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NAADAC
THE ADDICTION PROFESSIONAL'S GUIDE TO
ADDRESSING MEDICAL MARIJUANA USE - PART 1

WEDNESDAY, OCTOBER 21, 2020
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>> SPEAKER: The broadcast is now starting. All attendees are in listen only mode.

>> SAMSON TEKLEMARIAM: Hello, everyone, and welcome to today's webinar on what addiction professionals should know about medical marijuana, part one, presented by Aaron Norton.

It's great that you can join us today. My name is Samson Teklemariam and I'm the director of training and professional development for NAADAC, the association for addiction professionals.

I'll be the organizer for this training experience. The permanent home page for NAADAC webinars is www.NAADAC.org/webinars. Make sure to bookmark this page so you can stay up-to-date on the latest in addiction education.

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Every NAADAC webinar has its own web page that houses everything you need to know about that particular webinar. Immediately following the live event, you will find the online CE quiz link on the exact same website you used to register for this webinar. That means everything you need to know will be on (reading website.)

As you can see, we're using go to webinar for today's live event. You'll notice the go to webinar control panel that looks like the one on my slide here. You can use that orange arrow anytime to minimize or maximize the control panel. If you have any questions for the presenter, just type them into the questions box. We'll gather those questions and give them to our presenter during the live Q and A. Any questions that we do not get to we will collect directly from the presenter and post the questions and answers on our website.

Lastly under the questions tab, you will see another tab that says handouts. You can download the Power Point slides from that tab and a user friendly instructional guide on how to access our online CE quiz and immediately earn your certificate. Please make sure to used instructions in our handouts tab when you're ready to take your CE quiz.

Also in that handouts tab are a few additional resources from our presenter that he will cover during his presentation.

Now, let me introduce you to today's presenters Aaron Norton is a licensed mental health counselor, a licensed marriage and family therapist and master addictions counselor who serves as director of the national board of forensic evaluators, adjunct instructor at the university of South Florida, southern regional director for the American mental health association and (indiscernible) presenter and clinical supervisor, Aaron was awarded mental health counselor of the year by the American Mental Health Counselors Association, and (indiscernible) in 2016. He is also been published in several journals and magazines in the addictions and counseling profession. NAADAC is honored to present this webinar to you, provided by this incredible presenter and close friend of NAADAC, so Aaron, whenever you're ready, the floor is yours.

>> AARON NORTON: All right, thank you, Samson, and welcome everybody.

I'm disappointed that I can't see you all in person for this presentation like we originally planned on, but I'm excited that we can still meet together, even if online and get this important information out.

And I also just want to give a quick shoutout to Samson and Allison and to NAADAC, because let me tell you, having presented a whole lot of webinars, their webinar system is just a well oiled machine. They're so organized in their approach and that makes it a lot easier for us as presenters when you have a big team like this working with you.

I started getting kind of excited about this topic several years back when we legalized medical marijuana here in Florida where I practice, and then I noticed because I do clinical supervision with a lot of registered interns, that's what we call essentially licensed associate counselors here in Florida, we call them registered interns and what they were noticing in a lot of their

practices is nobody knew what to do once medical marijuana was legalized, because that changes a lot of things, especially for mandated treatment and substance use treatment. Because what they were telling me is so they'll have a client who comes in, and they to complete treatment successful to get maybe their license back after a DUI, or maybe to comply with the terms of their probation, or maybe it has to do with possibly being reunified with a child who might have been taken from a home because of a parent's addiction problems, and then of course they talk about requiring abstinence as a part of successfully completing treatment and they talk about urinalysis drug testing, the client doesn't want to stop taking marijuana, so they get a medical card, I haven't had a client turned down for medical marijuana, not a single one that has tried to get one.

So what do we do now, they're here, maybe they were referred because of their marijuana use but they're still using marijuana, just the same as they were before treatment, only it's legal now and this raised a lot of questions, so I thought it would be important to make sure that we get some good information out there, really dug in, started examining best practices, doing some training with medical marijuana prescribers and so forth, until we could put together a pretty good tool that we think will be very helpful and that we'll be covering tomorrow.

But today we're going to move at a fast pace to give you the foundation on medical marijuana so that tomorrow for those of you who are going to be in part two, you can apply the information that you learned today with some clinical scenarios and see how you can take this information to your practices and use it to your advantage.

And hopefully to your clients' advantages as well.

All right. So let's get into the slides here. There we are. Okay.

Now, we already took care of handouts. They're here in your go to webinar control panel but also if for some reason you needed to or wanted to you can access them using this link that you see on the screen here, and we have lots of materials available for you, the handout version of slides, the DSM-V substance use disorder checklist which we'll be using tomorrow, letter templates for interacting with medical marijuana prescribers which we'll talk more about tomorrow as well and the decision making matrix that we created along with an accompanying article that was published in the American Mental Health Counselors Association's magazine, the advocate magazine that tells you a little bit about the tool and how it was developed.

First thing I want to just throw out there is we are biased as clinicians. It doesn't concern me too much that clinicians have bias. It concerns me more when we say we don't have bias, because it is normal to have bias. Bias can very literally mean that you

have your own experiences and your own beliefs and viewpoints and you carry those to work with you, and it's important to be aware of those biases, especially when it comes to politicized or potentially conflicted topics like medical marijuana and this does seem to be a hot button topic. I've seen a lot of very heated debates with a lot of passion attached to them dealing with medical marijuana. So I think it's very healthy, very acceptable for you to look within yourself and examine your bias as it relates to this issue or any other issue that you address in your clinical practice.

Also I want to throw out there that our ethical codes require us to do so. Our ethical codes require us to examine our own biases, be aware of them and also try to prevent ourselves from imposing our beliefs on our clients.

So some of that will connect to some of the things we're talk about later on today and tomorrow. But also health care professionals, even prescribers, are ambivalent about medical marijuana. That just seems to be the case. Here's an example of a fairly recent review of 26 different studies revealing that health care professionals support medicinal (indiscernible) and health professionals voice concern regarding direct patient harms and indirect societal harms. So in other words the prescribers themselves acknowledge that there's an awful lot they don't know and they have some very mixed thoughts and feelings about prescribing medicinal marijuana. Certainly there are exceptions but generally health care professionals are ambivalent. They have mixed thoughts and feelings, and hopefully you as counselors are accustomed to working with ambivalence and hopefully you can notice it within yourselves.

What we're covering is the a comparison of THC and CBD, although most of the time we'll be talking about medical THC which will become obvious later on. We'll talk about disorders treated by medical marijuana. We're talk about dosing recommendations and some adverse health effects, side effects and risks. The positions of various professional associations, the questions to answer about medical marijuana in your state, especially legal issues that could connect to your practice. We'll talk about the risk reduction versus the recovery paradigm, and/or harm reduction as many people will call it. We'll differentiate between marijuana misuse or cannabis use disorders and the therapeutic (indiscernible) and then tomorrow we will focus more on the clinical mental health counselors decisional matrix, a tool that you'll find helpful.

This is a topic that has an overlap between the law, ethics and clinical practice. Sometimes all three of these things align quite nicely. Sometimes they conflict with each other. This is one of those areas that can get very murky and gray.

This brings us to our first polling question. According to NIDA, the national institutes of drug abuse, what percentage of

people who have used marijuana in the past 12 months meet the DSM-V criteria for a cannabis use disorder? Your options are five to nine percent, 10 to 19 percent, 20 to 29 percent, 30 to 39 percent, or 40 to 49 percent.

Give you a moment to chime in and decide what you think the answer to this question is.

>> SAMSON TEKLEMARIAM: Awe some, thank you so much Aaron. This is Samson. Thank you for participation in the poll. We've already got 60 percent of you voting. We'll give you about 20 more seconds, and as Aaron mentioned you have five options here. For those of you who came in a little late, if you have any questions for Aaron, he's going to hold a little bit time towards the end for a live Q and A so go ahead and send your questions into the questions box. Go to webinar control panel and we will answer your questions in the order in which they are received.

About five more seconds here and we will close the poll.

Perfect, thank you for answering.

>> AARON NORTON: All right. So the single most popular answer with a close second is 30 to 39 percent. 27 percent of you chose that option. And congratulations, this is the very first time I can ever remember giving this webinar to a group of professionals who the majority of whom selected the correct answer.

30 to 39 percent is right. And if we can go ahead and get back to the slides, I'm going to kind of show you the reference point for that statistic.

So 30.6 percent was the answer, both according to NIDA and to research that they were referencing, Hasin, et al, in 2015 and that's a slight reduction from ten years prior. About 30 percent of people who have used marijuana in the past 12 months would meet the criteria for a cannabis use disorder. Some of you might be confused because you might have heard a statistic, ten percent. That statistic is about cannabis dependence. That's a statistic that even the national association for the reform of marijuana legalization likes to acknowledge, but that is the more severe moderate to severe cannabis use disorders. When you include mild cannabis use disorders, we're looking at more like 30 percent.

And of course that also raises the bigger issue of there's a common myth that marijuana is non-addictive. An example there is a very well-known attorney here in my state, the state of Florida, but also becoming very big in Georgia and some other states, John Morgan, and he is a proponent of medical marijuana. And he on a news show was debating the issue of medical marijuana, and he said nobody's addicted to marijuana. And I of course as an addictions professional, really wanted to kind of call the question whether or not marijuana is addictive, because of the work that I do. So I contacted the show that had this debate and said, you know, you had an attorney on there, and he misled the public. He said that marijuana -- nobody's addicted to marijuana, and I think it would

be great for you guys to do a little fact checking on that and maybe provide your viewing audience with a little bit more of the story here.

