SOMETHING FOR THE PAIN

EPISODE 23: Surveying Substance Use Disorder: Marijuana

(30 mins)

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[cue guitar music]

[Sam Steffen]

This is *Something for the Pain*, a podcast produced by Project ECHO Idaho, made for Idaho's healthcare professionals working to prevent, treat, and facilitate recovery from opioid and substance use disorders throughout the Gem State. I'm your host, Sam Steffen.

[theme song]

Today we're continuing our theme of 'Surveying Substance Use Disorders' and are going to be talking about Marijuana. This episode features a presentation by Michelle Cullinan, Psychiatric Nurse Practitioner at Sage Health Care in Boise, titled "What is Going on with Cannabis and CBD?" This lecture was recorded on November 16, 2022 as a part of ECHO Idaho's Behavioral Health in Primary Care Series. Here to introduce today's presenter is ECHO Idaho Program Manager, Shannon McDowell.

[Shannon McDowell]

Hello everyone, welcome into our ECHO session for today. My name is Shannon McDowell. For those of you who don't know me, I am a program manager with ECHO Idaho. I did just want to mention that today's session, we're going to be talking about cannabis and CBD. This is not an approved form of treatment by the FDA, and so the purpose of today's session is to discuss, debate and explore the evolving topic. So we're really excited to have Michelle Cullinan who is one of our panelists, be presenting on cannabis and CBD.

[Michelle Cullinan]

Hi guys, Michelle Cullinan, nurse practitioner at Sage Healthcare. You know, I'm not really talking about cannabis as treatment today, so I wanted to get that out of the way, but I want to have a conversation with everybody about how to talk to our patients about cannabis.

In Idaho we're surrounded by states now where cannabis is legal in one form or another. I think we're one of three states now where it's completely illegal in all forms. So it's important for us to know how to talk to our patients about this because we're seeing it more often in our clinics with our patients. We need to know what they're using and how to talk to them about that. By no means am I suggesting that you recommend cannabis for treatment, but I think it's important to start these conversations.

Our learning objectives today are, I'm going to go over some terms that you may hear with your patients. We're going to focus a lot on concentrates and edibles because I think this is where we're seeing most of the issues. We're going to talk about high-potency THC which is a big issue where we're

getting a lot of cannabis-induced psychosis. So we're going to talk about intoxication, cannabis-induced psychosis and Cannabis Use Disorder.

So some good terms to know when we're talking to our patients. With cannabis, we're talking about CBD and THC, those are the two components that we see in cannabis, that's the two that we hear most frequently about. CBD is the neuroprotective part of cannabis. It reduces the undesirable effects from THC. Really important. It helps protect you from the psychoactive, so the paranoia, the anxiety. It's used for medicinal purposes. THC is that psychoactive part. It is being studied for use for appetite, for anti-emetic. There are definite uses for that. We see that with Marinol with the medicinal uses that we use for cancer, for MS, for pain. And then we're going to go into the Indica and Sativa, so these are the strains, the strains of marijuana that patients often talk to you about. You know, "I get a Indica strain," or "I get a Sativa." The difference between those being Indica is the strain that's most well known to give you a relaxing feeling, so it's that sleepy high. Whereas the Sativa is the creative high, so it supposedly gives you more energy, improves your focus. Hybrid is what we're seeing most frequently, it's where we're getting the really high THC strains, where we're kind of getting into some problematic areas. So these are the different forms, the different terms that you're going to hear for concentrates. I think we hear it a lot with our patients who are talking about "dabbing" or "getting shattered" or getting "rosin."

Concentrates are the oil that you can get from THC products, but the THC in concentrates is significantly higher than you're going to get in flower products. It's a preferred method of use now because it's smokeless and most of the time it's odorless. You can hide it pretty well. THC products are inhaled through a process called "dabbing" or "vaping." Now a big safety issue with this is that people are trying to make concentrates at home, and even in the dispensaries they're using solvent processing, which can sometimes be made with butane solvents, which can be pretty dangerous. If the butane isn't completely taken out of the product when the people are using it they can get in a lot of trouble cause they're now smoking butane. So we're looking out for butane hash oil, which is a dangerous form of cannabis. On average, that butane hash oil, the THC concentration exceeds even the regular solvent-based concentrates. Solvent-based concentration on average has a THC average of 54-69% and the butane is exceeding over 80% THC. Non-solvent products, which are by dry processing, dry-ice processing, water-based processing or combining pressure with heat, those THC concentrations are between 39-60%.

