## Sawbones 360: COVID-19: One Year Later

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

[theme 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, it's been a long year.

**Justin:** [sings] It's been a long December and November and October and September... and August, July and June... May, April, March.

**Sydnee:** March. We're back— oh, okay.

**Justin:** [sings] And also the January that was after the December that was aforementioned. And the February, March that followed it...

**Sydnee:** Okay. Good. Alright. Good. We're good on that— no—

**Justin:** [sings] And it's one more day stuck inside our house...

**Sydnee:** Okay, you're just keeping going.

**Justin:** [sings] And it's one more night in Huntington.

**Sydnee:** Okay.

**Justin:** [laughs]

**Sydnee:** Uh, my siblings and I have taken to calling it Morch.

**Justin:** Morch. It's just more March. [laughs]

**Sydnee:** It's just more March. It's just been more March ever since last

March, so it's Morch.

Justin: Morch.

**Sydnee:** It's still Morch. Welcome to—[laughs] it's been a year. I wanted to take this opportunity to acknowledge the year. I feel like that's important.

Justin: [laughs] Credit where credit is due. You got the better of us.

**Sydnee:** Well, it's one of those things where I think obviously there's been lots of articles about it, people talking about it, you know, I'm not the first one to have noticed it. Everybody's noticing it. And I think it's like you wanna avoid thinking about it too much, but at the same time I really feel like its important we engage with it. Because it's gonna get you if you don't. [laughs]

**Justin:** Yeah, it'll get ya. It's weird Syd, I was—you and I have talked about this at length so I'm not telling you anything you don't know, but the days— so we had a very surreal experience where we— things were seeming fine with COVID, we went on the JoCo Cruise, came back, different country. Unrecognizable. Everybody's in masks, there's no toilet paper anywhere.

Sydnee: Yes.

**Justin:** And that— I think trauma is probably overstating it, but it was definitely profound, that return trip. And those days are still crystallized, those days following our disembarkation and re-entry into this new world. They're so crystallized that it feels like last week. I remember, like, the very first trip I took to CVS after we got back to try to find, like, toilet paper. Because everybody got all the toilet paper. We didn't get a crack at it. [laughs] But stuff like that, I remember it like it was yesterday. It's like, so cemented.

**Sydnee:** I agree with you that having experienced that same exact scenario with you, I do not feel that that was traumatic, but I do think it's important to acknowledge the trauma that this year, generally, has inflicted on many if not most of us. I do think that that word is not overstated to use in regard to a year of fear and loss and change and...

**Justin:** And it's all degrees, right?

**Sydnee:** Anxiety. Yeah.

**Justin:** Obviously, Bruce McCulloch says we all have to get through life scathed and unscathed in our own ways, and I feel like this is very much a situation that obviously there's people who lost everything.

**Sydnee:** Yes.

**Justin:** There's people that lost their lives, there's people who've just been cranking it non-stop, 24/sev, no holds barred. They are not the best people. But there's people who've been out there chopping it up and living it, so they've suffered very little because they just went ahead with whatever they were doing.

**Sydnee:** Yes, that is true. That is true.

**Justin:** But... in our own ways. Maybe they were moderately, mildly traumatized when the, the waiter at Captain D's made them put on a mask or something like that.

**Sydnee:** Well, I will say that— yeah. [laughs] Um, I don't have a lot of sympathy if your entire trauma is someone...

**Justin:** [laughs] Someone made me put a mask on.

**Sydnee:** Someone made me put a mask on so that—

**Justin:** My rights were violated.

**Sydnee:** My rights not to kill other people with a deadly virus were violated because I had to wear a mask.

Justin: Yeah.

**Sydnee:** And be a decent human. That is not exactly the trauma of which I speak. But I would like to first acknowledge that when I look back on our year of COVID coverage, we, I like to think, have evolved in the way that science is supposed to evolve.

Because as people have pointed out, which is fair, when we initially began to talk about the novel coronavirus that was happening in China more than a year ago, we did not see what was coming. I certainly was not prescient with anything that I said. I had no idea. I had no... obviously, I had no thought that this is what would occur. And— I mean, and I, you know, not to beat myself up too much, I think most of us didn't.

**Justin:** No, but yeah. What do you think our failing was? What do you think you would do differently if you were in that situation again tomorrow? Because I have a thought, but I'd like to know what you think.

**Sydnee:** Uh, I think that as much as I gave myself credit for not necessarily assuming that all the systems work, like, for knowing better than that. For not trusting that just because we're told we're safe for all these reasons and all these systems are in place to protect us, that we shouldn't trust that. I think on some level, I still did.

And when so many— I mean, because like, when we're talking about the coronavirus, there's two things to this in the United States. There's "I didn't see how bad this virus was gong to be," which I think, like, you can't give me too much crap for because very few people did. Very few experts in the world knew what was coming on that level.

Justin: Yeah.

**Sydnee:** But then I also still didn't think we would be so absolutely terrible at managing that response. I really didn't, even with someone in charge that I did not feel was competent, I still didn't think we— I thought there was other stuff. I thought other people, there were other things that would keep it from getting this bad.

