Sawbones 371: Black Lung Disease

Published June 15th, 2021

Listen here on themcelroy.family

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

[theme music plays]

Justin: 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: Uh, how's it goin', Syd?

Sydnee: Justin, this episode this week is near and dear to my heart.

Justin: Yes.

Sydnee: And yours, perhaps. I don't know. Maybe. I think so.

Justin: As West Virginians, I think this is something that we grew up hearing about, but maybe could learn a little bit more about.

Sydnee: Yeah. I think—sometimes I take for granted, as a recipient of a Golden Horseshoe... I really didn't get a Golden Horseshoe.

Justin: Here she goes.

Sydnee: No, I didn't.

Justin: Here she goes.

Sydnee: I only made it to the state level, and then I didn't—so in West Virginia, we obviously take West Virginia history. You probably took a history of your state where you live, probably. I would think.

Justin: Yeah. It probably wasn't as interesting as ours, but that's fine.

Sydnee: [laughs] First settler of West Virginia that they tell you about is Morgan Morgan. [laughs quietly]

Justin: [laughs quietly]

Sydnee: Always remembered that!

Justin: Classic.

Sydnee: Not much else. Um, no. I—I did not. If you—if you take the test in West Virginia History and make it to the top, be the best in West Virginia History in the state, then you get a Golden Horseshoe. I don't know—I'm assuming it's like a physical Golden Horseshoe, right?

Justin: Yeah, each student kneels, and with a tap of the sword on the shoulder is dubbed either a knight or a lady of the Golden Horseshoe Society.

Sydnee: How did I not—man, I wish I had done that! Although I would've demanded that I wanna be a knight.

Justin: Of course, of course.

Sydnee: I am no lady. Um, but no, I didn't make it that far. I did do well, but not that well. Um, anyway, because of that, sometimes I take for granted that there are aspects of our history, and in this case related to our medical history that everybody just knows.

Justin: Yes.

Sydnee: Um, but that's not necessarily true. And so I thought it would be interesting to talk about something that I take for granted, because it's pretty—that it's very common, but that's black lung disease.

Black lung disease, the name for it is technically coal workers' pneumoconiosis, but I think most people are familiar with black lung.

Um, the history of the disease itself is deeply entwined with the history of not just coal mining and West Virginia and, I mean, Appalachia as well, this is not obviously just a West Virginia entity, but that is the history I know best—but also with the history of labor unions, and workers' rights.

All of that is tied very tightly to our understanding of black lung disease, what causes it, and the continued effort to, you know, diagnose it. [laughs quietly] And treat it, or perhaps, dare I say prevent it effectively.

Justin: Hey, why not?

Sydnee: Uh, so first of all, it—I don't know how much—if you haven't been exposed to this since birth [laughs quietly] how much everyone is familiar with sort of the history of coal mining and unionization. I think everybody's probably somewhat familiar with it.

It's something that we talk about so much in school that, like, you don't hear the Matewan and not know exactly what somebody's referencing, right?

Justin: Yes. Yeah.

Sydnee: But I wanted to just briefly kind of cover that piece of the history, 'cause it does—it is relevant. It does tie in to where we go with black lung.

So first of all, as you may already know, the coal companies came in to the Appalachian region, you know, West Virginia, Kentucky, Virginia, Ohio, all different parts of this area that have coal. [laughs quietly] And, um, basically plundered all of our natural resources.

Justin: Hey, still very rude, by the way.

Sydnee: [laughs] Destroyed our mountains, polluted our air and our water. Generations suffer—

Justin: It's not nice!

Sydnee: —from a wide variety of environmentally related diseases as a result of this industry.

Justin: Yes.

Sydnee: This is—this is not news, I think. And mining happens all over the world, obviously, and if you live anywhere where this specific type of mining, you know these specific issues, and any mining causes damage to the environment and to the people who live in that environment.

Um, however, they also employed, like, everybody for a while. Not so much now, but for a long time, that's very—

Justin: If you were here, that's where you were working.

Sydnee: Yeah. If you wanted to feed your family, this was your option. And, you know, coal companies usually owned and run from out of state.

Justin: Right.

Sydnee: Um, but the laborers were people in state. Had little concern for the safety of miners. Um, especially when we're talking about, like, the early days of mining. Like, the early days of industrialization. The idea that the people who were doing the hard labor had value was not necessarily... intrinsic? [laughs quietly]

Justin: Mm-hmm.

