

## Sawbones 421: The Brompton Cocktail

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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.

[sound of pop top being opened]

**Sydnee:** Oh, no.

**Justin:** Can you say— I'm not used to podcasting?

**Sydnee:** Grip it and rip it.

**Justin:** [chuckles] Thank you, Sydnee. Thank you so much.

**Sydnee:** I know. I know.

**Justin:** I will grip it and indeed rip it.

**Sydnee:** Yeah, but you gripped it. You already— it's, like, past tense. You have. You have—

**Justin:** I have gripped and doth have ripped—

**Sydnee:** [laughs softly]

**Justin:** ... this Topo Chico Margarita. [chuckles]

**Sydnee:** Mm-hmm. This is *Sawbones* Late Night.

**Justin:** [smacks lips] That's right. One of those rare "the kids are in bed" recordings, and that means anything goes. Sydnee, what are you enjoying there over on your side of the table?

**Sydnee:** Well, it's, um, a beer.

**Justin:** Local? Is it local?

**Sydnee:** Mm... No.

**Justin:** Looks like it. It's got a guy on a bike on it.

**Sydnee:** No. It's from Virginia.

**Justin:** Hey!

**Sydnee:** Lost Rhino Brewing Company. This is not an ad.

**Justin:** This is not.

**Sydnee:** It feels like an ad.

**Justin:** It feels like an ad.

**Sydnee:** It's called a Face Plant. It's good.

**Justin:** Okay, well, now that we've got that—

**Sydnee:** This is not an ad for that, though!

**Justin:** It's not an ad for beer or Topo Chico. They didn't pay.

**Sydnee:** And can I just say? We *just* opened these. Like, just this second.

**Justin:** Just this second. Yeah.

**Sydnee:** We are never— we're never intoxicated doing *Sawbones*. [holding back laughter] And you have occasionally been accused of being so, but you never have.

**Justin:** I never have been, though. Yeah.

**Sydnee:** Like, you aren't, and so I don't know what that says about you that you just seem that way.

**Justin:** But after the kids are asleep, that is time to open a Topo Chico. So, the kids are asleep, so I must open the Topo Chico.

**Sydnee:** So, I will— I will manage a few sips and then finish when the episode is over, but we do not do these intoxicated.

**Justin:** Yeah.

**Sydnee:** I just— I wanted to put that out there.

**Justin:** Once the episode is over, Sydnee will, as she does every weeknight, punch me in the face and say, "Chug-a-lug, stupid."

**Sydnee:** [laughing]

**Justin:** [through wheezing laughter] And then upend her beer into her waiting gullet as she opens another one.

**Sydnee:** I won't— I won't do that. It's just been— it's been a long couple of weeks, y'all.

**Justin:** Yeah, y'all.

**Sydnee:** Uh, obviously, we're— we're short on our, um, childcare situation.

**Justin:** Yes.

**Sydnee:** Which is why we are recording late at night—

**Justin:** Yep.

**Sydnee:** ... when the kids are asleep. And, um, you're about to leave town.

**Justin:** That's true. Heading on over to Salt Lake City and Portland.

**Sydnee:** And that's stressing *me* out.

**Justin:** Those shows are over, so I can't promote them anymore.

**Sydnee:** No, by the time you hear this, that will be over. Anyway, that's also why we are recording early, but I want to tell you about a different cocktail, Justin.

**Justin:** Oh!

**Sydnee:** Not and— well, I was going to say, "Not an alcohol one." But it is an alcohol one, but we'll get into that.

**Justin:** Okay.

**Sydnee:** This, uh, suggestion came from a listener named Carmen. Thank you, Carmen, because I had never heard of the Brompton Cocktail.

**Justin:** The Brompton Cocktail was a new one on me too, Syd.

**Sydnee:** Mm-hmm. I didn't know what it was. In the email, it was, uh, look into this. I had *no* idea what it was, so I looked into it, and, um, I think it's an interesting— it's, like, a little teeny— this is— this episode is, like, a *tidbit* of medical history. Just a little tiny—

**Justin:** Love the tid. I love the tidbits. You all have tidbits in your area when you're waiting to get into Taste of Asia, and they have a big sack of tidbits? Maybe at the Pizza Hut.

**Sydnee:** Mm-hmm.

**Justin:** Big sack of tidbits that are, like, flyers that are two-page brochures basically, which are just full of trivia.