Edibles! The big thing about edibles that we're going to want to pay attention to the percentages, the THC versus CBD. This can kind of tell you what it's doing, you know, the Indica versus the Sativa. We're going to want to pay attention to serving size. Serving size is a big thing to talk to your patients about if they're using edibles because these typically have like 100 mg in the package, but a serving size can only be 10mg. So Oregon rule: they say that the consumers can only purchase up to 100mg in a package but the serving size of those packages can only be 10mgs.

[Sam Steffen]

The rule that Michelle is referring to here is determined by the OLCC, the Oregon Liquor and Cannabis Commission.

[Michelle Cullinan]

So really if a patient is getting a gummy, a small little gummy, that gummy can be 100mgs of THC. A serving size is only going to be a tenth of that gummy. And that's where we're getting in trouble because patients are eating the whole gummy and then they're not feeling well for a while.

Canada has some really good resources on recommendations if you're going to be starting edibles. One of the recommendations is that you want to consume no more than 2.5 mgs and you want to wait up to an hour before consuming more. And that's because when you consume THC, it's metabolized into the liver into this eleven-hydroxy THC product, which is 1.5 to 7 times more potent than regular THC that you get from smoking flower products. The effects of edibles can begin between 30 minutes to two hours after you consume and can last up to 12 hours, even up to 24. Edibles are where people can get into trouble if they are not experienced cannabis users because you just don't feel that high that you're expecting, or that you get when you're inhaling or using flower products.

A requirement on the labels for Oregon products: so, you know, they have a list of requirements. A big thing that we're looking at: THC versus CBD. I keep saying that we're looking at that ratio, and the reason that that ratio is really important is because like I said, CBD is a neuroprotectant. It's going to protect you from the psychoactive, the things that we don't necessarily like from the THC. We would recommend a higher CBD because we want to protect our brain, we want to protect from psychosis, we want to protect from the anxiety, from the panic.

Now, when I was researching this, I was looking at the menus, what I found is that it's pretty difficult to find something that's higher CBD, low THC because people are looking for high THC. So that's unfortunate.

High potency THC: so the reason why we really want to talk about marijuana is because potency has changed significantly over the last 30 years. In 1994 the average THC content in your normal back-street weed would be about 4 % which is so much lower than what we get now. Even 20 years later it was at 12%. Today your average THC for flower products is between 10-25%. Looking at those menus online I can say that most of them were in the 20s, so 20-25% is kind of on average of what I saw. In Washington, looking at some research on sales, strains with greater than 15% THC is 92% of the flower sales in Washington for marijuana, so people are consistently getting higher levels of THC. The issue with that is with higher levels of THC, we're also getting decreased levels of CBD, so we're not getting that neuro-protectant that comes with this product. The emergence of new delivery systems in high-concentration products has lead to increased consumption and health consequences. That's where the cannabis-induced psychosis is coming in, we're seeing that more frequently with these high-potent products. Concentrates and extracts have significantly higher level THC, we saw that with the concentrates, the THC level's between 50-80% versus the flower products which is that, you know, 20-25%. It's a popular choice, concentrates, because they're cost effective and their shelf-stability—they don't stale.

So cannabis intoxication: We know that intoxication is going to be different from psychosis, but psychosis can happen in intoxication. Typically intoxication will develop within minutes after inhaled use, hours after ingested. Your symptoms will typically last 3-4 hours, but can persist up to 24 hours and we're seeing that, again, with the edibles lasting longer periods of time. Your psychotic symptoms can be present but differences from cannabis-induced psychotic disorder being: when you're experiencing a brief moment of psychosis when you're intoxicated or when you're high, your insight is in-tact; the psychotic symptoms are present but they're not severe or persistent enough to warrant clinical

attention. We're typically not seeing patients come into the hospital because they're high; we're seeing patients come into the hospital because the high is severe and they're uncomfortable and family is noticing that something is wrong, they're not coming out of it.

Cannabis induced psychotic disorder: so I think we've seen this a lot more in an in-patient setting where patients are coming in that have no previous history of psychosis, you know, no family history of psychosis; family has noticed that they're experiencing these really bizarre symptoms and they're not really explainable. With cannabis-induced psychosis, hallucinations or delusions are developed during intoxications, but they're not going away. It causes clinically significant distress or impairment in social, occupational or other areas of functioning. Cannabis is the substance that's producing the disturbance, so this is not explained by a previous psychotic disorder or other substances. It has a much longer duration than just intoxication; it can last from days to weeks. If symptoms are lasting more than one month, then we need to go outside of cannabis-induced psychotic disorder and look at other psychotic disorders. Psychotic symptoms occur in the context of recent intoxication, not with withdrawal. So we're not really seeing psychosis only in withdrawal, we're seeing it with intoxication going forward.

