#338 LIVE! Medical Cannabis: Is it still dope?

[Curbsiders theme]

[Disclaimer]

Matt: So, Take 2, Paul. [crosstalk] Welcome back to the Curbsiders. And Paul, as I always like to say, when we're doing this in front of a room of people, this feels totally natural. I don't even sense anyone here.

Paul: This is how I want to live my life actually. [crosstalk] hotspot light with feeling technology. This feels great.

Matt: [laughs] Well, thank you for coming. Tonight, on the show, we're going to talk about medical cannabis and we have a great guest, Dr. Julia Aronson. We will introduce her fully in a second. But Paul, before we do that, can you remind the audience what exactly is it that we do on the Curbsiders?

Paul: Sure. Happy to as always, Matt. As a reminder, we are *the* Internal Medicine Podcast. We use expert interviews for new clinical pearls and practice changing knowledge. And then, I'm going to set you up, Matt. I understand that [unintelligible [00:01:13] you want to include here, because you're going to be too embarrassed to do it in front of our guests who's sitting next to us.

Matt: Now, she's sitting here. Paul, I just wanted to remind you before we get too far into this show that you can't spell healthcare, Paul without THC. Well, agree with that?

Paul: You don't have to indulge this. That's not necessary.

Matt: And then, Paul, I know we've been having some interpersonal issues lately and--

Paul: I hate this.

Matt: Just allow me to be blunt. If we're going to continue to do this, Paul, I want it to be a joint decision.

Paul: This is the worst day of my life. I'm going to introduce our guest if that's okay with you, Matt. Do you have any more?

Matt: No. Well, I do but you know--

Paul: Let's introduce our amazing guest. We have Dr. Julia Aronson with us. She is a professor at Albert Einstein College of Medicine. She is the Chief of the Division of general internal medicine at Einstein and Montefiore Medical Center. Dr. Aronson earned her MD from New York University School of Medicine, and MPH from the Harvard School of Public Health, and a BA from Wesleyan University. She completed residency training in primary care internal medicine at New York University Medical Center, Bellevue Hospital and fellowship training in general internal medicine at Massachusetts General Hospital. Dr. Aronson was the founding Chief of the Einstein Montefiore Division of general internal medicine in 2004. Since then, she has created a vibrant academic home for over 75 faculty members.

In 2017, Dr. Aronson launched the Medical Cannabis program at Montefiore, which is the first primary care based medical cannabis program in the United States Academic Medical Center. So, without further ado, why don't we actually get to the show? And actually, before we do, let's just hold for applause for our fantastic guests, please.

[applause]

Matt: You're such a professional, Paul. Yeah, you're such a professional. Dr. Aronson, thank you so much for joining us. The audience has just heard your bio, but can you tell them maybe how do you describe yourself as a one liner and maybe throw in a hobby or interest outside of medicine?

Dr. Aronson: Thank you so much for the introduction and the applause. It's really exciting to be able to be here and talk about this topic about which I feel very passionate. I'm a lifelong New Yorker. I was born and raised there. That might be obvious to you after listening to me for 30 seconds. I'm primary care and addiction medicine trained. I'm the mother of two amazing young adults. I have to say that as division chief of general internal medicine, I have the best job in the world. It's the best job. I'm currently in my 60th year on the planet and I can also honestly say that life gets better and better every year.

Now that I'm older, I'm trying to work a little less hard and reclaim some of the things that I like to do when I was younger. This has been helped by the fact that I've recently had some orthopedic surgery and spending a lot of time on my back. I have been doing quite a bit of sketching and drawing, which is giving me a lot of pleasure.

Matt: I'm glad that life is getting better. As you're going on, that gives me a lot of hope/.

Dr. Aronson: Orthopedic surgery for everybody.

Paul: [laughs]

Matt: Despite the orthopedic surgery, you're feeling life is getting better. So, that's a good outlook. I can get onboard with that.

Dr. Aronson: Gets better.

Paul: I'll do our usual thing, where we ask for just some sort of piece of culture to share with us that you enjoyed recently. It can be a book, television show, movie, something broad. It doesn't have to be anything monumental, but something that you enjoyed recently.

Dr. Aronson: I was sent that question in advance and so, I thought about it a little bit. Living in New York City, I really get to take advantage of a lot of arts. That's been tricky during the pandemic but one of the things that I love is live theater and that's begun to come back. There're two shows that I've really, really enjoyed over the last few years that are now being-- You can see at other places than New York. If you live in another place, you can see a version of these two shows. One of them is David Byrne's *American Utopia* and the other is *The Lehman Trilogy*. These are very different than one another, but they both are really a statement on what it's like to live in this country during this time and I recommend them both. I believe the David Byrne show has been made into a movie by Spike Lee, which I haven't seen, but I'm sure is well worth seeing.