Sydnee: Um, it is still something, maybe, we struggle with as an American society, the idea that people who do hard work, you know, deserve to be safe, and cared for, and compensated.

Um, but they basically held their employees hostage, in a sense, by paying them in scrip. So, this was money issued by the coal company that could only be used in businesses run and owned by the coal company.

Um, so in the little mining town, if you were an employee of the mining industry, you would probably live in a house that was built by the mining industry, you would shop at a company store that was built and owned and run and operated by the mining industry.

Um, the church in your town was probably built by the coal company. The park, if you had one, was built by the coal company. The whole ecosystem was—

Justin: Completely beholden.

Sydnee: Yes, to the coal company. And because of that, living and working conditions were subject to whatever the, you know—[hesitantly] the big business cats... [laughs quietly]

Justin: Whoa!

Sydnee: [laughs]

Justin: Careful, there!

Sydnee: [laughs] Thought were—

Justin: Lenny Bruce, really goin' after 'em!

Sydnee: [laughs] Thought was acceptable.

Justin: Che Guevara! Those business cats and their big... boardrooms, of business.

Sydnee: [laughs]

Justin: Sheesh.

Sydnee: It's a—I—I try not to get too emotional about this issue, because the history of West Virginia is that we live in a state where most of our land is owned by people who don't live in our state.

Justin: Mm-hmm.

Sydnee: Which is—that statement still makes me so angry.

Justin: It's wild, yeah. People just milked all the money outta here, and then left.

Sydnee: I'm not saying we're perfect, guys. 'Cause I know there are a lot of you out there right now saying, like, "Yeah, but Joe Manchin."

And, like, no.

Justin: Yeah, we get it.

Sydnee: We get it. [laughs]

Justin: We get it. But you have to understand the roots of the thing. This is a people who have never expected any better, and this is why. Like, this is why.

Sydnee: And we talked about this sort of idea, what I'm trying to—the picture I'm trying to paint. We talked about this same concept with the Great Fog of London.

Justin: Mm-hmm.

Sydnee: The idea that, um, when we talked about the similar event that happened in the United States, that the idea of an industry sort of both abusing but also employing an entire town creates this weird loyalty among the people who are being most abused by the industry to that industry. You know?

And it gets really—it's really hard to protect people sometimes, because this is also their only livelihood. It's the only option they have. This is the job. You do this, or you starve. And if you got a family to support, then your kids starve.

Um, but by the end of the 1800's and throughout the turn of the century, there were calls for organization, right? And this was getting louder and louder. There was the United Mine Workers of America, was already in existence. They had organized strikes in several different states.

Violence was part of this interaction pretty much from the beginning, not necessarily always on the part of the miners, but the people who were trying to suppress the strikes and stamp out the unions. Um, in West Virginia, miners in Paint Creek and Cabin Creek had already started to strike in 1912, that early.

Um, but the Baldwin-Felts detectives who were employed by the mining industry basically to sniff out any sort of union activity and stop it by any means necessary, um, would, you know, use intimidation, violence, turn your family out on the street if they—if they found any of this sort of thing going on.

Now, of course this culminated in West Virginia in—you know, when I said Matewan, the Matewan Massacre of 1920, which was basically the result of some of the miners in that area who—and Matewan is a tiny little coal town down on

the border of West Virginia and Kentucky, I believe—miners who signed up for the United Mine Workers of America were about to be evicted from their homes for signing up for the union by Baldwin-Felts agents.

But the police chief in Matewan, Sid Hatfield and the mayor of the town actually both were on their side. They were on the miners' side. They were not in cahoots with the agents of the coal company.

And so when they showed up to evict people, the police chief stepped in. The mayor stepped in. They were like, "Ehh, come on. We—you know, we're not gonna do this. No, this is not gonna fly."

And there is a disputed account of who shot first. [laughs]

Justin: Yeah.

Sydnee: Um, but the violence started, and by the end, 11 people were killed.

Justin: There's a film about this, if you're completely unfamiliar, John Sayles made, called *Matewan*. Came out in '87. Sid Hatfield was, uh... uh, David Strathairn.

Sydnee: Oh, I didn't realize that.

Justin: Who returned! Triumphantly—

Sydnee: To do another West Virginia movie.

Justin: —triumphantly returned for *We Are Marshall*.

Sydnee: That's right.

