SAME-DAY SURGERY

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INSIDE

RELIAS MEDIA

Medical Marijuana Landscape Has Evolved Dramatically Over Past Decade

Cannabis use is ubiquitous across the nation as states continue to legalize marijuana, both for medicinal and personal uses. Surgery patients who ingest the drug are at a higher risk of complications, which is why surgery center directors and physicians should understand legal, medical, and other implications of cannabis use.

Medical marijuana is a hot topic, notes **Ivan Urits**, MD, pain medicine fellow, Beth Israel Deaconess Medical Center, Harvard Medical School. "It's highly controversial, and a lot of people are getting some good benefits out of it, but at the same time it's in its infancy," Urits says. "More work has to be done to see what is actually beneficial and what's not, and whether there is any benefit for various types of pain."

Federal law prohibiting the sale and use of cannabis has been undercut by state medical marijuana programs and recreational use legislation, says **Kathleen Russell**, JD, MN, RN, associate director, nursing regulation, National Council of State Boards of Nursing (NCSBN). "What states have done with medical marijuana programs and recreational marijuana laws is create an exception to the federal law," Russell says. "They say, 'If you follow these rules, it's legal in our state, and you can get marijuana at a dispensary.'"

Healthcare professionals should know their state laws and how these might affect their own practices, according to **Edward Mariano**, MD, MAS, professor of anesthesiology, perioperative and pain medicine at Stanford University. Recreational use of cannabis is increasing as more states legalize marijuana use, he adds. "This is something more and more healthcare professionals are going to encounter," Mariano observes.

Millions of Americans use marijuana, and its use is widespread among young people.[1] In states that have passed medical marijuana legislation recently, healthcare providers and employers might be unsure of how to adjust to the change, notes **Brian Garrett**, DNP, MSN, RN, CRNA, program director for

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"The Ohio state legislature just allowed medical marijuana use, but it's not widely accepted yet," Garrett says. "When something is new, we don't have a lot of data on it."

For instance, doctors sometimes would cancel elective surgery cases when patients were regular cannabis users, Garrett notes. "In recent years, this has lightened up where physicians are more likely to do the case," he says. "They are not routinely testing for it, and it's provider-specific as to whether they go forward with the surgery."

The National Institute on Drug Abuse notes that marijuana is gaining greater acceptance in American society in the wake of changing marijuana policies across states.[2] The federal government largely is allowing states to set their own policies on marijuana. During the Obama administration, the Department of Justice (DOJ) issued position papers that said the DOJ would not arrest people using or selling medical marijuana according to their states' laws. This position initially was reversed under the Trump administration, although officials indicated the DOJ would not crack down on states' legal marijuana industry in response to an objection by U.S. Sen. Cory Gardner, R-CO.[3] "The new DOJ memorandum said federal prosecutors should follow their usual rules to determine if they will investigate or prosecute a case," Russell says. "Since that memorandum, no lawsuits have been filed prosecuting those people who distribute cannabis for medical purposes."

Legal implications are changing rapidly and vary from state to state. As of December 2019, marijuana use remains fully illegal in only nine states.

Surgery centers might keep in mind two of the most important implications of marijuana use:

- Cannabis use among surgery patients can create a risk when they receive anesthesia;
- Employers in some states might run into legal trouble if they take action against an employee or potential employee after a positive marijuana drug test.

Another issue is that cannabidiol (CBD), one of the active ingredients of cannabis, is sold over the counter even in states that have not legalized marijuana use. Some of these products include tetrahydrocannabinol (THC), the chemical in marijuana that produces psychological effects. This means employees who use CBD oils, topicals, and other products could test positive on a marijuana screen.

Some employers in Colorado even conduct urine drug screening of patients to prevent problems

EDITOR'S NOTE

This special issue of *Same-Day Surgery* includes reporting on a variety of issues related to the legalization of marijuana. State cannabis laws are changing so rapidly that it can be challenging for surgery centers, physicians, and healthcare organizations to write policies and procedures that will be sustainable. Thus, this issue includes seven articles exclusively about cannabis, including an overview of current medical marijuana laws, cannabis research, regulations, legal implications of drug testing, guidance, and a look at how surgery centers can screen patients for cannabis use.

of cannabis drug interactions with anesthesia products, says **Doris Gundersen**, MD, medical director and psychiatrist, Colorado Physician Health Program in Denver. "They disclose to patients that they're screening for THC," Gundersen explains.

