talking about it right now is because this is the peak time that we see cases of Triple E. Which we do generally every year. But some years we get more than others.

So you can get it year round, but this is the time of year—especially, like, late August is mosquito season. I mean, you just gotta think about, when are the mosquitoes and when are they at their peak? And this is when we tend to see them. Late August.

Um, Triple E, while it is not as—we don't have as many cases. Like, for instance with West Nile we tend to have a lot more cases. But the reason I think we talk about Triple E is because it tends to be among the most fatal. We see a higher mortality rate, and so it's—I mean, you know, that's scarier.

**Justin:** It makes headlines, for sure.

**Sydnee:** The mortality rate is we think around 30%.

Justin: Wow.

**Sydnee:** There's no vaccine for humans right now. There is one for horses, though. Uh, the first cases we saw were in horses. In the late 1800's we started to see these cases—well, there had been sporadic cases of what looked like an encephalitis. The horses I assume were not behaving the way the horses behave. They were acting differently.

Justin: Not majestic.

Sydnee: Not-no.

**Justin:** [laughs] They didn't in any way seem elegant as they glided through the den.

**Sydnee:** They got very sick. They died. And then they did, you know, autopsies on the horses to try to figure out what happened, and they found all this inflammation in the brain. That's an encephalitis.

And so we knew there was something happening in horses in the late 1800's, and we suspected that it was this mosquito-borne virus. But it wasn't until 1938 that we knew it could happen in humans. And that was when it had been a particularly rainy July in Massachusetts in 1938. And there were of course more mosquitoes than usual as a result.

Mosquitoes lay their eggs in standing water, pools of standing water. So puddles, or if you have things that sit around like buckets or, you know, something that would collect water and it would stand for a long period of time, small ponds, whatever. Mosquitoes lay their eggs there, so you get more mosquitoes when it's raining.

**Justin:** Do you think that's why you almost never see bird baths anymore? I feel like that was a really common thing to see when I was a kid. I feel like we're more aware now of standing water and mosquitoes than we used to be, maybe. I don't know.

Sydnee: I don't know. I mean-

**Justin:** You know what I'm saying? Like the stone with the circle—like, the, like, birdbaths? I haven't seen a birdbath in 20 years.

**Sydnee:** I don't know. And I—you know, I don't know what it's like to grow up in an area that has a lot of this. Like, this isn't—West Virginia—although I would question our disease surveillance ability with this. But...

Justin: Chilling. Go on. [wheezes]

**Sydnee:** We don't think a lot about mosquito-borne illnesses in West Virginia, do we? I mean, do you remember that being a thing that we've ever discussed? But I think if you grow up in New England you probably do talk more about this. Um, and certainly now you're going to.

But anyway, that year it had been a particularly rainy July. There were more cases of encephalitis among horses they had already observed. And then they—and then children started getting sick in Massachusetts.

In August, they started to see these cases of children being admitted to the hospital, severely ill, and unfortunately some of them passing away from what was initially reported as encephalitis lethargica, which was they seemed to have some sort of neurological problem. Their brains are inflamed. They're having seizures, but we don't really know what's happening.

Over the next month, 25 people died, mostly children, of this new—what they eventually were able to isolate from autopsy specimens, an infectious encephalitis. And then they tied it to the horses. Well, the horses are getting something. This looks like the same thing. We think that humans can get it too.

So it took them a while—they figured out it's—I was reading the case report, actually, from December of 1938 from a public health official in Massachusetts at the time. It's so interesting when you can find, like, the original case reports of this written up. Like, the original epidemiological work that was done to trace them and everything.

But they knew it was this virus. They now knew that humans could get this thing horses could get. They knew that there was something like this in the west, but the western version did not appear to be nearly as dangerous, as severe, or as fatal as this new eastern version appeared to be. And at the time, it's interesting, if you read the end of the—I read this entire article that was published.

They say it appears that—or they were trying to figure out, were these humans near horses? Did they have contact with horses to get it from the horses? And they didn't, because of course we know that a mosquito was carrying it.

Um, but then the other thing they say is, we have to assume the horse is a reservoir, but that really doesn't make sense, because it kills horses too.

