

# WORCESTER medicine

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# Editorial

Jane Lochrie, M.D.



**Jane Lochrie, M.D.**

Medical marijuana became legal in Massachusetts when 63 percent of voters approved the ballot question in November 2012. The licensing process has been slow; 20 licenses were granted for medical marijuana dispensaries in January 2014, two of them in Worcester. Marijuana is still not legal on the federal level, and therefore, it does not go through the same

rigorous testing by the Food and Drug Administration as other medications. State rules do not include drug dosages or how marijuana should be administered.

Marijuana has been classified as a Schedule I controlled substance since 1972, meaning that it has “no accepted medical use.” Proponents of marijuana claim that it can be used safely and effectively if prescribed to the appropriate patient by a practitioner who is familiar with the drug. They cite numerous peer-reviewed articles and government reports that support this view. Opponents say that marijuana is too dangerous to use, especially when there are good alternatives. They opine that marijuana is addictive, damages the lungs and impairs judgment. We will let you be the judge after reading the following articles.

Peter Zacharia, M.D., an ophthalmologist, tells us that marijuana has been known to reduce intraocular pressure since the early 1970s, but the effect is short-lived. There is no evidence that it is any more effective than other medications used for glaucoma. The American Academy of Ophthalmology and the American Glaucoma Society do not advocate the use of marijuana for the treatment of glaucoma. In addition, they caution about potential adverse drug effects.

Haley Newman, a medical student, reminds us to keep legalization of medical marijuana and recreational marijuana as separate issues. She points out that medical marijuana can be life-altering for the appropriate patient who has severely debilitating symptoms. Research should be concentrated on the disease where there is no cure in sight.

In a contrasting point of view, another medical student, Wei Sum Li, states, “Marijuana is not consistent and well-regulated enough to fulfill the basic safety standards of any other medical product.” He takes issue with calling the use of marijuana “medical”; instead he would prefer to call it “medicinal.” In addition, he is concerned that this is society’s way of making marijuana acceptable for recreational use.

Matthew D. Metcalf, Pharm.D., Ph.D., calls our attention to physicians’ lack of knowledge regarding cannabis and draws attention to the lack of standardization in their education in this area. He also points out that cannabis is a prescribed drug and that all other prescribed drugs are dispensed by a pharmacist and questions why cannabis is not.

William Ortiz, M.D., gives us the pharmacologic perspective on cannabis. He relates that it has different pharmacokinetics, depending on how it is administered. He cautions that this is never a first-line treatment and “less is best with cannabis.”

Before closing this issue, be sure to read Legal Consult’s “The Hand-Off” by Peter Martin, Esq., and Society Snippets.

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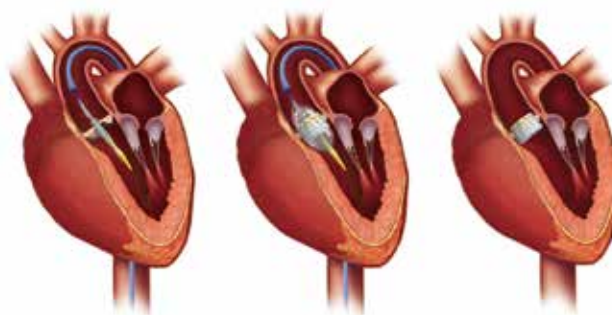


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# President's Message

Frederic Baker, M.D.



**Frederic Baker, M.D.**

A patient frantically calls his/her physician's office: "Doctor, please act quickly. My pharmacy says they cannot fill my prescription until you contact my insurance and give your OK."

The doctor signed for the treatment at the initial visit and must now scramble to revisit a medical record long after a patient's visit – diverting resources and

expending considerable unreimbursed time and effort – to ensure that the patient's care is not delayed and that safety is not compromised. "Submitted for your approval," writes the clinical team, as documentation is sent to a third-party payer with the hope the treatment will be approved. What the doctor and patient don't know is the fate that awaits them. A person, perhaps with no medical training, will review the information and decide what is or is not covered. No, it's not *The Twilight Zone*. Welcome to the world of preauthorization or prior authorizations (PAs), a reality that is played out everyday in physician offices throughout the country.