Colorado and some other states leave it up to employers to decide how they handle drug policies and cannabis education for employees.

"Colorado was a canary in the coal mine for legalization of marijuana," Gundersen says. "Our regulatory agency has done a good job of anticipating regulations for safety, but there is no formal process for healthcare providers to be educated about cannabis. Most providers are doing this on their own."

Employers conducting pre-employment drug testing will run into situations in which employees test positive for THC when they do not ingest marijuana, but use CBD oil for pain, says **Natalie P. Hartenbaum**, MD, MPH, FACOEM, president and chief medical officer, OccuMedix in Dresher, PA. "If you use CBD, you run the risk of having a higher level of THC," she says.[4]

Healthcare workers who are employed in states where recreational marijuana use is legal might be unaware of the risks they take. For instance, a physician might go to a party and eat a brownie, unaware that it has been laced with marijuana.

"I tell people who work in sensitive positions, and most healthcare providers fall into that category, that there are too many unknown products out there," she explains. "They should be aware of what is permitted and prohibited in their state."

Increased use of medical cannabis products also poses risk, says **Kannan Ramar**, MD, president-elect of the American Academy of Sleep Medicine. "We don't know, unfortunately, what they actually do and if it is helping patients or causing more side effects," Ramar says. "The bottom line is we need more studies and rigorously conducted studies that hopefully will guide us." ■

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Snapshot of U.S. Marijuana Legalization

More people worldwide use cannabis than any other recreational drug, according to the 2018 United Nations World Drug Report.[1] In the United States, that number is increasing as many states have legalized the use of medical marijuana.

In 34 states and the District of Columbia, medicinal marijuana is legal. In 11 states, cannabis use is fully legal, meaning that adults can use it recreationally without legal repercussions. Other states have instituted mixed marijuana laws, including some that have decriminalized the drug and some that allow CBD oils, but not smoking or edibles.[2]

Federal law governing marijuana use involves the Comprehensive Drug Abuse Prevention and Control Act of 1970. Marijuana/cannabis is a Schedule I drug like heroin, peyote, ecstasy, methaqualone, and LSD. According to the Drug Enforcement Administration, Schedule I controlled substances have no acceptable medical use and have a high potential for abuse.[3]

In 2019, Congress considered, but did not pass, legislation that would change laws prohibiting marijuana, including:

• The Marijuana Opportunity Reinvestment and Expungement (MORE) Act of 2019. This would remove marijuana from the list of federally controlled substances and allow states to set their own marijuana policy, setting up a 5% tax on marijuana products;

• The Marijuana 1-to-3 Act. Would require the attorney general to move cannabis from Schedule I to Schedule III. This would make it possible for more federal research of cannabis.

• The Ending Federal Marijuana Prohibition Act of 2019. ■

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Cannabis Products Can Create Safety Risk for Surgery Patients

As more states legalize marijuana, surgery centers and anesthesiologists should learn about safety issues related to ingestion of cannabinoids.

Cannabis use matters in the perioperative setting, says **Karim Ladha**, MD, MSc, assistant professor, anesthesia, University of Toronto. "We took a large national registry of patients coming in for surgery and looked at those with cannabis disorder," Ladha says. "Those ICD-9 codes for cannabis disorder are picked up in our database."

When Ladha and colleagues analyzed data for patients with cannabis disorder diagnoses and those without, their overall health outcomes looked similar. But when investigators examined specific complications, they saw a difference between the groups, Ladha says.[1]

"Those with cannabis disorder had a higher risk of myocardial infarction and risk of stroke," Ladha says. "This makes sense when we look at cannabis and how it interacts with the cardiovascular system."

Smoking marijuana affects the cardiovascular system, but less obvious is the effect of tetrahydrocannabinol (THC), marijuana's active ingredient, on heart rate. There is potential impact on oxygen in the blood, but this is an area that needs more study, Ladha says. Drug interaction of marijuana with anesthesia products also could affect surgical patients.[1]

"There are some data to suggest that patients who are using cannabis routinely will have higher anesthetic requirements and increased pain postoperatively," Ladha says. "That data are not robust, but it gives us an idea of challenges."

Marijuana use can produce a sedative effect and can interact with anesthesia. Also, smoking cannabis carries as many significant risks as smoking cigarettes.[2] With chronic use, marijuana cigarettes can lead to lung disease, notes **Bridget Petrillo**, CRNA, who works for Greater Anesthesia Solutions LLC in Phoenix. Petrillo also is a member of the Peer Assistance Advisors Committee of the American Association of Nurse Anesthetists.