**Justin:** So the horses aren't a good place to store the virus, so to speak, because it... it dies.

**Sydnee:** Exactly. And so it's—it's interesting to see that kind of from a historical perspective. At the end of the article they pose this idea that there must be something else that has the virus, but they don't know what it is yet. And eventually of course they'll figure out it's birds. But at the time, it's like you're watching the discoveries happen.

So we had this big outbreak where we diagnosed it back in 1938, and that's a particularly high number of deaths even—even looking all the way up to now, to the present.

**Justin:** So it was an aberrationally bad year for it.

**Sydnee:** This was a particularly bad year. And I think if you wanna know, like, okay, why? Well, one, we didn't really understand how it was transmitted or anything yet. And so as you're looking into, like, mosquito control, what measures are we taking? Nobody would be doing any of that. You didn't know you could even get it. We knew horses could get it. We didn't know we could get it. We didn't have a vaccine for horses. We couldn't prevent it in horses.

Uh, we didn't even really understand that as humans, you know—I don't wanna say invade. But as we expand into more areas...

**Justin:** [laughs quietly] Infect... more areas.

Sydnee: [laughs quietly] We...

Justin: Mr. Anderson. As you—[laughs]

**Sydnee:** This is part of how we contract these illnesses that were originally in other animals, is that we push our species—

**Justin:** [simultaneously] Show up at their houses.

Sydnee: -- into their-

Justin: "Hey, you got any cool diseases here? Let us at 'em."

**Sydnee:** Yeah. And so, like—so you're gonna see that initially. And then there's this peak of understand. And then we can start to control things a little better, within reason.

So what is happening now? That takes us to today.

**Justin:** Yeah. I was seeing all these distressing headlines. That's why I brought in Dr. McElroy on the case.

**Sydnee:** Okay. I want to tell you that. But first, we gotta go to the billing department.

Justin: Well, is there anything I need to know, like life or death stuff?

Sydnee: Um... wear long sleeves.

**Justin:** Okay, let's go to the billing department.

[both laugh]

[theme music plays]

[ad break]

**Justin:** Okay, you've kept me in suspense about how to protect my family and me from this.

**Sydnee:** Okay. So first of all, let me just walk you through what happens if somebody contracts this. I think it's important to know what we're talking—like, what does it look like? What happens of somebody gets sick, right?

Okay. 96% of people infected with Triple E are gonna remain asymptomatic.

Justin: Okay.

**Sydnee:** They're not gonna have any symptoms. You wouldn't know you were. So this is part of why it can be hard to trace these things, right? Like, what exactly is happening, or to diagnose them right away. You have to have a high index of what we call clinical suspicion, meaning that doctors in the area need to be aware, this is out there and this is what it looks like, because so many people are gonna get infected and have nothing. And then there are gonna be people who do have very nonspecific symptoms. They've got a fever, they've got a headache, they feel like the flu. Like, it would look flu-like at first. You got some nausea, maybe some vomiting.

Less than 5% of people who are infected are going to actually develop any inflammation of the spinal cord, meningitis, or inflammation of the brain, encephalitis.

Justin: Uh, you said infected. Do you mean symptomatic?

Sydnee: No, infected.

Justin: So, like, 5% of the people who are infected?

**Sydnee:** Less than 5% are actually going to get super sick.

**Justin:** Super sick.

Sydnee: Yes.

Justin: So-okay.

**Sydnee:** 96% are gonna have no symptoms.

Justin: Okay. But 4% are gonna have a lot of symptoms?

Sydnee: [laughs quietly] They don't know exactly—okay. One thing—

Justin: Do you understand what I'm asking?

Sydnee: I understand.

#### Justin: Okay.

**Sydnee:** I understand why we're asking this. One thing that is really hard in something like this is, how many people who have fever, headache, blah, blah, are gonna go in and get tested for anything at all?

Justin: Not a lot.

**Sydnee:** I mean, how often does that happen in our family, and we—other than COVID. I mean, let's take COVID out of the equation, 'cause that changed a lot of things. But do you generally—

**Justin:** You don't let us go to the hospital for anything, 'cause we're [crosstalk].

**Sydnee:** Well, most people don't. Most people if your kid gets a fever and feels sick for a day or two, or if you do, most of us don't go to the doctor.

#### Justin: Yes.

**Sydnee:** So we wouldn't get tested for anything at all. Let alone, how many people are they gonna test for Triple E? Because it's rare!