**Justin:** I would say, I would say that in terms of it finding a foothold, I would say that caught the globe by surprise. Because it's not like there we bad leadership in this country and good leadership in this country, like, on the immediate short-term, like, "It won't get through our borders," you know, "it won't arrive here," it arrived everywhere.

**Sydnee:** Yeah. It got everywhere. Yeah.

**Justin:** But I think it is— I overestimated— and shame on me for uh, I overestimated the res— I still assumed that there were adults in the administration at the time. And who would like, take over and handle it. And in a way, we saw some of those, right? We got our— we got Fauci, people like that.

**Sydnee:** We got Fauci.

**Justin:** But like, I really, I overestimated the extent to which we could believe— well, believe is one, because not everybody was caught as flat-footed as we were, because there was people at the highest levels of

government that knew exactly what was going to happen. I mean, maybe not exactly but certainly—

**Sydnee:** Well, Fauci knew. Well, I mean, I don't mean that in a mean way. But I am certain that that Fauci was in rooms telling people what was happening and trying to stop it.

Justin: Yes. Yes.

**Sydnee:** But the thing is, what it reminds us maybe more than anything is how linked we all are. Like, we are all linked to each other and our actions affect everyone around us. And you can't have one person who's standing there trying to tell everybody else the truth alone and make an impact, you know? You need more than one person.

And I think there are a lot of people who have known this for a long time because they've suffered from the system that never did protect them. The system that we had faith in, that we thought, "Well, certainly it couldn't get that bad. Certainly there are things in place." There are a lot of people in this country who know that those things aren't in place, or who know that the system is built to actively work against them. If you're a black person in America.

Justin: Yeah.

**Sydnee:** So, I think that those are lessons learned. I like to think that at least— I would never take down old episodes we did where we were naïve or ignorant to what was to come, because I like to hope that the way that we have evolved and the way we talk about it is the way that mirrors the way that science should evolve. You get new data, you get new information, you take that in, you assess it and you change your, you know, your understanding of a topic as necessary. That is the way— and that's the way we should all operate, right?

Justin: Yeah.

**Sydnee:** Ideally, [laughs] that is the way we should take in information. I did wanna talk about sort of an update as to where we are now and then answer some questions we've gotten recently about COVID and the vaccines and everything.

**Justin:** Can I talk about another bad thing, before you do that?

Sydnee: Yeah.

**Justin:** Something that I just— and I don't know, we're kinda— this is a pretty open-ended one, it was kind of like a... year-long retrospective. [laughs]

**Sydnee:** Maybe a little bit cathartic.

Justin: Yeah.

**Sydnee:** I felt maybe that was necessary, not just for us, but for everybody. Everybody out there.

**Justin:** Especially living where we live, I have not enjoyed... I'm a humanist at heart. Um, and it's a tough time for that, the past four, five, however many years. And I have not enjoyed being able to instantly tell if the person I'm looking at is, uh, a scumbag or not. I don't like that. I like to be able to— when you're living in our area, sometimes you see some... [laughs] some challenging imagery on a t-shirt or whatever and you wanna say like, "You know what? I'm gonna give that person the benefit of the doubt. Maybe they're not so bad if I got to know them," blah blah blah.

But when you see people in a store and they aren't wearing a mask, it's like, I don't like the instant sort of internal... rage. I mean, the internal flip I make on that human being, that fellow human being who I have challenged myself through my existence to try to love as many people as possible. And like, to see people who I just know they suck. Like, I instantly know they suck. I hate that feeling. I hate it.

**Sydnee:** I think I feel like we have not had to experience this much in our circle, but if I had friends or family who totally didn't take it seriously and didn't do any of the stuff they were supposed to, um, I don't know how I would remain on speaking terms with them through this.

Justin: Yeah.

**Sydnee:** Through this very specific— I mean, there are lots of, gosh, well, the last... the last year has brought up lots of things like that, but we'll focus on COVID.

**Justin:** Narrow down that old friends list. [laughs] Whittle out some of the chaff.

**Sydnee:** But I definitely think that, um, luckily I have not had to lose anybody, I don't think, over this specific issue. I have found that most of the people we associate with do believe in science at least to some degree. Enough to wear a mask.

Justin: Okay.

**Sydnee:** Um, so, the big buzz right now are, I would say like, the vaccines and then the new guidelines that just came out from the CDC. At least in this country. If you live outside the US, the new CDC guidelines are probably not as exciting or interesting or whatever emotion they evoke for you.

**Justin:** I'm not ignoring you on my computer, I'm pulling these up too so I can have them to reference.

**Sydnee:** Yeah. Well, let's start with that. Let's start with— I just changed my outline. We'll start with the CDC guidelines.

**Justin:** Whoa! You think this year hasn't been tough? Sydnee's changing outlines mid-recording.

**Sydnee:** I just changed my outline. I never change my outline.

Justin: Never!

**Sydnee:** This is like, maybe the first time. Sometimes I might skip a chunk if I realize it's not very interesting on the fly, but—

**Justin:** She usually just removes her own editing access to her Google document. No one can change it—

**Sydnee:** No one can change this outline. No. Justin never changes an outline. Ever.

**Justin:** What, Justin never?

**Sydnee:** No.

**Justin:** No. Oh, I've never. No, are you kidding me?

**Sydnee:** You don't even type on them. No. I don't even like to see your little cursor appear on the google doc because it stresses me out.