**Sydnee:** And jokes.

**Justin:** And jokes and local ads.

**Sydnee:** Mm-hmm.

**Justin:** Tidbits.

**Sydnee:** Sometimes, like, a word search.

**Justin:** Sometimes, if you're lucky.

**Sydnee:** No, this is— I meant small. Like an amuse-bouche of medical history.

**Justin:** Oh, mm.

**Sydnee:** But I think it illustrates a kind of, um— a cool— it's like a bigger idea, that it's illustrating than, like, the *change* of medicine over time.

**Justin:** Okay.

**Sydnee:** In this little amuse bouche so, the history— I'm gonna tell you— I know right now you're like, "Well, tell me what the frigging cocktail is." I'm going to tell you what it is. I promise you that's part of this. But it's really tied to our understanding of cancer, specifically, but more broadly, the idea of, like, terminal illness.

**Justin:** Hmm.

**Sydnee:** The idea, um— I mean, you have to think about, like, initially, it probably felt like most things we didn't know how to cure, right? Like, most of the time, people got sick, you just sort of hoped for the best. Because there's a lot we didn't know.

**Justin:** Right.

**Sydnee:** Right? And I mean, if you look at, like, um, the rate of scientific advancement, especially, like, as we go from the late 1800s into the early 1900s, and we understand the germ theory of disease. And then, we enter the antibiotic era. There must have been a sense that for everything, the cures are just waiting to be found. Right?

**Justin:** Mm-hmm.

**Sydnee:** Like, as we learned all this stuff and our knowledge base accumulated, you know, quickly. Even things like cancer, we must have had this sort of sense for a while, like, "Well, we'll figure out the cure to that too."

**Justin:** Yeah. No problem. Why not?

**Sydnee:** We can cure anything— like, with science— with modern science, we can cure anything.

**Justin:** Then nothing can withstand us. Yeah.

**Sydnee:** Exactly. And we had some ideas with things like radiation and surgery that had been around for a while, even before chemo. Um, however, even as we sort of were coming up with all these other great ideas to, like, cure infections and things that we had never been able to do before, um, we— we were also developing this simultaneous understanding that maybe some things we can't fix yet.

**Justin:** Mm. Yet.

**Sydnee:** Maybe some things, as far as we know, we can't fix. And there was a recognition that with some of these diagnoses, some of these things that were terminal, and, like, cancer is closely tied to this specific substance, this Brompton cocktail.

But, I mean, the same would have been true for things like Tuberculosis for a lot of history. You watched people progress in their disease. You knew you couldn't stop it. You knew that that would come with pain and depression and some degree of suffering and so, the idea that, "You know what? Maybe there's also another thing we need to work on, which is how do we take care of those people we can't make better?"

That— and I know that sounds like a really obvious idea now, but at this point in history, it would have been pretty revolutionary to suggest that.

**Justin:** Palliative care, we call it.

**Sydnee:** Exactly. So, the precursor to this, and this is before the concept of palliative care had been introduced, is a Doctor Herbert Snow. So, he is a surgeon and a cancer researcher in the late 1800s and early 1900s. He worked at the Cancer Hospital in Brompton, London. It would later be called the Royal Marsden Hospital. But, anyway, I should note about Dr. Snow that while he is key to the story of the Brompton cocktail and there were some good things that came from that, he was, um, anti-vaccine.

**Justin:** [disappointed] Oh.

**Sydnee:** He did not believe in the germ theory of disease, which is too bad because the germ theory of disease will believe in you, whether— [softly chuckles] whether you believe in it or not.

**Justin:** You know nothing, Herb Snow.

**Sydnee:** Uh, but let's not dwell on those things. [chuckles]

**Justin:** Okay.

**Sydnee:** He was also an anti-vivisectionist, which, I guess, was a big movement that just said, "We don't need to cut anything open to understand it better."