So they did. They contacted me and they interviewed addiction medicine specialists. They contacted universities that had done research. They looked at the DSM-V. They contacted NIDA. The U.S. Department of Health and Human Services, and they concluded that his statement was false and much to his credit, John Morgan, when they went to him with this information, he said, you know what, I apologize. I misspoke. There are people who do develop problems with marijuana and develop addictions to it. But his greater point, he said, was and people develop addictions to other legally prescribed medications which in his opinion are much more lethal, like opiates and benzodiazepines and we're kind of on the same page with that. To let you up front, I did vote in favor of legalizing medical marijuana. I do think that it should be an option for prescribers, even though I am also an addiction professional. I'm certainly conscientious with people developing problems with addictive substances. It's not that I'm anti-medical marijuana, it's I do not like it when people misinform the public because I think we should put everything out there that we truly do know in terms of research about marijuana and have that be part of the public discourse when we look at politicized issues impacting our field.

So THC versus CBD. One of the things about the term medical marijuana is it's a broad term. You can be talking about medical THC, you could be talking about medical CBD because they both are found in the marijuana plant, but they are very different chemicals.

And I would go out on a limb and say that THC is by far the more controversial of the two and yet sometimes we'll hear headlines about medical marijuana or a study about medical marijuana and we don't necessarily know what type of medical marijuana is being discussed unless we get into the details of that study.

THC as an agonist for CB1 receptors, whereas (indiscernible) I won't get into the intricacies. THC is psychotropic. It is potentially addictive. It produces a euphoria or a high. We do not see that with CBD. It's not psychotropic. It's not going to produce a euphoria or a high. It's not considered to be addictive, it's not considered to be a controlled substance where as THC is and yet both are referred to as medical marijuana. So I wanted to put this distinction up there and put it out there up front, and I really encourage people to start using verbiage like medical THC or CBD instead of medical marijuana so they can be specific about what chemical they're talking about.

There was a report that was out by the World Health Organization in 2017 in which they said CBD is not a public health risk. They don't say that about THC but they do say that about CBD and after

this report was released there was some interesting headlines.

These headlines give us a good depiction of the spin on this topic and the way that media reports information that we and our clients should know about. Let's look at these three different headlines here.

One headline says compound in marijuana appears safe and non-addictive, WHO says. Okay. That's not such a bad headline, given what the report says. It's true, it's a compound in marijuana that is safe and non-addictive, and I like that they said who said that, the World Health Organization right in the headline. I would prefer that they say CBD or cannabidiol, in marijuana appears safe and non-addictive, because that would be even more specific. But I don't get to write all the headlines.

Look at this one. WHO reports finds no public health risk or abuse potential for CBD. That's an even better headline in my opinion, so specific, so subjective, so accurate in terms of what the study says.

Look at this one, blow to anti-cannabis campaigners as WHO declares no health risk of medicinal marijuana. That's a misleading headline. They didn't declare that. They were talking about CBD, not about THC. But when your average person in the public sees this headline, they're thinking, oh, okay, so medical marijuana, good, non-addictive, not a public health risk, great. They're not going to look into the details in terms of CBD or THC or that sort of thing.

Which brings us to a polling question.

>> SAMSON TEKLEMARIAM: Perfect. Thanks, Aaron, you'll see this polling question pop up on your screen. Yes, it's a true and false question. So two answer options. The research has clearly established an inverse relationship between medical marijuana use and opioid related problems.

We'll give you about five more seconds here to answer this polling question.

Perfect. Thanks so much, everyone. As you're answering this polling question, it looks like a lot of you are coming in just now. Just another reminder, please feel free to continue sending your questions into the go to webinar panel questions box. We will go ahead and close this polling question now, and share the results.

And I'll turn this back over to Aaron.

>> AARON NORTON: All right. Fairly close numbers for these two options. 56 percent of you saying false. A slight majority and 44 percent of you saying the answer is true.

Okay. Let's go ahead and hide these results and we'll get right back into the slides here and let's dig in and see what you think about this issue in just a moment here.

So I love science daily. It's a great website. They do a pretty good job of providing brief reports on research that comes

out every day, and I subscribe to science daily, specific their science daily mind list where you get every day health related news summaries, but, you know, if you were to place a science daily which is a pretty good resource and you typed in the words marijuana and opioids, you're going to get a whole lot of information.

Look at this headline, August 2014, 25 percent fewer opioid related deaths in states allowing medical marijuana. If we could (indiscernible) the science must be settled. Marijuana could help treat drug addiction, mental health, study suggests. In November 2016. Wonderful. It also can be used to treat drug addiction and mental health. Great. So far so good, huh?

December 2017, marijuana use may not aid patients in opioid addiction treatment. Oh, wait a second, new research finds that frequent marijuana use seems to strengthen the relationship between pain and depression and anxiety. Not ease it. Well, maybe this isn't so clear-cut after all, huh?

And then in May 2018, medical marijuana could reduce opioid use in old adults. At least for older and more wise and experienced Americans, surely they will be at less risk because of medical marijuana in terms of opioid related problems.

But another study in February 2018 questions that link, saying that association appears to be changing as medical marijuana laws and opioid epidemic change. So maybe it's not such settled science.

A relationship between legal cannabis and opioid prescribing is examined. April 2018. And this is another study that sort of reaches -- raising some question as to, well, is this association clear-cut or is it not?

April 2018. People who use medical marijuana are more likely to use and misuse other prescription drugs. So maybe it actually makes things worse, huh?

June 2019. Medical marijuana does not reduce opioid deaths. Well earlier we were told it does, so this is kind of interesting.

Marijuana legalization does reduce opioid deaths. August 2019. Never mind, we're right back to where we started.

November 2019, daily cannabis use lowers the odds of using illicit opioids among people with chronic pain. If we get them to use it daily then real lower the use of opioid use of people with chronic pain.

October 2020, cannabis use appears to encourage not replace non-medical opioid use. We're going to kind of undo the previous study.

So what I'm trying to illustrate here is what I see in medical marijuana trainings, for people who argue both sides of the issue, is they are so often pick the study they want you to see and they'll say, look at that, research has proven that medical marijuana reduces opioid related problems. See that study right

there? Published in that nice prestigious peer reviewed professional academic journal? It is settled science. So single study tells you much of anything in your field. What I hope this walk through, there's an awful lot that we don't know, and you can't trust a single study's results and you have to look at the totality of research and also I think it is pretty irresponsible for a lot of people in our field and I've been to lots of medical marijuana trainings where the presenters are people who sell medical marijuana, and so guess what, I kind of -- they just talk about how settled the science is and how much it helps, but they don't tell you about the other side of the coin and the evidence that contradicts their perspective. So I'm a proponent of us looking at the totality of the evidence. Wouldn't it be nice if there's one resource we can pick up, here's the evidence for and against and here's an analysis of it that seems pretty fair and objective, created by scientists showing a consensus. Wouldn't it be nice if we had that? Especially we can't read all day to read every journal. In a way there is such a resource. The health effects of cannabis and (reading) engineering and medicine, you can underload it for free on the Internet. And this report was published in 2017, which already makes it outdated. I hope they update it soon.

But at the time that this report was published, there was only one symptom, condition, or disorder that we had conclusive evidence that medical marijuana helps with. See, the national academies do is they look at standards of proof. They look at the design of studies, they look for replication, and then they have different categories, conclusive evidence means it's pretty close to proving something, not a hundred percent but pretty close to proving it. Substantial evidence means there's a good enough evidence to make it true, and a lack of evidence. Moderate evidence is okay, there's some, maybe a medium amount of evidence out there, but we need more.

And then limited evidence is there's just a tiny bit of evidence for it, and then no or insufficient evidence tells us, look, either the information out there proves the opposite of what we're looking at, or we don't have enough research to really draw any kind of conclusion about this at all.

So if you kind of look at this graphically, here's what we can conclusively say medical marijuana treats in terms of the research, and then here is what has been examined but that we really don't know if it helps or not, and here's our limited evidence, so as you can see, there's very little that we can confidently say is relatively proven about what medical marijuana can treat successfully and not treat successfully, according to the national academies of science, engineering and medicine.

I wish that more presenters would say that instead of seeming so confident that they know the truth out there, and I think there is

one local medical marijuana clinic here in my state that I love because in their informed consent form, they have all their patients complete. They literally go through every disorder and they tell you what the academies concluded and they have an initial next to it saying I understand there is only limited evidence that medical marijuana successfully treats this condition, so that's actually part of their informed consent process, and I thought that was very responsible and refreshing to see in the industry, 'cause I do not see that with all the other clinics that I have -- that I've gotten records from, and most of them I can't get records from. It's a very difficult process. It's been kind of interesting.

That brings us I think to a polling question.

>> SAMSON TEKLEMARIAM: Yes. Thanks so much Aaron. This is popping up on your screen everyone in just a moment. And there it goes. All right. Which medical application of marijuana is best supported in the research?

You'll see five answer options there, we'll give you about 20 to 30 seconds to answer this third polling question. Again the question is which medical application of marijuana is best supported in the research?

Again you'll see five answer options there. Take a moment, see which one you think is the right answer. And we'll pull the results in just a moment.

We've got about 50 percent of you voting. Thank you so much, everyone. About five more seconds, and we'll close the poll.

Perfect. Thanks, everyone. That last minute crowd came in and changed the percentage. So we're going to go ahead and close the poll. Share the results, and I will turn this back over to Aaron.

>> AARON NORTON: All right. 51 percent of you said increased appetite for patients with chemo induced nausea. Great job. That is the correct answer.