One of my biggest issues in doing this research is we just don't have a lot of studies available. Because of the illegal status, there's just not good research out there right now. This research was done a while ago in Europe and Brazil…

[Sam Steffen]

The study Michelle is referring to here is was conducted by DiForte et. al, titled, "The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case control study." Published in *The Lancet Psychiatry*, 2019.

[Michelle Cullinan]

And they were looking at patients who had just experienced their first psychotic episode, and they were able to identify how their cannabis use, particularly the potency of THC in their cannabis, and how it affected their psychosis. The focus of the study was to identify patterns of cannabis use with strongest effect on odds of psychotic disorders and if differences in such patterns contribute to the variations and the instance rates of psychotic disorders. So what we see in this is people who use daily high-potency THC—and for this study, high-potency is going to be above 10% concentration—for that, we're seeing that they're 5 times more likely for that cannabis-induced psychosis to develop into an actual psychotic disorder. That's pretty significant, I would say. So with people who are using cannabis products on a daily basis, are they using those really high-potency products? And you know with flower being the lowest-potency on the menus, it's still between 20-25% for most products.

Treatment recommendations: so, for cannabis-induced psychosis, what are we doing with them? How are we treating them? Cause it can be a little more complicated than just giving them an antipsychotic. The recommendations that we have right now is that we're going to start with a second-generation antipsychotic. They have been found to be effective. The recommendations that I saw state Zyprexa. If Zyprexa is not effective, maybe try some Haldol. If you're still seeing symptoms or symptoms are not improving, then using an antileptic carbamazepine was shown to have rapid effects in conjunction with an anti-psychotic. And then this last recommendation I feel is really important: if you're patient is not going to stop using cannabis, which we know is going to be the best way to prevent a further episode, if

they're not going to stop using, we want to keep them on an anti-psychotic daily to reduce the risk of psychotic relapse. Recommendation being Aripiprazole, 10mgs a day, just to kind of be a protectant. Obviously we're going to try to recommend to our patients that stopping use is going to be the most beneficial thing for them to do.

Cannabis use and psychotic disorders: So a lot of research which has kind of been inconclusive, and some of them, I think the studies are a little skewed—but we're trying to see: does marijuana cause schizophrenia? A Danish study from 1994-2014 looked at a lot of people with substance-induced psychosis that would later on go into a schizophrenia or bipolar disorder.

[Sam Steffen]

The study Michelle is referring to here, conducted by M.S.K. Startzer and M. Nordentoft, titled "Rates and predictors of conversion to schizophrenia or bipolar disorder following substance-induced Psychosis" was published in the *American Journal of Psychiatry* in 2017.

psychosis.

[Michelle Cullinan]

In that particular study, 41.2% of the patients with cannabis induced psychosis converted to schizophrenia, 47% converted to either schizophrenia or bi-polar disorder. Also in that study, it showed that cannabis had the highest rate of conversion to either schizophrenia or bi-polar disorder compared with amphetamines, cocaine or hallucinogens. I have a little bit of issue with this study. I think cannabis has more availability, it's a little more socially acceptable. I'm not convinced that amphetamines wouldn't have a higher rate but the study, what it's showing us is there definitely is a risk to that conversion. We're also seeing, there's some new studies coming out that are looking at gene variations: how are genetics involved in the risk of that conversion to psychotic disorders? We definitely need more of those. The one that we see right now is this AKT-1 gene variation, they have found that people with this variant are seven times more likely to develop psychosis than those who did not use marijuana. THC use is genetically predisposed or at-risk populations leads to earlier diagnosis of psychosis. So if we know that you're already at risk for schizophrenia or bi-polar disorder or a psychotic illness, you're going to be more at risk when you're using marijuana. Cannabis use in patients with pre-existing psychotic disorders often experience more frequent symptom relapse, rehospitalizations and more severe positive symptoms. There are studies going on right now to look at negative symptoms, specifically with CBD—again the difference being CBD not THC. So when we talk to patients about, you know, "…marijuana will help everything, it's even helping this…" it's not the THC that's necessarily helping, it's the CBD.