**Justin:** [laughs] Yeah. I don't even log in to my account when I look. It just says anonymous platypus or whatever so I can maintain plausible deniability. "We've been hacked, sweetie! It's Russia. Russia's looking at your notes."

**Sydnee:** I'm a control freak about one thing. And it's my podcast.

**Justin:** Really, just one? Just one thing?

**Sydnee:** That's the most thing.

**Justin:** Just one thing?

**Sydnee:** So, the new CDC guidelines came out on March 8<sup>th</sup>, I believe. Morch 8<sup>th</sup>. And this is for fully vaccinated people. And this has been the question, right? As soon as people started getting their vaccines— man, I love humans. I love humans. As start as people started getting vaccinated, they started going "Well, what can I do now? I did it, I got the vaccine."

**Justin:** "Look at my power! My incredible power!"

**Sydnee:** "Where can I go? What can I do? Why are there no new— I need new rules! There need to be new rules for me! I can do stuff now!" Everybody wanted to know, and so the CDC was like, "Fine. Here. Everybody calm down, here." And so, generally speaking, not to— you can read them by the way, CDC.gov, you can go look. You can google "new coronavirus guidelines CDC" and they'll pop right up. So, it's easy to find.

But fully vaccinated people can visit with other fully vaccinated people indoors without wearing a mask or physical distancing. That's huge.

**Justin:** I mean—

**Sydnee:** That's a huge thing.

Justin: That's huge but I assume everybody was already doing that,

right?

**Sydnee:** I think vaccinated people were probably doing that.

**Justin:** Yeah. That's why I got vaccin— come on.

**Sydnee:** Well, that's not the only reason. But I think—

**Justin:** You don't get to tell me what to do, CDC!

**Sydnee:** [laughs]

**Justin:** You don't get to tell me— as far as I'm concerned, the CDC doesn't get to tell me what to do anymore, as far as I— like, I'm extralegal now.

**Sydnee:** I thought this other one was a bigger step. Visit with unvaccinated people from a single household who are at low risk for severe COVID-19 disease indoors, without wearing masks or physical distancing. And refrain from quarantine and testing following a known exposure if asymptomatic.

So, those are the big changes. The rest of it is like, but also you should continue to," and then they go into, like, when you're in public you should still be wearing a mask and distancing and all the other things that they talk about. If you have symptoms you should still get tested, blah blah blah. Do what your boss says. If your boss says, "I don't care, I want you to do this," you have to follow the instructions of your employer. Because the CDC doesn't get to trump your boss or whatever.

But I thought that second one especially was intriguing. Because what this speaks to is our new understanding, what we kind of, like I have said all along, what we kind of predicted but are starting to see borne out in the data, which is that more than likely when you get the vaccine, whichever vaccine you get, and are fully vaccinated, you can't transmit COVID either. Now, that's not 100%.

Justin: Right.

**Sydnee:** But it is so unlikely that you would transmit COVID that you couple that with an unvaccinated person who is at low risk, the risk of that entire situation becomes very low. And it's always important to remember that all these things we've talked about this whole past year is all risk management. It's not about saying 100% everyone's safe, it's about saying "We think the risk of this situation is incredibly low," right? Because as we've talked about, the only no risk situation would have been if everybody locked themselves away in rooms completely alone for however long that took.

Justin: Right.

**Sydnee:** And that's not, like, a feasible thing for human society. So anyway, these— I have been very critical of a lot of government-led efforts to, uh, limit restrictions and that kinda thing. And I am still, I'm looking at you Texas, highly critical of removing mask mandates right now.

**Justin:** There's just no reason— it's so scummy. It's just so gross. Like, you're not hurting the economy by having masks in place.

Sydnee: No.

**Justin:** You're just being a d— man, I wish we could curse on this show.

**Sydnee:** You can't.

**Justin:** But you're being a... dingus.

**Sydnee:** Yes. Well, people are gonna get hurt because of that and it's unece— it doesn't hurt you to wear a mask. And people will get hurt because others don't have to. And it's just that simple.

But anyway, I do think that these guidelines— because like, if you read them, cause what first came out is vaccinated people can— I mean, that's what I was seeing on Twitter. "Vaccinated people can run through the streets naked!" [laughs]

Justin: Yeah.

**Sydnee:** [laughs] "Screaming at the top of their lungs unmasked. They're done." And that is not what the guidelines say. They're still very restrictive. They're still very clear that, like, you can't just go have a party. That's not what they're saying. They're saying that in very specific situations with people who've been vaccinated, there are some activities that they can engage in, which probably [whispers] they were. And then—

**Justin:** If I'm unvaccinated— Sydnee, I appreciate what you're saying. If I'm unvaccinated, I'm gonna do whatever I want to.

**Sydnee:** If you are vaccinated, you mean?

**Justin:** If I'm vaccinated. Which I am.

Sydnee: Uh huh.

Justin: I'm gonna do whatever I want.

**Sydnee:** No, I wouldn't— I'm not advocating for that. Not yet. Just—

**Justin:** Okay, but I'm me. And you're you. And you are technically the boss of me in a sense.

Sydnee: I am.

**Justin:** But I— I mean, I'm still gonna wear a mask in public, right? Because that's a good—

Sydnee: And they say that.