Nurse anesthetists and anesthesiologists can educate patients about the risks of using cannabis and marijuana cigarettes. "It can cause lung disease, which can compromise the patient's health in being intubated," Petrillo explains. "We inform patients that marijuana use could impact their requirements for medicine."

Patients using cannabis might need more anesthesia — and with more anesthesia, they could experience more side effects, Petrillo cautions. Surgery centers could educate patients about the risks of smoking cannabis in the days or weeks leading up to surgery. For instance, surgery patients with damaged lungs from cigarette or marijuana smoking might be at a safety risk if they are put on a machine to mechanically ventilate their lungs, Petrillo says.

Surgery centers and physicians should screen patients for cannabis use and acknowledge potential drug interactions, including with CBD products that are legal even in states that have not legalized marijuana.

"There are drug interactions with CBD," says **Kevin Hill**, MD, MHS, director, division of addiction psychiatry, Beth Israel Deaconess Medical Center, and associate professor of psychiatry, Harvard Medical School.

CBD is one of the active ingredients of cannabis and is a component of medical marijuana. It also is sold in the United States over the counter as oil concentrates, topical agents, capsules, edibles, tinctures, vape oils, and skin and hair products.[3]

There is an FDA-approved version of CBD that serves as an anti-epilepsy medicine, Hill says. "Whether you purchase it online or it's prescribed, there are potential drug-drug interactions," he adds.[4]

Physicians will need to ask patients specifically about how they ingest cannabis products. For instance, the rise of vaping's popularity has led to vaping-related lung injuries, some of which involve THC.

"We need to pay more attention to vaping," says **Edward Mariano**, MD, MAS, professor of anesthesiology, perioperative and pain medicine, Stanford University. "It's a real problem ... and we didn't have it on our radar until recently. We have seen patients who switched from combustible cigarettes to e-cigarettes and vaping devices, and it's matching with the surge in vaping-related lung injury."

In a recent report from the CDC, most people affected by an outbreak of lung injury from vaping and e-cigarettes were using THC-based vaping products.[5] Also, the CDC analyzed data on the use of THC-containing products, and found a number of counterfeit products. The CDC and FDA recommend people do not use THC-containing e-cigarettes or vaping products.[6]

"These two phenomena — increased vaping and increased use of cannabinoids — go hand in hand, and we need to know more about that," Mariano says. "There is no clear connection between vaping injury and a specific ingredient." Anesthesiologists must think about potential risks when

patients who have used cannabis products and/or vaping products receive general anesthesia.

"You want to anticipate these problems and, in certain circumstances, you can avoid general anesthesia," Mariano says. "In our outpatient setting, patients with foot and ankle and wrist or shoulder injury could have more selective anesthetic — nerve blocks, which anesthetize one area of the body."

Now that vaping has introduced a new level of uncertainty, anesthesiologists should engage in presurgery conversations with patients about what techniques are available to them if the patients are vaping or smoking marijuana, Mariano says.

Another consideration is the risk that occurs when surgery patients combine marijuana with opiates. "There is higher potential risk if patients who use marijuana are driving and are on oxycontin for postoperative pain," says **Ivan Urits**, MD, pain medicine fellow, Beth Israel Deaconess Medical Center, Harvard Medical School.

"I'd advise patients not to mix the two drugs." More research is needed before physicians will know for sure about drug/anesthesia-to-cannabis interactions. "The short answer is we don't really know what the best practices are," Ladha says. "We have some ideas, based on our experience, but we're trying to solidify that through an expert panel."

Ladha is involved with a group of global researchers who are working on consensus-based guidelines for perioperative implications of cannabis. "We're hopeful we'll release the guidelines within a year," he reports. ■

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Straightforward, Neutral Approach Best Way to Screen Patients for Marijuana Use

Surgery centers in every state should screen patients as routinely for marijuana use as they screen for cigarette smoking and alcohol consumption.

"When talking with patients coming to surgery at a same-day surgery center, the most important thing is to establish their use of marijuana in a preoperative profile," says **Bridget Petrillo**, CRNA, who works for Greater Anesthesia Solutions LLC in Phoenix. "It's one of the questions we regularly ask people now, especially in states where marijuana use is legal. We want to establish that use, how often they use it, and, more specifically, when was the last time they used it."

From the perspective of someone scheduling surgery, cannabis use is as important to know about as cigarette smoking, alcohol consumption, and prescriptions for diabetes and hypertensive medications.