## Justin: Right.

**Sydnee:** You're not gonna be thinking about it. And so with diseases like this, it gets really difficult to pin down statistics. How many people get infected? How many of those people have any symptoms? How many of those people have severe symptoms?

Those numbers are really difficult, right? We don't have a lot of numbers to draw from, and we're kind of guessing based on who gets tested.

**Justin:** Which would be, obviously, a lot more terrifying and challenging if it was something we were transmitting between ourselves, right?

Sydnee: Right.

**Justin:** Because the inability to track it would be really tough.

**Sydnee:** And that's why you see statistics like right now of the cases we're aware of in the US. They're all severe. Well, it's because they're the ones we're—I mean, we aren't aware of all the not-severe—you know. It's not that every—right now it would look like 100% of the cases in the US are severe. Well, no. It's 100% of the cases we know about are severe. And why do we know about them? Because they're severe. Does that make sense?

#### Justin: Yeah.

**Sydnee:** So if you do get the neurological symptoms, they're gonna appear pretty fast, like usually within the first five days. You can have seizures. There can be confusion. You can have some stroke-like symptoms at times, but that's less likely. It's more just like... you know, the entire brain is inflamed, so it's a problem everywhere, not just in one part of the brain like a stroke would be.

Um, if you get—obviously 30% can die from this. Of those who do survive, half are gonna have some long term damage from what the virus did.

Justin: Okay. Can you clarify something else for me?

Sydnee: Mm-hmm.

Justin: 30%...

**Sydnee:** Of the severe cases.

**Justin:** ... of the severe cases. So 30% of the... roughly 4%.

Sydnee: Less than 5%, yes.

Justin: Okay. Gotcha.

**Sydnee:** Exactly. So it's a small—I mean, it's a small number.

**Justin:** But any—as I often think with human life, a number that is one or more is a big deal.

**Sydnee:** It's a big deal. It's a big deal. Especially if there's a way we can prevent it, which is the question.

**Justin:** And this is what I've been curious about, right? Because I get these, like, news briefs in my email, like a lot of people. And, uh, I have—I saw two discrete headlines about this. And it was enough—when I see a health thing like that pop up, it makes me wonder. But I find myself wondering, if it's this hard to figure out how bad it is, how is it making headlines?

**Sydnee:** Okay. Here is why it's making headlines. One, uh, a person unfortunately died of EEE this year, Triple E. A 41-year-old man in New Hampshire passed away on August 19th after a very short, rapidly progressive, severe illness. He was previously healthy, according to his family. And so I think when a younger person passes away from a severe, rare illness, I think that makes headlines. And I think that escalates the amount of fear we have associated with it.

And in New Hampshire, this was their first case of it since 2014. Not in the US, but in New Hampshire it was.

The other reason. The last year that we had major transmission was 2019. There were 38 cases in the US of Triple E in 2019. We don't know how many we're going to get this year. We've had, as of the time of this recording, and this may change by the time you listen to this, but as of this moment, there have been five cases in the US. So it's not a huge number, right?

## Justin: Right.

**Sydnee:** But obviously one of them has been fatal, which is scary. And I think that part of why we're seeing these headlines is that in reaction to this, the recommendations from the CDC and then from local health departments are some basic things. When you're outside, wear long sleeves and pants so that you don't get mosquito bites there. Wear an EPA approved mosquito repellent. Which by the way, you can go to the EPA website and look up lists of approved mosquito repellents if you're not sure.

**Justin:** Or you can go to McElroy Merch and buy our Richard Stink cologne. I have been told it works as an everything repellent.

**Sydnee:** It is not a mosquito repellent. I just wanna put that disclaimer out there right now.

**Justin:** It's not an approved mosquito repellent.

**Sydnee:** You can make sure you remove mosquito breeding grounds around your home, if you've got standing water around your home. You know, dump your buckets out or whatever.

**Justin:** Listener, if you have a birdbath and you're like, "What's the matter? Birdbaths are cool." Go outside. Smash that birdbath right now.

**Sydnee:** They're doing aerial spraying in some of these communities. They take planes around and, like, kind of like crop dusting, spray to kill mosquitoes. So, like, all of those measures can be taken on a wider scale, or on an individual scale, or the public can—you know, the public health professionals can do that.