**Justin:** I'm still gonna do that. But other than that, I'm gonna— and I'm not gonna go, I mean, there's stuff that's tougher because we've got the girls, who are obviously not vaccinated, so that's—

**Sydnee:** That's part of what I want to get into, our kids.

**Justin:** A challenge. But other than that, I'm gonna do whatever I want. CDC's not my boss.

Sydnee: Well.

**Justin:** Tell me what I can't do now that I'm a vaccinated person out there living the life I want.

**Sydnee:** Well Justin, you still need to wear a— they're right here. Wear a well-fitted mask and physical distance when you're in public.

**Justin:** Yeah of course, I'll do that. Of course.

**Sydnee:** Um, if you're visiting people who are at increased risk for severe COVID, you still need to wear a mask and do all that stuff.

**Justin:** Yeah, I'll do that. Okay. But other than that.

**Sydnee:** Physical distance. You still need to, you know, practice other prevention measures when you're visiting unvaccinated people from multiple households. So, wear a mask, physical distance.

**Justin:** Obviously.

**Sydnee:** So if you're with like, two families that are unvaccinated but low risk, but you're vaccinated, you still gotta do all the old stuff. That doesn't change. Avoid medium and large size gatherings.

**Justin:** Done. Easy.

**Sydnee:** Get tested if you have symptoms. Follow guidance from your boss. That's me. I'm your boss.

Justin: [laughs]

**Sydnee:** Follow CDC and health department travel requirement and recommendations— so I mean like, there's still a ton. But that's okay. This is the way it should happen. It should be gradual. It shouldn't be "We're done! COVID ended today! You can stop now." Like—

**Justin:** Do I still have to stay 6 feet away from people?

**Sydnee:** Read the—well, it depends. Read the guidelines. In public, yes.

**Justin:** Yeah, Well, I do that anyway. That's a slam dunk. I invented that. They stole that from me. [laughs]

**Sydnee:** If— none of our couple friends are fully vaccinated so I don't have anybody to like, use as an example. But if they were, you and me could as two vaccinated people, go to the house of two vaccinated people and not wear masks and not physically distance.

So, I think that was the biggest shift. And I have to say, like, I am not particularly critical of any of this. This makes sense. This is science-based. This is where the science is pushing us. This is what we always thought we would say, is that eventually, once you're vaccinated, you're not gonna be able to get or give COVID, for the most part, statistically, most likely, you can't. And so, it is okay for you to engage in activities of yore. That would be fine.

That is what we thought would happen, we just, it— nothing happens immediately. It's always a gradual process, and we have to take it slow so that we can pull back if things change. And this is a fluid situation where things can constantly change. These are reasonable. Removing a mask mandate...

Justin: Come on.

**Sydnee:** Ridiculous.

Justin: Come on.

**Sydnee:** I wanna talk about some specific questions people have asked about some of the vaccines, and then just some other random little COVID stuff. But before we do that, let's go to the billing department.

Justin: Let's go.

[ad break]

[Maximum Fun ad plays]

**Justin:** Alright Syd, what else is happening in the world of COVID?

**Sydnee:** So, the vaccines. So, the big thing that happened more recently in the US, not super recently but more recently, is that the Johnson & Johnson, or Janssen vaccine was approved.

**Justin:** Okay, I remember that.

**Sydnee:** We haven't talked about it.

**Justin:** Oh gosh. You and I talk about this stuff so much, I forget what is and isn't on the show. That's a one-shotter.

**Sydnee:** Yes. That is a one-shotter, it's easier to store. It's older technology— we've talked about— I won't get into the weeds with all the tech because we've talked about it before on the show, but it's one of the adenovirus vector vaccines.

So, they take a harmless cold virus that has been de-fanged, so to speak, they put the information in it to make the spike protein and then you put that in your body and your cells use that information to make the spike protein. Which is the same— that spike protein is that same focus of the Pfizer and the Moderna, the mRNA vaccines. We want our bodies to make the spike protein so then our bodies learn how to fight the spike protein, so then when the spike protein on the coronavirus in the wild comes into your body, you go, "Ah! Spike protein!"

**Justin:** [laughs]

**Sydnee:** And kill it.

Justin: Got it.

Sydnee: Got it?

Justin: Got it.

**Sydnee:** So, that sort of technology, an adenovirus vector, is not as new, so to speak, as the mRNA technology, although none of it, as we've talked about, is particularly new and it's all safe and very effective. Um, this is exciting because it's one-shot, it's exciting because it's so much easier to store and transport. You don't have to have the deep freeze stuff, the really cold stuff that you do with Pfizer and Moderna. So, this is all great and, uh, most recently the president has announced that we will have enough for everybody who wants it to get it by May 1<sup>st</sup>, I believe.

Justin: That's what he says.

**Sydnee:** So, it should just be willy-nilly by May 1<sup>st</sup>. Everybody can go get it. And hopefully everybody wants it.

**Justin:** That means June? Gonna pop off.

**Sydnee:** [laughs] Um, the— a lot of people have started to worry, "Well, what about how effective are these? How effective are these?" Because if you look at the data from the Janssen, which I'd say the same for the AstraZeneca, and this same conversation happened in places – or Oxford vaccine – the same conversation happened in places where that was approved. It still has not been approved in the US.