Matt: I wanted to ask you, before we get on to the main topic here, can you tell the audience, you've accomplished a lot in your career, you told us almost 60 years. You've accomplished a lot already. What is some great advice that helped you get there along the way that you found meaningful?

Dr. Aronson: I was thinking about this question, too. I think the most meaningful advice that I've received in my career has been the advice that I did not follow. There's a lot of advice you'll get, which you should not follow. It reminded me of one of the things that's often said in 12-step meetings. "Take

what you like and leave the rest." I think the most meaningful advice for a career in academic medicine, which is not easy is to cultivate your perseverance and also pay attention to your passion. Because succeeding in this game requires a tremendous amount of perseverance. If you don't have passion for what you're doing, it just can't be done. So, figure out what you're passionate about. And then more importantly, where can you do that thing and who can you work with that you can do it with? That's how to be successful, create a career around those things.

Matt: Thank you. That's excellent advice. Paul, I think the audience probably wants to pick of the week from you. It's good to see him do it live. This is not prepared in advance. Paul, what do you think?

Paul: Sure.

Matt: What can you recommend?

Paul: I feel this is already caught on. So, I don't know. But I have been very much enjoying *Severance*, which is an Apple TV show starring Adam Scott. It also has Chris Walken, John Turturro in it, Patricia Arquette. It is this dystopian sci-fi series that I've not finished yet. It may tank at the end, I don't know. But basically, it's a shadowy corporation, where the whole premise is that its employees, they have their work life medically separated from their home life. When they're at home, they have no idea what they did at work. When they're at work, they have no idea who they are at home. It takes this idea of work-life balance like this weird dystopian extreme, then of course the corporation does have to be shadowy and terrible. So, I'm enjoying it so far. Like I said, hopefully it doesn't go bad, but I don't think that it will.

Matt: I actually might check that out, Paul. A lot of your picks of the week or two like their soul crushing for me, but I think I might check this one out. Audience, medical cannabis, you've probably heard about. It's pretty popular right now. Patients just love this stuff. There's also recreational use of cannabis. Maybe that's not the right term, but we'll learn. And right now, something like 36 states have medical cannabis, and another 12 or so have recreational use cannabis, and it is just exploding. The first question for you, Dr. Aronson is, what's this history that got us here? A lot of my patients call it marijuana or weed. Why is marijuana not the preferred term? How does that relate to the history of this?

Dr. Aronson: Okay, so, that's about five questions.

Matt: I like to ask 10 or 12 questions at a time.

Dr. Aronson: Yeah.

Paul: It's like a tough medical school, just stack them [crosstalk] possible. Patients love it.

Matt: [laughs]

Dr. Aronson: Okay. This is a fairly controversial topic for doctors to talk about. The way that I have gotten my mind around this topic and have been able to launch a medical cannabis program at an academic medical center is by really separating medical cannabis from other forms of cannabis use. You said recreational cannabis and that is the term that's been used for a long, long time in this country. Many people prefer to use the term "adult use" for nonmedical cannabis because we know from a lot of surveys and other data including some that I did that people who are buying cannabis in a dispensary without a medical card are more than half the time buying it to treat a specific symptom like pain or insomnia. Which means that most people are not buying in order to have a party or be recreational. Now, that doesn't mean that most cannabis is not bought by those people, who are buying it to for recreation. But most people are not buying for recreational purposes. I like to use the term "adult use" cannabis and separate that from medical cannabis.

Further, the debate about whether cannabis, the plant, flower, the bud, all of the things should be legalized for people to purchase who are over 21, and where they should purchase it, and how it should be regulated is a crucially important debate that has very tremendous implications for social justice and a long, long legacy of racism, and harm to undo. But that's not the debate that we're having when we're talking about medical cannabis. When we're talking about medical cannabis, we're talking about, is this a medication, is this a pharmaceutical that it can be used to help people with specific symptoms using specific doses of the active ingredients in the cannabis plant?

For me, it's a very helpful distinction to think about adult use cannabis as something that some people use to treat symptoms and some people use for recreation, but is not what I as a doctor, I'm going to talk to people about. I'm never going to say to somebody, "Walk down to the dispensary and buy a quarter ounce of White Widow." I'm not going to do that. I don't know what exactly is in it. That's not our line. If we can prescribe or recommend is the term, because this is not FDA approved, specific formulations of THC, and CBD, and give people specific instructions about how to use them safely, to me, that's medical cannabis. Now, that's my opinion, but I'm the expert here, so, you get to hear it.

[laughter]

Dr. Aronson: There are other people who believe that there are enough benefits to the whole plant that we should be helping patients to grow the plant, and use the plant, and that is our lane. I'm not one of those people. That's the adult use, medical use story. In this country, we really didn't smoke cannabis. The way that we took it prior to the 20th century was using tinctures. The oil would be extracted and turned into a tincture. It was prescribed by doctors, it was on the United States Pharmacopoeia, it was the subject of medical conferences, it was a widely used substance for cough, and pain, and menstrual cramps, and neuralgia, and all kinds of things.