So lets get back to the slides here. That is the only condition that NASEM concluded was solidly or conclusively demonstrated to be successfully treated by medical marijuana. It makes a lot of sense. For those of you who know much about the psychoactive properties of medical marijuana, it makes a lot of sense because medical marijuana -- or THC, there's an awful lot of receptors that THC can bind to in the hypothalamus, the regulation center in the brain and one of the things that the hypothalamus regulates is our hunger (indiscernible) it's sort of convinces the brain, oh, my gosh, I am starving, and then produces a phenomenon that many of you know as the munchies, which particularly involves craving foods that tend to be high in carbs, fats and sugars, so that kind of makes sense that that can successfully treat people who are struggling because of chemotherapy or other conditions, and are finding it very hard to have an appetite or to keep food down.

So solve our medicinal uses of THC on the left-hand side, pain

relief, reduced spasticity from MS. Improved symptoms from Tourette's, may increase appetite and reduce nausea or vomiting secondary to chemotherapy of HIV/AIDS, reduction of nightmares associated with PTSD. I tried to be a little more specific with this because there's only one study in the report that really showed something pretty solid about THC and PTSD, and that's it reduces nightmares over a short term use of a THC pill, but, you know, that kind of makes sense because THC is known to reduce the time that spend in REM sleep, that doesn't mean that people with PTSD are doing any better on medical THC. Anecdotally there are people who tell you it helps them a lot though. It will be interesting to see what more research here.

And anti-inflammation. (Indiscernible) but there are some evidence for these things, and these are some of the things that clients might commonly be prescribed medical marijuana for.

CBD though, I want you to notice some of the overlap between what it treats, because it too treats reduced spasticity, and it also can reduce nausea and vomiting secondary to chemotherapy and it can also be anti-inflammatory, and my principle as a conservative principle, it's one of my biases and it goes like this. If you can successfully treat a medical problem with a non-addictive safer option, then it would make sense to try that first, and then if that doesn't work, move on to other options that might have an addictive potential or might be less safe in comparison and consider those. So I'm kind of a fan of if there's evidence that CBD can treat it, maybe it makes sense for clients to start with that before they use THC, but that's part of my bias. That's part of my belief system.

All right. So dosing considerations. I did some great training with a physician who has written textbooks on medical marijuana and has designed many medical marijuana products, and he says in the professional literature, virtually anything that THC treats successfully that we have reason to believe it would treat successfully, the condition will respond to dosages of ten milligrams of THC or less. And so -- and if you're taking more than ten milligrams you're therefore probably overmedicated and he says this because he says the purpose of medication is not to feel a euphoria or a high. It is to ameliorate the symptoms successful so they can function. Also most conditions will respond to a CBD to THC ratio of one part CBD or more to one part THC or less, whereas recreational marijuana tends to have a ratio of one part CBD to 15 or more parts THC so what you can see is people who recreationally use marijuana, what they're taking in has a higher THC content than would medically be needed for somebody who is using medical marijuana. So yeah, the reality is most -- my clients who take medical marijuana are all taking things that are way higher than these.

In an online review of products sold in Florida clinics, I see

dosages that range from ten milligrams on the low end, that's the lowest, to 600 milligrams on the higher end, and CBD to THC ratios of one part CBD to 20 parts of THC (indiscernible) one to 20 and one to 60 ratio. So in other words, what the dispensaries are providing people seems to be much, much higher than what experts like Dr. Smith say medicinally would be needed to help a person ameliorate their symptoms.

Raising the question of whether what's really going on is that maybe the clinics are just kind of getting people high instead of focusing on medically addressing the issue. That's the question that I think is raised here.

Some of the adverse side effects, health effects and risks, I'm not going to spend much time on this because if you're a diction professional you probably learned -- addiction professional you probably learned about the adverse effects of marijuana. I've got some of that information on the slides if case you want to go back and refresh yourself later anyway that.

That brings us to a polling question. Can you overdose on marijuana? You can say yes, but you're highly unlikely to die from it. Yes, and it can be fatal, no, but you can have some unpleasant experiences with it. Or no, period, end of story. You can't overdose on marijuana.

>> SAMSON TEKLEMARIAM: Thank you, Aaron, and thanks everyone who's answered. Already over 50 percent of you have answered. We'll leave this one up for another ten seconds or so.

Thanks, everyone. I'm going to go ahead and close this poll and share the results. I'll turn this back over to your presenter.

>> AARON NORTON: All right. 45 percent of you say yeah, but it's highly unlikely to die from it. 42 percent. No, but you can have some unpleasant experiences with it. What a great group. Most accurate group I've seen so far with these polling questions.

So let's get into the answer here.

You know, when you look at the definition of the word overdose, according to the CDC, yeah, you can overdose on marijuana. Especially when you're ingesting high quantities of edibles, but it's highly unlikely, perhaps impossible for it to be fatal. So marijuana overdose is not going to look like an opioid overdose, for example. And that's part of the argument is that marijuana would be much safer than some of the other potentially addictive substances that clients are commonly prescribed.

And also marijuana related deaths are not overdose deaths. There isn't such thing as marijuana related deaths. In fact in areas where we legalized medical marijuana, we often see initially an increase in emergency department visits that are connected to marijuana use. As marijuana -- it kind of makes sense. If marijuana use becomes more prevalent, then you would expect some of the negative consequences you'll see increases in. That doesn't mean that all of the good that comes from it being prescribed isn't

greater than that, but it's important for us to be aware that there are medical emergencies that happen connected to marijuana and there are deaths. But you know what, those are usually about, they're usually about people making decisions under the influence of marijuana to do something that's physically dangerous like handle a firearm. But they forget you can't just eject the magazine, you have to clear any rounds that are in the firearm. And/or somebody driving under the influence of marijuana.

Which I believe actually brings us to another polling question. What's the one day of the year in which car accidents increase nationwide in the afternoon and the evening? Your options are December 31, which is New Year's Eve, January 1, which is New Year's day. April 20, May 5, Cinco de-Mayo, or the Fourth of July?

>> SAMSON TEKLEMARIAM: Thank you, Aaron. They got to this one pretty quickly. Everyone I'll give you about five more seconds on this question.

Perfect. Thanks so much, everyone. I'm going to go ahead and close the poll and share the results. We'll turn this back over to Aaron.

>> AARON NORTON: All right. And once again, you guys are accurate. 42 percent of you said April 20, 4/20. The connection here is pretty clear. 4/20 is essentially the code for light up. On April 20, starting at 4 p.m. Eastern time, we see an increase in marijuana related motor vehicle accidents starting in the Eastern time zone, into the Central zone, into the Pacific time and so on, like a wave across the country.

And, you know, most people would say that's not a coincidence. It doesn't seem to be one anyway.

And there's a reference there that you can check into later if you'd like to.

There are some major challenges in cannabis research. There are regulatory hurdles. This is part of why I say we have to get comfortable as clinicians, when we say sometimes we don't know the answer to a question, we have to have a tolerance of uncertainty, because there's so little that we can say conclusively, not only about the medicinal value of marijuana, but there's a lot that we don't know about add version health effects of marijuana -- adverse health effects of marijuana.

So let me explain that to you a little bit. What about the ideal -- what would be the ideal study to examine whether a particular disorder successfully treated by medicinal marijuana. For that matter what would be the ideal study to determine what the long term risks, health risks are of medical marijuana use? What's the drawback to using it? Well in such a study, you would have a very, very large sample size, and the sample size would cover the developmental spectrum. You would have children, teenagers and adults, all the way through to our oldest and wisest and most mature American citizens, and then you would randomly assign these

adults to two primary groups, using a double-blind research protocol, where the experimenters, the prescribers don't even know who is a part of which group, and one group would be a control group, and then the experimental group would be further divided into subgroups, with varying dosages of THC and then what you would do is you would give these individual THC under supervision for decades, an entire lifetime perhaps and then you would measure the differences health outcomes between the different groups, controlling for as many extraneous variables as you possibly can.

That study does not exist, I don't think it will ever exist, not only because it would be so expensive and time-consuming, but you would never be able to get it through an IRB, an institutional review board because it would be considered unethical. We're going to take a substance that we know creates harm for people. We're going to give children and adults this substance for decades and just see how messed up or not messed up people get from it. So we don't have studies like that, so we use animal studies with rats that have short life stance so we don't know what long term effects would be with humans or we use correlational research. We go out and find people who say they use it and try to figure out what is different between the people who use it and the people who don't and we look for statistical differences and control for as many variables as we can and we come up with a connection but ultimately we can't really prove things that way.

So there's an awful lot we don't know, even though sometimes we think we know an awful lot about people on both sides of the issue.

That brings us to another polling question as we start to look into our professional associations, which of these associations either discourage or fully oppose medical marijuana? Yet are supportive of decriminalizing it? Your options are the American Medical Association, the American Psychiatric Association, the American Society of Addiction Medicine, NAADAC, our beloved NAADAC, the Association for Addiction Professionals, or all of the above.

>> SAMSON TEKLEMARIAM: Thank you, Aaron. It looks like about 40 percent of you have answered this poll already. You'll see the poll pop up on your screen. You can answer it directly there and again please continue to feel free sending in those questions for Aaron. Any questions that we don't get to, we'll have on a typed out Q and A document and post on our website on a later date.

We will give you about five more seconds for this poll.

Perfect. Thanks, everyone. We're going to go ahead and close this poll, and share the results. And hand this back over to your presenter.

>> AARON NORTON: And you have once again demonstrated your wealth of knowledge out there. 59 percent of you were correct. All of those organizations either discourage or completely oppose medical marijuana, but believe in decriminalizing it and they also want additional research to look into legitimate medicinal

practices moving marijuana. That's not the same -- involving marijuana. That's not same as them being anti-marijuana per se but they're very conservative about it.

And I'm going to demonstrate that for you by giving you a brief look at the highlights of some of these associations and their positions.

The American Medical Association, you know, it's interesting 'cause when they revised their position statement in 2017, many people, medical marijuana supporters, said the American med Sal association now approves -- medical association now approves medical marijuana. If you read their position statement, I think it's quite a misguided interpretation. They say number one, cannabis is a dangerous drug, and it is a public health concern.