Justin: Come on!

Sydnee: I...

**Justin:** There was some story— did you see some story outta Denmark about AstraZeneca and blood clots?

**Sydnee:** There was no increased risk is what it—

**Justin:** Yeah, I know, I just wanted to highlight that in case people hadn't heard about that.

**Sydnee:** Yeah, there's been a lot of misinformation out there about the Oxford vaccine. Like, strangely it's been very targeted at that vaccine. And I'm trying not to have bias, it is the one that is in my— that I put in my human body. Well, I didn't put in, I let them put in my human body and is currently still protecting me. And I would have no problem, like, I think they should have it— we should have it here, too. It's more vaccines, more availability, let's go.

But um, if you try to compare— and this is something that's really important. If you start looking at the numbers form the Moderna and the Pfizer and you start looking at the numbers from the AstraZeneca, or the Oxford, and you look at the numbers form the Janssen, all of this— you'll start to say, "Well, some are better than others."

Justin: Mm hmm.

**Sydnee:** Like, you'll see these charts of percentages and like, "Well, that one is more protective than others." That is not how— you can't do that. That's not science. This is important Justin, I need you to look at me.

**Justin:** Okay, I'm sorry. I was looking at the blood clots story, that was unnerving— okay. But it's fine.

**Sydnee:** I know. Well don't bring it up, it's misinformation.

**Justin:** I was trying to figure out why it— how does that get to a point where people are like, "We're gonna stop using this vaccine," like where did that come from? Is it just rumor mongering and then countries stop using it?

**Sydnee:** Well, that has happened. I mean, not that people stopped using it, but like, yes, there were concerns with— I mean we talked about that with infertility in the Pfizer vaccine.

**Justin:** Right, okay, yes.

**Sydnee:** And that was totally fake.

**Justin:** Yeah, you're right.

**Sydnee:** It does not— none of the vaccines cause infertility. We have no evidence of that whatsoever.

Justin: Okay.

**Sydnee:** Anyway, so this is really important. When you compare efficacy of all these different vaccines, you'll see these percentages. And people are like, "Well, I want the Pfizer or Moderna because they look better." You can't do that. Heres' why. Those percentages were derived from the studies that were done, right, the Phase III trials that were done.

Justin: Right.

**Sydnee:** Which were done in different places and at different points during the pandemic. You are comparing apples and oranges and bananas and grapes and strawberries, you're not comparing the same things when you look at all these different vaccines. If one of these new variants was circulating, you're going to see different numbers. The Pfizer and Moderna trials were done largely before these new variants were circulating. If you look at the Janssen, a lot of the trials were done in places where there were a lot of the new variants. A lot of the participants got the new variants.

**Justin:** Janssen is Johnson & Johnson?

Sydnee: Same thing.

**Justin:** Okay. [laughs]

**Sydnee:** Sorry.

**Justin:** It's alright.

**Sydnee:** But you can't compare those two. It's not the same thing. What you need to know— I'd say the take-home message from all these vaccines and everything that's been approved so far: They look incredibly safe, we have no reason to believe that outside of the initial, you know, symptoms that we've talked about, that you can have from the immune response you get from the vaccine and the sore arm and whatnot, outside of those initial things there are no long— there are no effects from these vaccines that are negative, they are not dangerous in anyway.

Again, we have no reason to think there would be any long-term health consequences, because that's not really how vaccines work, we've talked about this on the show. And all of them are very, very effective at preventing severe COVID disease, which means hospitalization also and

death. They are incredibly effective at that, all of them. So, that's what we want.

Justin: Yeah.

**Sydnee:** They're good. They work. They all are safe and effective. Whichever one shows up in your hometown, you should get it if you're eligible.

**Justin:** If you see any vial with a needle on it—

**Sydnee:** [laughs] Well no, don't—

**Justin:** Rove into your field of view...

**Sydnee:** No, don't— that's not— no. And like I said, there've been some really intriguing studies. There was one out of Israel that— on the Pfizer, that shows not only are we protecting people who get the vaccine from COVID, but we're decreasing the transmission of COVID, because we're seeing fewer and fewer people in general getting it. Not just the vaccinated, but we are working towards that herd immunity, which tells us that the vaccines do prevent transmission. And that was the piece that we didn't know in the beginning that we knew we would learn. And we thought we knew what it would say, but you can't say until you do the study, until you look at the data. And that is where we're getting.

So, I mean, this is all very positive, this is all very heartening. And when it comes to— a lot of people have asked about the new variants. That's been the big concern, the new variants. So far, the vaccines still look like they prevent severe disease and death from COVID, even with these new variants. Obviously, we think they might decrease effectiveness somewhat. Like, they're a little tougher. None of them have been deadlier, just more transmissible. You can get them more easily.

Justin: Got it.

**Sydnee:** So, we're kind of, I mean, part of what we're doing now is racing against them, right?

**Justin:** Trying to get everybody vaccinated so that we can't—

**Sydnee:** Yes, so if you protect enough people, these new variants don't have time to really get a foothold. And then at that point we can re-

figure. We can, uh, look back at our vaccines and say, "Okay, now for the next generation of them do we need to make them specifically better against these new variants? Is there something we should do? Do we need a booster? Is it just that simple? We just might need another booster of these." All of this stuff we knew we wouldn't know going in.