"All of those things impact the body and anesthesia. The medicines we give are all connected to that," Petrillo says.

It is essential to know whether patients use cannabis or CBD products regularly, stresses **Kevin Hill**, MD, MHS, director, division of addiction psychiatry, Beth Israel Deaconess Medical Center, and associate professor of psychiatry, Harvard Medical School. Physicians should be straightforward when asking patients to disclose this information, suggests **Edward Mariano**, MD, MAS, professor of anesthesiology, perioperative and pain medicine, Stanford University.

Mariano says he approaches substance use screening with this script: "I'm a physician, and my specialty is making sure you are safe when you have surgery and making sure you have the best outcome and experience. When I ask you questions about the things you put in your body, I'm not passing any judgment. However, I need to know how the substances you put in your body may affect what I give you in anesthesia when you have surgery."

Some drug-drug interactions are unpredictable, but others can be

anticipated; still others can be avoided. "I have that open conversation, and patients respond really well to that," Mariano says. "The doctor-patient relationship is still sacred, and the questions we ask are not to turn around and report them to the authorities. We're taking their history and trying to understand what they do in their daily life and what substances they use on a daily basis, which is what we need to know before we can anesthetize them."

In states where medical marijuana is legal, patients might not disclose their marijuana use to surgeons or other providers.

"I don't think patients are trying to mislead healthcare professionals," Hill says. "But they either don't think about it when they're in the clinic because they are not asked about it, or they may believe their physician does not support the use of cannabis, so they're not going to offer that information."

With medical marijuana legal in almost three dozen states, there is less stigma surrounding its use than there might have been a decade ago. "I have noticed that it is becoming less stigmatized, and people are more open to [discussing] it," Petrillo says.

A National Institute on Alcohol Abuse and Alcoholism survey revealed that the percentage of Americans reporting marijuana use doubled between 2001-2002 and 2012-2013. About 9.5% of American adults said they had used marijuana within the past year, and about 30% of the adults who use marijuana meet criteria for addiction.[1]

A more recent investigation revealed that marijuana use by middle-aged and older adults in the United States also had doubled.[2]

Doctors should ask about cannabis use for safety reasons. "Whenever you ask people if they're using — not only cannabis, but also cocaine or heroin — it's a little discomforting," says **Karim Ladha**, MD, MSc, assistant professor, anesthesia, University of Toronto. "Sometimes, we'll say to people, 'You don't use any substances, right?' and this discourages people from disclosing their use to us. Now that marijuana is legalized in Canada, people are asking the question more, and patients are more comfortable disclosing it as well."

One way to screen for cannabis use is to make it a routine question. "It works well to ask people if they smoke cigarettes, drink alcohol, and the third question could be marijuana use," Petrillo offers.

Clinicians should not stop with just asking whether someone uses marijuana. They need to ask specifically about cannabis products, CBD products, and edibles used for medicinal purposes.

"Educate patients on the importance of telling us what we need to know about their [cannabis use]," Petrillo adds. "Maybe you could give them another opportunity to answer that question." ■

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Workplace Cannabis Use Poses Risks, Legal Confusion, Testing Issues

Rapidly changing state marijuana laws may challenge surgery centers to write ironclad policies regarding drug testing and screening. Any decision made one day could be put in peril by new or updated regulations the next day.

"States continue to put out new regulations and guidance," says **Natalie P. Hartenbaum**, MD, MPH, FACOEM, president and chief medical officer, OccuMedix in Dresher, PA. "Illinois just came up with a recreational marijuana law, and then the legislative body in Illinois came out with modifications and clarifications. There are bills in Congress that might affect the whole marijuana and CBD industry, and the [FDA] is looking at cannabinoids in general." To date, the FDA had approved only one CBD product, a prescription drug used to treat two rare forms of epilepsy.[1]

Surgery centers should contact their attorneys to learn how state laws affect their drug-testing practices, says **Geoffrey Mort**, an attorney at Kraus & Zuchlewski LLP in New York City. Mort specializes in employment law, and serves on the New York State Bar Association Committee on Cannabis Law.

Generally, state marijuana laws can be placed in three categories, according to Mort:

• Fewer than one-third of states still have not legalized marijuana for either medical or recreational use. In these states, employers can refer to federal law, which still makes it illegal to use and sell marijuana. Employers

may screen job applicants for marijuana use and drug test employees for THC. Healthcare employers might institute a zero-tolerance policy; any worker who tests positive for THC, even if it is from legal CBD use, could be disciplined or fired.