And then what happened in our country in the early part of the 20th century in the first and second decade of the 20th century is that we had prohibition, and we also had a depression, and we also had a lot of immigration to this country. Cannabis, as well as alcohol were prohibited. There was a very concerted effort at the level of the federal government to determine how to free the society from cannabis. One way to do that was to associate it with another element in society that people were unhappy with. That element at that time were immigrants who came from Mexico. And so, the plant

became called marijuana really in order to associate it with Mexican immigrants. And that's the story of marijuana. There is a very longstanding movement to try to delete the word marijuana from our language.

Now, the other important historical things that have to do with cannabis and how it got to the position that it's in right now where it's so maligned and schedule one substance has to do with Nixon. But I feel I've been talking and talking. Let me let you ask another question and we can talk about Nixon and the war on drugs a little bit more.

Matt: Yeah. Well, I think I do want to get to a case, because I want the audience to leave here tonight having some idea about how to talk to patients about this. So, Paul, would you do me a favor and read the first case? The audience can see it up here on the slide. But can you read the first case?

Paul: Sure. Yeah. After 2,000 years of history, we're going to bring us to Jake. Jake is a 35-year-old male with anxiety, obesity, chronic pain, high blood pressure that's reasonably well controlled. He's sedentary and works a desk job. He's been in physical therapy for back pain. He's tried SSRIs for anxiety, but he stopped them due to weight gain and decreased libido. He's been buying cannabis from a friend and wants to know if you can certify him for medical cannabis. One of his friends had an opioid overdose in the past, so he is appropriately wary of opioid medications. Acetaminophen, NSAIDs, and muscle relaxants all provided only modest relief of his pain. Cannabis has been the only thing that's really helped him so far for both his anxiety and his pain. He's here in our office for certifications. So, just given that introduction, what other history do you need to know about Jake, what are the other questions might you ask before you start to certify or consider certifying someone for cannabis?

Dr. Aronson: Well, first of all, let me say, if this patient were not already using cannabis, this wouldn't be somebody that I would start first on cannabis. This is somebody, who should probably go through a good trial of some other modalities for their pain treatment before we start them on cannabis. But they are coming to us on cannabis and they are telling us that it helps them. That's the situation that we're in. If I were to say to Jake, "Well, I think you should stop taking cannabis." The likelihood that advice would be followed is pretty low. And so, what I want to do instead is have a conversation with Jake about why he's using cannabis and how he might use it more safely and more predictably? But in order to do that, I need a lot more information. So, really, we have to do a more comprehensive pain assessment. What kind of pain is it, when did it start, what's been the workup to date, have there been any imaging studies, what other medications is he tried for it, what's been his response, what are the OTC analgesics, what was his response to acetaminophen, NSAIDs, what were the muscle relaxants that he tried? When did he go to physical therapy? If he did, I thought he did, why didn't he go to physical therapy? Helping him go to physical therapy, a whole bunch of other things like that. Who prescribed this SSRI? Was it me?

Paul: [laughs]

Dr. Aronson: The primary care doctor? Why did I do that? What's happening with this patient? We need to really understand it. There are many doctors, who are certifying patients for medical cannabis, who are not able to do a comprehensive assessment. They ask patients to bring them their records and

they'll go through their records, but it's a much different an assessment. Some of these are done over the phone or they're done online, and the patients are charged cash for it. What we've tried to do is create a medical cannabis evaluation program within primary care, so that we're able to have access to all of the records that every everything that's been done for our patient in our hospital setting. If they've been to pain management, if they've been to rheumatology, if they've been to neurology, if they've been to orthopedic surgery, whoever they've been to, we have access to those records. I would like to know all about that with respect to his pain for which I think the evidence is good enough to give him a trial of medical cannabis.

Anxiety is a different issue. They're lumped together in this case, but they're really very different. That's because the data for anxiety are much, much less clear. I believe that the picture that will emerge is that THC is going to worsen anxiety disorders in high doses. But in low doses may be effective for some people. CBD will probably be effective for anxiety disorder. But this is a very complicated situation when somebody has pain and anxiety. What are they medicating with the thing that they're taking, whether it's cannabis or something else and how is it helping them? What I try to do with a patient like this in addition to getting a more extensive history is really have a nonjudgmental conversation. "Tell me about your experience with cannabis. How do you use it, how many times a day, in what form, how does it help you? There's no judgement here. This is what I need to know in order to make a reasonable recommendation for you." To really have people tell me what their habit is, what they're doing.