We knew we wouldn't have all these answers going in, we're learning them and adapting them as we go, and thank goodness you hear so much about it and that, um, when you read—every time one of these new variants is announced to the public, I guarantee you there were already research scientists in labs all over the country frantically testing vaccines against it before you heard about it. Like, people are responding to this as we go. This is a coordinated global effort. It is changing, but people are on top of it as it changes.

Justin: Right.

**Sydnee:** One thing I would highly recommend, you've probably heard of Dr. Kizzmekia Corbett, who worked on the Moderna vaccine, one of the lead immunologists, vaccinologists who worked on the Moderna vaccine. I would highly recommend you follow her on Twitter @KizzyPhD.

Justin: How do you spell that?

**Sydnee:** K-I-Z-Z-Y-P-H-D.

**Justin:** Got it.

**Sydnee:** She is a great— I love her tweets, like, sort of updates as new information comes out. The way that she explains it. She's a great science communicator and obviously an incredible vaccinologist, immunologist and that has been really helpful for me to like, little bits of information that help me understand what's happening and not freak out when you hear something new.

Some other questions specifically that people have asked. One is about they've been using BMI as a way to assign who gets the vaccine or not, right?

**Justin:** Right.

**Sydnee:** If your BMI is above a certain level, if you qualify as obesity, then you are higher on the list to get the vaccine because we consider

you at higher risk for severe disease from COVID. And I've gotten a lot of questions about how, like, how does that play into the fact that the BMI is not a great measure?

Justin: Yeah.

**Sydnee:** Which is a great— and I mean, when people suggest we need to do a whole episode on the history of the BMI and why it's not a great measure, you're right, we do. We just haven't done it yet.

But, uh, this is a tough one. We have seen that, I mean, you referenced it to me the other day Justin, that there is some correlation. We don't know causation, but there is correlation between obesity and severe COVID. I'd say that there are a lot of confounders that we would need to tease out of that, but it's enough that it does make us think obesity is a risk factor for severe COVID disease.

And so, I think based on that concept, putting people higher on a list to get vaccinated, you know, because of obesity, I think that makes sense from a scientific standpoint. But it doesn't change the fact that BMI is a crap measurement that we should have abandoned a long time ago.

Justin: Right.

**Sydnee:** It's not very, it's not a very useful metric for anything other than insurance companies who are trying to decide, like, who can get bariatric surgery or who can have a sleep study or whatever. [laughs]

**Justin:** And like water intake calculators online.

**Sydnee:** Yeah. So, I mean, I agree wholeheartedly with everybody who's like, "Why are we using the BMI? BMI is stupid." I agree with what you're saying, you're not wrong, but I also don't think it's wrong to consider obesity when you're trying to make a list of who should get a COVID vaccine next. I think both of those things can exist.

But you're right about BMI and we should do an episode about it. And will, eventually. I never wanna promise next one, because then stuff happens and we do something else. But we should do that.

Another question I've gotten a lot about is COVID and painkillers. Why can you take Tylenol and ibuprofen or whatever, your, you know, overthe-counter painkiller of choice after but not before. Have you heard that?

**Justin:** No. With the vaccine or with COVID?

**Sydnee:** With the vaccine.

**Justin:** Got it, okay.

**Sydnee:** Sorry, I should have clarified. So, we have had studies in the past that have suggested that, um, and the main population where you see this is in the pediatric population. Parents will pre-medicate their kids with like, Tylenol before they come get their vaccines, so that it's easier afterwards. Which is not, I mean, it's a good thought. But then there was some concern, are we, by giving these medications to someone before a vaccine, are we reducing their immune response that they can generate to it? And there was some data that suggested possibly. We haven't seen that effect when you take them after you get the vaccine.

Justin: Okay.

**Sydnee:** But we have, it has been suggested that that could happen before. So, the recommendation is don't pre-treat before a vaccine, but certainly if you have side-effects from the vaccine, if you have, you know, soreness or whatever, you can take things after the vaccine. And so, I would say that's just a good practice. I don't ever— generally speaking, I just don't recommend pre-treating. Cause you don't know, sometimes you get a vaccine and you feel, like I did after my second Oxford shot, I felt fine. I had no...

**Justin:** I felt fine both times. A little bit of soreness in my arm.

**Sydnee:** I had some soreness after the first one. I don't remember if I took ibuprofen after the first one. But I didn't need anything after the second one, so, um, but that's where that comes from.

I had one interesting question that I've seen a lot of in some of my doctor mom groups. Can you pass immunity through your breast milk?

Justin: Yeah?

**Sydnee:** If you get the vaccine and you're breastfeeding, does it go? Does it pass through? [laughs] We don't know is the short answer.

**Justin:** Man, people never wanna test on little kids. [laughs]

**Sydnee:** I know. We don't know. A lot of people— I think it's interesting, I've heard of, anecdotally, people doing antibody tests on their breastmilk to see if there are antibodies to COVID in their breastmilk.