• More than 30 states have passed medical marijuana or compassionate care bills, and some of these also have legalized marijuana use for adults for recreational purposes. In these states, absent an antidiscrimination provision, employers can drug screen and conduct random drug tests. They can institute zero-tolerance policies. Courts usually will uphold their decisions.

• More than 10 states have passed antidiscrimination provisions in addition to compassionate care laws. These statutes prohibit employers from discriminating against employees, by firing them or taking legal action against them, because of their use of medical marijuana, Mort says. In these states, employers could be sued for rescinding an employment offer or firing an employee who tests positive for THC.

"We've only seen this in the last two years," Mort reports. "In those states, employees have significant rights."

In states without antidiscrimination provisions, employees might not prevail in a court case, as demonstrated several years ago in a Colorado case involving Dish Network. In 2010, Dish Network fired a customer service employee, a person with quadriplegia who used medical marijuana. The employee's performance reviews were positive, but he tested positive for marijuana. The employee filed a wrongful termination lawsuit against Dish, but lost the case. Later, the Colorado Supreme Court upheld the decision, ruling that medical marijuana use was unlawful under federal law.[2]

"Until 2016, with a few exceptions, employers almost always won these cases," Mort explains. "The reason they did is because they relied on a doctrine called preemption, which says that if there are state laws and federal laws that contradict each other, then the state law undercuts the purpose of the federal law, and the federal law trumps the state law."

In states with antidiscrimination provisions, employees have won some significant federal court cases. Mort offers two examples of recent federal cases involving THC tests:

• In Connecticut, which placed an antidiscrimination provision in the state's Palliative Use of Marijuana Act, a U.S. district court decided in 2018 in favor of a woman who claimed discrimination after an employer rescinded a job offer because of a positive THC drug screening test.

The plaintiff had disclosed her marijuana use to her potential employer, saying she used the drug for medical purposes (treating PTSD). The employer gave her a drug test anyway. When the results returned positive for THC, her job offer was withdrawn. The woman sued, and the court ruled that a federal contractor can employ someone who uses illegal drugs outside of the workplace, even if they prohibit drug use at work.[3]

• In Arizona, a Walmart employee sued the company after she was fired when a blood test returned positive for THC. The woman owned a medical marijuana registry card. Her lawsuit claimed discrimination under the Arizona Medical Marijuana Act.

The trial court ruled in favor of the employee, saying the company could not claim that the woman was under the influence of marijuana while at work based solely on the drug test.[4]

Surgery centers and other employers in those states should take the antidiscrimination provision seriously and perhaps think twice about firing an employee who tests positive for THC, Mort advises. "Employers would be well-advised to let it go."

If employers insist on drug testing, then they should realize that if a person who tests positive for THC is a medical marijuana user and owns a medical marijuana state registration card, that employee can use medical marijuana legally. The employer is prohibited from firing or taking action against the person.

"A significant point that is underlying all of this is that drug testing is becoming more and more out of favor," Mort says. "A lot of companies look at it as an anachronism, something that doesn't accomplish anything because drug tests for marijuana are very imprecise."

With alcohol testing, employers can tell how much alcohol is in one's blood and whether the level is high enough to cause impairment. That is not true of marijuana/THC testing. Marijuana can stay in a person's body longer, and it is impossible to pinpoint when a person last used a THC product.

For example, an employee could smoke marijuana once while on vacation and test positive for THC three weeks later. One small study revealed that one-third of people who vaped CBD cannabis tested positive for THC in urine tests.[5]

"I spoke with someone recently who had never used marijuana, but has used over-the-counter CBD. This person came up with a positive THC result on the drug test," Mort recalls. "The employer sided with the employee, and ignored the test results."

Such inaccuracies are leading more employers to turn away from drug tests for marijuana. In healthcare, if a physician uses medical marijuana to help prevent seizures, then an employer would be better off not testing that individual — so long as

the doctor's performance is good, Mort says.

"I don't think it's in an employer's interest to have a zero-tolerance drug testing policy; that's unrealistic," Mort offers. "Such a significant percentage of the population uses marijuana that it's self-defeating." ■

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Organizational Guidance on Marijuana Comes With Caveats, Cites Lack of Robust Research

Plenty of medical associations have released position statements addressing medical marijuana, but many cite the lack of research into cannabis as a healthcare product as a barrier to writing comprehensive, evidence-based guidelines.