Preauthorization is a process that typically requires a physician, clinician or surrogate to provide documentation or information to a third-party payer to justify treatment, diagnostics, equipment or professional services prior to any services or resources being rendered to ensure either reimbursement or payment for said services by a third party.

Ideally, PAs are designed, not with the intent to withhold necessary treatment, but rather with the intent to reduce *unnecessary* consumption and utilization of often costly and limited resources, thus ensuring that resources are sustainable and equitably distributed in a manner that promotes affordability, safety and cost-effective outcomes and preserves financial security for those who assume and finance risk. However, the major grievance lies not in the premise of PAs but the manner in which they are executed, often described as onerous, non-transparent, disruptive and wasteful. According to the American Medical Association (AMA), PAs cost the health system \$728 million in 2012. A 2010 AMA survey noted that "78% of physicians believe insurers use preauthorization requirements for an unreasonable list of tests, procedures and drugs." Physicians in the survey also said they average 20 hours each week dealing with PAs. Is this time well spent? According to *Health Affairs*, "When time is converted to dollars, practices spent an average of \$68,274 per physician per year interacting with health plans." The journal added, "Nationally, the time-cost estimate is \$23 billion to \$31 billion each year."

But there are additional costs and adverse consequences with PAs. The cost to pharmacies is estimated at five hours a week, time unreimbursed to pharmacists to address PAs, diverting precious resources away from patients. The cost to patients comes in the form of anxiety from delays in complying with a complex protocol or denial of needed treatment. Then, there is the risk of abandoning or never initiating a treatment, secondary to a denial or an onerous protocol that discourages a patient from pursuing a treatment. A PA program in Maine

was noted to have contributed to a 31 percent reduction in the initiation of bipolar medication.

*Medical Economics* noted, “In 2006, PCPs spent a mean of 1.1 hours per week on authorizations, primary care nursing staffs spent 13.1 hours, and primary care clerical staff spent 5.6 hours, according to a 2009 study published in *Health Affairs*.”

I vividly recall a patient, a bilateral lower extremity amputee who presented with an exacerbation of congestive heart failure. We followed the patient’s cardiologist’s advice to increase the dose of a particular drug if the patient’s status worsened. The drug was admittedly very costly, but he failed less costly alternatives. Imagine my disgust upon hearing the pharmacy tell me that this patient left without the prescription, as it was denied by his insurance. Coordinating transportation to the pharmacy for this patient, who was in a wheelchair, presented significant hardship. I felt powerless and undermined by a plan that I felt showed no consideration for my care and, more importantly, for the patient’s safety and well-being. I now had to run behind on other patient visits to fill out and fax a lot of paperwork, with no option to relay or even call a specific person or designated party with my concerns. The request was denied on the grounds that the increase had to come from the cardiologist. It was somehow irrelevant that the cardiologist was away, my documented history and exam supported the need, and the patient’s health and safety relied upon this drug. By sheer luck, I came across the contact information for a physician on the plan’s formulary committee by virtue of an email survey I received just a few days prior. I called that person, explained the circumstances, and approval was granted. I was relieved. Had it not been approved, the high cost of an ER visit or hospitalization would have easily exceeded any cost savings that plan had desired, as well as my patient being put in a potentially and unnecessarily life-threatening situation. Who really benefits from such a situation?