**Justin:** Oh, that's funny.

**Sydnee:** And they've found positive tests. Which is interes— so they're finding evidence that they got the vaccine, their body produced antibodies and those antibodies did pass through to the breast milk— again, this is anecdotal, but I have seen people have done this. The next question though, is what happens when the baby ingests the breastmilk? Do they absorb them into their bloodstream so that they actually have immunity, like passive immunity? Or do you digest them. [laughs]

Justin: Oh, yeah.

**Sydnee:** We don't know any of that yet. So, I don't know. Maybe, I guess. Maybe. That would be great.

Justin: Yeah.

**Sydnee:** I'm still nursing Cooper, so I would love to think that Cooper has gotten a little passive immunity from me, but I mean the short answer is we just don't know yet. It's theoretically possible. Kids are another big question that not only have we gotten emails about but you and I have discussed at great length. [laughs]

Justin: Yeah.

**Sydnee:** Uh, we're going to reach a period where all the adults who are eligible for a vaccine should or could have been vaccinated, right? What about kids? They're doing studies. Obviously at some point the vaccine will be offered to kids. I don't know how young that will go. I've seen down to 12.

**Justin:** Is there a point at which it, or, the serious reaction to COVID is so low where it becomes, like, kind of moot?

**Sydnee:** Yes, that point, that certainly would exist—

**Justin:** Every kid can get— now, obviously we vaccinate against the flu so this isn't a good example, but like, we live with diseases that can sometimes have very serious complications for kids that we don't stop the

world for. Like, will this eventually fall into that category or do you think we'll go for like, full, MMR, like, style eradication?

**Sydnee:** I know what you're saying. I don't think we can answer that question fully until we understand more about COVID and kids. Early in the—

Justin: I could make some guesses if it would speed things up.

**Sydnee:** Well, I mean, a lot of people have— I mean, I think we know a lot more than we did in the beginning. Because right in the beginning they said kids don't get it and kids— and even when they do, they don't get it bad. That was like, the whole thing.

**Justin:** Yeah. And actually, their blood cures it. [laughs] So kids are immune from COVID, period. Yeah.

**Sydnee:** And then as we've evolved with our understanding of COVID, we go no, well, kids do get it. Maybe there is a threshold, an age threshold where transmission is less likely, but they still can get it, absolutely. They can give it to each other, they can give it to adults, we know that now. Whereas— and I don't— well, I won't get into that. That was called into question at the beginning, we know that now. We still think, obviously, kids are not as likely to get severe COVID, right? Like, that's still true. We don't think they're as likely.

But how unlikely are they and are there long-term consequences for getting mild or moderate COVID? For kids? We know that there can be for adults, which will lead me into our next thing, so like, if our kids are getting mild or moderate disease, well that's great, maybe they never got hospitalized, maybe they just missed some school and then they're fine, that's great, but if there some sort of long-term thing that could result from that Because if there is then that's just as serious.

Justin: Yeah.

**Sydnee:** We just don't know all that yet. We think its not as bad for kids, still. I don't think, as a parent, that's not enough for me. [laughs]

**Justin:** No, right. We're not kicking it at Great Wolf Lodge or anything.

**Sydnee:** No, which is gonna lead us into this world where adults are safe, generally, kids are not, generally, what do we do? I mean I hope

that they rush these trial— I mean, I don't, you know what I mean. I hope they start these trials. I don't mean rush them. I hope they start them soon. I know there are already some trials down to 12. I have read that they're going to start trials down to six months, which again, I have said it on the show before, if I can find a trial that I can get my kids into, I would. In a heartbeat.

**Justin:** Yeah. Keep a look out, listeners. If you hear anything, tweet at us. [laughs]

**Sydnee:** Yeah, I would. Because at the end of the day, I'd prefer my kids didn't get COVID. I know that it is not as risky as someone who is older or has other chronic medical conditions getting COVID, but I still would prefer they didn't. So, I think there is still a lot of grey area here and it's gonna be a lot of people decided what their personal comfort level is as we move forward with allowing kids into the world.

Justin: Mm.

**Sydnee:** Not so much— I think we're answering the question as to, like, you and I are vaccinated parents going out into the world and coming back to our children I think we're learning is not dangerous. I mean, we're still washing our hands and everything and I still strip down when I come back from doing medical stuff. But when we can let them go out into the world regularly, I still think that's gonna be a big, giant question mark. It'll be a while before you can safely take the masks off, I would say.

Justin: Yeah.

**Sydnee:** And that leads us into Long COVID. Which I thought I would end with because, one, so many people have asked us to do an episode. I can't in good faith do an episode on Long COVID because we don't know enough yet. We are in the middle of learning about this. I could tell you general ideas of our understanding so far.

**Justin:** Can you specify what you mean by Long COVID?

**Sydnee:** By Long COVID? People who have had COVID, recovered from the acute disease, but still continue to suffer from either occasional or even persistent symptoms. So, not necessarily the fevers or cough, but everything from like, um, fatigue to headaches to brain fog to all kinds of

things that have resulted since they had and recovered from the acute illness, COVID-19.

I don't know. I mean, that's the short answer. There are clinics that have been designed— that have been, like, built. Not physically built, you know what I mean. Experts have been brought together to create long COVID clinics around the US. There aren't many. And I'm sure that that exists outside the US. To try to study this and understand what is happening, what are we looking at and how can we best treat, manage, maybe cure, I don't know. I don't know what we're talking about yet. I am concerned about people like Gwyneth Paltrow taking advantage of this vacuum of knowledge.