Justin: Uh, David Strathairn. Basically [unintelligible] West Virginia at this point. [laughs quietly]

Sydnee: Because of this, Hatfield was brought up on charges, which he was acquitted of. But, um, later he would be brought up on conspiracy charges again for, like, "Well, but you helped the unions. Even if you're not in trouble for this, you're in trouble for this other thing, and he was gunned down on the courthouse steps during that trial.

In response to that, an army of thousands of miners would march to the coal company in Mingo County to demand that they be recognized as a union, and on the way, in the path of their march from right outside Charleston to the coal company—that's their capitol—they to get over Blair Mountain. This is a—if you know where I'm going with this.

So, they were met atop Blair Mountain by the Logan County sheriff and his officers, and fighting broke out. And this is the Battle of Blair Mountain. This is a battle. A—

Justin: A battle that we did here. [laughs quietly]

Sydnee: Yes. Um, when the, uh—President Harding had to send US Army troops into West Virginia to back the Logan County sheriff [laughs quietly] to suppress, um, the mining—the unionization, the striking of the miners.

Um, after several days of fighting, 16 men, including 12 miners, were dead. And this really put a dent in union activity until the 30's. The UMWA really struggled to stay alive after this military action to stop the unions.

Justin: But I think if you have ever looked at West Virginia and wondered—this is not as much the case anymore. It's semi the case of Joe Manchin. If you've ever looked at West Virginia in the past and thought, "How did Democrats keep winning in such an incredibly red state?"

This is why. Like, this is...

Sydnee: This is—this is—

Justin: This is it. Right? This is—

Sydnee: This is *the* moment. Because—

Justin: You have to understand this event here, because it is, like—it goes to, like, union—like, they fought—they literally, like, died for it. So, like, yeah, it—we're a couple generations out now, and obviously some of those ties don't run as deep. But, like, that is how Democrats won here for so long.

Sydnee: Well, it's ridiculous that we come from this history to just this year in our state legislature we passed, you know, union busting legislation to stop the teachers' unions.

Justin: Yeah.

Sydnee: Because they were, you know, powerful, and using their power to do the right thing on behalf of students. And... they didn't like that.

Anyway, this is also interesting. Part of—so, the term redneck, where that term came from is often sort of disputed. The original impetus of the word is probably from farmers, who would get sunburns on their necks and would be called rednecks. It is often used to refer to these early miners who were organized, part of the UMWA, these early striking miners who would wear red handkerchiefs around their necks.

Justin: Hm.

Sydnee: And were therefore called rednecks. Interesting, you know, history of the term.

But anyway, it wouldn't be until FDR that real support for labor rights grew, and this is where you get this democratic origin story of West Virginia. All of these, uh, union-backed democratic candidates took office and won during the 30's. Um, because the Democratic Party was the party for unions. They were party for laborers, for workers' rights. That's where you went.

Justin: Right.

Sydnee: Um, and so as a result, there was more and more support for the workers. Obviously—now, I don't want to overstate too much. They were still making sure the coal companies were happy.

Justin: Sure, yeah.

Sydnee: There's a long history of that here. Like, nobody wanted to—yes, we wanted to support our miners, because they're voters, but we also don't want these industries to get too angry with us, because they employ all of us, and they also give the elected officials lots of money.

Justin: Well, that's more accurately, yes.

Sydnee: Mm-hmm. Um, and sometimes they *are* our elected officials. Like our governor, perhaps.

Justin: A coal baron.

Sydnee: Yes.

Justin: And failed businessman.

Sydnee: [laughs] So anyway, uh, it was this force that I have just sort of described. Because at this point, throughout the 30's, like, the mining union grows. And by, like, '46, it's huge. You know, the—it is a huge presence throughout all of Appalachia, throughout the mining industry, and definitely in West Virginia. Um, the unions fighting for safer conditions. To, like, you know, pay work—pay miners in money, maybe?

Justin: Yeah, why not.

Sydnee: Like actual, you know, money.

Justin: Yeah, let 'em shop other places.

Sydnee: That they have, like, living conditions that are, you know, livable, uh, and sanitary, and working conditions that are safer. I wouldn't say completely safe, but safer.

So, uh, throughout the first half of 1900's, mining during this whole time is becoming more and more mechanized, right? We're going from a time where, like, I don't know, you're going in there with... whatever.

Justin: Pick... axe. [crosstalk]

Sydnee: A pick—a pick—a pickaxe.

Justin: Pick—Pickaxe? A bucket, I'm assuming.