When those who are most involved and knowledgeable in a patient’s care are not empowered by third-party payers, it is no wonder patients suffer and physicians feel so sour. A 2013 article from *HealthLeaders Media* noted that “60% of Docs Wouldn’t Recommend Their Profession as a Career,” concluding that physicians love the practice but hate the business of medicine, citing unjustifiable administrative burdens and less autonomy and time for direct patient care. A medical student, upon observing the daily administrative

burdens in the office, once remarked in dismay, “Is that what I have to look forward to?” The answer should be a resounding “NO!” Organized medicine has a duty to not only identify and address the problems but to demand from our legislators, insurers and other stakeholders that our health care system employ sensible and transparent policies that are truly meaningful in advocating for patients and designed in such a way to sustain and foster an inspired health care workforce while enjoying cost savings and waste reduction.

Some authors and health care leaders have proposed various ideas that include: Regulate insurers and third-party payers to comply with universal standards for electronic PA submissions; require insurers to pay the cost for PAs, rather than shift costs to practices and pharmacies; incentivize them for efficiency and disincentivize them for abuse or frivolous practices; consider exempting physicians who are not cost outliers from PAs; and (perhaps the easiest thing to do) require insurers provide up-to-date formulary coverage, with alternatives, on the EMRs and allow submission of qualifying criteria at point of contact – on the EMR – with denials and approvals available at the visit, similar to a credit card system of authorization.

As your WDMS president, I will need your help. We encourage *all* readers to respond to this message. Please share your stories of how PAs adversely affected you or someone you know. At some point, we will plan to share your stories with legislators and other stakeholders in an effort to reform our system of PAs. Massachusetts is often seen as a leader in health care. It’s time we change the process of PAs in this state. We can, and we must, make a difference.

Thank you for all that you do.

Please feel free to provide feedback: [fgrillb@aol.com](mailto:fgrillb@aol.com).

*I would like to thank Drs. Jeff Satnick and Eric Ruby for their thoughtful comments and response regarding Electronic Medical Records, which I discussed in the President’s Message, published in the September/October 2014 issue of Worcester Medicine.*

# Marijuana Use in the Treatment of Glaucoma

Peter T. Zacharia, M.D.



**Peter T. Zacharia, M.D.**

Glaucoma is an optic neuropathy characterized by loss of axons within the optic nerve and associated death of retinal ganglion cells. This causes a loss of visual field corresponding to sectors of axonal loss. Glaucoma is typically accompanied by an elevated intraocular pressure, which can be the result of several different mechanisms. However,

glaucomatous optic neuropathy can occur and progress at intraocular pressures that are considered normal range. Whether glaucoma is accompanied by elevated intraocular pressure or is a normal-pressure variant of glaucoma, the only therapeutic strategy which has been approved and demonstrated to slow down or prevent glaucomatous visual loss is reduction in intraocular pressure. Other therapeutic strategies not involving intraocular pressure reduction and focusing on neuroprotection are the subject of ongoing research. There are existing pharmaceuticals and nutritional supplements that are hypothesized to have such neuroprotective properties, but these are not officially approved for this indication.

Currently approved treatments to reduce intraocular pressure to treat glaucoma include several classes of topical and systemic medications that either reduce the production of aqueous humor or facilitate the drainage of aqueous from the eye, since inadequate drainage of aqueous is the cause of elevated intraocular pressure. Beyond medical treatment, ophthalmic laser procedures and incisional surgical procedures also reduce intraocular pressure by either reducing aqueous

production or facilitating drainage. Smoking marijuana has been known to reduce intraocular pressure since the early 1970s, but the intraocular pressure reduction was found to be short-lived, lasting only about three to four hours after each use, and accompanied by adverse systemic and psychotropic side effects.<sup>1</sup> Marijuana contains a compound, tetrahydrocannabinol (THC), which has been shown to reduce intraocular pressure when ingested orally or deposited sublingually, however, with similar systemic effects. This short duration of action and the mood-altering properties of marijuana make it impractical for use in currently available forms as a treatment for glaucoma. Mood-altering and judgment-impairing properties, as well as drowsiness, which can occur with the use of marijuana, would make it difficult for a glaucoma patient to function normally in several settings, especially if frequent dosing would be required to maintain a stable effect on intraocular pressure. A 2002 study involving nine patients with end-stage glaucoma who were treated with THC orally or inhaled marijuana resulted in all nine patients discontinuing treatment between one and nine months after treatment started, either because of unsustained intraocular pressure reduction or adverse systemic effects.<sup>2</sup> One important side effect of smoking marijuana is a reduction of blood pressure, a property which may injure the optic nerve by reducing the blood supply to the optic nerve.

