



NCSBN
Leading Regulatory Excellence

2018 NCSBN Scientific Symposium - Regulation: Patients Using Marijuana: An Integrative Review of the Literature Video Transcript

©2018 National Council of State Boards of Nursing, Inc.

Event

2018 NCSBN Scientific Symposium

More info: <https://www.ncsbn.org/12009.htm>

Presenter

Kathy Russell, JD, MN, RN, Associate Director, Nursing Regulation Administration, NCSBN

Well, I'd like to first start with thanking the other people responsible for this body of work, the NCSBN National Nursing Guidelines for Medical Marijuana.

We had a committee that was from the boards of nursing and staff from NCSBN. And I'll just tell you their names real quick. Rene Cronquist was our Chair from Minnesota, Holly Fischer from Ohio, Cathy Borris-Hale from D.C., Diana Heywood from Manitoba, Canada, Dusty Johnston from Texas, Sherri Sutton-Johnson from Florida, and Valerie Smith from Arizona.

The staff were myself, Maureen Cahill, and Kent Gowen. And so they were all responsible for this body of work. So first, I'd like to direct you to the state of the state, or the state of the country related to marijuana. And you can see that the biggest influence you have here is green.

Okay? You don't have to memorize all the particular states, but that this is moving across the country. And there are just a couple of states where they're not really talking about this or have access to it, and that is these two kind of grayish states here, and over here too. So this committee was brought together by NCSBN's Board of Directors to do these specific five charges – develop guidelines for RNs, develop guidelines for APRNs, and then develop guidelines for nursing education, and that was two parts for the APRNs and for prelicensure education.

As well as develop guidelines for boards of nursing. So first, a few important items about cannabis, some of this you already know. We'll pass through this rather quickly. But you all know that cannabis is a Schedule I controlled substance.

And that came from the Comprehensive Drug Abuse Prevention and Control Act, which actually put together the schedules. And it's important to know what a Schedule I substance is. First of all, according to the act, it has no accepted medical benefit.

It presents a high potential for abuse. Health care providers cannot prescribe Schedule I substances. And then, there's restrictions on research using a Schedule I substance and that's particular to cannabis also. And so then, what do we do when we're looking at the literature if it's restricted?

You'll see that there's a dearth of randomized clinical trials that actually compare the effect of cannabis and cannabinoids against other standardized medications with clinically-proven efficacy and regular use in clinical practice. So there were two most prominent and thorough reports, and that was the National Academy of Sciences and the World Health Organization.

So in our methodology, we used those two studies, as well as to search all scholarly articles related to cannabis and its derivatives and words related to qualifying conditions listed by jurisdictions.

So what we did then was identify all those studies in the literature, and so the search used was medical, as well as scientific, as well as gray literature sources. And so then all those studies were reviewed and graded according to the Cochrane method, and then what we continued to do was review all of those studies and then all of their references, and reviewed every article and graded it until all the literature had been exhausted.

So after amassing those citations, you can see that we looked at randomized placebo-controlled studies like we do for most studies when we're looking at efficacy. Now, we did do additional researches in PubMed and the gray literature, and we use those terms usually relating to cannabis and medical marijuana programs as qualifying conditions, common symptoms related to qualifying conditions, and words related to cannabis.

So once everything was graded, we could come up with, "What is the moderate to high-quality evidence for effective treatment with cannabis?" And we found there were really only six conditions where there's moderate to high-quality evidence.

And those are some things that you would probably know of right off the top of your head – cachexia, chemotherapy-induced nausea and vomiting. Everyone kind of knows that about the use of cannabis in medical conditions. What we also learned about was pain resulting from cancer or rheumatoid arthritis, chronic pain resulting from fibromyalgia, neuropathies resulting from HIV/AIDS, MS, or diabetes, and spasticity from MS or spinal cord injury.

And it's real important to remember that, you know, we're not talking about pain for everything. There are moderate to high-quality studies for these specific types of pain and these specific types of neuropathies and spasticities. So it's not a blanket evaluation for effectiveness for every spasticity and every neuropathy.