But then they're also saying, we would recommend don't go outside between dusk and dawn. And then some local governments are taking the steps of closing maybe a public park or playground or a field where people play sports between dusk and dawn, or maybe proposing that we move evening sports to afternoon, before the sun goes down, to prevent especially children from contracting this illness.

This, I think, is why you're seeing the headlines. And if you read—I've read some of the articles around it. They're very much discussing this.

We do not currently as a society—and I don't know if it's a US thing. I don't know if this is a—listen. I'm not from Massachusetts. You can tell me if you are. I don't know if it's a Massachusetts thing.

Our appetite for government restrictions on our activities to protect us from the spread of a deadly virus seems to have waned.

## Justin: Hmm.

**Sydnee:** And there were, in preparation for the local board of health—I was reading an article about Oxford, Massachusetts.

In preparation for, like, a local board of health meeting to discuss, should they put restrictions on public park access, or curfews, or just recommendations?

There were already parents and local people who were ready to go fight. I think that they were ready for sort of the—you remember the school board fights over masking during COVID?

Justin: Mm-hmm.

**Sydnee:** I think there were a lot of people prepared for those arguments again. Because we have kind of codified this idea now, because of COVID, that somehow taking public health measures to prevent the spread of an illness... automatically infringes with our American idea of individual freedom. Always. That the two cannot coexist, somehow.

Justin: Okay. [sighs] Well...

**Sydnee:** And I will say, in Plymouth, Massachusetts they actually did put some of these measures into place, and there's, like, a petition circling. Like, they moved Friday evening football to Friday afternoon football, and there's already people, like, petitioning. Like, "No, move it back to the evening."

Because—I mean, the idea is like, "These are my kids. I want to take—like, I get to take whatever risks I want to or don't want to. I will mitigate the risks to them, and I don't need the government to tell me how to mitigate risk for my children or myself."

**Justin:** I mean, it's... I obviously would not want to—I mean, we've made it pretty clear, our stance about public health and that stuff. So I hope that this is all contextualized through that lens.

I will say, I mean, I would want to—I don't have an opinion about whether or not it's a good idea to do that, 'cause I didn't look at the science. I'm assuming that people in positions of authority are looking at that and making the best decisions they can.

**Sydnee:** Yes. Those are the public health recommendations from the both federal and local levels.

**Justin:** I will say though, part of the picture of this might be that a lot of public health was really wildin' out when COVID started. There was a lot of recommendations that weren't necessarily—that didn't turn out to be, like, that helpful or that important. And they changed a lot. And they shifted a lot.

And I think that when you've been through that scenario and you do have to—like, you are put in a position where you are having to make those decisions for your family, which everybody was put into that position in 2020, then, you know, I could see why you would have a natural inclination to want to be—have some sort of, like, agency there. Because we were all taught that for three years or whatever. We all had to make the best decisions, because the government, by and large, was not looking out for us.

**Sydnee:** It's interesting, though. Because I don't know... I mean, I certainly did not trust a lot of—

**Justin:** That's the Trump-led government response to COVID, by the way. Which, if you went through that and your takeaway was, "Man, it's really hard for public health to manage something like this." I don't think I could fault you for that.

**Sydnee:** I understand that. And I—I mean, I felt the same way, of course. But I do trust the CDC. And I do—I mean, if you look at the public health recommendations that are evidence-based, that come out of entities like the CDC, and then are spread down through your local departments of health, they make—they make sense. They're evidence-based. They're smart to follow. And they have nothing to do with any president, past or present. Right? The idea of personal freedom and, like, "I don't want to live in fear," has been, I think... generally applied to "I shouldn't have to do anything that someone else suggests is a good idea for me. I should make every decision based on my own personal morals, values, ethics, and what I think is right."

And that's a wild thing to say when so many of us don't—I mean, I don't do mosquito surveillance. I don't know how many mosquitoes. in these various counties in Massachusetts have been surveyed and found to contain Triple E. But there are government officials who do. And you can, like, check.

They have a whole workbook. I was looking at it. Where you can—and it's updating constantly. Just updated again as I was looking at it. Where you can look at the risk map and the reporting and in your area, what is the risk level, and there's colors. And you can look at all that and it's based on science. It's based on going out and catching mosquitoes. and checking them for this virus. I mean, it's not... it's not based on what political party you belong to.