There is a potential for the development of medications derived from or related to compounds within marijuana that may be useful for the treatment of glaucoma. Both the brain and the eye contain receptors which bind some of the molecules contained in marijuana, and for this reason, these receptors have been classified as cannabinoid receptors.<sup>3,4</sup> These receptors in their usual function interact with normally occurring compounds



produced within the human body and classified as endogenous cannabinoids. Molecules within marijuana exert their effects on the eye and central nervous system by occupying these receptors and also by blocking the effects of endogenous cannabinoid molecules normally present within the body. Within the eye, this so-called endocannabinoid system of endogenously produced cannabinoid molecules and their receptors has been found to play a role not only in regulating aqueous production and drainage of aqueous from the eye, but also in regulating the death of retinal ganglion cells.<sup>5</sup> Extrapolating from the implications of this research, we can speculate that it may be possible to develop medications based on compounds contained within marijuana that may have useful roles in treating glaucoma through both intraocular pressure regulation and neuroprotection.<sup>6</sup> In order for these medications to be practical and effective for the treatment of glaucoma, these medications would have to exert their effect locally on the ocular tissues without the systemic and central nervous system effects of marijuana and also reduce intraocular pressure for a longer duration than has been found with inhaled marijuana. Topically applied marijuana extracts have been investigated, but an obstacle to the success of these extracts as a treatment for glaucoma has been the poor solubility and corneal penetration of the active compounds. There has been some progress in modifying the vehicle used to dissolve the compounds for improved penetration into the eye, but there are no marijuana-derived topical glaucoma medications currently available.

In conclusion, there has been no evidence to date that marijuana reduces intraocular pressure any more effectively than available glaucoma medications, and there are no studies demonstrating a beneficial long-term effect of marijuana in

the treatment of glaucoma beyond short-term intraocular pressure reduction. Position statements from the American Academy of Ophthalmology and the American Glaucoma Society do not advocate the use of marijuana for the treatment of glaucoma and also caution about potential adverse effects.

*Peter Zacharia, M.D., is an ophthalmologist and glaucoma specialist in private practice in Worcester, Mass. He is an assistant professor of ophthalmology at the Tufts University School of Medicine.*

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# Legalization of Medical Marijuana: Its Own Debate

Haley Newman

Marijuana policies have changed dramatically across the U.S. over the past several years. Twenty-one states have now legalized medical use of marijuana, and 15 states have decriminalized its possession so that punishment mirrors traffic fines instead of prison sentences. In 2012, Colorado and Washington were the first states to legalize cannabis for recreational use.

With these rapid changes in state laws, the public debate over marijuana has commanded attention in both the medical community and the political sphere. However, with increasing attention and media drama, medical prescription of marijuana has been conflated with generalized recreational legalization to the detriment of medical research. The result is a hindered understanding of how marijuana should be used in treatment and palliation of certain medical conditions. In order to evolve from this impasse safely, it is essential that these two ideas – marijuana for medical treatment and marijuana for recreational use – be separated in the mind of the public and in medical research.

Valid research currently indicates that marijuana has beneficial effects for dozens of medical conditions. A 2013 study in the *Journal of Pain* demonstrated that low-dose, vaporized cannabis significantly improved neuropathic pain, even in patients whose symptoms were not alleviated by conventional treatments. Another randomized, placebo-controlled trial in 2012 showed significant pain reduction in multiple sclerosis patients with treatment-resistant spasticity.

This research adds to an existing body of evidence that marijuana helps alleviate anorexia and nausea in cancer patients. Ongoing clinical trials are also examining the use of cannabinoids for the treatment of severe childhood epilepsy.