Sydnee: Yeah, and a shovel, and a bucket.

Justin: [simultaneously] And a shovel.

Sydnee: And you're going into drilling, and ways to get into there faster. Um, which is good in some ways, you know, for the miners themselves. I mean, for the laborious parts of the process. But it's bad for specifically coal dust, you know?

Um, even as we see some improvements in the mines in terms of explosions and cave ins, you see more and more coal dust being created. And as more and more coal dust is being kicked up by these machines, we see that more and more coal miners are developing what was initially sort of just vaguely referred to as miner's asthma.

Justin: Mm-hmm.

Sydnee: Um, and this starts to be recognized really early on in the process. It's one of those things—you know how, like, everybody pretends that we didn't know smoking was bad for us?

Justin: Right, yeah.

Sydnee: Until the surgeon general issued that report.

Justin: You used to hear that from your grandparents all the time. Like, "We didn't know it was bad for us back then!"

Sydnee: Well, my grandparents didn't tell me that. My grandpa said, "You know, we always say that, but I used to call 'em coffin nails back in the day, so, like, we knew something was up."

Justin: Yeah.

Sydnee: Um, I think it's the same thing. We knew that there was something bad about inhaling lots of coal dust for a long time, and we just sort of vaguely called it—you know, you got miner's asthma. But we didn't know how bad that was until this mechanization started to take place. This is where I want to get into black lung, and the history of that. But first, let's head to the billing department.

Justin: Let's go!

[ad break]

Sydnee: So, miners' asthma, as it was initially called was not always seen on x-rays, once we had x-rays. You couldn't always see it right away. So, people would come in with some shortness of breath, maybe it's a little harder to get up and down stairs or to do the work that they were previously doing. Um, maybe they had a cough or something. But it wasn't always obvious at first what was going on.

Now, eventually what they began to see in some miners is this condition that started with some—what looked like maybe some asthma or chronic bronchitis or emphysema, similar to maybe the picture in some of the miners who were also smokers, that kind of thing.

Um, what they did see was that in some patients, it progressed to low oxygen levels, necessitating the use of oxygen, eventually being completely debilitated, and in some patients it was fatal. Um, and when they did start to see that there was a corollary to things on x-rays, what they saw were these small round nodules, initially, and then eventually this could progress to these larger, um, what we know on autopsy were black masses in the lungs, with dead tissue in the middle, and then eventually sometimes complete fibrosis of the lungs, which is sort of like thickening scarring of the lungs.

And as you can imagine, our lungs are supposed to be bouncy and elastic. And when they are thick and scarred...

Justin: It—

Sydnee: ... they don't work very well.

Justin: Yeah. It's bad.

Sydnee: They don't get—the oxygen doesn't exchange through them very well to get into your bloodstream, and they don't allow you to inhale and exhale effectively. So, what is happening in this condition is when you inhale coal dust, it never goes away.

[pause]

Justin: Okay.

Sydnee: Your body can't clear it.

Justin: You just keep—it just stays in there.

Sydnee: It's in your lungs.

Justin: We don't have mechanisms for that.

Sydnee: Yes. So you inhale it, it gets into your lungs, it gets into the little air sacs, the alveoli. Macrophages, which are a type of immune cell, will, like, try to engulf it, try to eat it to get rid of it. Um, but once it gets engulfed by the macrophage, it just sort of sits there in your lungs. And then it triggers this immune response.

So in the area around it, you get inflammation and scarring. And the more you accumulate of these little—little teeny, teeny cells filled with coal dust, the more of those that clump together, the more damage you get, the more inflammation, the more scarring, right?

Justin: Is this a unique reaction to—in the case of coal dust? Or are there other, like, uh, infiltrators in our lungs that work the same way?

Sydnee: This is very similar to silicosis. So, if you inhale silica, it's the same idea. And a lot of the—

Justin: Why would I inhale silica? What is that—where—

Sydnee: If you—well, I mean in part in coal mining you do inhale silica, too. 'Cause that's part of the—the coal. There's silica in there, so there's silica dust. But in different industries where silica is being processed, you can inhale it. And initially that's what they tried to say about coal mining. "Well, this is just another form of silicosis. It's nothing different."

Justin: Hmm.

Sydnee: "Um, we don't need to distinguish this as a clinical entity."

It took a while to figure out that, like, "Well, there's silica in coal, but also the coal dust itself is a problem."