**Justin:** Right. But I'm... and I'm obviously not arguing whether or not again, I'm just saying that I think there's a more nuanced thing than, like, there's a whole half of the country that is always going to be anti-public health initiatives. And I understand that there is definitely a stripe of that. What I guess the point I'm trying to get to is, if you live through a public health crisis that was so badly mismanaged as the COVID-19 pandemic in America, if you had a lack of faith in public health institutions, I can understand where that would come from.

Sydnee: I mean, yes.

Justin: At the end of the day-

Sydnee: That's a valid—

**Justin:** —you could argue public compliance, right? But that is part of public health. Messaging, communication, like, not overreaching and not just throwing out, you know, things that seem like good ideas because we want to be doing something. I'm saying if you were in a situation like COVID where it was so badly mismanaged, and then by the way the management

just kind of stopped? Like, everybody just kind of, like—there was never, like, a, "Okay, we're stopping it."

It was like, even though the government—you know, I remember there was an announcement like, "Hey, we're done!"

**Sydnee:** Yeah. Mission accomplished.

Justin: "We got a vote coming up soon. Like, we're done with COVID!"

Like, it was—I don't think that public health officials get a free, like... well, now you always have—like, that loss of trust is gonna affect everybody, even people who did their jobs brilliantly. Like, it's part of it. Like, we lived through a really crappy public health debacle. And these conversations are gonna be crappy to have for a really long time.

**Sydnee:** Well, and I think that's why you're seeing the news reports about it. Because it seems to me... and granted, I do not live in an area of the country where this is particularly prevalent. Although—I mean, there are other mosquito-borne illnesses that, like I said, West Nile virus we had 2200 cases last year and 182 people died in the US. Nobody's talking about that. So, like, the idea that—

**Justin:** But that's what I'm talking about, right? So, what's the difference, man? Like, what's the difference? Why are we shutting down—like...

**Sydnee:** Well, but listen. Part of the problem is that West Nile is more widespread and the season for it is longer. We are talking about a season that if you just keep kids from playing football or whatever other sport in the evening for, like, another month, you're out of the peak risk. And so what they're saying is, why wouldn't we just play these sporting events in the afternoon?

**Justin:** Um, okay. Well, I could think of one thing, in that the past couple afternoons here it's been 100 degrees. [laughs quietly]

**Sydnee:** But what's the mo—I mean, I think that what you're bumping up against—

**Justin:** Heatstroke, for kids, is like, a real threat.

**Sydnee:** Okay. Well... but you're... I think there is a major difference between "Don't leave the house and don't see your loved ones," which those were our recommendations for a while with COVID, right?

Justin: Right.

**Sydnee:** "Don't go anywhere." And that was hard for all of us, right? It was hard. Whether it was the right or wrong thing to do, it was hard.

#### Justin: Right.

**Sydnee:** And what they're saying is, playing outside at this very specific time of day during this very specific time of year, probably you'll still be fine. But there is a rare chance that your kid gets bitten by a mosquito and then gets a fatal brain infection. What do you want to do with that information?

**Justin:** I mean, I very much can see the logic of if—I think you remove people's agency by having events. You know, if you can move the events, great. Great. [crosstalk].

**Sydnee:** That's all I'm saying. Just move the events.

**Justin:** I know. But I'm not—I am not trying to debate with you the specific, like, wisdom of—again, if the public health officials there say it's the right thing, it's the right thing. I'm not questioning that. I don't. I'm married to you and I do this show. I'm saying that... you gotta, like—that was kind of a mess with COVID.

## Sydnee: Oh, it was!

**Justin:** It was kind of a mess. And people have a lot of really strong feelings that I think are, again, not a failure of any one person except for the obvious. I think that it's gonna be—if you go into it deciding that anyone who is bridling to this is just like an anti-vax, like, anti-government overreach, anti-whatever, I think that you lose the people in the middle who

are like, "Are we... I'm trying to think about my family in the same way that the government forced me to for several years because it did not look out for me in an effective way during the COVID pandemic."

**Sydnee:** Well, I think that the problem is what we've done is crystallize the absolute most difficult part of—I mean, right now we're talking a lot about parenting and not individual risk, which I think is a different thing, by the way.

# Justin: 100%.

**Sydnee:** I think that's why... what you're hearing in a lot of these articles are people who are upset about limitations being put on what their kids can do, and not necessarily what they can do. Like, they—and I think it's because if you get right down to it, every time as a parent you let your kid ride in a car, you're taking a risk.