THC, the main ingredient in marijuana, binds to cannabinoid receptors in the brain that exist in high density in areas of pleasure, memory, coordinated movement and concentration. Thus, marijuana has psychological effects on mood, perception, cognition and psychomotor functions. Tolerance to many of these effects has been shown to develop, as have well-defined withdrawal symptoms coinciding with use cessation.

What we know so far is that appropriate use of medical marijuana can be life-altering for individuals with severely debilitating symptoms. However, marijuana as medicine may not be without acute side effects and long-term risks. The fact that 29 states still classify marijuana as a Schedule I substance – the most dangerous category of drugs, along with heroin, lysergic acid diethylamide (LSD), 3,4-methylenedioxymethamphetamine (ecstasy), methaqualone and peyote – makes research proving its legitimate medical uses more difficult to fund and sustain. This need not be. Many of our most successful drugs have serious long-term side effects, including most modern chemotherapy agents.

Given the enormous social and economic burden relating to degenerative neurologic diseases and the challenges to quality of life for individuals living with Parkinson's, multiple sclerosis, Alzheimer's and other forms of dementia, emphasis should be placed on studying the benefits of marijuana among this population, for whom there is currently no cure in sight.

The debate over medical marijuana is an important one, and it should be separated from the recreational use debate if research is to move forward swiftly and effectively.

*Haley Newman is a student at the University of Massachusetts Medical School, Class of 2017.*

# The Lack of ‘Medical’ in ‘Medical Marijuana’

Wei Sum Li

On Nov. 6, 2012, 63 percent of Massachusetts voters voted to “eliminate state criminal and civil penalties for the medical use of marijuana by qualifying patients.” Qualifying patients are identified as having any of a litany of conditions, including cancer, glaucoma, positive status for HIV/AIDS, hepatitis C, ALS, Crohn’s disease, Parkinson’s disease, multiple sclerosis and “other debilitating conditions.” While the law prescribes an interpretation for when a patient might benefit from “medical marijuana,” the practical implementation of this law falls upon physicians, who must determine what, exactly, is the medical use of marijuana?

Many proponents of “medical marijuana” will cite medicinal properties that address a wide range of diseases, including the ones listed in the law, but medicinal is not the same as medical. Some promising studies have shown the efficacy of marijuana in alleviating several ailments, including chemotherapy-induced vomiting, cachexia in HIV/AIDS, spasticity associated with multiple sclerosis, and neuropathic pain. Unfortunately, due to the legal difficulties regarding the study of marijuana, much of the evidence supporting the use of the plant remains anecdotal, rather than based on adequately powered, double-blind, randomized control trials. Research is still unclear on all of the roles of the active ingredients in marijuana, the mechanism of action for the purported medicinal effects and the correct safe dose to reach those effects. Furthermore, positive efficacy studies must contend with a concerning body of safety studies that address possibly related health issues such as addiction, respiratory problems and increased risk for psychotic disorders. The fact remains that the currently available evidence-based research exploring the safety and efficacy of marijuana is still inadequate.

At this time, there are no regulations or recommendations regarding the dosage or administration of marijuana. Marijuana is smoked or consumed at an amount decided upon by each particular user. As a plant, it is not a pure substance. There are different strains, each with its own purported advantages and drawbacks, depending on the varying potencies of active ingredients. Regulation regarding cultivation of marijuana remains in development. At this time, marijuana may be grown by dispensaries, “legal growers,” or even patients themselves. Even if preliminary studies are enough to argue that the benefits outweigh the risks for certain patients, in its current form, marijuana is not consistent and well-regulated enough to fulfill the basic safety standards of any other medical product.