Number two, public health strategies should be used instead of incarceration. Number three, we want more research.

Well, that doesn't sound like an endorsement of medical marijuana at all. They also say that the AMA, that physicians should educate their patients on the health effects of marijuana. They urge legislators to delay full legalization, and they encourage the following warning on all cannabis products not approved by the FDA. So when a legislature decides to legalize it anyway, even though they're not recommending that as the AMA, they at least want there to be this label: Marijuana has a high potential for abuse. So it doesn't sound like an endorsement of medical marijuana to me but that's the way some people like to interpret it.

The American academy of pediatricians, they say, you know, we basically oppose it for kids. We really don't think it would be wise to use it for kids and teenagers. This is especially true because of the wealth of research on the adverse effects that exposure can have on the developing adolescent child brains. (Indiscernible) like THC, this can create some significant developmental problems. That is their position.

And the American Psychiatric Association says there is currently no scientific evidence that it's in any way beneficial for the treatment of any psychiatric disorders. And on the contrary a lot of evidence that it's not helpful.

Treating something like chemotherapy induced nausea and vomiting is very different than (indiscernible) my social anxiety disorder or my panic disorder. We'll talk a little bit more about that when we talk about psychotherapy and medical THC.

They even put out a separate position statement on PTSD. They do not accept using medical marijuana for PTSD, and they say there's a lack of evidence supporting it. Remember we only saw one study in the NASEN report that was promising and that was for its short term reduction in nightmares associated with PTSD.

And that brings us to our next polling question. In your opinion, medical marijuana, blank, interferes with psychotherapy.

You can say it always interferes with therapy, usually, sometimes, rarely or never interferes with it.

>> SAMSON TEKLEMARIAM: Excellent. Thanks, Aaron. A chance to interact with your presenter. Five quick answer options here. Go ahead and fill in the blank. We'll give you about five more seconds to answer this poll.

Wonderful. Thanks so much, everyone. I can see you're leaning in. We'll share the results and turn this back over to Aaron.

>> AARON NORTON: 49 percent of you said sometimes, 31 percent said usually and 13 percent said always. 7 percent of you said rarely or never.

Okay. That is good to know that that is your position. 'Cause I'm going to, you know, I haven't seen good research on this yet. Except there kind of is.

So some of the things that have been proposed, some possibilities of how can to interfere with psychotherapy for mental disorders. Number one, approach (indiscernible) this isn't just about medical THC, this is about alcohol, it's been benzodiazepines, like Xanax, it's about opiates, it's about any potentially addictive substance that you can use and will quickly produce some kind of sedating effect or euphoria. You don't want that in an ERP protocol. An ERP protocol, what you're trying to do is have the person be exposed to the stimuli, that their brain is drawing a connection to leading to danger, and therefore generates a great deal of anxiety within the individual's system. Let's say that something is flying planes. Well, if I got sloshed at the airport terminal and then I got on the plane and I found that it was a lot easier to fly than deal with my anxiety because I was practically passing out from inebriation, then maybe we could say then that's medicine, but maybe we could say it's not because the next time that I get to that plane, I'm still going to have the same anxiety, the same panic. And an ERP protocol, what you want to do is have the client experience the anxiety, experience it and then do the thing anyway. What will inevitably happen is the anxiety will come down. The system is not capable of maintaining them in their fight or flight reaction for too long a period of time, so it's inevitably going to reduce, they're going to get through it, they're going to land safely and repeat that exposure over and over again until the (indiscernible) flying and danger has diminished sufficient so they can now encounter planes without anything impairment or distress without the aid of a foreign chemical.

So what happens if you use medical THC to reduce your anxiety or Xanax for that matter? You can make the argument that okay, that's fine. But some people don't have the luxury and time to slowly or over time have these exposure exercises and they need to get from point A to point B on this plane today, so maybe this is a better short term solution and I think there's validity in that

perspective, but ultimately is medicating the system what we're trying to do with psychotherapy or are we trying to help heal people's minds and extinguish the connections that their brains are drawing between stimuli and danger?

And it depends on what you think the goal is, or whether you have a long term or short-term goal in mind with your client.

And also there's a dysregulation of endogenous neurotransmitter systems. Any substance -- this goes back to Dr. Smith saying if you're feeling high you're overmedicated, you shouldn't be euphoric if you're using medical THC therapeutically, so if you're high, then there's kind of a guarantee. There's been some kind of a shift or a change in neurotransmitters to produce that sensation, and in the aftermath, that means there's going to be a period of dysregulation where there aren't enough nerve transmitters and packaged in vacuoles leading up to binding sites (indiscernible) and that we have very little left in reserves.

You guys are accustomed to that as addiction exerts. You know about that. And you can reinforce some core beliefs (indiscernible) because I need a Xanax to get through it. I've got to. I can't do it without a pill. And that same belief could be about medical THC. I can't cope, I can't deal, I can't handle without it. And I would call that a dysfunctional core belief, and then there's an interference with memory consolidation. We see the same thing with benzodiazepines, where we know that THC interferes with short-term memory consolidation into long-term memory, so what is therapy? Therapy really involves clients learning and experiencing in the session, and then when they go home at night, hopefully their short-term memory is consolidating well into their long-term memory banks and then their mind is changing, but there's actually some changes on a neuronal level inside the brain and they can recover or improve over time because of that. Therapy is a neuroscience intervention, because of neuroplasticity. But if you got a short-term memory impairment because of a chemical, then maybe that delays the process a little bit.

Now, having said all this, I don't support illegalizing benzodiazepines prescriptions, and I don't support illegalizing medical THC. I think it should be an option and sometimes it's appropriate. But we have to also know about the ways that it could not be appropriate. I tend to not be a big fan of using it for mental health disorders. You can call that a bias of mine but I feel it's an informed one also. I would support more for those areas where there's a lot of evidence that would help with something biomedical, like spasticity, for example, or chemotherapy induced nausea or vomiting, which many of our clients, you're going to be working with clients who have some of those issues and medical THC might be an important part of their treatment protocol. We don't know.

ASAM's position is they support the decriminalizing of it. They

do not support legalizing it. And they support the use of cannabis only for medical purposes only when governed by appropriate safety and monitoring regulations such as those established by the FDA and clinicians should educate patients about the known medical risks of (reading) and the role of cannabis and cannabidiol. This position will become important on day two as you'll see when we start looking at interacting with prescribers.

NAADAC's position, marijuana should be subject to the same research and study protocols as any other potential medicine. There's currently sound evidence that smoked marijuana is harmful. NAADAC does not support legalizing it for recreational or medical purposes and further NAADAC opposes proposals to legalize marijuana anywhere in the United States. Okay, pretty strong position.

The VA. Veterans -- so I'm going to summarize the VA position just by saying the VA does not allow its physicians to prescribe medical marijuana. They do not allow physicians to recommend it. (Indiscernible) from an external provider, then that is okay. That veteran will not be denied services. It is important for that veteran to communicate though that they are taking that medical THC so their VA health seem so they at least know what you're using and not using and they can factor that in when they're coming up with medication recommendations. Their pharmacies do not sell it, and this probably has a lot to do with wouldn't it be weird if a federal government health care organization used taxpayer dollars to sell something that is illegal under federal law, which raises the big issue of should it even be illegal under federal law. My opinion is no. Many of you will disagree with me. And that is okay. Because you have valid points I'm sure.

Who does not have a published position? The American counseling association, the American Mental Health Counselors Association, the National Association of Social Workers, the association for MFTs, marriage and family therapists and the American Psychological Association. Why not? Well, I think it's perfectly appropriate for none of these organizations to have a position and the reason is that they're not prescribers, and they're not necessarily addictions professionals, which are two disciplines that I think it probably would be important for them to have a position on the topic. So some of you know, I'm on the board for the American Mental Health Counselors Association, and I would not support them having a position on medical marijuana per se because I don't think it's our thing to be focused on. Now, if they had a division of addictions counselors and they wanted to look at a position statement, then I'd kind of be more on board with that, so it makes sense because they can talk about it from an addictions standpoint. That's my opinion. But these organizations do not have any official position.

That brings us so our next polling question. How many states have legalized medical marijuana? Nine, 13, 24, 33, or 42?

>> SAMSON TEKLEMARIAM: Thank you, Aaron. About half of you have already voted. You'll see five answer options there. We're going to leave this one up for another five seconds.

Perfect. Thanks so much, everyone. We're going to go ahead and close this poll, and share the results, and I will turn this back over to Aaron.

>> AARON NORTON: All right. This is the first question that the highest number was not correct for. The answer is actually 33, which 23 percent of you responded with.

So if we get back to the slides here, I like, you know, procon.org, they have a map that's ever changing and currently 33 states have legalized medical marijuana, plus Washington, D.C. And 11 states have legalized recreational marijuana plus Washington, D.C. So obviously more than half of states -- of our states have legalized medical marijuana in some way or another. And I think we're going to keep seeing that number increase. I would not be surprised if we reach a point where eventually all 50 states have legalized medical marijuana in some respect or another.

Which brings us to some important questions for you as clinicians to ponder about medical marijuana laws in your state.

First question is is it legalized for medical use, recreational use, or both?

So in my state, it's only legalized for medical use.

So I have clients who come in and say, yeah, I take marijuana medically. But they don't have a physician, they're not getting it from a dispensary. They're just buying it off the streets. So that would not be illegal, but if you just take them at face value, their verbiage, then you would think, oh, at least they're not at risk for some kind of legal problem connected to their use. So that's an important question to be aware of when you look at the laws in your state.