**Justin:** This is what I'm sitting thinking, yes.

**Sydnee:** Because we don't understand fully what's happening. But we know something is happening, because I can attest to this. Again, this is anecdotal, but I can attest to the fact that the last time I was running our in-patient service, we were frequently re-admitting people who had COVID, got better and then something else has happened. This is not uncommon right now.

So, this is not something that just goes away in two weeks. For some people. I mean, yes, of course, others it does. But there is something that we're not— and we still don't understand it. We still don't know what's happening inside your body that's causing all this. And we don't know how best to address it. There are very smart doctors, scientists, studying this all over the country.

Justin: Right,

**Sydnee:** And I do think we will understand this entity better with time. But right now, we don't have like, hard fast do this, do this, do this, you'll get better no problem. If anybody's telling you they completely understand it and they have all the answers for you and also they can sell it to you—

Justin: Or that doctors are ignoring you and not taking it seriously...

**Sydnee:** Yeah, no, we just don't understand it yet. Now, your doctor shouldn't ignore you, they should take you seriously, they should listen to all your symptoms. And there are these clinics throughout the country to

study this. But we just don't have the answers yet. We're still in this, like...

**Justin:** But this sort of thing, this atmosphere of not knowing is really fertile ground for charlatans.

**Sydnee:** I mean, that's how hydroxychloroquine became such a thing, right? Because you had so many people online echoing back to each other that the doctors won't give it you but it is— I've heard that from so many people who never had COVID, who never knew— they didn't even necessarily know anybody who had COVID, but they knew that doctors were keeping hydroxychloroquine from people even though it saves lives. And that obviously wasn't true.

So, I do think that yes, that point is very worthy to make and this is a perfect example of that. I guess, unfortunately for Gwyneth Paltrow, because I don't want anybody to get sick or suffer, she has, she is a Long COVID sufferer. She had COVID, got better, but then says she continues to have brain fog and fatigue and trouble concentrating, I think are the symptoms she said she had. Things like that. Anyway, she has... consulted with someone to help her address it and is now on some sort of specific diet for it.

Justin: [sighs]

**Sydnee:** Takes a lot of vitamins, uses a detoxifying powder and then also has recommended things like a specific pair of shoes that she uses for hiking because exercise is so important.

**Justin:** [humming the American national anthem quietly in the background]

**Sydnee:** And there's a necklace that you can... wear. I think while you're hiking. There's like an infra-red sauna blanket. There's a serum. There's an acid peel. These things are very expensive, too. I should note, like, everything I'm— there's a price tag that comes with all these things and she's promoting them and I'm sure, selling some of these things through Goop.

**Justin:** Can't beat America, baby. America's back! We're back. Can't beat America, can't stop, won't stop. We're back.

**Sydnee:** And that concerns me because I— if all these things work for Gwyneth Paltrow and goodness knows, she has the means to afford them—

Justin: Then they work!

**Sydnee:** Well no, then that's fine for her. If that is how she is— we've talked about there is no such thing as a detoxifying powder. You don't need to detox your body, your liver and kidneys do that for you. But if that is how she chooses to spend hard-earned dollars and she feels better, I'm not gonna come to her house and tell her to stop. But it does frustrate me that she's telling everybody else that she's cracked it and just do what she does and then you, too, can be better. But I mean, it costs, I mean, altogether this stuff is going to be thousands of dollars. And I think that's very frustrating.

And you're gonna see a lot of that. You're gonna see a lot of people who are gonna tell you, "Oh, I know the doctors say they don't understand it, but I do, and here's the solution and also, it's gonna cost you." And that is what worries me right now, is that is where we're— we're in that space. I think that unfortunately we have to be satisfied, as we have for the whole past year, knowing that we don't know some things. We will.

**Justin:** We will, we just don't right now.

**Sydnee:** We know so much more than we did a year— look at this show versus one year ago. We know so much more. We will understand Long COVID and we will understand how to address the symptoms more effectively and how to help people who are suffering from it. We will understand those things.

**Justin:** I know how to make a bunk bed now. I didn't know that a year ago.

**Sydnee:** Yes.

**Justin:** That's episode.

**Sydnee:** [laughs]

Justin: I'll just call it right there. That's episode. We're done with

COVID-

Sydnee: No, we're not done.

Justin: Mission accomplished. Sydnee's unrolling a banner!

**Sydnee:** We're moving— no.

**Justin:** It says "Mission accomplished".

**Sydnee:** [laughs] We're moving in the right direction though.

**Justin:** Seems a little foolhardy to me Syd, but okay, you're the doctor.

**Sydnee:** That is the difference between a year ago and now. A year ago, we were moving in the wrong direction and now we're moving in the right direction. And let's just keep going there.

**Justin:** Thank you so much for listening. Um, we, uh, have a book. It's called The Sawbones Book. It's in paperback and hardback, you can go get it right now. Um, and thanks to The Taxpayers for the use of their song "Medicines" as the intro and outro of our program. Thanks to you for listening. That's gonna do it for us for this week, so until next time, my names 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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