# Justin: Right.

**Sydnee:** But are you gonna never let your kid ride in a car?

## Justin: No.

**Sydnee:** And that question is the thing that keeps me awake at night. It's the thing that from the moment we became parents... it's why I can never fully relax. [laughs quietly] And I don't know if I ever will. Because what risks do you take with the most important thing that you've ever had in your life? What risks are okay?

And COVID made us ask that question constantly, for every single thing we did.

## Justin: Right.

**Sydnee:** From, I mean, to just as simple as leaving the house. And to put that in focus for people is traumatizing.

Justin: Yes.

**Sydnee:** It's horrifying, it's traumatizing. And every time you make us do that again, we are going to have a natural impulse to get angry, and defensive, and not want to engage with it. Because, I mean, it's too hard to touch. It's just so hard to touch constantly.

**Justin:** Yeah. I'm taking—I really am trying to... I'm trying to be more charitable towards people. Because no matter how you reacted to it, we all went through it. Like, everybody experienced it. Right? To a person. Everyone experienced it.

And I guess what I'm trying to... I'm trying to say that no matter who is talking about stuff like this in the future, it is going to be a conversation. But I don't think that it can be a conversation of the public health system telling people, "Here's what you need to do to stay safe."

Because I think that the idea of public health lost a lot of credibility during COVID. So I think that that is going to be—and if public health officials don't have the sensitivity to that, and if they don't understand that those conversations have to look different if you want... you know what I mean?

Because, I'll give you an example, right? Five years ago if someone had said this, the average person probably wouldn't have ever in their life looked at a fricking chart every day to see the number of infections to see if it was safe to let their kids go to the mall. You know what I mean?

## Sydnee: Right.

**Justin:** Like, it—it... it's always gonna be thorny. It's always gonna be a conversation. But I don't think if you are a public health official that really wants change, you can just stick to what I think was the talking points during the thing, which is "Here's exactly what you need to do. And it keeps changing. But, like, we're not really gonna manage it."

**Sydnee:** Well, in crisis situations, you are supposed to be open and honest, give information as it's available, and share what you do and don't know. That is how you gain trust in the people around you. Trying to withhold information, hide things, keep things that might be scary or alarming from

people, eventually people will find out, and they're going to be less trustful of you because you didn't tell them to begin with.

We didn't have that. Right? We didn't have transparency. We didn't have honesty. And we also—I mean, it's a top down thing. Government officials, from our elected leaders to people appointed to, you know, to the scientists who work in offices and everything, have to not only be transparent but have to do their best to not allow politics to guide public health policy.

And, I mean, they're gonna be part of it. You can't remove it. We're humans. You're not gonna remove politics from public health. There's always going to be things that brush up against our own personal values, and that aligns with our politics, whatever.

But this is gonna become more and more important that we have leaders who try their best to stick with, "Here's the truth. Here's what we know. Here's what we don't know. Here's what we're doing to find it out. Here's what we recommend right now. Here's what we're looking into that might change."

It's really important that we do that. Because part of why we might see—and I don't know how many more cases of Triple E we'll see. Nobody knows right now. We'll see.

But if we do see more, and we start to see that trend as years come, it is because climate change is part of this story. And climate change is another area of fra—I mean, it isn't just public health, but public health is intrinsically connected to climate change. And climate change has become so politicized that you can't even say "We're going to see more mosquito-borne illnesses in parts of the US where we haven't seen them before, because of climate change."

That statement isn't even widely accepted because of how many people refuse to accept the scientific truth of climate change.

Justin: Right.

**Sydnee:** And so we can undo the damage, but it is gonna take a long time. I mean, I don't give up, that COVID completely decimated our ability to make smart public health decisions. But I do think that scientists will often say—I shouldn't say "Will say."

I think there is a belief in the scientific community that if we have the truth and we have the facts and we just present it clearly... that's enough.

Justin: Mmm.

**Sydnee:** And that is not enough.

Justin: You got—

Sydnee: It will not be enough.

**Justin:** You gotta sex it up.

Sydnee: [laughs quietly]

Justin: [snorts]

**Sydnee:** I mean, maybe that's why people in Massachusetts have started calling it Triple E, 'cause that's...

**Justin:** Uh, more... catchy.

**Sydnee:** Yeah. It's a catchier name.

Justin: Yeah.