We were real clear to look at the specific studies and what the conditions were for those studies. Now, it is important to report also that there is moderate to high-quality evidence for effective treatment with cannabis for conditions supported by a single clinical study, and it's important because cannabis is being used in those conditions.

So we do know and it would be an omission of us if we didn't talk about Dravet syndrome and Lennox-Gastaut syndrome. Because you do hear about children using cannabis for the reduction of seizure

frequency, but there's only one clinical study for that, and also the reduction of posttraumatic stress disorder, there's one clinical study now, and improvement in tics.

And what we should talk about right now is, "Well, are those the only things that medical marijuana should be used for?" And I'll comment now and say that there's great restrictions on studying marijuana or cannabis, or THC, or any of the cannabinoids because it's a Schedule I substance.

So that limitation actually limits how you procure marijuana for study, and that procurement has to go through several federal government layers. So what does that mean?

Red tape, lots of red tape and, in the context of this current administration, even slower action on the request for use of medical marijuana, which only comes from the University of Mississippi. So there's one source for marijuana and a lot of restrictions on obtaining the marijuana.

So therefore, although we report on what there's evidence for, there probably could be a lot more evidence for other conditions and other diseases. However, there hasn't been able to be enough study so far. So I'm reporting on the current evidence, not that there'll never be any other evidence.

Now, we also found some other interesting information besides the effectiveness of marijuana, and we'll talk briefly about those additional findings. We found studies that talked about the improvements due to the general effects of cannabis, and we found a lot of information regarding the adverse effects of cannabis for these particular areas, and we learned a lot about administration of cannabis.

So let's talk about the general improvements due to the use of cannabis. I bet you could name a couple. What do you know happens when people use cannabis? They get the munchies. So there is some appetite stimulation, and there is some euphoria, and there is some sedation.

So those are the general effects that we all know about, and it's in the literature. Those three general effects, though, may actually help the patient because they may mask the symptoms. Because it produces a euphoria, you may feel better about your disease, even though the cannabis may not directly affect a symptom of your disease.

So you may have an increase in the subjective sense of well-being, and so then patients report a quality of life improvement sometimes. Now, the adverse effects of cannabis are important to also know about. You may also be familiar with some of these.

It's an increased heart rate, dizziness, sleepiness, decreased blood pressure, increased appetite, maybe dry mouth, dry eyes, some decreased urination. Some people have some hallucination or paranoia, or anxiety, impaired attention, memory, psychomotor performance. Those are also maybe common things you've heard about when people use marijuana whether it's medical or recreational.

Some people describe fatigue, or nausea, or asthenia, or vertigo, and others may report some suicidal ideation. This is really contradictory in the literature. As much as there is said about suicidal ideation being caused by cannabis, there isn't literature that talks about suicidal ideation not being caused by cannabis.

So that's really contradictory, and more research is needed. It's also important to look at the adverse effects on certain populations that use cannabis. So in adolescence, there have been some studies. However, those studies are contradictory, and again I'll say more research is needed.

But there are some studies that talk about poor grades high drop-out rates, lower income, lower percentage of college degree completion. But again, these are contradictory studies, so we can't say for sure. Fertility, there's absolutely no human studies available.

So there are two preclinical studies that talk about there being interference with the cannabis and an increased chance of failed embryo implantation. There's also a couple studies that talk about an interference with spermatogenesis and just a decrease in sperm function. But again, those are studies in nonhumans.

Okay. Now, pregnancy, again, there's no reliable data for neurodevelopmental outcomes with early exposure to cannabis, again, because we're not looking at humans. If there is a correlation, it might be related to an increased risk of decreased birthweight and higher odds of a newborn being placed in the NICU, the Neonatal Intensive Care Unit.

We'll look at conditions. There may be some adverse effects with particular conditions. And so for altered cognition, so if you have some neurological symptomology, and you give someone a substance that might affect their cognition, you're going to show some greater cognitive impairment in those particular patients.

Mania and predisposition to mania, there may be a significant relationship between cannabis use and exacerbation or onset of bipolar disorder manic symptoms. So there's a correlation between the two, but not necessarily high-quality evidence.