**Justin:** I don't agree with that.

**Sydnee:** Which, unfortunately, we do need— we did—

**Justin:** We do. We gotta.

**Sydnee:** We did have to.

**Justin:** Maybe not anymore. There's probably good enough videos, but—  
[snickers]

**Sydnee:** Mm.

**Justin:** No, still? Okay.

**Sydnee:** Well, I mean, I'm not suggesting that, like— I mean, we understand a lot about anatomy now. [chuckles softly]

**Justin:** Yeah.

**Sydnee:** We got a lot of it figured out.

**Justin:** Yeah, it's just weird to me. Okay, listen, I'm a layman.

**Sydnee:** Or, like, surgeries still have to have things cut up.

**Justin:** I'm a layman, and this is a bit of a heavy episode, so grant me 30 seconds.

**Sydnee:** Okay.

**Justin:** Y'all don't need to cut people up anymore. You get it, right?

**Sydnee:** Nah.

**Justin:** You're like the last generation, I feel like, that where a full autopsy was, like, part of your medical training, like, de rigueur, right? Like, there's— there's more modern ways of doing it now. And, you guys, you really don't need to cut people— dead people up anymore just for yucks.



**Sydnee:** That's— well, okay. Well, first of all, it was never done for yucks.

**Justin:** Not for yucks, but I'm just—

**Sydnee:** That dishonors the people that donate their bodies to medical science.

**Justin:** I would never. I'm just saying, "I feel like we should have enough videos at this point."

**Sydnee:** No. It, um— as far as I know, in many med schools— I know in our med school and many med schools, um, cadaver lab and anatomical dissection is still very much a part of medical curriculum.

**Justin:** Oh. Okay.

**Sydnee:** They did try to move away from it for a while, but I believe it's back. Anyway, I know it was in our med school.

**Justin:** I get it. I'll take your word for it that you need to do it. Just seems a little morbid. I don't know.

**Sydnee:** So, uh, Dr. Snow, not— let's not dwell on his vaccine feelings. He also observed that many of the cancer patients for whom he was providing care and on whom he was researching, he noted that they were suffering. And he came up with something to help *ease* that suffering. Um, he published an article in The British Medical Journal in 1896 about cancer and its causes and the progression. Now, he didn't get everything entirely right, I should say.

**Justin:** Mm.

**Sydnee:** He felt that the root cause of cancer was neurosis.

**Justin:** Oh, like you're too nervous?

**Sydnee:** Sort— I mean, neurosis was like a bigger concept, but, I mean, it was certainly tied to probably, like, a manifestation of anxiety.

**Justin:** Yeah.

**Sydnee:** And, like, when you think about, like, that sort of, like— what we think of, like, terminal restlessness now, the pain and, like, the emotional repercussions of that he was observing, like, you can see where that would all get tied together. And especially if you can give somebody a medicine that would ease some of those outward signs of suffering—

**Justin:** Mm-hmm.

**Sydnee:** ... you may believe you're actually doing something to fix it, right?

**Justin:** `Cause they seem less distressed.

**Sydnee:** So, maybe you've made them better. We understand better— I mean, like, we understand now that just, like, providing analgesia doesn't necessarily fix a problem.

**Justin:** I gotcha, but—

**Sydnee:** But at the time, you wouldn't have necessarily known that.

**Justin:** It gave you— it had the exterior appearance of solving the problem.

**Sydnee:** So, we gave people a mixture of morphine and cocaine.

**Justin:** Oh, yeah!

**Sydnee:** And [chuckles softly] what he found is people seemed a lot—

**Justin:** Yeah, I know we said there's no such thing as a cure-all over here, but I bet that gets you halfway, at least, for most stuff.

**Sydnee:** [laughs softly] So, what he found is that people felt a lot better when you gave them morphine and cocaine.

**Justin:** Yes, as many Kid Rock songs will attest.

**Sydnee:** The morphine, of course, was known to do pain, and the cocaine was thought to provide vitality. [pause] You can see why.

**Justin:** Yeah.

**Sydnee:** Yeah.

**Justin:** [through laughter] Love them vigor. [laughs loudly]

**Sydnee:** Now, again, the idea of doing that at the time was pretty— even though that doesn't sound revolutionary. Like, so somebody was hurting, and you treated their pain. [laughs softly] Of course. Well, this would have been a bigger deal at the time. Now, the addition of cocaine *would* cause a problem. It's not the problem you think, though. [chuckles softly]

**Justin:** Really?

**Sydnee:** The problem that it caused for Dr. Snow at his hospital was cost. Cocaine was expensive.

**Justin:** Yeah, it's been my problem with it too.

**Sydnee:** And the hospital was not willing to continue to supply Herbert Snow's patients with cocaine.

**Justin:** Yeah, I understand. Especially if they weren't valuing or prioritizing pain management.

**Sydnee:** So, his cocktail— his concoction— his mixture fell out of favor within, like, a year of him introducing it, simply because the hospital just could not afford to continue to buy cocaine for the patients. Um, but once that idea— once an idea like that gets out, you know it's going to catch on.