Cannabis use disorders. This is just from the DSM-5, this is the criteria for cannabis use disorder. The recurrent use, the difficulty with abstaining from use, withdrawal; there is a withdrawal from cannabis, it's typically seen with anxiety, irritability, restlessness, depression and insomnia—those are the big symptoms of withdrawal that we see. We do have treatment recommendations for cannabis use disorder: cognitive behavioral therapy, motivational enhancement therapy, contingency management, and then some medication treatments, including gabapentin which I've been using a little bit more with my patients and it has been helpful to kind of decrease the irritability and the anxiety. The recommendation that we're seeing in studies is up to 1200 mgs a day which will help with cravings as

well as helping with those withdrawal symptoms. And the NAC 1200 mgs twice a day, this also has really good research in reduction and cravings, and it's very well-tolerated with few adverse effects.

What I want you to remember from this presentation is that we need to talk to our patients about pot. We need to be comfortable talking to them about this. We are surrounded, like I said, by states where it's legal. It's going to happen. If it's eventually going to be legalized here, we need to know what patients are talking about when they're talking about strains, when they're talking about products, so we can educate them. This is not a topic meant to recommend marijuana use, this is a topic where I want you to be able to educate on marijuana use. Talk to your patients, you know, "if you're going to use, maybe use something that's a little higher CBD, a little lower THC…" so that we can prevent this psychosis that we're seeing more frequently.

[Shannon McDowell]

Um, we had a few questions in the chat, Michelle, that I just wanted to cover. Mark, you had a question. Did you want to come off of mute to ask your question?

[Mark Worthen]

How can folks identify butane hash, I think you called it…

[Sam Steffen]

Speaking here is Mark Worthen, an ECHO Idaho participant.

[Mark Worthen]

Can they smell it or what?

[Michelle Cullinan]

So, I don't know how to identify it, I think it's important to tell patients not to try to make concentrates on their own. You know you can get these recipes online and gosh, I think one story I read about is they're making this butane hash, not getting the butane out, and then smoking butane and getting really, really sick from it. You know when you're getting concentrates from the dispensaries, you can kind of see the ingredients or how they're doing it. You can talk to your 'bud tenders.' Now, are they accurate? You know there's these laws in place in Oregon that say you have to have these ingredients listed on the products, there has to be an accurate description of the product, how it's made. My thing is, when I have patients who are using any cannabis product and I want to try to give some sort of harm reduction techniques, I would much rather they get their products from a dispensary than from an alley or trying to make these things on their own.

[Tara Whitaker]

Hi, um, so I think the main thing I get in primary care, and I don't know if you guys have—this is like a common little mini-case…

[Sam Steffen]

Speaking here is Tara Whitaker, Family Medicine Physician at Capital City Family Medicine in Boise. Dr. Whitaker is also a standing panelist for ECHO Idaho's Behavioral Health in Primary Care series.

[Tara Whitaker]

Which a patient who has a little bit of depression, low anxiety, usually younger patient, may be on an SSRI, and they sort of mention in passing, “oh, yeah…and I smoke marijuana.” And you know sometimes it’s daily, sometimes it’s every once-in-a-while, and a lot of times they’re like, “No, it’s super helpful.” And so my party line is generally like you know, “It’s a psychoactive substance, you have to be really conscious of how it’s affecting you, it’s obviously illegal, so you know that could be really bad for your health and your mental health if you get caught with it…” but aside from that I think what I’m left with is kind of like, we don’t know. And you know, it’s not something I’m prescribing them, obviously. But is there anything else that I should be cautioning them against? Or like, any interactions with psychiatric medications? Or things I should tell them to watch for that’s part of your advice?

[Michelle Cullinan]

Yeah, I want my patients to feel comfortable talking to me about it. So what I would do is, I would ask them questions, you know: “What are you using? Are you smoking? Are you vaping? Are you eating?” And then: “Well, what kind of products are you getting? Do you know if your products are really high THC?” And then we kind of go into the education part: “Maybe let’s look for lower THC, higher CBD and this is why—cause we don’t want you to go into psychosis. We want you to keep your brain safe as much as possible. CBD is where we’re seeing more of the benefits, rather than the high.” Even with depression and anxiety, though, that’s more the CBD, that’s not the THC.

[Shannon McDowell]

You’re next question, Michelle, was from Sue, who asked if there are any risks for CBD use alone?

[Michelle Cullinan]

Yeah, I mean I think everything has its risks, everything has its side-effect. But also, a big risk being that CBD is not regulated. CBD is a supplement, so we’re not knowing exactly what’s in it. There’s no FDA-approved CBD product that’s being sold in the stores right now, and I think that’s the riskiest thing. Typically if you look at a lot of the CBD products that are sold in the stores, CBD’s the last ingredient listed which we know means it’s not the thing that’s in there that’s most in there. So I would just talk to them about that, talk to them how you talk to them about supplements and supplements being kind of risky.