Which you'd think you'd know from, like, looking at lung tissue and seeing these black areas that are filled with coal dust. Um, that probably shouldn't be there.

Anyway, the longer you work in the mines, the more you inhale. And this can go from everything from, like, someone who lives in an urban area, or probably lived in these coal fields who inhaled a lot of coal dust regularly would have anthracosis, which is just sort of, like, a little bit of evidence of this, but not necessarily progressive to any sort of actual disease.

Just, like, something you might see on autopsy, but wouldn't necessarily be relevant in your life. To coal worker's pneumoconiosis, and then progressing to complete pulmonary fibrosis, which is the worst case scenario.

Um, so there's a range, and the longer you work, the more you inhale, the more risk you're at. The US Public Health service started studying this and investigating it as its own condition as early as 1924. Reporting on incidents of this. And again in 1945. And they knew about it in Britain, because in 1943, they took the step of officially recognizing, "Yes, there is a lung condition specifically related to coal mining."

So again, we knew this was a problem.

Justin: Somebody figured it out.

Sydnee: Somebody figured it out. They figured it out in the UK. Um, but in the US, the standard medical opinion is that, "Look. If you work in a mine, it's gonna hurt your lungs a little, so stop whining. Stop complaining. Stop being lazy. And get back to work."

And that was really how it was seen, initially. Like, just because we saw something on an x-ray doesn't mean it's a problem. Like, man up. I mean, that was really the—the—kind of the attitude.

Um, it wasn't until the 60's when rates of disease really started to climb, because of increased mechanization, uh, and that's when you see the sort of demand for action that followed.

Um, the other reason it took a while for anything to happen is that union leadership had been really reluctant to fight this issue. The actual mine workers themselves, like, the union—you know, they wanted to focus on pensions. They

wanted—they had other priorities they wanted to focus on. And the other thing is for a while, the UMWA President was pretty friendly with the coal companies.

Justin: Mm-hmm.

Sydnee: And wasn't really necessarily wanting to pick big fights with them. Um, and they knew that this black lung thing was gonna be a big battle once they undertook it. Um, the only reason that finally changed is there was a large mine explosion in Farmington, West Virginia in 1968, and during the coverage of this event, the UMWA President was seen, like, standing alongside coal company, like, officials defending them and saying basically, like—I mean, the attitude—which is just wild to think about—is part of your job as a coal miner means that sometimes things might explode and you might die, or sometimes the whole thing caves in and you might die. And that's just it, and you should accept it.

And the—like, the idea that we should be doing more to keep you safe is really just not accepting the inherent dangers of your job.

Justin: Yeah.

Sydnee: Um, which is gaslighting, basically.

Justin: Yeah.

Sydnee: So this led to outrage. It led to a change in union leadership. The whole company—this was also a time period, if we're talking about the late 60's, where the idea that our workers should be respected and that they needed to be—that they had their own rights was a lot more fashionable. You know, if you think about, like, the cultural milieu of the late 60's, early 70's. You know.

Justin: Yeah.

Sydnee: The hippies and all that. [laughs quietly] They were a lot more likely to fight big business and the suits.

So, suddenly mining safety became a priority, not just in West Virginia but of, like, the Nixon administration. On a federal level.

Justin: Because of the explosion.

Sydnee: Because of this explosion, and because of all this issue with the union. Um, the issue of black lung suddenly could be added to the table. So first of all on the state level in West Virginia, miners wanted to start organizing to make sure that when the next session came up, something was gonna be passed to prevent and recognize—like, prevent black lung and recognize it as an entity, and compensate those who are no longer able to work, or who have died, you know, from black lung. So first, some miners in Fayette County—there are a ton of counties in West Virginia.

Justin: Yeah, we got a lot of counties.

Sydnee: We got so many counties.

Justin: Unbelievable.

Sydnee: It's ridiculous. We're so little. We got so many counties. So a bunch of miners in Fayette County enlisted some doctors to, like, work with them—

Justin: Kentucky, though. Kentucky got a lot, too.

Sydnee: Yeah.

Justin: Kentucky's right across the river there, just county after county after county.

Sydnee: We just—it's these—these states have—like, they have all these little counties, which are all these little fiefdoms where everybody gets to run the show in their own way. It's a problem. Anyway—[laughs]

Justin: 120 counties, by the way. 120.

Sydnee: In Kentucky?

Justin: In Kentucky. Can you believe that?

Sydnee: We've only got 55.