**Justin:** [bursts out laughing]

**Sydnee:** So, throughout the early part of the 1900s, you start to see other physicians writing in articles and in their medical records about employing a similar substance for their patients. And they begin calling it "The Brompton

Cocktail." Now, it— this was widely adopted at Brompton Hospital, which was near the cancer hospital, near the Royal Marsden.

So, the Brompton name could have come from the hospital specifically or just generally from the fact they were in Brompton, either way. So, they start calling this mixture the Brompton Cocktail. And at the Brompton Hospital, surgeons begin using it, um, for patients who were recovering from a thoracotomy from having, like, a surgery where their chest was opened. That would be a very painful recovery process.

**Justin:** I can imagine. Yeah.

**Sydnee:** And so, having a mixture of morphine and cocaine probably would be very helpful in that recovery. And they improved upon it by mixing them in a base of gin and honey.

**Justin:** Oh!

**Sydnee:** So—

**Justin:** Now it's even more of a cocktail.

**Sydnee:** Now it's a cocktail.

**Justin:** Now it's a cocktail.

**Sydnee:** Now it's a cocktail! That made it tastier and I— more fun?

**Justin:** Probably.

**Sydnee:** Okay. Um, over at King's College Hospital at St. Luke's, they began using at the hospital— at different hospital— er, they began using the cocktail at different hospitals throughout London. Um, and the name remained the Brompton Cocktail even though, like, the ingredients would change depending on the physician, the hospital, the—

**Justin:** It's more about the spirit of the thing.

**Sydnee:** It's the same concept. And I will say, for the most part, morphine and cocaine were pretty, like, standard in every mixture. Um, the other ingredients would vary. Like, any alcohol would do after a while. You know, it didn't have to be gin.

**Justin:** [quietly] Whose sweating that?

**Sydnee:** In 1952, The Brompton Hospital actually added, like, a *recipe* for the, like, codified Brompton Cocktail to the National Formulary. And at that point, the recipe was: a quarter grain of morphine, a sixth grain of cocaine, 90% alcohol, and you need 30 minims of that. I'm not sure—

**Justin:** Thirty?

**Sydnee:** Yeah.

**Justin:** I'm sorry. I'm taking notes here.

**Sydnee:** 60 minims of syrup. So, some sort of simple syrup, probably. Sugar— a sugar base, right? For the alcohol. And then chloroform water was actually added in there.

**Justin:** Woah!

**Sydnee:** A half an ounce. Yeah. So—

**Justin:** And you'd drink this? Or you—

**Sydnee:** Mm-hmm. Yeah. You would take this orally. Um, there were other formulations that would be made with some of the substances that would be injectable. But oral formulations were most common.

**Justin:** Okay.

**Sydnee:** And, like I said, as the recipe spread from London and outside the UK, sometimes they traded out certain ingredients. Like, for instance, morphine was occasionally traded for something called diamorphine. This is also an opioid. Obviously, it's a— it's a synthetic form, like, chemical

alteration of mor— of the compound morphine, right? It's faster. You can use less for the same effect, so it's—

**Justin:** It's super morphine.

**Sydnee:** Yeah. You may know it by a different name.

**Justin:** Oh?

**Sydnee:** Heroin.

**Justin:** Ah! [chuckles] Okay. Got it.

**Sydnee:** Yes.

**Justin:** All right.

**Sydnee:** So, at this point, like—

**Justin:** Now you know the rest of the drugs.

**Sydnee:** [laughs softly] Yes. Diamorphine is also— I mean, like, it's a— it's a— heroin is a crude form of diamorphine. Depending on— Heroin is a colloquial term. It's not a me— you know? Like, it's not a medicine. So, it is— it can be applied to multiple substances that might have slightly different chemical formulations.

**Justin:** Yeah. I got you.

**Sydnee:** Crudely speaking, diamorphine was heroin at the time.

**Justin:** Okay.

**Sydnee:** Um, and in addition to trading diamorphine in for morphine, which obviously would make it much stronger and faster acting, some physicians would add things like Thorazine, which was, like, an early anti-psychotic that would be sedating. It also had, like, a lot of side effects. And then sometimes things like promethazine, Phenergan.