Paul: Speaking of which, why don't we give you a little bit more history about Jake's use. Jake smokes cannabis nightly before bed, sometimes during the day or on weekends. He has tried edible brownies at parties, but he doesn't really like them, because he's found the effects pretty variable and he prefers smoking cannabis. He likes cannabis better than beer or alcohol because, "I can still drive if I need to," which obviously makes us shudder a little bit. He denies any family history of schizophrenia. In terms of quantity, he says he buys about an ounce of cannabis each month. We've got a little bit more history here. I guess, as you're talking about the certification process and you're counseling patients through what to expect and how this will proceed, can you just talk us through your script and your schpeel talking about risks and benefits?

Matt: Can I put in a plug for--? The New England Journal of Medicine catalyst article that y'all did has an appendix in it that really has a lot of what seems like is from your EHR almost directly, the forms that you use, what questions you ask, the scoring systems, it's very helpful. We'll, of course, link to that in the show notes but I would recommend that to everybody for the stuff, the history that you just went through, that's all in there and there's forms for it, which would be really helpful if you were in primary care trying to do this on your own. So, now, to Paul's question.

Dr. Aronson: There's a lot of information here and-- God, okay. If I'm sitting down-- Can I stand up?

Matt: If you want to, sure.

Dr. Aronson: Sorry. I'm sitting with Jake and he tells me the story. "Okay, I use cannabis before I go to bed and sometimes during the day or on weekends." I would say, "Why? Why do you use it? Why do

you use it before you go to bed, what would be during the day or weekend time when you would use it?" I would really try to help the patients separate when they're using to relieve pain or to get sleep, because they feel they can't get sleep. When they're using, because they're bored or they're with somebody else who is using, and they just feel they should, or some other reason. To not make a judgement about those latter kinds of reasons, if you want to do that, you know you do that, but that's not your medicine. I want to talk about your medicine and I want to switch you to a form of cannabis as medicine that will be helpful for you. What form is that going to be? No, it's not going to be smoking. I say to every single patient, "The most important thing that I as a doctor can tell you is don't smoke, don't inhale smoke into your lungs. Whatever kind of smoke it is, don't inhale smoke into your lungs."

Once in a while, I might recommend to somebody that they switch from smoking to inhaling the vapor from either an oil or vaporizer that vaporizes dried flower. But really, I very much encourage patients to use either tinctures or some form of edible and an edible can be a pill, a gel cap, a gummy, something like that. Baked goods are not medicine.

Paul: [laughs]

Matt: Oh, man. That's why everyone's here. They thought you're going to tell them like, "How many cookies they eat or brownies, whatever it is?"

Dr. Aronson: Yeah, no baked goods. If you want to do that in your own time, that's fine. But we're not going to think about that as medicine. Because what we're trying to get to is the point where what we're recommending to a person is that they're taking something like 2.5 milligrams of THC and 2.5 milligrams of CBD or 5 and 5 or 10 and 10, and that we can reliably and predictably know that what we're recommending to them has that much THC and that much CBD in it. I explain all that to patients. When I tell them I say, "Okay, let's talk about what medical cannabis is. Do you know anything about it?" They say either yes or no. I usually open up a website, which is from one of the dispensaries in New York State, which-- Thank you, which all of their websites are very, very helpful.

New York State has had a very medicalized form of medical cannabis. There have been only five companies that have been licensed to do medical cannabis in New York State. I practice in New York State, so that's what I'm most familiar with. All of their websites have a huge amount of educational information on them. In the dispensaries in New York State, the patients are required to meet with a pharmacist before they make their first purchase. And that pharmacist is going to go over many of the things that I go over. And so, I know that they'll hear them again.

Matt: I was going to say, for him here, I think maybe you're leading towards this. We gave you the last bullet here. He buys an ounce of cannabis [crosstalk] month.

Dr. Aronson: Yeah, I'm getting.

Matt: The quantification, I want to put this up here and let you talk through it because I thought this was super cool when you were telling me about this.

Dr. Aronson: Yeah. We're almost there.

Matt: Okay.

Dr. Aronson: [laughs] sorry guys.

Matt: We're here for the ride.

Dr. Aronson: There it is.

Matt: You are doing great.

Dr. Aronson: Okay. All right. I thought you wanted me to talk about something else. We'll talk about that. I do try to get people to describe how much they use. This is not easy for some people and for some people, it's easier. The way that I ask about it is I say, "How often do you buy cannabis and how much do you buy at a time?" People usually in our community buy about an eighth of an ounce at a time. We get all kinds of answers. "I don't buy it, my boyfriend buys it for me, or my child gives it to me." But people can usually make some estimate. Sometimes, they say a baggie. But we try to get a sense of how long a person takes to go through an eighth of an ounce.

What is an eighth of an ounce? An eighth of an ounce is-- an ounce is 28 grams. Everybody knows that. That's 28,000 milligrams. An eighth is 1/8th of that, which is 3,500 milligrams. That's just math. That would be the plant form and so the plant form has all the things that the plant has. It has all the other cannabinoids, it has some leaf, although a lot less leaf than it used to have, and it has CBD, and it has THC. What we're really trying to understand is, how much THC is in that volume or that weight. And we don't know. We don't know, but we estimate. We estimate about 10%, but it could be anywhere from 5% to probably no more than 25%. Patients are very surprised to hear that because sometimes they think that they're buying cannabis that's 90% THC.