The American Medical Association published an updated resolution on cannabis use, calling for it to be further studied. The resolution also called cannabis a dangerous drug that is a public health concern, although it should be handled with public health-based interventions rather than incarceration.[1]

The American College of Surgeons' committee on trauma developed a Statement on Cannabis Regulation and Risk of Injury. The 2018 statement authors noted that cannabis impairs the ability to perform tasks associated with driving. Further, the paper authors suggested more public education on safe driving and cannabis use.[2]

Marijuana legality and workplace policies are rapidly changing. This is partly why the American College of Occupational and Environmental Medicine published guidance on marijuana in the workplace as early as 2015.[3]

"We tried to get out our statement as quickly as possible," recalls **Natalie P. Hartenbaum**, MD, MPH, FACOEM, president and chief medical officer, OccuMedix in Dresher, PA. "We wanted to say, 'Don't forget about safety.' From an employer's standpoint, that has to be a concern."

The problem is that there are certain risks associated with marijuana use that are not as well-known as risks associated with FDA-approved medications. "We have no idea of its strength, half-life, how often it can be used appropriately, and how much is too much," Hartenbaum says. "With prescription medicine, you know the dosing interval, and the drugs have been studied." The American Society of Regional Anesthesia and Pain Medicine published a brief statement on cannabis in 2016, calling on the federal government to reschedule marijuana to a Schedule II substance, allowing it to be studied in clinical trials.[4]

Recommendations from the Federation of State Medical Boards, issued in 2016, guide physicians on how to evaluate, inform, and share decision-making with patients over medical marijuana use. The guidelines suggest healthcare professionals document a written treatment plan that includes a review of other measures attempted to ease suffering. The treatment plan also should include a determination whether the patient with a terminal or debilitating medical condition may benefit from a recommendation of marijuana. Providers also should give advice on risks, quality and concentration of cannabis, exacerbation of psychotic disorders, adverse events, use of marijuana during pregnancy, and the need to safeguard cannabis products from children and pets.[5]

The National Council of State Boards of Nursing (NCSBN) appointed members to the Medical Marijuana Nursing Guidelines Committee to develop recommendations for nursing care of patients taking medical marijuana. The NCSBN published its recommendations in July 2018.[6] The council's basic conclusion is there is too little scientifically rigorous evidence to make specific safety and use guidelines, but nurses can learn more about cannabis administration, safety, and ethical considerations to improve nursing care of these patients. The recommendations noted the problem of substance-induced psychosis

in which a person who ingests large amounts of THC can hallucinate and experience feelings of paranoia, delusion, confusion, and disorientation. Other risks of marijuana use noted in the NCSBN paper are the potential negative effect of inhaled cannabis on patients with asthma, bronchitis, emphysema, or other pulmonary diseases, and the potential of cannabis worsening conditions of the liver or kidney disease. Cannabis also can exacerbate bipolar disorder manic symptoms. The NCSBN paper also noted that even as cannabis legislation evolves, social acceptance may not progress at the same pace, which creates ethical challenges in patient care. ■

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Cannabinoids for Pain Relief Unproven for Surgical Cases

Surgery centers treating patients who have been using marijuana or cannabinoids for pain relief or nausea are raising questions about efficacy and side effects.

"When people use cannabinoids for pain, I do believe they seek them out with good intentions," says **Edward Mariano**, MD, MAS, professor of anesthesiology, perioperative and pain medicine, Stanford University. "As an anesthesiologist and a physician who focuses on pain management around injury and surgery, I'm for any innovation that will help relieve suffering. The difficulty with recommending these cannabinoid products is we don't always know what's in them, and that's scary from a physician's perspective."

There is anecdotal evidence of pain relief benefits from cannabis, says **Ivan Urits**, MD, pain medicine fellow at Beth Israel Deaconess Medical Center, Harvard Medical School. "I run into a lot of patients who use medical cannabis, and they seem to get good benefit," he reports.

Moderate- to high-quality research suggests cannabis could relieve cancer- and rheumatoid arthritis-related pain, as well as discomfort brought on by fibromyalgia, says **Kathleen Russell**, JD, MN, RN, associate director, nursing regulation, National Council of State Boards of Nursing (NCSBN). "It's not to say [cannabis] won't help with other pain, but we have no evidence positive or negative," Russell adds. "We just don't have [enough] research to say it is effective."