**Justin:** Hmm.

**Sydnee:** An antihistamine we use for nausea nowadays. For nausea and sedation and things like that. And this Brompton Cocktail, in one of these formulations with these various substances, became, like, not just a mainstay of taking care of people with pain or recovering from surgery, or whatever in hospitals, but, like, almost took on, like, a mythical kind of quality.

**Justin:** How so?

**Sydnee:** Like, um, it was this magic mixture of substances that was thought to provide *so* much relief that it *must* be doing something beyond— like the sum— it was synergistic. The sum of its parts was greater.

**Justin:** It must not just be getting you drunk and high very quickly.  
[chuckles]

**Sydnee:** It did. There was a lot written and talked about how— somehow by— it's not *just* the morphine and the cocaine. They do something when they're mixed together that we can't understand.

**Justin:** [giggling]

**Sydnee:** Um, that is beyond what you would expect the properties of these individual medicines to be. And so, that is how the Brompton Cocktail became this kind of like— it was an idea as much as it was an actual thing.

**Justin:** Okay.

**Sydnee:** The idea of giving someone who is in great suffering this elixir. And the words I'm using are very specific, 'cause that's how it was referred to these elixirs, concoctions, potions. It sounds kind of magical.

**Justin:** Mm-hmm.

**Sydnee:** It wasn't.

**Justin:** A bit of magical thinking, though.

**Sydnee:** And this would call to the eras of medicine before, where, like, that wouldn't have been uncommon. I mean, if you think about tinctures and poultices and all the different things that people used, a ton of different ingredients would go into those things a lot of times. It would be, like, a mithridate kind of thing. Something— the antidote to all poisons. Um, but of course, that would change. [chuckles softly]

**Justin:** Yes. Sadly.

**Sydnee:** But before I tell you about that.

**Justin:** Oh. Before you rain on the proverbial parade.

**Sydnee:** Yeah. Before I become Buzz Killington.

**Justin:** [laughing]

**Sydnee:** [chuckles softly] Let's go to the billing department.

**Justin:** [holding back laughter] Let's go.

[theme music plays]

[ad break]

**Justin:** All right, Syd. Old "Doctor No Fun" is back on duty.

**Sydnee:** So, uh, there is a doctor who I think would probably be comfortable with me saying he is the Doctor No Fun of this episode. Although, what we're really talking about is a shift in our understanding that, like, taking care of people even if your goal isn't adding more years to their life, if your goal is adding quality to the time they have, is just as valuable of a discipline.



Um, and that— that idea came about with the introduction of palliative care as its own separate discipline in the 1960s and 70s. The originator of what we think of as the modern hospice movement was Dr. Cicely Saunders, who was a physician, and nurse, and social worker who, um, established, like, the first hospital, St. Christophers Hospital, where palliative care was really developed as, like, a distinct science, as something you could practice.

**Justin:** `Cause I was gonna say, like, I've heard a lot of the history of medicine. Palliative care is, like, the one form of care that we probably did have, like, that was effective and— well, I mean, how much of it— what we were doing was palliative? You know? Like, because we had so few cures to anything.

**Sydnee:** You are absolutely right. I think that the change isn't so much in, like, giving somebody something to feel better even if it doesn't make them better, it's the understanding— the very clear understanding that that's what you're doing. This will not necessarily make you better. It will just make you feel better. And then, also, approaching that in a scientific way.

`Cause, you can see where there would be, like, sort of this allure of just giving somebody something that would make them really drunk, or really high, or just knock `em out, right?

**Justin:** Right.

**Sydnee:** Like, all of those would achieve that end, but in a very unscientific and ultimately not focusing on quality of life. If you just make somebody sleep all the time, you haven't given them quality of life.

**Justin:** Right.

**Sydnee:** So, like, alleviating pain but also giving them the opportunity to engage with their family and stuff.

**Justin:** Sure.

**Sydnee:** That's— those are higher goals, and you needed a scientific discipline like palliative care to achieve them. Um, so, in the early days of

palliative medicine, they were still using the Brompton Cocktail, and it seemed to fit, um— Cicely Saunders introduced the idea of total pain. And the concept is basically what seems, again, common sense to us, but nobody had really described, which is, like, it's pain that's more than physical.