**Sydnee:** Than eastern equine encephalitis. But I think that's why you're seeing the stories about it. It is something to take seriously, especially if you're in those areas. There's tons of information from the local public health officials in those areas about what you should do and how you can mitigate your risks and all that kind of stuff. Recommendations, mostly, not rules, but you know, things that they advise you to do.

So obviously we should take these things seriously. But I think that it's the conversations we're gonna have about this post-COVID world, and this world where COVID exists.

**Justin:** I guess—I guess what I was trying to get at, maybe if I could distill it down a little bit, because I'm worried about how I've sort of presented my—my viewpoint here.

I think that if we as a nation had had a robust and effective long-term response to COVID that meaningfully was able to respond to it, I think that these conversations would be a lot more different. Because I think that if we had had leadership in that moment that had united us in this thing instead of maybe the divisive thing, like, that it might be a much easier, different conversation.

# Sydnee: Mm-hmm.

**Justin:** But, like, those same—like, that isn't what happened. But that's not the fault of the people who were burnt by it, and the people who got, like, misled or—or whatever. They can still be part of a public health response. It's just that conversation is gonna look so much different than it would have if things had gone a different way.

**Sydnee:** Yeah. I mean, I don't disagree with you at all. And I mean, it is not—it's not fair to just expect everybody to forget everything that's happened since 2020. I mean, you can't just... it doesn't go away.

**Justin:** Yeah. [pause] I'm assuming that silence was shortened in the edit. Thanks so much for listening! [wheezes] [through laughter] To our podcast!

**Sydnee:** [laughs] Well, I didn't mean—I didn't mean for it to be that heavy. But I think it's—I mean, you asked the question, why is everybody talking about it? And as I started digging into the research I was like, well, I mean, we've definitely seen cases, but it doesn't sound like so far we're seeing a ton more or something than we normally would. Certainly someone dying from something that—and I mean when I say "preventable," I mean, these are hard measures to take, right? Staying inside and wearing long sleeves, especially when it's hot out. I mean, like, preventable to an extent. But not... Justin: I mean—

Sydnee: I don't know. I think-I-

Justin: But it's that—but it's—

Sydnee: Preventable's a tough word in this case, right?

**Justin:** Of course, yeah.

**Sydnee:** And so—but I mean, obviously that is something to take seriously. And obviously for the people affected, it's horrible. I mean, it's a tragedy.

**Justin:** Obviously, yeah. That's the problem with public health we bump into constantly with public health, right? If you're talking about public health it's very hard to—to—you start to elide the tragedy of, like, an individual death as you're talking about, like, statistical... [crosstalk]

**Sydnee:** Right. But the loss of that life is absolutely tragic and horrible for the people affected. But when you asked me, and I'm looking at the numbers, I'm like, well, this is not—I wonder why there's all these stories about it? It doesn't seem like a particularly standout year in terms of numbers.

And then, I mean, I really think that's why. Because we're gonna be—every time something like this happens, the shadow of COVID is over us.

**Justin:** Thank you so much for listening to our podcast. We hope you have... uh, enjoyed yourself isn't right. But maybe had some provoking thoughts? Is that... it was thought-provoking? Is that good? [laughs]

Sydnee: Just, you know-my main thought is like-

**Justin:** Kill all the mosquitoes. That's my thing, man.

**Sydnee:** Kill all the mosquitoes., man. Just screw mosquitoes.

Justin: We did that podcast—

**Sydnee:** Hate mosquitoes.

**Justin:** —up at the bug people's spot. Up at WVU.

Sydnee: Entomologists.

**Justin:** The entomologists. And I kept bringing up, like, "Y'all think we should kill all the mosquitoes?" And I expected every one of 'em to be like, "What are you, kidding? God's beautiful—" No. A lot of people I talked to there were kind of like, "Yeah, man. Maybe we kill all the mosquitoes."

Sydnee: "We probably should kill all the mosquitoes."

Justin: "What if we did kill all the mosquitoes.? That'd be sick."

**Sydnee:** Just get rid of all the mosquitoes.

**Justin:** Hey, um, thanks to The Taxpayers for the use of their song, Medicines, as the intro and outro of our program. And thanks so much to you for listening. That is gonna do it for this week. 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]

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