Second, does the law in your state differentiate between THC and CBD? Because some laws -- most laws do. But some don't. Some have caught CBD into the dragnet, or to make this even more complicated, so here in Florida, I mentioned that THC is not legal recreationally, but it is legal medically. And CBD though is legal, period, across the board. They sell CBD even at convenience stores and things here in the state of Florida, so you could go into a convenient store and buy CBD, but here's the thing. Some of that CBD has THC in it, because a lot of the places where they're getting CBD from, like a lot of it comes from China, for example, they don't do a very good job of making sure that there's no THC in it. So there have been lots of operations where law enforcement have bought CBD from convenience stores, tested it, and found indeed that there's THC in there. Which also means you might have a client who thinks that they're taking CBD, and that they'll pass a drug test, for example. But maybe they don't. Because maybe there's actually a lot of THC in that CBD. This is why if I had a

client who was using CBD, I would prefer that they do it through appropriate medical avenues, through a physician, and that they have a good medical source where they can know what they're getting and not getting instead of buying the cheap stuff there the convenience stores. That's just my opinion.

Third question, what can marijuana be prescribed for and what can it not be prescribed for? I'll show you where it gets hairy in a moment. What's the process for getting a prescription? Technically it's not a prescription, because a doctor can't put medical THC on a prescription and hand it to a client. That is them breaking federal law. So instead they write a recommendation for medical THC, and then the client goes to a dispensary which fulfills that recommendation. So it's not technically a prescription. And the doctor is not deciding what the dosage is going to be. The way the process usually goes according to almost all of my clients ever, they go into the dispensary, they have got their medical marijuana card, and people ask them, well, you know, do you know what you want? And they kind of ask a series of questions that deal more with the effects, what you're wanting to feel like, and then they try to match you up with whatever strand they think is the best. Then how do you dose? You self-dose.

So you experiment, and you decide how much you need or don't need.

Well, we don't do that with benzodiazepines, do we? So the process is problematic in my opinion. The medical marijuana process. But part of that is because you can't legally prescribe it, because of federal law. So what if it were legal under federal law? But regulated more. So that physicians have more of a -- were more involved in the dosage, you know, and the strand and those sorts of things, and actually prescribing limits for clients? Wouldn't that actually improve some things?

I don't know. I feel that no matter what we do, there's always a drawback for it.

Who is an approved vendor, who can they get approved THC from. What are the restrictions and limitations like? Where are they allowed to do it and not do it. And in what places or contexts is it illegal to use it even if you have a medical marijuana card.

So let's look at a case in point here. Oh, actually before we look at the case in point, let's throw out a polling question. Medical marijuana can both help and hurt the employability of clients, true or false?

>> SAMSON TEKLEMARIAM: Thank you, Aaron. Great question here. Everyone, only two options, true or false. Go ahead and give it a shot. Answer this question. We'll give you about ten more seconds to answer the polling question on your screen.

Perfect, thanks so much everyone, we're going to go ahead and close this poll and turn it back over to your presenter.

>> AARON NORTON: 87 percent of you say true and my opinion is,

I'm going to go with the 87 percent of you. I think you're on to something here.

We go back to the slides here. I'm going to show you -- oh, I'm sorry. There's one more polling question before we go into the slides actually.

The Americans with Disabilities Act, the ADA, provides protections for employees who are legally being prescribed medical THC for a disability. True or false?

>> SAMSON TEKLEMARIAM: All right, I know some of you are very competitive and you're going for ten out of ten. If you've gotten nine correct so far, this is the last poll for this webinar. I'll go ahead and give you about ten more seconds. We've got a lot of questions if the Q and A box. We will try to ask the questions in the order in which they have been received but of course if you still have more questions, please feel free to put them in the go to webinar panel. About five more seconds and we'll close this last poll.

Perfect. Thanks everyone. We're closing this Powell now. Sharing the results and giving this back over to Aaron.

>> AARON NORTON: Clearly you were all very, very torn on this one. 49 percent of you said true, 51 percent of you say false. I'm very glad we're covering this, 'cause only one of those can be right.

So half of you maybe are not on the right page about this.

So let's look at this information a little bit here. I'm going to start with employment. Remember that even if a state legalizes medical marijuana, it's still illegal under federal law. That means it is not protected by the Americans with Disabilities Act. If the read the ADA there's an exception built into the ADA, and the exception is that the ADA does not protect people who are using illicit substances. Bam, right off the bat. You are not protected under the ADA for medical THC. So you can go to work and say I know we have a drug free workplace policy, but I have a legally -- I've been legally recommended medical THC by my physician. I have a medical marijuana card. I've gone to a dispensary. I need this for a disability, in order to function with my essential job duties, and you're still not protected. The employer is not required to permit you to use medical THC, even if it's legal under state law. It's not protected under the ADA, which means you would not have a successful lawsuit against your employer because they will not permit -- because they're going to enforce the drug free work policy and they're not going to permit people to be using illicit substances.

Connected to that, it is not permissible to use in safety sensitive jobs according to U.S. Department of Transportation regulations. And even though it's allowed under state law, it's prosecutable under federal authority. It's (indiscernible) where it's been legalized, but there are occasions where it happens. So

these are important things for your clients to know about.

Here is, you can check this out later on if you want to, and the PDF that we provide you with all have built in hyperlinks, so any link that you see on the slides, you can click on in the PDF version and you can access the original source.

So some of you are SAPs like me, substance abuse professionals who you can -- NAADAC provides the provide the SAP credentialing or testing process, and at least they're one of the organizations that does. So what happens if an individual fails a pre-employment drug screen, or a random drug screen or post-accident drug screen at a workplace, and they work in a safety sensitive duty, such as a bus driver or a pilot or a person who paints bridges, or a person who works on the assembly line that puts together circuit boards that eventually end up in a plane somewhere. Those are all examples -- truck drivers, there are so many safety sensitive drugs that are regulated by the Department of Transportation and in those positions you're not allowed to use medical marijuana even if it's allowed in your state or not. You will violate DOT regulations, you will be removed from safety sensitive duties and then you'll have to see a SAP for evaluation, and the SAP at minimum has to recommend education but at maximum could recommend long term residential substance abuse treatment. And then that person must comply with that recommendation, among other requirements, in order to be considered to be returned to their safety sensitive job duties. So if you have a client who works in a safety sensitive job duty and they're getting a medical marijuana card, it's important for them to know that they're putting their occupation in jeopardy.

I don't know that prescribers do a good job of -- or that clinics do a good job or dispensaries of educating clients about that. So you can though as an addictions professional. Some pros and cons as far as employment goes. Medical THC could relieve some of their symptoms, maximizing their work performance, especially if it's dosed appropriately. It can the difference maybe for some people between the ability to function occupationally or not and it might prevent your client from relying on more addictive or dangerous medications as well. Wouldn't that be a nice thing? It might prevent them -- it might mean the difference between them being able to work or not work.

But on the other hand, it could impair their work and reduce their productivity, especially if they're overmedicated or their high at work, they could violate their drug free workplace policy. (Indiscernible) even if they're legally taking it under state law. Positive drug screens may reduce their employment opportunities up front. And then here's an important one. I really like to tell my clients this. I have clients who take medical THC and they come in and look stoned to me. I tell them if you look high to me, that probably means you look high to other people too, your employer,

your customers, the people you interact with at work. So and the weird thing about it is, I don't know if some of you have noticed this, but people who look really stoned, usually don't realize that they look that way. Or a lot of times they don't seem to be aware or have the insight in terms of how they look. It's usually the same thing with intoxicated people sometimes from any other substance because the parts of the brain that do a good job of connecting the dots in the prefrontal cortex are the first to be affected sometimes by addictive substances when people are high.

So it's the heart of the informed choice process I think that clients become aware of both of these things. Let's use Florida law as a case in point just as an example. I mention it's only legal medically here. And here are the approved uses of medical marijuana. Cancer, epilepsy, glaucoma, positive status for HIV or AIDS. By the way the rationale for that is because the medication for HIV or AIDS, can also suppress appetite, and so sometimes they'll get dangerously underweight, so that's kind of the rationale for using medical THC in those cases. Interestingly PTSD is on the list even though the American Psychiatric Association says it doesn't help PTSD or there's not sufficient evidence yet and even though they oppose it, somehow it made it on the list. Notice it's the only mental disorder that's on the list in Florida, then we have ALS, Crohn's disseize, Parkinson's, Crohn's disease makes sense because people often have a problem with appetite. Parkinson's is interesting. Some of you may have seen this really interesting video on social media where there's a man with Parkinson's and they show him just with tremors that you would imagine would be so difficult to live with, and then they have him smoke marijuana, and for the first time in years, he's completely still. And it's a very emotional video to watch, and, you know, watching that video makes it kind of hard to say this shouldn't be an option for people, but then again as part of my doctoral program, my cognate was neuroscience related, so I would take some coursework in both in the medical school and in the school of psychology that was connected to neuroscience and some of the professors there, great neuroscience researchers and one of them talked to me -- told all of us that the problem with medical THC and any -- in fact any of the medications for Parkinson's is they don't continue having that effect. Unfortunately people's systems habituate to it so medical THC may help at first and unfortunately it doesn't seem to help for very long.

And I was given an in depth neuroscience explanation for that that totally goes way over my head, so I couldn't even pretend to give you the explanation now, but it's the same reason why the approved medications for Parkinson's tend to only work short term and something you can research. MS, multiple sclerosis for spasticity we talked about is another common application.

But then this is the weird thing. Most of my clients who take

medical THC don't have any of these conditions. In fact, most of them don't even seem to know why, what the medical THC is supposed to treat. Most of them tell me flat out, honestly, I just wanted to be able to keep using it but not worry about legal problems, so I got a medical marijuana card. You can go in there and tell them anything and come out with -- never had a client turned down for a medical marijuana card, not once ever. So you -- it's pretty easy to get for almost anything. So sometimes they will know why it was recommended, and they'll say, oh, for my ADHD and I'll say that's interesting because ADHD isn't on this list, or they'll say for my social anxiety. That's interesting, social anxiety isn't on this list. For my depression. That's interesting. Depression isn't on this list.