If you're thinking about, like, a terminal diagnosis or an end-of-life pain; it's mental, it's emotional, it's social, it's psychological. It's multiple levels, right? And so, in that setting, the Brompton Cocktail made a lot of sense to people because it's got a bunch of different stuff in it. So, it's doing a bunch of different things. And, again, there was this sort of idea, like, "You're treating all these different feelings you might be having as well as the physical pain. And then, also, it's doing something."

**Justin:** Something.

**Sydnee:** "That we don't even understand." [chuckles softly] And they started studying that in different places. There was, like, a Montreal-based palliative hospital where they tested, like, the use of the Brompton Cocktail in a palliative care setting, and found that it was, like, 90% effective.

**Justin:** Hmm.

**Sydnee:** So, you know, it seemed— it was working. That was the thought. Like, well, we don't love this as scientists because it's not standardized.

**Justin:** But.

**Sydnee:** The amounts can vary. The substances can vary. This whole sort of mystical synergy that people are [chuckles softly] imbuing it with—

**Justin:** Yeah.

**Sydnee:** ... doesn't make sense to us, but at the same time, if it works... you know?

**Justin:** Yeah. It worked. Yeah.

**Sydnee:** Keep using it.

**Justin:** Yeah.

**Sydnee:** Well, there was one researcher who wasn't willing to settle for that.

**Justin:** Okay. Does it— is this Dr. No Fun?

**Sydnee:** [through soft laughter] This is... [normally] I mean, I hate to call him Dr. No Fun, but I guess in this context, Dr. Robert Twycross. Um, and he was a researcher who had, uh— early in his career had sought to work with Dr. Saunders. That was his goal. Greatly admired her work. Wanted to be part of the palliative care and hospice movement and research, and this was the field he had endeavored to enter. Even, like, created a medical society for her to come speak at, just for the opportunity to, like, meet her, and get in her little black book as a— as, like, "This is a doctor I could work with someday."

**Justin:** Mm-hmm.

**Sydnee:** Like, just to make that connection. So, he went to work with her, and he was— he was unsure of the necessity of the Brompton Cocktail. Of, like, "Are all these components really necessary?" Um, he was *really* concerned with how variable the cocktail could be, and then also the shelf stability of it. It was not— with the stuff that was in it and the way it was put together; it was not particularly shelf stable.

**Justin:** Really?

**Sydnee:** And so, you're talking about something that, like, you're going to mix up, and then it's going to sit in a pharmacy. And who knows what's there by the time you're giving it to people?

**Justin:** Hmm.

**Sydnee:** And that really concerned him too. Just as somebody who was trying to come at this from a very, like, "I will give you this medicine, and I can predict the effect."

**Justin:** Okay.

**Sydnee:** You couldn't do that in this case, right? And you certainly couldn't predict, like, based on weight, and size, and gender, and age, and all the other things that influence our metabolism of medications. So, he went about to sort of, like, pick apart the Brompton Cocktail.

**Justin:** Okay.

**Sydnee:** To try to figure out, like, what's necessary? What doses actually work? What is happening with this sort of mystical thing?

**Justin:** What parts of this are just getting people stoned?

**Sydnee:** So, throughout the 70s, he's doing this research. The first thing he was studying was the diamorphine because, at this point, we were beginning to be concerned about diamorphine. Um—

**Justin:** We think it might be heroin, so we should start over. [chuckles softly]

**Sydnee:** It was heroin, and there was concern— well, first of all, like, it was much stronger. It was very fast acting. You can see potential for harm there if not dosed correctly.

**Justin:** Tch. Yeah, of course.

**Sydnee:** The other thing that concerned people was just the amount of euphoria that was associated with it too.

**Justin:** Hmm.

**Sydnee:** It did.

**Justin:** Too happy. Too happy.

**Sydnee:** It had— it made you feel better, [softly chuckles] and it had fewer side effects was the thought process. Um... so, the first thing he did is he compared concoctions that used diamorphine with ones that used morphine.

**Justin:** Okay.

**Sydnee:** And what he found is that the morphine was fine. There was really no advantage to using the diamorphine, and there were some risks to it. So, he recommended, like, "Just stick with the morphine. We don't need to mess around with that other stuff." Um, in certain settings where somebody's tolerance was incredibly high for some reason or if they needed massive amounts and you needed it to act really quickly, there was a place for diamorphine, especially as an injectable. And we see medicines like that today, right?