Justin: Yeah, I know! So, like, let's, you know—hey, Kentucky? How about remove the plank from thine own eye, you know?

Sydnee: I don't think—I don't think Kentucky was yelling about this.

Justin: You don't know! You don't know who's listening. Some Kentuckian was like, "What about all the counties?"

Sydnee: Uh, first, miners in Fayette County enlisted a couple doctors to help them explain to other miners, "This is what black lung is. This is what's causing it. This is, you know, something that you should be compensated for, because they could be doing things to reduce dust and they're not, and as a result, you've got this condition."

And so first there was the education piece, then the organizing started to spread. And in January of 1969, miners met in our capitol, Charleston, to rally for legislation on the state level. Um, after that, 282 miners in Raleigh County went on strike, then most of southern West Virginia followed.

Um, by February of that year, 2000 miners gathered in the state capitol to demand a bill to address at that session. At first they were told, like, "Listen, maybe we'll do a special session later, and address this later. Like, please go back to the mines. Please go—go do your work. We'll get to it. We—we hear you, we hear you, we see you. We're gonna get to it."

And so they moved into the lobby. [laughs] Um, to say "Nope, we're not leaving."

So they introduced a pretty weak bill in the house and said, like, "Well, how about this? Does this work?"

And the miners said, "Actually, all 40,000 of us, every miner in the state, went on strike."

Justin: Right.

Sydnee: And said—and a bunch of them came to the capitol and said, "No. Not until you do something about black lung."

So as a result of this, a much better bill was passed on a state level to recognize, try to prevent, and compensate those who have suffered from black lung. Um, this inspired Congress to pass the Coal Mine Health and Safety Act, where standards were placed on, like, coal dust particles that were created to try to prevent the condition. And there is also a federal black lung program, which is

mainly aimed at compensating the surviving family members of someone who has died of black lung, which still exists today, of course.

Um, and the thing is, uh, you know, this seemed to address things for a while. Like, black lung benefits were robust, and there was a robust program, and a lot of impetus on coal companies. 'Cause, like, if you're gonna have to pay out a lot of money when somebody gets black lung, you probably wanna do better to try to prevent it, which you can do by finding ways to decrease the production of coal dust in the industrial process.

Justin: Well, here's what I was—here's what I was gonna say, and that I don't actually understand, and maybe you can—maybe you understand this better than me. Um, why can't they just wear some sort of breathing...

Sydnee: They do that.

Justin: ... apparatus? I mean, why does it—but that doesn't—it's not effective? In preventing it?

Sydnee: It's not enough.

Justin: Mm-hmm.

Sydnee: Um, part of it is, like, enforcement of that.

Justin: Ah, yeah.

Sydnee: Part of it was the comfort, too. I mean, to be fair, a lot of miners have told me before, it's incredibly uncomfortable in a coal mine, and then you put on one of these big masks, and it's almost impossible to breathe down there.

Um, and, you know, what plays into this is the idea that, like—and this still exists today—coal miners are expected to work long, brutal shifts with no complaints. And to just show up whenever. I mean, like, the loyalty they're expected to show to the coal company, that still persists today.

So, you know, it's a difficult problem to tackle. The coal companies had the money to tackle it.

Justin: Yeah.

Sydnee: The problem is that, um, over the years, the mining companies got tired of paying out so many millions to miners, and the standards for reporting have gotten a lot stricter. They have lobbied to make it a lot harder to get diagnosed and qualify for black lung benefits. That's been the main way.

Like, "Okay, fine. We'll have this really robust benefit program, we're just gonna make sure that a lot fewer people get it."

For a while, cases of black lung were dropping, but they're actually back on the rise, but compensation rates for black lung disease have dropped dramatically. And in addition, you see things, like very recently—now I am gonna throw shade at Kentucky. I don't mean to. Sorry!

Hey, listen. You can throw plenty back our way.

Justin: Yeah.

Sydnee: Um, but in 2016, there was a radiologist in Pikeville, Kentucky, not too far from us, Dr. Brandon Crum who started noticing—he's a radiologist, and he started noticing this uptick in diagnoses of black lung disease, which you can diagnose by looking at an x-ray and seeing it. That's how you diagnose it, by the way. You see certain patterns on an x-ray and you combine that with sometimes, like, a blood gas that we draw to look at levels of gas on your arterial blood. Um, and a, uh—and just a history of mining, history of exposure.