It can be argued that marijuana must be legalized to allow for necessary research and regulation. Until the research is done, however, use of marijuana cannot legitimately be considered “medical.” In a 2013 Gallup poll, a majority of Americans proposed legalizing marijuana. Some approve of its medicinal properties and others accept its recreational use. Because Massachusetts has only passed a “medical marijuana” law, the public’s use of marijuana must be filtered erroneously through medical providers. This is an example of a social movement hijacking the medical community for its own purposes. Society has voiced its opinion, but the scientific research remains inadequate to claim marijuana as “medical.”

*Wei Sum Li is a student at the University of Massachusetts Medical School, Class of 2016.*



# Time for Honest Discussions about Medical Cannabis

Matthew D. Metcalf, Pharm.D., Ph.D.



**Matthew D. Metcalf,  
Pharm.D., Ph.D.**

The voters, legislature and governor of Massachusetts have mandated medical cannabis as a legal form of medication in the Commonwealth. The medical community now needs to make sure the application of cannabis-related medical decisions are in the best interests of those patients who will be taking the drug as a medication. Despite any personal position you may take for or against

its use, medical professionals will begin to encounter an increasing proportion of the patient population who rely on this substance as a medical drug therapy, and this means more questions about medical cannabis. In this article, I attempt to provide some questions and points of interest for discussion.

Since my research involves opioid and cannabinoid receptors, I'm frequently asked questions involving substances targeting these systems. In the last month, I've been asked questions such as:

"My relative wants to start taking cannabis for his glaucoma, what strain should he take or are they all the same?"

"My relative has [serious debilitating disease covered under Massachusetts law]; do you know anything about cannabis in the treatment of this disease? We have tried everything else with little success; do you think this is something we should consider?"

(Physician) "I don't know if you read the *New York Times*, but there

is a lot of talk about cannabidiol. Is there anything to it, and what is it good for?"

I believe these questions illustrate common themes and perceptions in the community about medical cannabis. The main issue these questions bring to mind is: What education is there currently on the topic of medical cannabis? Patients are not asking how they can obtain medical cannabis, but rather they are asking if cannabis can really help treat their disease state. These individuals desire a therapy alternative to their current medical treatment but are concerned about efficacy and want an honest and professional medical opinion. Patients are educating themselves in use of cannabis as a medication, properly or not, and perhaps at a faster rate than health professionals. My question to the reader is: How educated are you on the medical use of cannabis? What do you know about the effects of cannabinoids other than tetrahydrocannabinol (THC)? How does changing the strain of cannabis change the therapeutic effect? What strains will you use? How will medical cannabis affect your specific profession? Patients will be coming to health care professionals for trusted opinions. What are your strategies for obtaining factual medical information and what will you tell your patients about medical cannabis?

These questions are not simply answered. The topic of medical cannabis is not well covered in health professions schools, and even the highly respected International Cannabinoid Research Society encounters difficulty presenting its (biennial) medical cannabis continuing education classes. I highlight this topic to draw attention to lack of standardization in health professions education in this area and the necessity for self-education. Typically when standard

education is lacking in an area, self-education begins with seeking the opinion of experts for guidance.

Since cannabis is written into Massachusetts law to be treated as a medical drug and prescribed by a physician with a written prescription, should it not then be dispensed as a drug by pharmacists? Pharmacists, the drug experts of the medical team, dispense all other non-over-the-counter drugs prescribed by physicians. Why then should cannabis be dispensed by non-pharmacists when physicians are prescribing it? How will these dispensary workers, well-meaning or not, answer drug interaction questions? Will these persons even ask what other medications the patient is taking? How do physicians prescribing cannabis trust these random dispensing agents to properly dispense a medication in accordance with their medical directions? Will these non-medically trained agents be directing the persons to strains of cannabis with different cannabinoid profiles than the physician desires? How will this affect the cannabis therapy that the patient is receiving and the patient's health? Will these agents even think about these and other drug therapy concerns, or is their primary concern with promoting and selling their product? Who is the sincere patient to trust, other than his/her doctor, about the actual cannabis dispensed for the treatment of his/her disease state? While I personally argue against cannabis legalization, in situations where cannabis is to be treated as a medical drug, I argue it should be dispensed by licensed pharmacists. Connecticut is the only state with medical cannabis laws that require pharmacists to dispense the drug. To me, it makes sense: If any drug is controlled or regulated such that a licensed physician's prescription is the only way to obtain it, that drug, like any other, must be dispensed by a licensed pharmacist. As a patient or prescriber, do you want an expert or a non-expert dispensing your drugs, and who do you want answering your drug questions?