**Justin:** Mm-hmm.

**Sydnee:** Like, all the— although it's the subject of media scrutiny for another reason, fentanyl is used in hospitals *because* it is so strong and fast acting. If you come in as, like, a trauma, if you've got a broken femur, something like fentanyl is exactly what you need in that situation to provide quick, reliable, predictable pain relief to somebody who is in excruciating pain.

**Justin:** Okay.

**Sydnee:** So— but he found that morphine for most patients is going to be fine. So, that was the first kind of thing, "Let's get rid of the diamorphine and switch to morphine." Okay. Then he started doing these cross-over studies where he compared, like, "Okay, you're getting the morphine and cocaine. And now, we switched you to just morphine. And did we notice any difference?" And comparing groups and doing that.

And what he found, and this was a huge breakthrough, is that for the first, like, two weeks, you do notice there was a significant difference in alertness with the cocaine.

**Justin:** Okay.

**Sydnee:** But after two weeks, there is zero difference between patients that were receiving morphine and cocaine and patients who were just receiving morphine.

**Justin:** Weird. So, they, like, acclimated to the psychological effects of the cocaine?

**Sydnee:** Mm-hmm. And so, you were getting nothing from the cocaine at that point.

**Justin:** Except addicted to cocaine, I would imagine.

**Sydnee:** Yeah. And then, I mean, I guess the cost was still an issue, I would say. So— but at that point, what he said was, “I don’t think we need the cocaine. The morphine is what is doing the trick. We just need the morphine. And if we focus on— the fewer components in this thing, the more we can, like, standardize how we’re giving it to people. And we can also adjust the dose more easily.”

I mean, if you think about it, like, if you have something that has a set amount of morphine and cocaine in it, and you’re giving it to—

**Justin:** You got to do the math on the ratios.

**Sydnee:** Exactly.

**Justin:** Yeah.

**Sydnee:** And, like, you can’t just give people twice as much morphine without also giving them twice as much cocaine, and you know, all that. So—

**Justin:** If you ever tried to double a cupcake recipe, you know what’s happening here. [soft chuckle]

**Sydnee:** Exactly. So, they switched to just morphine at St. Christophers in a solution of chloroform water still. Um, and then they added something for nausea as well, and they just ditched the cocaine.

**Justin:** Mm-hmm.

**Sydnee:** So, that was the first big breakthrough, which I imagine was, like, a pain in the butt for all the doctors in the hospital. It'd be, like, "Everybody, stop the thing you're writing."

**Justin:** Ah.

**Sydnee:** Like, you probably had it, like, all written out, and you just—

**Justin:** And you had a big vat of it.

**Sydnee:** [soft chuckle] Uh, so, and then the researchers back in Canada decided, like, "Well, we see what y'all are doing there. We're gonna up the ante. We're going to take it even a step further." So, they did a study where they said, "Okay, part of you get this Brompton Cocktail, and some of you just get straight up morphine in flavored water."

**Justin:** Oh.

**Sydnee:** Forget the cocaine. Forget the chloroform. Forget the alcohol. Forget the nausea medicine. Forget it all.

**Justin:** Just morphine.

**Sydnee:** Just morphine, in some flavored water for palatability, so it didn't taste bitter. And what they found is, there was no difference.

**Justin:** Ah.

**Sydnee:** It was the morphine all along.

**Justin:** Okay.

**Sydnee:** It was the morphine doing the trick.

**Justin:** Yeah.

**Sydnee:** Yeah. It would take a while for everybody to catch on. I always think that's really interesting. So, like, they did all these studies, and really by the end of the 70s, it was known, to the people that studied such things, that you really just need to give people the morphine.

And, yes, of course, this palliative care is advanced. There are a variety of other medicines we give for *other* symptoms, right? Like, I'm not saying we don't treat anxiety or nausea or those other things, but when it came to this *pain*, the morphine is what you really needed.

Um, and the advantage of knowing that is, then you can dose it appropriately, and you can adjust it appropriately. And you can address each patient's symptoms and experience a lot more individually 'cause you predict— you know what response you're going to get to the medicine, and you limit harm that way too. But it would take a while for everybody to catch on. The Brompton Cocktail survived well into the 80s and 90s.