Here's what really happens. This phrase here, medical conditions of the same kind of or class as or comparable to those enumerated above, this is clearly not the legislative intent, but unfortunately many prescribers out there, what they do is they say, generalized anxiety, that's practically the same thing as PTSD. ADHD, that's kind of like PTSD, they both have attention problems, or they'll say depression, depression, PTSD, close enough. Both mental disorders.

It's ridiculous. It seems like to me. Quite honestly. It seems like it doesn't matter what -- headaches, that's a common one. That's not on the list, but some clients will say I have mild headaches. It doesn't take much to get it seems like.

Where can you not use it? You can't use it on any form of public transportation, unless it's low THC, which isn't impairing. In any public place. In a qualified place of employment, unless the employer specifically tells you, hey, I'm okay with you using it here. You cannot. You can't use it in a state correctional institution. Or any correctional institution. You can't use it on the grounds on a preschool, primary school, or secondary school, and you can't use it on a school bus, vehicle, aircraft, or moat boat. So it's important -- motor boat. Most of my clients who use medical THC don't know these until I educate them about it.

Maybe the dispensaries are giving them this information in writing, but who pays attention to all that writing? I feel like an awful lot of people, they don't, they just kind of go through the paperwork rapidly, pages and pages of information, sign on the dotted line and get their card without really having an informed choice process.

So I have some good news for you guys. I tried to move at a very fast rate, because a lot of times I don't get through the slides and then we get to the end, and I don't have time for questions. But actually we timed this out pretty well. We still got lots of time for questions. And I bet you probably have a lot of questions.

So maybe we can start taking some of those.

>> SAMSON TEKLEMARIAM: Aaron. You're right, we do have a ton of questions. Less me ask the first -- let me ask the first question comes from Susan from Virginia. Susan asks my concern is the psychoactive qualities of marijuana. Can you spend some time readdressing or elaborating on the psychoactive piece and all the psychoactive substances tend to make changes in the brain. How does marijuana make changes in the brain?

>> AARON NORTON: All right. So I'm also going to use this as an opportunity to kind of go backwards a little bit on the slides, 'cause there was one that I didn't really spend time on, because in part 'cause I'm like, they probably already know a pretty good amount about this. But it was about the adverse health effects of marijuana. See if I can find that one again here.

I passed it. Here it is. Okay.

So I'm going to talk a little bit about psychoactive effects of marijuana.

Now, I have limitations in what I know about it as well. But here's some of the things that I do know.

I know for example that there are a lot of CB 1 receptors which THC primarily binds to, in certain parts of the brain. And one part of the brain that I spoke about earlier was the hypothalamus. The hypothalamus is a regulation center in the brain. And I mentioned that in terms of the medicinal application of treating chemotherapy induced nausea or vomiting, that it seems to be about THC binding to receptor sites in the hypothalamus seems to be the explanation for why people get the munchies when they're using THC, but there's some other things that happen because of that hypothalamus connection. One of them is sleep.

So I published an article in addiction professional magazine, NAADAC's magazine, years and years and years and years ago, because I did research even as an undergrad on the effects of THC on sleep. Most studies show that for humans, rabbits, cats, and primates, other primates, THC when it binds to receptor sites in the hypothalamus will tend to reduce the amount of time that people spend in slow wave sleep and REM state sleep. When you're reducing time in those stages, so that a disproportionate (indiscernible) what you'll see is people will not have the vivid dreams that they often have normally anyway. Even if we typically forget those dreams later on. We're still having them. And what's happening during the REM stage of sleep is the hypothalamus -- or the hippocampus actually, our short-term memory bank, our sort of flash drive if you will that's limited in its storage capacity, has to communicate with the cerebral cortex, and it has to take information from the past 24 hours or so and somehow draw connections with long-term memory to decide how this information gets stored and encoded.

This is critical for learning, and it's critical for really for cognitive change, when we think about it.

If we're reducing time that people spend in REM sleep, then inevitably it's probably going to be harder for them to learn things, and it's going to be harder for them to draw connections between different things in their life.

Now, somebody using a little bit of THC every here and there, I doubt that's going to have much of an effect there. But I don't know about you, but I work with a lot of people who are chronic and long term heavy users and for them, you know, there's like a stereotype of a burnout, and I don't like stereotypes a whole lot, but they usually exist because there's some truth to them, and it's amazing how when I work with a client, and they're heavy and prolonged user and they present as being slow and it's not drawing connections and remembering things very well, and then we get them off of THC for a good two weeks, three weeks, four weeks, it is amazing the difference. They come in, they seem more vibrant. They seem more logical and coherent. They remember things better. They respond more quickly to things. It's amazing the difference.

And a lot of times in the first, you know, seven days or so, we'll be talking about this tomorrow when we talk about cannabis withdrawal, but they're like, oh, my God, this sucks, this is horrible. I hate, you know, life without THC. I was better off with it. But if they stay through that withdrawal process, then what tends to happen is they usually say things like, you know, it's like as though I've been a cloud for years, I didn't know I was in a cloud until I finally saw what a clear sky looks like again and now I know I was in a cloud, but I didn't know then.

So in terms of some of the psychoactive effects, I think this is one that is often overlooked and it's actually pretty important.

The paranoia and psychosis tends to be in high doses but also remember there's a growing body of research that for people who have a biological predisposition towards bipolar disorder and psychotic disorders like schizophrenia, that marijuana use tends to trigger the full-blown symptomatology of those disorders. There is a lot of speculation that sometimes without exposure to marijuana, some of those people would never have developed the full disorder anyway. It seems to unlock the active symptoms. I've had several case examples of this where people had a biological predisposition towards bipolar disorder, but they never had a manic episode until they used marijuana and then they started having manic episodes. And are being hospitalized and things like that. But it didn't happen before they started using THC.

And I don't know why it does that. That's sort of above my pay grade, but I know that the body of research is very large, and I flow that it doesn't apply to people who do not have that genetic predisposition.

It alters our judgment and our perception of time and space, and I did training one time with an undercover police officer who was involved in a great deal of drug operations, and he might go to a

drug deal and sometimes people will pass around a joint. He's going to smoke that joint just like everybody else, because otherwise he could blow his cover.

So the first time that he smoke a joint at a drug deal, he starts driving away from it and dutifully he stops for a red light. He sees the red light, he stops, so far so good, right? And what seems like an eternity but was probably a small amount of time, he realized, oh, the red light's way down there and I'm way over here, so he stopped not at the intersection, but prematurely.

Well, that's because marijuana among other things is a mild hallucinogen. It distorts our perception of time and space. And it can be very dangerous to drive under the influence of it. Do I think it's as dangerous as being intoxicated by alcohol and driving? No, I don't, or opioids or benzodiazepines and driving? I doubt it. But if you look at studies where they take people, put them in dose dependent groups, and a control group that takes a placebo and they put them out on a driving range, they always show the higher the THC content, the more mistakes people make on the road and ironically people do not perceive that they're making the mistakes that they're making a lot of times under the influence of THC. Sometimes they're slow mistakes, like moving slowly and bumping something, which I think is better than fast mistakes in terms of lethality but not necessarily.

So another thing that we'll tend to see is altered judgment. People not making good decisions. I gave you the example of somebody handling a firearm. Now, when (indiscernible) they may easily remember eject the magazine, clear the chamber, but for some reason they'll eject the magazine and not think to clear the chamber under the influence of marijuana because they're not drawing connections or thinking as clearly as they usually do, and so then something dangerous might be more likely to happen.

Impaired motor coordination is here. But long term, we already talked about risk of addiction, withdrawal we'll talk more about tomorrow. Let's talk about altered brain development. Hello.

Sorry about that. Siri is talking to me. But I think that what happens a lot of times with people that I work with who started their marijuana use early on in life, during their adolescence, every time that they get bored, anxious, angry, annoyed, depressed, they get high. I feel something bad, I put something in my system, I feel better.

So what is their brain being deprived of during those important developmental years? It's being deprived of the capacity to learn self-regulation. If every time I feel something bad, I can put something in my system that makes me feel better, then I don't develop the wiring to be able to manage and cope with (indiscernible) emotional things like the next person might. That's why so many of you know who have clients to have severe addictions, and started using regularly in adolescence seem to be

sort of emotionally underdeveloped and especially early on in recovery, but often for many years after they stop using. They're still struggling to get their bearings in terms of emotion regulation.

So I think that's a great example of psychoactive effect.

Our brains acquire brains in adversity to learn to self-regulate. I'm not saying that we should all be exposed to traumatic experiences in our childhoods so we can develop resiliency, but I am saying the (indiscernible) swings too far in the other direction also.

Educational outcomes, I did a study, part of a study when I was an undergrad where we took juveniles who had tested positive for marijuana at the juvenile assessment center and we pulled their school records and looked at their grades over time, chronologically, and then we looked at the psychosocial interviews and when they said they started using and how much. And what we found is the average GPA for one of the youth who tested positive was 1.3. Our school district at the time the average GPA for our students was 3.0. That doesn't prove that marijuana causes bad grades because there are all kinds of compounds. Like maybe there's something else that's causing both the bad grades and the marijuana use but it kind of makes sense that given we know marijuana impairs short-term memory and that people especially under moderate to high doses won't perform as well on tests, it kind of makes sense that it would kind of partially explain the academic difficulties. I know people will say, yeah, but I know a guy who he smokes pot every day, he makes straight A's and he's a genius. There's always going to be that. But it doesn't mean that it's not having an effect for most people most of the time.