And schizophrenia. And the reason why we mentioned some of these is because you might see, I wouldn't call it "literature," but publications, because we have the internet, and anybody can public anything. So right now, we can say that there is no research, no moderate to high-quality research exists that concludes that cannabis use causes schizophrenia.

There is some research that supports a correlation between cannabis abuse and more and earlier psychotic relapses. So the literature is really scant on this area, but we need to mention it because you'll hear about it in the popular literature.

Abuse, dependence, overdose, and withdrawal, always important to think about when we're talking about a drug. Okay? Overdose, there's no cannabinoid receptors in the brainstem. So in the cardiopulmonary, cardiorespiratory centers, there's no cannabinoid receptors, so there can't be an overdose as we know it so far.

Induced psychosis, again, that can happen with ingestion of very, very large doses of THC. And there is a cannabis use disorder in that that's a problematic pattern of cannabis use, leading to clinically significant impairment or distress.

And sometimes you can see hyperemesis in patients that are less than 50 years old with a history of daily or excessive cannabis use. And then we have cannabis withdrawal syndrome, which is actually noted in the DSM-5. We also learned a lot about methods of administration and dosing.

So most of the studies that are conducted that are good, high-quality studies are referring to smoking and oromucosal sprays. So when you look in our published study in the "Journal of Nursing Regulation," you will see it's really important to look at the particular study and what the method of administration was.

The findings cannot then be generalized to edibles and dabbing, and other really interesting ways of taking cannabis. And also, it can't be combined with some of the oral administration because smoking cannabis, you're using the whole plant, some of the edibles may be using part of the plant, they're using an oil.

So that all of the administration effects are different depending on the route of administration. And so that we really need to look at that when comparing literature and taking the literature and using it out for different types of disorders.

The other thing that's really important with any dosing and any administration relating to cannabis is that there's no particular milligram amount or spray amount. You know, the ingestion of marijuana is just so different with everyone and with every type of administration. So dosing is really on a self-titration basis, with continual assessment of perceived efficacy and adverse effects.

So that's the most important part about any type of dosing that is used. So what do we know from all of this literature? We know that there's limited moderate to high-quality research on effectiveness for various symptoms and conditions. And then caution should be taken with some specific populations and some specific conditions, and that dosing consideration includes that self-titration and continual assessment of efficacy and adverse effects.

So how does that fit with medical marijuana programs? Well, in 1996, California adopted exemptions legalizing the use of cannabis for medical purposes, and there was the first medical marijuana program. It didn't go into effect until 2000. But that health care providers cannot prescribe cannabis, and that they can only certify that a person has a qualifying condition.

And each jurisdiction has its own list of qualifying conditions. So there are 31 medical marijuana programs in the United States. You can't fit them all on this slide. But there are 57 different qualifying conditions across all those programs, which I did fit on one slide here.

Okay? But let's look at the most common qualifying conditions because that's a more manageable list of 18. Okay. So we see those 18 here, and then you learned about the literature that we reviewed. And so we can see that in red are the most common qualifying conditions that actually have evidence, and that even included the two that have the one study.

So you can see here that we don't have evidence for most of the qualifying conditions. So how did we get there? Well, we got there via advocacy, via patient advocacy groups, actual patients, health care

professionals. So we have more qualifying conditions with more symptoms and conditions than we do with high-quality research.

So it leaves the jurisdictions to approve conditions based on those advocacy research. So what do all researchers say at the end? "More research is needed." So we really need to reschedule cannabis so that research can be completed. And we need to then assess individuals right now with cannabis use as a complementary or alternative medicine, not as the only medicine.

We also need research to assess the safety and provide dosage and delivery route information. So from all of that, we reviewed the literature and the medical marijuana program legislation, we came up with some nursing implications and nursing guidelines, which I cannot talk to you about today in my time limit.

But you can read about them in the "Journal of Nursing Regulation," which is available for you at the back of the room. So I am near out of time, and we have a panel discussion coming.