**Justin:** That late?

**Sydnee:** Yes.

**Justin:** Wow.

**Sydnee:** Where people were still getting it. Um, I would imagine there may be somebody listening to this podcast who knows, like, "Oh, I remember it had like a—" You know? Either they remember or their parent or grandparent, like, remembers that this happened. Like, maybe somewhat familiar with the concept of the Brompton Cocktail because it was so widespread and imbued with so much importance for a long time.

And I don't know, you know, how much longer it may have stuck around in other places. If you think about, like, in West Virginia, Goody Powder is still something patients ask me for.



**Justin:** Hmm. And that is?

**Sydnee:** It's a mixture of acetaminophen/Tylenol, aspirin, and caffeine.

**Justin:** Oh.

**Sydnee:** And in most places, you just don't use that much. It's just an old thing.

**Justin:** Yeah. People just get used to something and—

**Sydnee:** But, I mean, there are still people who will say, like, "Well, I just prefer Goody powder."

**Justin:** [snickers]

**Sydnee:** And I don't have any evidence that specific combination would be better than any other at a headache, but there are definitely people who— who still use it. So, you, like, see that. You'll see these sort of— what we think of as, like, patent medicines, although this would have been much different prescription level. Um, we see those things hang around. I can think of a couple of other examples around here today. I don't want to put too many people on blast but—

**Justin:** A-oh!

**Sydnee:** Um, it's interesting to me because— well, this is just the story of the Brompton Cocktail, which, as far as I know, is not being used anywhere today. And palliative care is a science. It is approached in a scientific fashion. There is a way to take care of people and give them the best quality of life. And that's studied; it's not just about pain control. It's about overall quality.

**Justin:** Life quality.

**Sydnee:** Yes. And making the best of whatever time you have. Um, and so, it's much bigger than pain control now. But it's interesting because this is— this was one example of, sort of, getting rid of some of those kind of *magical*

elements that still linger— and still to this day kind of linger around different parts of medicine.

**Justin:** Mm-hmm.

**Sydnee:** From our roots of something that wasn't a standardized scientific practice. Something that was very much, like, "Did that seem to work? Okay, it did. Oh, let's just do it again." Without much thought as to the why and the how, and the "could we reproduce it?" And the scientific method of it all.

Um, and so, you know, the problem was obvious: it was not standardized, different ingredients, different amounts, not shelf stable, all of that stuff, no clear evidence of how it worked, no clear evidence of synergy. All that kind of stuff, but it took us a really long time to let go of it because of the importance we, sort of, hung on that concept.

**Justin:** And it feels right. Yeah. You use something long enough, and it just feels— feels right deep down. Like, Sydnee and I have just discovered a while back that beer doesn't actually go bad when you let it get warm and then cool it off again.

**Sydnee:** Yeah, it doesn't skunk.

**Justin:** And it just *feels* wrong. It doesn't feel right. [through laughter] It feels incorrect, but that is— that is the case.

**Sydnee:** It's very true, and that's, you know, the— even when they did the first study, to— the one I referenced in Montreal, to compare just morphine with the Brompton Cocktail, they referenced the morphine as morphine elixir.

**Justin:** Morphine elixir? Why?

**Sydnee:** I— [pause] because it sounds... I don't know. [holding back laugh] I don't know. Why do you need to call it that?

**Justin:** [laughing]

**Sydnee:** It's just, I mean— but I think that's why! I think because we have these, sort of, um, emotional connections to these sorts of things, and they're hard to let go of. I mean, I very— only people in medicine are really going to understand what I'm saying with this, but, like, I still feel this way about steroid tapers. [laughs softly]

**Justin:** Oh, yeah.

**Sydnee:** Medicine is really shifted where we don't give people long tapers of steroids for certain conditions nearly as often as we used to, and that's only been within my years of practice. And it is still, like— it is hard for me [through laugh] emotionally to let go of these long steroid tapers, even though I know the evidence shows I shouldn't do them. Um, I always worry. I become— I become anxious about it. Um, so...

**Justin:** There you have it. Well, at least the Brompton Cocktail is a cool name.

**Sydnee:** It is. It's a great name.

**Justin:** Great name.

**Sydnee:** Yeah.

**Justin:** Thank you so much for listening to our podcast. Thanks to The Taxpayers for the use of their song. "Medicines" is the intro and outro of our program. Thanks to you for listening; we really appreciate it. Thanks, Max Fun, for having us on their network, and what have you.

[outro plays]

**Justin:** That is gonna do it for us this week. So, 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!

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