These questions and topics are just the tip of an immense iceberg of the practical, pharmacotherapeutic, legal and ethical concerns surrounding medical cannabis. My hope is that this article will draw the topic of medical cannabis education and application into genuine open discussion. It is my belief that honest discourse and communication with fact-based education is how we, as a medical community, can best approach any topic, especially the controversial ones.

*Matthew D. Metcalf, Pharm.D., Ph.D., is an assistant professor of medicinal chemistry, Department of Pharmaceutical Sciences, MCPHS University School of Pharmacy at Worcester.*

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# Call it Cannabis, not Marijuana

William Ortiz, MD



**William Ortiz, MD**

The hemp plant and its extracts (known as marijuana) have been known for thousands of years. The isolation of the psychoactive ingredient, THC (tetrahydrocannabinol), led to the discovery of the Endocannabinoid system (ECS) in the human body. Endocannabinoids are normally secreted by post-synaptic neurons

and modulate (“down regulate”) pre-synaptic neuron signaling by retrograde transmission. Cannabinoid receptors (CB<sub>1</sub>) are located in the central nervous system (CB<sub>1</sub>) and peripheral nervous system and immune cells (CB<sub>2</sub>). The manipulation of these receptors by marijuana affect mood, coordination, cognition and pain. Since there are very few CB<sub>1</sub> in the brain stem, an overdose of marijuana is not associated with respiratory depression.

## **Physician use of cannabis (marijuana) in Massachusetts**

The Commonwealth of Massachusetts allows physicians, in the context of a bona fide patient-doctor relation and who are registered with the state, to use cannabis when treating patients suffering from symptoms associated with debilitating medical conditions such as cancer and AIDS. Please see [www.mass.gov/medicalmarijuana](http://www.mass.gov/medicalmarijuana) for further details. At present, cannabis is not considered a first-line medication for anything but offers another option when patients’ symptoms

fail to respond to more conventional treatment. Cannabis can be used in hospice and palliative care settings and has several methods of administration.

## **The methods of medication administration**

Topical cannabis salve containing cannabidiol (CBD) is a non-psychoactive cannabinoid with promise as anti-inflammatory agent. It is effective in alleviating pain in diabetic neuropathy and phantom limb syndrome. Most patients report no cognitive effects when used for brief periods but should be cautioned about possible psychoactive effects with chronic use.

Inhalation of cannabis is not a first-line medication for anything. This medication works incredibly well in low dosages and should be introduced only after traditional pharmaceuticals have been tried and have failed. Of the various methods of cannabis administration, inhalation is by far the easiest to titrate and assess clinically. A temp control vaporizer is the medically preferred method of inhalation. Most patients are cannabis naive and don’t want to smoke anything. Instruct them to take one puff from a vaporizer device, waiting 15 minutes before attempting a second inhalation. If after one puff a patient does not receive relief, then recommend that he/she try one more puff. Inhalation, if it works, will work right away or within minutes. If it doesn’t work, a patient will know just as fast. This is not Cheech and Chong medicine. Less is best with cannabis.



Sublingual cannabis preparations, called tincture, provide similar relief to inhalation but are variable in potency and take about 15 minutes for onset of action. Several drops are placed under the tongue of a patient. The drops remain under the tongue for three to four minutes before swallowing. Tincture, just like inhalation, avoids first-pass liver metabolism, and its effects are less psychoactive. More body, less mind, so to speak. The effects are similar to inhaled cannabis and can last up to two hours.