Let's see. Chronic bronchitis. There's not a lot of evidence that long term it would create something like lung cancer. That's highly contested. Chronic bronchitis is a little bit more clear.

So we're going to talk some more about psychoactive effects, but maybe this is a good enough exploration for now anyway.

Hopefully that answers the question, and maybe we can move on to the next one.

>> SAMSON TEKLEMARIAM: Awesome, thank you so much, Aaron. The next question is from Alice from Alaska. Alice asks what is the research on the effect of marijuana on birth defects, problems in pregnancy, and mother's milk?

>> AARON NORTON: I know that there are a lot of studies about adverse effects or likelihood of like if a pregnant mother uses marijuana, that their child is more likely to have symptoms that are a little bit like -- I'm trying to remember the name of the syndrome that involves alcohol, but will often have a greater likelihood of various birth defects. Not really intimately familiar with those studies in great detail. But I know that there are a lot of -- I know -- I mean I just -- in science daily, they

just put one out just a few days ago and they seem to be putting them out like every other week, some kind of study on negative effects -- prenatal exposure to marijuana.

The other part of the question though, besides like birth defects, was about -- what was the rest of the question Samson?

>> SAMSON TEKLEMARIAM: Yeah. Effect on birth defects and pregnancy and mother's milk.

>> AARON NORTON: I don't know about mother's milk. I have no idea what the research shows about that part. But I do know that there's research that shows greater likelihood of birth defects, and pregnancy complications.

>> SAMSON TEKLEMARIAM: Great. And the next question comes from Dorell from Ohio. Dorell asks in my state, in Ohio, there are not any treatment programs that are specific for marijuana use. Do you know of any marijuana detox programs or treatment programs in other states that are dedicated to cannabis or marijuana use?

>> AARON NORTON: I don't know of a single treatment program that specifically singles out cannabis use disorder or cannabis withdrawal for that matter. I know of lots of treatment programs that treated along with just like they treat alcohol use disorders and stimulant use disorders and so forth, opioid use disorders, but I don't know of a specialty program that just does that.

>> SAMSON TEKLEMARIAM: Great. And a lot of people are asking this next question, so this is not just from Michael but Michael and a few others are asking understanding the different effects based on the route of administration, if there is any, based on the ROA, so Michael asks when using the smokeable form of marijuana, what research is out there on the effects of inhaling smoke into the lungs, we also have people asking about CBD lotions and chap sticks, I thought I heard someone mention a mouth wash once upon a time. But we're getting a lot of ROA, route of administration types of questions.

>> AARON NORTON: That's a good question. I realize in this version of my presentation, I don't have my slide that I have on some where I show you the different routes of administration, and some of the -- even some of the products that are sold with those different routes of administration. I mean there's even anal and vaginal administration options. I mean I was shocked at how many devices and routes of delivery there are for medical THC.

What I can tell you is the short version is respiratory -- smokeable marijuana is largely considered the worst route of administration, because of all the respiratory problems that can be attached to it. And if you look for example here at chronic bronchitis, and I know sinusitis, there are high rates of sinusitis for smokeable marijuana, and there's mixed research on emphysema, or COPD, but the bottom line is it seems like almost anything that you smoke that provides combustible smoke that you are inhaling in your system has the potential to create some significant problems,

neck and throat cancers is another one. I mentioned lung cancer, that one doesn't seem to be well established, but there seems to be a little bit more evidence about neck and throat cancers.

When you're inhaling combustible smoke, you are irritating your linings within your system, and doing that habitually over time tends to create problems for people.

You know, when I did -- when I went into private practice, and I bought life insurance, they sent a nurse out to my office to do -- collect urine and blood and all kinds of things as parts of the eligibility process for my life insurance plan. She took a tape measure and put it around my test and she had me breathe in for a certain amount of time, hold air for a certain amount of time and exhale and then she was taking readings on essentially lung capacity. After doing that she said well I can tell two things about you. One is you exercise regularly and the second is you are not a smoker of anything. And I said yes, those are both true.

So lung capacity would be another consideration. It seems like vaping in some ways is reduced risk for respiratory problems, but it can sometimes create another problem.

See, we see this with nicotine also, like let's take tobacco smoke, for example. Sometimes tobacco smoke, it smells bad, it's nauseating, and so when people switch to vaping, they'll get these nice pretty flavors and taste really cool. It's almost like chewing gum or something. And they don't get that nasty smell or odor, and they have more places that they can vape without fear of it creating like a bad smell in that area or something.

So then what happens sometimes is people, well-intentioned, they say, well I'm going to switch from cigarettes to vaping, so that I don't have to worry about the smell, and then I'm going to slowly titrate down my nicotine and I'm going to use it as a way to get off the cigarettes and eventually get off the nicotine forever. They get off the cigarettes, get on the vaping and they never get off the vaping and they get more nicotine from the vaping (indiscernible) because it's so easy to access, they don't have to go outside to do it, it tastes good and they actually do more of it and because you get really high nicotine content liquid. The same could be true for THC. Sometimes we'll see people they stop the combustible smoking of marijuana, they'll switch to vaping it, but now they have got high THC content cartridges or waxes and they're actually taking it a lot more THC and doing it more frequently than when smoking combustible marijuana. There's a benefit in terms of the lower respiratory risks (indiscernible) which is a big part of what we're worried about with medical marijuana.

So pills I think would be a lot better. The pills or the gummies, than smokeable marijuana and vaping THC as well.

As far as CBD goes, I know there's a gazillion routes of administration, there's lotions and (indiscernible) and stuff you put on your tongue and stuff you inject in all kinds of places in

your body. It's amazing the number of products out there. I'm not focusing as much on CBD with this presentation because again CBD is not the public health risk its not the potentially addictive compound so people in our field I think are a lot less concerned about it. But I think avoiding smoking is really good, avoiding vaping, vaping probably better than smoking, but probably better to use edibles and gummies, except there's another drawback with those.

Remember when we talked about overdose, a lot of the overdose cases seem to happen from edibles, from people ingesting high THC content edibles, again we got so many variables here. How much THC is in this thing? That's a big question, and that's part of why I would like to see physicians being more involved in the process than the dispensaries and clinics and the self-dosing that clients participate in.

Overly elaborate answer to the question, I suppose, but --

>> SAMSON TEKLEMARIAM: No. That was great. Thank you so much.

We're getting tons of positive feedback for this Q and A. Thank you for having time for it.

Nicholas from North Carolina asks why is the word marijuana still being used to describe cannabis?

>> AARON NORTON: Great question. Even in my own presentation, it would be nice for me to stop using it. I got to tell you guys I'd rather use medical THC or CBD. I'd rather cannabis than marijuana. I don't really know why. I guess it's just a word that the public -- I use it a lot to communicate with the public because some people in the public have no idea what cannabis is. They do know what marijuana is, but I think cannabis would be a better word for us to use. It's more scientific. It's more medical. Marijuana has a different connotation to it. It feels differently to people to use that word. I bet you if you had a study where you flashed words on the screen and you had people rate the level of certain feelings or something when they see those words, we'll see a different reaction to marijuana than cannabis. We'll see a different reaction to medical marijuana than medical THC or medical CBD. I wish we'd get more of the medical terminology, so it's a great point.

>> SAMSON TEKLEMARIAM: Thank you. And the next question is from Michael from Massachusetts. Michael asks is there actually any scientific evidence that medical marijuana is effective for treating PTSD?

>> AARON NORTON: Well, remember I brought up the study that's in the national academies of science, engineering and medicine where they took a specific type of a THC medication, it was a pill. I can't remember the name of it off the top of my head, but you can find it in the report, that you can get for free online, and I don't know if we even included that report as one of the handouts. I don't see it. So probably not.

But you can Google it, and you'll see in that study, it was a brief study. I think it was seven or eight weeks long. In fact we have a reference to it over here. And it showed that it reduced the amount of time that people spent -- or it reduced -- here it is. Seven weeks. It was a reduction in nightmares associated with PTSD. That was only one study.

Now, I bet if you go to Google scholar, and you keyword search medical cannabis PTSD, you're probably going to find some studies, some of which will say, yeah, like, you know, we sampled this group of people, and we administered this PTSD questionnaire and the people who were taking medical marijuana maybe were reporting a difference in symptoms or something. You might see some isolated studies like that. But you also see so many studies that don't show that. So you really have to take in the totality of the evidence available.

What I ask tell you is anecdotally I hear reports from clients who say it helps my PTSD. And I think it does in the sense -- this is where we get a little technical. What is -- what do we consider a positive outcome? Is it when I started to experience a symptom, like I'm having a flashback, and there's an incredible amount of anxiety or even panic associated with it. I vape some THC. And I started to relax and come down. Is that a reduction in symptoms? Well, in that moment, I think it is. I think the person got relief in that moment. Is the PTSD going away? Are they recovering from it? Are they having fewer flashbacks or are they of less intensity? Not a lot of evidence for that. But in the moment, I certainly think it brings people down.

For a subset of people it increases paranoia and anxiety and that has to do with their expectations and beliefs about the substance as well, but, you know, I can give you all kinds of clients who say it makes them feel better in the moment, it gives them relief in the moment, but it doesn't mean they're getting recovery from the disorder.

>> SAMSON TEKLEMARIAM: Perfect, thanks, Aaron.

The next question is from Davina. Davina says that some of her clients tell her that using THC or marijuana helps them with their sleep. Can you talk a little bit more about how it affects sleep. Not sure if it's really true because these clients also seem to be taking sleep medication. I guess a side question is is there any harm of using THC or medical marijuana with sleep medication?