Matt: [laughs]

Dr. Aronson: That made you laugh.

Matt: Yeah.

Dr. Aronson: Okay.

Matt: Seems like a wild over estimate. That's all.

Paul: [laughs]

Dr. Aronson: But even in Colorado, the most cannabis that you're going to get in dried cannabis is going to be about 25% to 30%. If somebody smokes tells me that they're using an eighth of an ounce every few days, I'll say, "Okay, that sounds like a quarter of an ounce a week and that sounds like an

ounce a month." These are very approximate, but that's where we get to. So, an ounce a month would be that, I think that's that middle column, right?

Matt: Yeah. The bottom there.

Dr. Aronson: The bottom.

Matt: An ounce a month is around 2,800 milligrams of THC per month or 93 milligrams THC per day.

Dr. Aronson: Yeah.

Matt: And this is again from the cannabis patient.

Dr. Aronson: Yeah, that's so-- [crosstalk] An ounce a month, that's a pretty big habit. Well, I thought it was a pretty big habit. But now, I've met people who go through an ounce a week.

Matt: [chuckles]

Dr. Aronson: So, that's where we would go. Okay. So, now, Jake, we don't know how much he smokes. We just know he smokes every night. I have this very interesting conversation with patients about the way in which they smoke. What do they do with the weed? Do they roll it in a joint, do they roll it into joint with tobacco, which is a blunt? Do they roll it with tobacco paper, do they put it in a pipe, do they do something else? And then we have a whole lot of conversations about whatever it is that they're doing is not healthy.

Matt: Yeah.

Dr. Aronson: If it has tobacco in it, there's all of that. If it's rolled in tobacco paper, there's that. Even if it isn't rolled in tobacco paper, they're still inhaling smoke into their lungs.

Matt: Well, let me summarize where we're at here as far as Jake goes. So, right now, we've gone through our whole list of, "Why are you using this, how much?" He told us, it's an ounce a month. Right now, we know it's about 93 milligrams THC per day. He's mostly smoking at sometimes. Let's say, sometimes he's using tinctures if he can get them. But mostly he is smoking it maybe about twice a day. And then you said that you do talk to them. You prefer patients are not smoking that they're using a tincture. You said maybe vaporization. Paul, where do you want to take this next with Jake? What else do you want to know if you're seeing this patient in your practice?

Paul: I think of a broader question, you talked-- I think we're limited in terms of what we know, because we're limited in how well we can research because of the legal issues around cannabis. But I did want to ask in terms of what we currently know, what conditions actually have solid evidence to actually certify someone-- What are some of the softer calls? What are the things that we know benefit from actually certifying for cannabis?

Dr. Aronson: At this point, there's probably about 30,000 or 40,000 articles if you go into PubMed that have to do with cannabis or marijuana. About five years ago, there was a panel that was put together of many people who do research in this area, where they reviewed the number of articles that there were at that time, which was about 25,000 and came up with some guidelines for us. There's been some criticisms of the methodology, but to my read it's pretty solid. This National Academy of Sciences, Engineering and Medicine panel that reviewed all of these articles essentially told us that there are three conditions for which the evidence is sufficient to consider cannabis. Those three conditions are chronic pain, and the evidence is probably the best for chronic pain. But what does that really mean? So, this is what it really means and this is what I tell the patient. "For about half of people, you will get some benefit to your pain from using cannabis."

If there're two people just like you sitting in front of me, I don't know which one of you is going to get the benefit. All we can do is try and see what happens. And then the other important thing is, what is that benefit? The benefit is modest. It's about a 30% reduction in pain. If somebody's walking around with 10 out of 10 pain, they may go to 7 out of 10 pain. And so, we really have to be very clear about the expectations. Now, that would be a conversation I would have it like that if somebody were naïve. But somebody is telling me, "No, this helps me." Then I'm not going to argue with that. They're telling me it helps them. Now, if they're using 100 milligrams that's a pretty hefty dose. An ounce a month is quite a lot. Our goal and we're not going to get there the first day, but our goal is going to be, can we get to a lower dose that still helps them, but doesn't put them at risk?

Now, what are the other two conditions because I said there were three. The first one is chronic pain. And then there is a little bit less evidence, but enough for two other very specific conditions. One of them is nausea and vomiting associated with chemotherapy and the other is spasticity associated with multiple sclerosis. These are really the only three conditions. Now, chronic pain is a big wastebasket. A lot of the data for chronic pain come from neuropathic pain and they also come from formulations of cannabis that we don't have in this country.