[Shannon McDowell]

So Katy’s mic isn’t working, but she said, ‘I understand research is still limited for a variety of reasons. Are you aware if there’s any data on impact on the liver’?

[Michelle Cullinan]

With edibles there could be impact on the liver because it’s getting metabolized through the liver. But no, there’s just limited research. I haven’t seen any specific…there could be, I just didn’t see any when I was doing my research. We need more research. That’s the big thing. We need way more research than there is available right now. One of the things I was really trying to look for was what is a dangerous amount of THC? What is the ‘overdose content’ or ‘milligram use’ when you’re eating? And there’s just

nothing saying that, and I think part of that is because people's tolerance levels are different, but it would be nice to have some sort of safety recommendation, something that we have kind of for alcohol.

[Mark Worthen]

Quickly regarding adverse effects, what I tell my patients. The strongest research support is for a-motivational syndrome, which affects a good chunk of people who smoke pot regularly, and cognitive impairment and exacerbating anxiety and causing panic attacks, that one they usually know right away. You know if we could get it schedule-2, instead of schedule-1, it's just really really hard for researchers to obtain the cannabis to do the studies because of the way the federal government continues to classify it.

[Neil Ragan]

Well the other thing, one other impact, too, is—

[Sam Steffen]

Speaking here is Neil Ragan, a physician at Health West in Pocatello, and a regular participant at ECHO Idaho.

[Neil Ragan]

In fact, I just had a patient this morning who is an older woman, long-time smoker, has been able to quit smoking regular tobacco, but is still using marijuana. She has some degree of COPD and we couldn't help but notice on her initial vital signs this morning that her oxygen saturation was a little bit low, and the smoking marijuana cannot possibly be helping that. So there's just lots and lots of effects, some of these are age- and co-morbidity-dependent, and so that's part of what makes the research, I think, so complicated, because it's not only young healthy people that are using marijuana products.

[Shannon McDowell]

Thanks, Neil. Alright Rachel, you want to close us out here?

[Rachel Root]

Uh, just a quick question…

[Sam Steffen]

Speaking here is Rachel Root, psychiatrist at Treasure Valley Psychology in Boise. Rachel is also a standing panelist for ECHO Idaho's Behavioral Health in Primary Care series.

[Rachel Root]

You know, understanding that the research is very complicated and the information is limited, Michelle, do you or anybody else on the call have any good resources that they use to point their patients to, knowing that it is limited out there but that all of our patients like to do their own research?

[Michelle Cullinan]

So Canada had really good resources, and I think it was realistic. So, you know, "if you're going to start using edibles, do it this way…", "…if you're going to start using marijuana, this is a safe way." Canada's doing it right in terms of educating the public on these things.

Music

[Sam Steffen]

That again was Michelle Cullinan, psychiatric nurse practitioner at Sage Health Care in Boise presenting "What is Going on with Cannabis and CBD?" That lecture was recorded live on Nov. 16, 2022 as a part of ECHO Idaho's Behavioral Health in Primary Care series.

If you'd like to watch the Zoom recording of that presentation, that video is currently available on the ECHO Idaho YouTube channel, which you can access through our website. The PowerPoint slide deck as well as information about how to contact some of the organizations and services mentioned in that talk, are available in our podcast show notes, on our podcast webpage: www.uidaho.edu/echo-podcast

Banjo music

If you're interested in joining our free, live ECHO sessions to receive Continuing Education credit, learn best practices, ask a question or grow your community—please visit our website at www.uidaho.edu/ECHO where you can register to attend, sign-up to receive announcements, donate, and find out more information about our programs.

[Fade out banjo music]

Season three of Something for the Pain is brought to you by ECHO Idaho, supported by the WWAMI Medical Education Program and the University of Idaho, and is made possible with funding provided by BJA, the Bureau of Justice Assistance.

[cue guitar strum and guitar theme w/ lyrics in background]

We here at ECHO also want to hear your feedback. We welcome your questions, comments and suggestions and invite you to email us at echoidaho@uidaho.edu. And don't forget to subscribe to Something for the Pain using your podcast app. And if you have a moment, write us a review!

[bring up theme song lyrics and chorus until first "echo Idaho", then drop volume and continue playing]

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The contributing voices on today's episode were those of: [Michelle Cullinan, Shannon McDowell, Mark Worthen, Tara Whitaker, Neil Ragan and Rachel Root].

We'd also like to thank all of our listeners, without whom none of this would be possible. Without you, we'd just be talking to ourselves. [Continue to theme chorus, fade]