Um, but anyway, so, he started noticing a lot more of these chest x-rays that were consistent with black lung disease. Um, he called this to the attention of, um... NIOSH, which is the National Institute for Occupational Safety and Health.

Uh, so he called it to the attention of NIOSH, and he was like, "I'm seeing more black lung disease here."

And just in his—his clinic. Not, like—just—like, way too many cases for just one area.

Justin: Right.

Sydnee: And so he called this to their attention. NIOSH followed up with some research in conjunction with Dr. Crum and they said, "Yeah, you're right. No, this

is happening. You're the only one calling attention to it right now, you're the whistleblower, but, like, black lung is on the rise, and nobody's talking about it."

And some follow up research indicated that, like, one in five miners are gonna get some form of this disease, which is way above what we previously had thought.

Um, and so when this was brought to more broad attention, Kentucky responded by passing House Bill 2 in 2018, which restricted the doctors who can diagnose black lung to only pulmonologists, which was pretty targeted, specifically making this radiologist incapable of diagnosing black lung disease moving forward. Uh, and also currently there are only two doctors in the state who do the final certification.

So basically, like, your doctor can say you have black lung disease, but then the state can appeal it to one of these two assigned, like, doctors in the state who are allowed to do the final review, and these two doctors who do the final review—who can, by the way, their word can overturn—even if you have eight other doctors who say you have black lung disease, if this doctor, one of these two who review your case, if they say you don't, you don't. And that's final.

And they do overturn that, in 85% of cases they overturn it. Both of these doctors—allegedly, according to the articles I have read. I don't know the details—allegedly have ties to the coal industry, and both of these doctors are very likely to say, "Actually, no you don't... have black lung disease, so therefore you don't qualify for any compensation or benefits."

And the thing is that's really wild to me about this is, like, pulmonologists totally can read x-rays, no doubt. I have worked with many pulmonologists who were wonderful at reading x-rays. I am certain that they can diagnose black lung. But yeah, so can radiologists, actually, since reading x-rays and other radiological studies is sort of their entire thing. That's what they do. I am certain Dr. Crum and other radiologists are perfectly capable of diagnosing this. So why specifically would they make this rule? Who does it help?

It also, in the past year during COVID was incredibly restrictive if you had to travel to one of the two doctors.

Justin: Yeah. Of course, yeah.

Sydnee: Who could do the final evaluation during COVID. The result is that also the percentage of black lung cases that have actually found to qualify for compensation has dropped dramatically.

Justin: Ugh. Wow, amazing. What an amazing twist.

Sydnee: Um, alongside this is the fact that coal companies have, since inception, found ways to skirt regulation, falsify dust readings, that's been found in cases, um, fail to meet safety standards. We still have cave ins and explosions. It's not like that is just a thing of the past.

Um, that still happens periodically, and it's because at the end of the day, it is an industry that is built on abusing laborers as much as you can get away with to make as much money out of them as you possibly can, and to make as much money off the land as you possibly can while leaving it in whatever condition the state will allow.

Justin: And also, to... to... convince people, generationally convince people in these areas that it is—that any sort of effort to make it safer, both for them personally and for the environment, is a targeted, you know, attack on them. Like, ecolo—ecological efforts to prevent the damage of burning fossil fuels is an attack on them, and their way of life. Which is an idea that has, like, been perpetrated and reinforced by coal companies for generations.

Sydnee: Oh, it's really hard. This is—so, by the way, I should mention. There was a bill that tried to overturn this introduced in the Kentucky legislature this past session, but it died in committee, so this is still a problem.

In West Virginia, this doesn't exist. There's no other state, actually, where they've taken the—this sort of tactic that Kentucky has. But it is not easy, necessarily, to get black lung benefits anywhere.

In West Virginia, that is something that coal miners have routinely lobbied for, and no bills have really ever gotten much traction, to try to make it a little easier to get black lung benefits and to close some of the loopholes.

Coal companies have a lot of ways of just sort of prolonging this process. So, like, yeah you might get it, but it'll take you ten years to get those benefits, which you might not have in some of these cases.

So, um, they—this is a problem all over. And even the miners who are fighting to make it easier to get black lung benefits will still talk about, you know, part of the problem—like, "We're understanding of the coal companies. We're sympathetic to the fact that there is a war on coal."

Justin: Yeah.