Matt: [laughs] That's hopeful;

Dr. Aronson: It does become a really complicated issue and a lot of this is because of the fact that we can't do research. We can't do research because it's a schedule 1 drug and we can do research, but it takes a really, really, really long time and a tremendous amount of perseverance. And even then, the results are limited because the way in which one can do research on cannabis in this country is to buy the cannabis from the federal government, and ask the federal government to give you cannabis that has either this much THC or that much CBD, and hope that it really is like that. Whether what you get from the federal government is equivalent to what would be in the products that the proprietary companies are making is something that people are just beginning to study. But in order to even get that product from the federal government, I'd say it takes about four or five years of paperwork. So, you have to get a schedule 1 license, you have to submit-- [crosstalk]

Matt: Paul Williams is the man for the job.

Dr. Aronson: Right. Yeah. You could have a baby, and raise them, and still be waiting to start your study.

Paul: I'll do the paperwork.

Matt: [laughs]

Dr. Aronson: As a result, we really don't know the answer to many important questions.

Matt: It's interesting that I think you're able to certify patients for many more diagnoses than the three that you just-

Dr. Aronson: Right.

Matt: -which is interesting and which is why I think the use of it is so ahead of the evidence and the enthusiasm is so ahead of the evidence. Well-- [crosstalk]

Dr. Aronson: That's because the lists of what you can certify patient for which are different from state to state to state. In New Jersey, you can certify for anxiety. But in New York, you can't certify for anxiety. But these lists of what you can certify for are not made by us. They're made by politicians. That's who makes them. We end up with people who are listening to different constituencies. Some of which might be very smart, but they're trying to craft a piece of legislation that is going to meet everybody's needs.

Matt: Let's get back to Jake and try to talk about how we're going to prescribe to him. We've calculated how much he's currently using here. I do want to try to leave at least a couple minutes at the end for audience questions as well. I think we're doing okay if we move on.

Paul: We're doing great.

Matt: Yeah. Let's talk about Jake, how you might think about his dose, and you can talk the audience. I think this is similar to what you do. The example number two at the bottom is a patient that's using an ounce a month and the example at the top is a patient using 1/8th of an ounce per month. For Jake, what would that look like? What would you prescribe? What would you tell him when you're going to recommend--? Let's say, you certify him and now you're recommending a dose or formulation for him.

Dr. Aronson: Yeah. The patient who smokes an ounce a month that we've decided is, when I do the calculation, I round it up in my head. I try to show it to the patient the same time, but I say, "Okay, it's about 100 milligrams a day." A single dose of cannabis, it's a little bit uncertain right now, but it's either 5 milligrams or 10 milligrams. My belief is that Jake will do best taking a one-to-one formulation at night. Whether he's going to need 10 milligrams, or 20, or 30, I think is going to be dynamic. He'll probably need more in the beginning if we're trying to get him to reduce, and then we should be able to come down on that.

Matt: And he's going to split that into-- Of 93 milligrams THC, you're not going to give him 93 milligrams at one dose? How would you adjust it for someone that's on the heavier side of you?

Dr. Aronson: Yeah. Similar to starting, let's say, methadone for a patient. If they came in and told you, "This is how much heroin I'm using." You would not try to approximate that much and give them the-- [crosstalk]

Matt: No. Right.

Dr. Aronson: Even though, cannabis is not lethal in overdose, we don't want people to be overdosing on cannabis.

Matt: Sure.

Dr. Aronson: It's very uncomfortable. We just don't want it. We wouldn't recommend more than say, 50% of what we calculate of [crosstalk] doing.

Matt: Okay.

Dr. Aronson: For him, that would be 40 or 50 milligrams a day.

Matt: Right.

Dr. Aronson: Okay. That's going to be four doses. I would probably suggest that he take them, for the first few days, take two doses, 10 and 10, and then go up to 20 and 20.

Matt: Okay.

Dr. Aronson: But there're a few caveats here. One thing that I tell patients is that our goal for them, even if it isn't their goal for themselves is that they're going to stop smoking and move to the medical product. I get that that might not happen today or this week, but for the 24 hours before they start the medical product, they should abstain completely from smoking, so that they can understand how the medical product is affecting them. For him, I would say, "Okay, let's go for a 20 to 1 ratio of THC to CBD." I would ask him if he wants to use the tincture or the pill. I would explain to him that if he takes-- There's so much to say here.

Matt: [chuckles]

Dr. Aronson: All of these different ways of delivering the cannabis have different attributes associated with them. Switching from smoking to an ingested form is going to be a very different experience for him. When he smokes, he feels it in five minutes. That's what he's used to and that's not what's going to happen when he uses either a tincture or an edible. It'll take at least half an hour, probably more like 60 to 90 minutes to kick in and it'll probably feel different than when he smokes. And so, he has to understand that and be expecting it. What I'll tell patients is, "In the evening, maybe a couple hours

before you want to lie down, take your edible then, so that you have some time before you go to sleep to see how it's affecting you, write down on a calendar or diary, how much you took, and how you felt," and then we try to get to a dose that works for them over the next four to six weeks.