>> AARON NORTON: Yeah. So I'm not a hundred percent sure as to whether THC is synergistic with any of the sleep aids. That's a great question. I would assume there's a capacity for that to be true. Does it help some people sleep? I certainly have clients -- that's a common reason clients tell me for using THC. It does tend to knock people out. It tends to make them sleepy or tired, and start to calm down and relax. Just like alcohol does, just like benzodiazepines do, just like opiates do, just like any central

nervous system depressant does and THC is interesting. It's a central nervous system depressant. It's a stimulant because it increases your heart rate and it's a mild hallucinogen (indiscernible) but because of those depressive qualities, it does help some people to sleep.

Now, again is it helping their sleep quality? Even sleep aids like Ambien and others, the research often (indiscernible) at the expense of knocking people out. So there's no free lunch in life, and do people develop a tolerance to it? Yes, so I have clients who have been using marijuana daily for years, and it used to help with sleep a lot and now it doesn't seem to help nearly as much as it used to. That's because of tolerance. So it's the end game, which we'll talk about tomorrow.

Now, the American academy of physicians, they say that the first line of treatment for insomnia should be cognitive behavioral therapy, CBT, that in clinical studies performs better long term than things like sleep aids or sedatives that people take at night. And so they think it should be the frontline of treatment, because the majority of cases of insomnia, the cause is thoughts and behaves and that's -- behaviors, and because that's true (indiscernible) so that's what they recommend should be the frontline of treatment. Try CBTI first, and if CBTI protocols don't work and you don't have could he occurring biomedical conditions like sleep apnea to address, then you might consider something like sedatives or something like that. And in the majority of cases they would expect to get some relief from CBTI. They don't want to do CBTI. It's not fun to do for a lot of people. In fact it feels a little bit miserable for a little bit of time at the beginning. Before things start to improve.

So I would say, you know, again my conservative viewpoint is avoid any potentially addictive substance as a sleep aid, first try thoughts and behaviors (indiscernible) that could be creating the problem, and those have been adequately addressed, then maybe we look at would it make sense -- really all of these sleep aids were die signed to be used -- designed to be used short term. They weren't designed to be used long term because people develop a tolerance to them and THC is the same.

>> SAMSON TEKLEMARIAM: Just a little while ago you mentioned that overdose with people who are having edibles, so we had a lot of people ask what does it look like when someone has THC overdose? What are the symptoms?

>> AARON NORTON: That's a great question. You know, I used to collect news reports about these kinds of things. So that when I was doing -- when I worked in residential treatment, I could use them for psycho educational groups and things. And a lot of the cases, what we could see is things -- would see is things like, I remember one pretty vivid. It was a fire department. Nice little lady in the neighborhood brings brownies to the firefighters. She

doesn't tell them they have THC, and the firefighters ingested the brownies and what they started to experience were symptoms like nausea, vomiting, and headaches. So because only firefighters start vomiting and getting nauseous and having headaches and diarrhea, gastrointestinal distress and things, they went to the ER, and it was included that they had all ingested those high THC brownies and they overdosed, so that's an example of a what overdose would look like. It kind of looks like food poisoning I would think.

>> SAMSON TEKLEMARIAM: Thank you Aaron.

>> AARON NORTON: I forgot to mention, pair know I can't. Remember -- paranoia. High doses sometimes people get paranoid and anxious. They may experience high heart rates.

>> SAMSON TEKLEMARIAM: I'm going to sneak in to you more questions here and then we'll wrap up. So this one is a little longer. Lourdes from Washington, from the state of Washington, an ongoing issue we run into is working with legally involved clients who should be abstinent from all mind altering drugs as they're mandated to treatment but then they test positive for cannabis. Is there a good source for determining how to read the test results and the differences between CBD use, recreational use, and what the lines show on the tests?

>> AARON NORTON: Yeah. Glad you think this up. One thing -- glad you bring this up. One thing I do not like. I don't like treatment programs that (indiscernible) screenings and call them drug tests and then make big decisions that affect people's lives with those screenings. Please understand I'm not trying to disparage any of you or countries size anybody but it's -- criticize anybody but I think it's important for us to look at.

Any test that you do with a client and they pee in a cup and you get a result light then. That's just a screening. That's all it is. Those tests where the bars start to appear. That doesn't tell you -- first of all you can get false positives and negatives and higher rates from the screening test. The second thing is if you get the right bar or line that shows up that tells you you're positive for THC, you don't know if they used THC today, yesterday, or three weeks ago. You don't know how much they used, how often, anything like that from that result.

Technically you can't even fully rule out that there couldn't be something causing a false positive. So what I think is very critical is that you send urine specimens off to laboratories and that you get confirmatory testing procedures in place, like radio immunoassay, and then the labs will provide you information sometimes that helps you to interpret the results.

So for our lab that we use, which is (indiscernible) toxicology labs, they give you like THC values in your lab report. And then they give you a chart that says, okay, if it's in this range, that would suggest this possibility. This range would suggest this and

that range would suggest this.

It might say, yeah, this could be a small amount of marijuana -- this is a small amount of marijuana in their system. THC. So either they used just a little bit recently or maybe they had been using more regularly but they haven't been using for a while and it's still working its way out of their system. And then if you get a positive up front then you retest them a month later. Is the THC value gone. Let's say you retest them a week later. Is the THC level coming down? If it keeps going up, you know they used again. You can't know exactly how much they used and when from those lab reports, but you can at least see how much is in their system and is that amount changing over time. So maybe that answers that question a little bit.

>> SAMSON TEKLEMARIAM: Awesome. Yeah. And the last question, Stephanie from New Jersey, do you ever see us moving in a trajectory where it will be legal federally?

>> AARON NORTON: My personal opinion, probably so. I could be wrong, but I think it'll probably be legal federally eventually and I think probably eventually it'll be legal in most or every state.

>> SAMSON TEKLEMARIAM: All right. And I'm moving to your references slide. I don't know if you had any references you wanted to point out as we close out and I'll remind them how to stay in touch with you, Aaron.

>> AARON NORTON: Yeah. Good question, because remember how I brought up that NASM report where you can see the totality of evidence about certain disorders and by the way, some of the effects, the health effects of marijuana, 'cause they cover all that in the report as well. I think it's right here in the fine print, national academies of science, engineering, and medicine and you click on that link and I believe it will take you to that report. It is 400 and like 50 pages or something. It by the way, speaking of insomnia, is effective treatments for insomnia, sit down and read that manual and you will fall asleep quickly.

(Laughter.)

>> SAMSON TEKLEMARIAM: Nice. And so everyone I'm going to leave this on the screen for just a moment. Here is Aaron's contact information. Aaron, thank you so much for this incredible presentation. We have a lot more questions that came in so we'll send those questions with Aaron and work with Aaron over the next couple of weeks to see if we can get some of them answered in a Q and A document.

Everyone else, Aaron mentioned this earlier and some of you mentioned it in the questions box but whenever you have questions about the dangers or risk, make sure you have some clinical supervision protocol that involves medical professionals. Bringing them into a training is great. We could discuss it all day, but as Aaron mentioned earlier, it's really important to consult and make sure you're maintaining the safety of your patient. We have --

Aaron was really kind to share his email address, his website and tomorrow's training is going to be incredible. So just as a reminder, every NAADAC webinar has its own web page that houses everything you need to know about that particular webinar. So immediately following this live event, you will find the online CE quiz link on the same website that you used to register for this webinar. You have the website here at the top of the page.

(Reading website.)

Just add a 2 and you'll be able to register for tomorrow's webinar. That is October 22, same time, 3 p.m. to 5 p.m. eastern. And here's the schedule for other upcoming webinars, please tune in. There's some other really great interesting topics with great presenters just like Aaron today. We have Dr. Susan Bradshaw towards the end of this month. And (indiscernible) starting off the month of November, with a really great training on personality disorders.

If you haven't done so already, please make sure to bookmark this web page. So you can stay up-to-date on the latest in this new series, and catch up on all eight trainings that you may have missed. They are now open for free registration, believe it or not. We've got more to come next year in 2021.

As an additional resource, NAADAC the association for addiction professionals has provided a COVID-19 resources page that includes six excellent free webinars covering top concerns in the addiction profession and presented by leading experts in the field on the other side of the nation, Dr. Frederick Dombrowski, also a strong member and a partner with us, similar to Aaron's affiliation, he did a training on psychological first aid. Wonderful resource.

As you may have seen before, we do have two specialty online training series with exclusive content on clinical supervision in the addiction profession. This one is by Dr. Thomas Durham and a lot more others in the group. But it partners -- or also connects to our clinical supervision workbook, which is sold in the NAADAC bookstore. And the other series or second series is the addiction treatment in military and veteran culture, to learn more about these two exclusive series, they have their own dedicated training pages. They are a part of a certificate program, meaning you earn a certificate of achievement after accomplishing some of the goals within that program. Feel free to email us anytime at ce@naadac.org. You can go to our website. Many benefits for becoming a NAADAC member as you see, in fact we'll update this number, there's over 300 CEs for NAADAC members. Those CEs have a small processing fee for those who are not NAADAC members. Of course access to addiction recovery magazine and right now our on demand virtual annual conference is open for registration. If you missed any of those excellent presentations you can go to our website, and you can register to view those now.

A short survey will pop up at the end. Please take some time to

give us your feedback. Share any notes you have for us or our presenter. Let us know how we can improve your learning experience.

Thank you again, everyone, for your awesome participation in this webinar, and sort of extended Q and A that we got with Aaron. We really look forward to learning more from you, Aaron, tomorrow. And I look forward to seeing you all from this group again tomorrow in the training.

Aaron, thank you for your valuable expertise and leadership and support of the field in such a challenging and sometimes controversial topic.

Everyone, you can stay connected with us on LinkedIn, Facebook and Twitter. Have a great day. Be well.

(End of webinar.)

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