Sydnee: "And our coal companies are under attack, and we don't want to be part of that. We just... our lungs have been destroyed from inhaling all the coal dust in their coal mines, and we can't breathe, and we can't work if we can't breathe, and we have no way to support our families because we can't work, 'cause we can't breathe. So if you please could just give us, you know, enough money to live off of."

I mean, that's really the argument. And it's hard, as somebody who's outside of that industry. Like, we don't have relatives in the coal mining industry. I mean, I don't think you do.

Justin: No.

Sydnee: No. We have always lived in West Virginia, but that's not... that's not our family. Um, but this gets so personal, if you talk to people. And even this doctor, who is a hero for calling attention to this, um, even he will say, like, "I have family in the coal industry. I'm not trying to do this to destroy the coal industry. I'm just saying, like—"

Justin: But that is the—that is the wild thing about it, is that these coal companies have cast themselves as the victims, because they are being, you know, *persecuted* for the damage that they are doing to the environment.

Sydnee: Yes. And they have done—they have done a remarkable job of marketing that to the people they are abusing. To the people that they are *killing* with this industry!

Justin: You can't go—I mean, every tenth car in this state has a bumper sticker on it that says "Friends of Coal."

For a long time, the comp—the, uh—when Marshall and WVU were playing each other it was the Friends of Coal Bowl. Why does coal need friends? Like, coal doesn't need friends. Coal's a rock. [wheeze] Like, it—

Sydnee: It is really—yeah!

Justin: —it's really twisted. I mean, it's genuinely disturbing.

Sydnee: I—I—I received criticism as a—what was I, in sixth grade? I did a science fair project on the effects of acid mine drainage on the environment and I was criticized for that. Like, "Well, okay, maybe, but, you know, the coal industry is—you know, that—that *is* West Virginia. How dare you... associate them with these bad things when, like, that's just the cost—" so much of it as seen as the cost of doing business.

And the human lives that are effected, and the health, and the years of life and productivity and healthy living, and all that that's lost, the environmental damage—I mean, because if we—this is not just a health crisis for these miners. This industry is a health crisis for the whole state.

I mean, if you really want to get into the sort of environmentally linked diseases that we see in West Virginia, the cancers that we see, um, how much of our water is toxic—and I know this isn't just a West Virginia problem. I know there are lots of places in the United States where this happens, and all over the world. And that's another thing to remember about this, mining, and that was the last thing I wanted to say.

Mining happens all over. Coal mining happens all over. I think once again we are quite literally the canary in this situation, in Appalachia. Because what this—again, I can't—I wanna meet this guy. He's only in Pikeville. I gotta hang out with him sometime.

What he has called attention to with this uptick in cases of black lung, um, is gonna happen—it's gonna happen every—we're gonna see it everywhere. We're—something is going wrong, and we're destroying a lot of people's lungs.

Justin: Mm-hmm. And if you wanna get, like, I mean... not to get too nihilistic about it but, like, reduction of workers' rights, depowering the unions—like, it's not even just this. I mean, this is—

Sydnee: Oh, no.

Justin: —one version of the story you're gonna hear repeated ad nauseum.

Sydnee: Well, and maybe at the end of the day it's a good reminder that—and, as a West Virginian I know [laughs quietly] you're not supposed to say this, but this is not the best form of energy. [laughs quietly] It's not!

Justin: Yeah.

Sydnee: It's not the future! It's not. And, I mean, the cost to the environment, to human life, to... I mean, everything. How—when will it not be worth it to us?

Justin: Listen, folks. I'm really sorry. Fellow West Virginians, I'm sorry about my wife, Sydnee. You know how she gets.

Sydnee: [laughs]

Justin: I support *clean* coal—

Sydnee: [laughs]

Justin: —which is—[wheezes] [holding back laughter] is a different kind of coal they found out about a while back. I don't know how they're doin' it, but I love the sound of it, folks. And I am just way deep in on clean coal, that exists. Uh, thank—[wheezes] thank you so much for listening to our podcast. Uh, we really appreciate it. Thanks to The Taxpayers for the use of their song, "Medicines," as the intro and outro of our program.

Uh, we got a *Sawbones* book, both in paperback and hardback. Hard—the paperback's newer. It's got some stuff about quarantine and other things like that, some new illustrations from Sydnee's sibling, Teylor. It's at bookstores... as you would imagine.

Sydnee: Places you get books.

Justin: Places you get books. That's gonna do it for us, folks. 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!

[theme music plays]

Maximumfun.org.
Comedy and Culture.
Artist Owned.
Audience Supported.