Matt: And I wanted to clarify, you said, you might try them on a one to one or you might try them on a 20 to 1, which one you would--?

Dr. Aronson: I'm sorry, if I wasn't clear. I think a one to one will work best.

Matt: One to one.

Dr. Aronson: But I wouldn't start him on that.

Matt: Okay.

Dr. Aronson: Because this brings us a little bit to harm reduction, right?

Matt: Yeah.

Dr. Aronson: This guy is smoking an ounce a month and he's smoking every night. He's used to that. Whether that that feeling that he's getting from smoking that cannabis is helping his pain or not, or helping his anxiety or not, he thinks it is. We have to try to tease out pain, and anxiety, and insomnia, and maybe he needs other things for the anxiety and the insomnia. Maybe it's not cannabis. Ultimately, I think a one to one is going to be best for him. But for the short term, I would be trying to treat the pain with a higher THC combination because he's used to a lot of THC. Makes sense?

Paul: No, it makes a ton of sense. I do want to ask, as we're discussing this as a medication for treatment for specific conditions and we're doctors to think in terms of risk benefit, I would like to hear how you counsel patients about the potential downsides. Are there neurocognitive effects, what medications should be avoided with cannabis?

Dr. Aronson: Right. THC has its place, patients say, "But the pain was still there, but it didn't bother me as much or this is really the only way that I was able to relax." That's okay. But what was becoming clearer and clearer is that the combination of THC and CBD, because of the way that they sit in the cannabinoid receptors is most effective for pain. That's really where we want to get to. CBD so far has very few side effects of which we're aware. We are seeing when people get to very, very high doses, which is usually for the treatment of severe seizure disorders, some liver enzyme abnormalities. But in the doses that people are taking, we're really not seeing that. CBD is really pretty benign. THC on the other hand is where the adverse effects are.

In addition to the main adverse effects of THC and I say this to my patients, "The main adverse effect is being high. We don't want you to be high. That's going to not enable us. It's going to interfere with our ability to understand whether this is working for your pain." Because you telling me, "My pain was still there, but I didn't feel it as much." That doesn't really help me understand whether this is working for

your pain. We want to, we tell them being high is an adverse effect and we want to avoid that. But it's really just uncomfortable. What are some of the other adverse effects that we're trying to avoid? There is data suggesting that THC can raise your heart rate, cause tachycardia, might cause a little bit of hypertension. People who have a history of coronary artery disease, we want to take a very, very careful history of that and make sure it's stable, start them on a low dose of THC. I have one patient that I take care of has that, and he's been in a car accident, and we started with very low THC, and over time, she's gone up on the THC. The contraindication is unstable heart disease. The area to be cautious and to consider adverse events is that THC can raise the heart rate.

The other really big area of concern has to do with psychiatric illness and neurocognitive changes. You get THC onboard and you have neurocognitive changes. You forget things, the next day you can't remember what you did. Most of that goes away. Most of that is not a long-term neurocognitive effect. But what's been observed in multiple observational studies is that people who smoke a lot of marijuana are more likely to have a whole bunch of adverse outcomes that are essentially mental health outcomes. More likely to have amotivational syndromes to drop out of school, to be unemployed, to develop depression, to develop psychosis particularly if there's a family history or a vulnerability, which we often don't know about. We have those data from observational studies, their association, not causation, but there is so much data like that that if we have somebody who were concerned about from a psychiatric standpoint or is young and their brain is still developing, then we have to be extremely thoughtful about whether there is any benefit using THC in those people.

Paul: The process as I noted for certification that patients have to have access to the internet in some capacity to get the card itself or even the application process cost some money. No insurance to actually covering the product during dispensary. They have to have access to healthcare provider, who will do this certification. This seems a little bit like a setup for disparity. Only certain privileged people are going to be able to actually have access to medical cannabis in the first place. I wonder if you wouldn't mind talking a little bit about if that is in fact the case and what disparities exist?

Dr. Aronson: So, that's totally the case and I appreciate the question. When I give this talk and as I'm talking to you, this is all a really big hassle. Really, we have to put patients through this in order for them to have a trial of this medication? The answer is yes. That has to do with the history, and the war on drugs, and the conflating of the adult use and the medical uses of cannabis. But that's where we are right now. We have this incredibly cumbersome system to which we have to adhere in order to allow patients to try medical cannabis. There's many, many predatory persons who are taking advantage of this. I was talking about the online certifiers and the telephone certifiers and what we've done at Montefiore, which is in a very poor part of the world is we've embedded this program within primary care, so that patients don't have to pay for the evaluation. That's great. But they still have to pay for the product when they get to the dispensary. We say to somebody, "This little bottle of 30 ccs of tincture is going to cost you $75."