Urits recently coauthored a scientific paper that describes the new field of pharmaceutical development of cannabinoids, including drugs that target endocannabinoid receptor agonists. One product is nabiximols, an extract from the cannabis plant that has been used for pain therapy related to multiple sclerosis, cancer, and other chronic pain conditions. Another drug is Epidiolex, sold in the United States for the management of refractory epilepsy, which could possibly help with chronic pain.[1]

"More people are going to be using cannabis-based products, so all physicians should be familiar with what's out there," Urits says. "It's difficult to keep up on these because so much is unregulated."

When patients ask their doctors about using medical marijuana for pain, physicians must determine if the patient has a qualifying condition that fits into what their state's legislature approved for medical marijuana use, Russell notes. For example, the state of Illinois lists more than 40 different conditions for using medical marijuana, she adds.

But just because a state approves a list of qualifying conditions for medical marijuana does not mean that cannabis is effective for everything on that list.

"These lists are based on anecdotal research and what advocacy groups that come before the state legislature say will help people, as well as based on some research evidence," Russell explains.

Without evidence-based guidelines and FDA approval of cannabis for use in postsurgery pain, surgeons might not want to include cannabis in any pain management plan. "I would not recommend cannabis over FDA-approved medications," says **Kevin Hill**, MD, MHS, director, division of addiction psychiatry, Beth Israel Deaconess Medical Center, and associate professor of psychiatry, Harvard Medical School. "One point I make about cannabis for issues like pain is that it's a viable alternative, but not a first- or second-line treatment. If a patient has tried multiple medications for pain and injectables for pain, then would you consider cannabis for pain, and a lot of physicians still would not."

The National Academies of Science, Engineering, and Medicine found conclusive evidence that cannabis helps patients effectively manage chronic pain. One meta-analysis revealed that cannabinoids reduced pain 30% more than placebo.[2]

Despite some evidence of the pain-relieving qualities, Hill's paper on medical use of cannabis concluded that evidence is insufficient for the use of medical cannabis for most conditions. Physicians most likely will remain reluctant to recommend it unless the drug is legalized nationally and there are more studies proving its efficacy.[2]

Hill foresees a future where cannabis is better studied and regulated, and physicians are willing to consider recommending it. "Doctors can have a risk-benefit conversation with patients," he says.

"Having the awareness that patients are using cannabinoids has to be seen as an opportunity, an open door to having conversations with patients about their suffering and how they think they're helped by cannabinoids," Mariano says. "That's an opportunity to find out if there are other approved therapies that can make a difference, as opposed to their using substances that are not federally regulated."

Research also is lagging regarding using cannabis to alleviate general nausea symptoms. "Studies have not determined the effectiveness of using marijuana for nausea, in general, but were specific to chemotherapy-induced nausea and vomiting," Russell says.

The cannabis industry is not waiting for federal legalization to expand. CBD products are sold legally over the counter in many states.[3] In the past few years, the CBD market has exploded. Industry projections say it will become a billion-dollar market in 2020, a seven-fold increase from 2016.[4]

A recent Gallup survey found that 14% of Americans use CBD products, and 40% of respondents using CBD said they use it for pain. Twenty percent said they use CBD for anxiety, and 11% use it for sleep/insomnia.[5]

CBD is made from cannabis plants, including hemp, which does not contain THC. "The CBD component of the plant is not psychoactive, and it's popular for a variety of health issues," observes **Doris Gundersen**, MD, medical director and psychiatrist, Colorado Physician Health Program in Denver. "It has anti-inflammatory properties and is used topically for rashes; it has sedative properties and is used for sleep."

Hemp was legalized with the passage of the 2018 Farm Bill, which treats hemp, a crop used to make ropes, textiles, various industrial products, and CBD oils, similarly to other crops. It had been included with marijuana as a Schedule I substance, but this is no longer the case.[6]

Although some states say CBD use is legal only for certain medical conditions, the substance is sold more widely. For example, in South Carolina, CBD is legal only for severe seizure disorders, yet shops selling CBD oils and products are widespread. The FDA does not regulate these products, and are treated as natural supplements.

From a clinician's perspective, CBD use is a risk factor because the lack of regulation means little is known about what is in these products, Mariano says. "There was an interesting research letter published in *JAMA* that looked at online CBD products that you could purchase without a prescription," he recalls. "They tested more than 80 products to see if they had the ingredients listed on the label."

Investigators found that only 31% of those products were labeled accurately. Plus, one-fifth of the CBD products contained THC, which is not supposed to be in CBD.[7] "This is very scary ... the patients I talk to who use CBD products say they use CBD because they worry about THC side effects," Mariano says.