And essentially, the response most of the time is, "Well, I can't get it then." Because people live on a seriously fixed income and that's not something that they can do. That is really one of the most heartbreaking things that I have experienced in my many years practicing medicine. We've studied the initial outcomes from our cannabis clinic and what we found is that only half of people that we certify

are going to the dispensary and purchasing the product. The other sequela of this is that, oftentimes, people are not getting up to a therapeutic dose. In order to save money, they're spacing out what they have over a long period of time and then saying, "It didn't really work for me and I'm going to stick with my Percocet," because Medicaid pays for that.

Matt: It is depressing that we have a safer way that can be a little bit more exact and we can more easily titrate what the patient's getting. We can reduce harm by they're not getting things off the street that might be contaminated with other things. Maybe they'd be smoking less if we were using more of the tinctures and the other formulations you mentioned. So, it is a shame. But that is the status of where we are now.

Dr. Aronson: I just want to be careful about the word, safer.

Matt: Okay.

Dr. Aronson: Because it's safer than what. Is cannabis safer than opioids? This is the question that people really want to know the answer to. There is data looking at this question, but they have limitations to them. What we mostly have for this question are ecological data. This state has medical cannabis laws, and this state does not, and our doctors prescribing fewer opioids in the state that has medical cannabis in the state that doesn't have medical cannabis. There were a number of studies that showed that about seven, eight years ago. More recently that looks like it's not true anymore. There's either equal or maybe even more opioid prescribing in the states with medical cannabis. We don't really know the answer to this question.

Matt: Oh, boy. Yeah, that's not good.

Dr. Aronson: What we need are-- Even if all the studies went in the same direction, it would still be ecological, this population compared to that population. What we really need to know is, you have this much pain, and you start medical cannabis, and you have a little less pain, and you start medical cannabis. What happens to your own use of opioids? Does it not the average of the two of you? Does this for any one person are they using fewer opioids after they start medical cannabis? That's a study we're doing at Montefiore and that's really the question that we need to know the answer to. Do I believe that cannabis is safer than opioids? Yes. But are there people who are less certain of that? Yes.

Matt: Dr. Aronson, if you could give the audience maybe two or three take home points, and then we'll hang around, and we can answer any follow up questions from people?

Dr. Aronson: I think that really what I want you to take away from this is that patients or people in their networks are using cannabis or thinking about it. They want to talk about it with us. If we don't have the tools or the knowledge to talk about it with them, whether we're going to recommend it or not, but just to have these conversations, they're going to get the information somewhere else. They're going to get it from budtenders, they're going to get it from family, we need to know what we're talking about. That's one. Data are lacking for most conditions. They're best for pain and I told you what they are. Among cannabis naive patients, I believe that a trial of cannabis is reasonable. If the concern for cannabis use

disorder, which we were hoping to talk about, but I probably talked too much and we didn't get there. If the concern for cannabis use disorder is low.

If you have a naïve patient, you're not concerned about use disorder in that patient. No contraindications, no psychosis, pregnancy, or unstable heart disease. A trial of cannabis is reasonable. It should include specific doses of THC and CBD not go down to dispensary and see what the budtender thinks you should buy. In many states, such trials will be highly limited and what the patients can do because of cost. And finally, for heavy cannabis users like Jake, there are harm reduction approaches to using that can be more protective of their health. So, switching to the regulated market, avoiding smoking, and really avoiding the criminal justice system, which is very bad for your health.

Matt: Thank you so much and definitely, there's room for a Part 2. We have an Addiction Medicine series coming out. Cannabis use disorder has to be part of that. So, this will not be the last that we cover this topic on the show and thank you everybody for joining us.

[applause]

Paul: This has been another episode of the Curbsiders bringing you a little knowledge food for your brain hole.

Matt: Yummy.

Paul: [laughs] It must be late because I like that one. Gets you short notice at the *curbsiders.com* and while you're there, sign up for or mailing list to get our weekly show notes in your inbox, plus twice each month, you'll get our new Curbsiders Digest recapping the latest practice changing articles, guidelines, and news in Internal Medicine.

Matt: We're committed to high value practice changing knowledge and to do that, we need your feedback. So, please subscribe, rate, and review the show on Apple Podcasts or contact us at the *curbsiders@gmail.com*. You can also claim free CME credit through VCU health at *curbsiders.vcuhealth.org.* A special thanks to our writer and producer for this episode, Malini Gandhi. Also, a special thanks to the team at Pod Paste for helping to produce and edit this episode. Elizabeth Proto runs our social media, Steward Brigham composed our theme music, and Paul, with all that until next time, I've been Dr. Matthew Frank Watto.

Paul: And Matt, I'm glad you are. And as always, I remain Dr. Paul Nelson Williams. Thank you and goodbye.

[Transcript provided by SpeechDocs Podcast Transcription]