"It is difficult to remove all the THC from the CBD products, so the public has to be aware of what is in these products," Gundersen adds.

Physicians who want to answer patients' questions about the use of these products for pain, nausea, and other symptom relief will find little help in scientific literature. "Right now, we have only naturalistic studies, but not well-designed, placebo-controlled, randomized clinical trials," Gundersen says.

Some surgery patients use cannabis products for debilitating presurgery pain. Physicians have no way of knowing the quality or potency level of these products as they would if the patient was on FDA-approved pain medication, Mariano notes. For example, a patient might use CBD cream to help with chronic osteoarthritis pain. Another patient might use inhaled marijuana for chronic back pain.

"I'm reluctant to have patients stop using medications that improve their chronic pain," he adds. "That's a

complicated scenario that you have to take case by case." ■

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SDS Manager

Benchmarking: Required Reading

By Stephen W. Earnhart, RN, CRNA, MA
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You may think you know what benchmarks are, but an update on that knowledge is needed. The simplest definition is "a standard or point of reference against which things may be compared or assessed."

I like looking at it a little differently: "A way of discovering the best performance achieved, whether in a particular company, by a competitor, or by an entirely different industry." This information can be used to identify gaps in an organization's processes to achieve a competitive advantage.

I am in hospitals and surgery centers virtually every week, and I cannot remember the last time I saw posted benchmarks for staff. They should be a requirement. Imagine watching a game on TV with no commentary on who is winning or any indications of the score and other statistics. The game would be significantly less exciting if you did not know that information. How can one come to work each day with no indications regarding performance vs. expectations?

There are several benchmarks one can use to monitor or "score" a facility. There are internal and external benchmarks CMS wants to see in a facility, all of which are part of QA, infection control, and other standards. Medicare requires facilities to demonstrate how those benchmarks are met. Is everyone in your organization aware of these benchmarks?

In ambulatory surgery centers, the most common benchmarks likely concern turnover time, cases vs. budget, revenue vs. budget, infections, and hospital admissions. There are more than 100 benchmarks one can use to help compare a center to the rest of the industry.

Other benchmarks I like to see include net revenue per case for every specialty performed at the facility, hourly pay rates per position per job title, last year to date vs. current period, supply cost vs. net revenue, and personnel cost vs. net revenue. How do you share your "scores" with staff? Try assigning and rotating employees who can update everyone on benchmarks you deem important. It is likely all staff to know how they are performing compared to other facilities.

Consider sharing information based on what particular staff members would want to know. Above all, remember to set a goal, or your staff will never reach any goal.

After facilities receive benchmarking data, what comes next? Be sure to read next month's column for tools to help track your benchmarks. ■

(Earnhart & Associates is a consulting firm specializing in all aspects of outpatient surgery development and management. Earnhart & Associates can be reached at 5114 Balcones Woods Drive, Suite 307-203, Austin, TX 78759. Phone: (512) 297-7575. Fax: (512) 233-2979. Email: searnhart@earnhart.com. Web: www.earnhart.com. Instagram: Earnhart.Associates.)

COMING IN FUTURE MONTHS

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SAME-DAY SURGERY

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CME/CE QUESTIONS

1. **Under the federal Comprehensive Drug Abuse Prevention and Control Act of 1970, marijuana/cannabis is a Schedule I drug like heroin, peyote, ecstasy, methaqualone, and LSD. According to the Drug Enforcement Administration, Schedule I controlled substances:**
   a. are the most expensive illicit drugs.
   b. can produce serious adverse medical and emotional side effects.
   c. carry the gravest potential for public and social harm and injury.
   d. are not acceptable for any medical use and are likely to lead to abuse.

2. **What is the part of cannabis with psychoactive properties?**
   a. Cannabidiol
   b. Tetrahydrocannabinol
   c. Opioid
   d. Mescaline

3. **As of December 2019, the FDA had approved one cannabidiol product. Which condition was it approved to treat?**
   a. Epilepsy
   b. Cancer
   c. Diabetes
   d. Congestive heart failure

CME/CE OBJECTIVES

After reading *Same-Day Surgery,* the participant will be able to:

- identify clinical, managerial, regulatory, or social issues relating to ambulatory surgery care;
- identify how current issues in ambulatory surgery affect clinical and management practices;
- incorporate practical solutions to ambulatory surgery issues and concerns into daily practices.