Edibles, the ingestion of cooked cannabis such as the “brownie,” is more psychoactive than inhalation or tincture as a method of medication administration. The onset of action with edibles is quite variable and can take up to two hours. However, because of first-pass liver metabolism, the effects of THC are potentiated, meaning patients will get “stoned” longer, in layman’s terms, when they ingest cooked cannabis. However, in medical terms, patients can achieve a longer sustained level of relief by introducing and titrating edibles correctly – up to four to six hours of sustained effect, as compared to two hours when a patient vaporizes. Patients, when they are ready, are instructed to consume only ¼ of a brownie or cookie and wait two hours before attempting to consume any more.

Concentrates made from cannabis are known as waxes and dabs, something to tell patients to currently avoid. The lack of a standardization in the process of making these products has the potential to cause end-organ damage from exposures to possible free radicals and other impurities in the process of making concentrates.

Cannabis affects liver metabolism. It can either increase or decrease liver metabolism depending upon not only the cannabinoid concentration but also the ratios of cannabinoids in the medicine, THC/CBD ratio, and whether it is cooked or raw. Patients on other medications affected by liver metabolism should to be monitored for changes in therapeutic levels. Other medications such as opioid agents have been found most recently to potentiate the physiological effects of cannabis such as transient tachycardia and orthostatic hypotension. The above physiology combined with the cognitive impairment caused by THC, the most psychoactive of the natural cannabinoids, has the potential to harm patients if left medically unsupervised.

## Take home points for clinicians

1. The (ECS) is named after cannabinoids found in the cannabis plant, so call it cannabis, not marijuana
2. Cannabis has various methods of administration as a medicine, with different pharmacodynamics/ pharmacokinetics, depending on how its administered.
3. Although overdose is unlikely, potential for harm is still present; keep in mind liver metabolism and drug interactions.
4. Less is best with cannabis

*William Ortiz, M.D., is a geriatrician who specializes in hospice and palliative care. He evaluates people for the use of medical marijuana in Maine and Massachusetts.*

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# The Hand-Off

Peter J. Martin, Esq.



**Peter J. Martin, Esq.**

It is a commonplace in the medical community that transitions of care can be problematic. Ensuring continuity of care when a patient moves from one caregiver or care setting to another is as important as it is difficult, and the difficulty increases as the number of caregivers increases or the type of care setting changes. In the

employment context, it is common for former employers to say very little in response to inquiries about a former employee from a new employer. Typically, the response is limited to dates of service and the position held by the former employee. A recent Supreme Judicial Court decision upholds that employment-law approach in the health care context but leaves open the possibility that a former employer of a physician may owe a greater duty of disclosure to a subsequent employer of that physician.

The case involved some extreme facts: a Children's Hospital Medical Center pediatrician, Melvin Levine, left that employer and moved to the University of North Carolina School of Medicine, where he was accused of performing unnecessary genital examinations on a number of patients. The physician surrendered his license and agreed not to practice medicine anywhere. Two years later, 11 former patients of the physician while he worked at UNC brought suit against Children's

Hospital, alleging that it failed to properly train, supervise or discipline the physician and failed to report the physician's conduct to the appropriate licensing authorities and to UNC. One count in the complaint specifically alleged Children's Hospital fraudulently concealed and prevented the disclosure of the physician's sexual abuse of his pediatric patients. At trial, these plaintiffs alleged that Children's Hospital had received multiple complaints about sexual abuse committed by the physician while he was employed by Children's Hospital.

The SJC applied a traditional legal analysis to this case, holding that since the hospital did not have a "special relationship" with either its former employee or with any of his prospective patients, it did not owe a duty of care to those patients. Absent such a duty of care, the hospital did not have to take affirmative action to protect those patients from the physician. The law recognizes four types of special relationships – parent-child, custodian-ward, employer-employee and mental health professional-patient – that give rise to a duty to control the conduct of a third party. Thus, an employer may be liable for the actions of its employee when that employment facilitates the employee's causing harm to third parties. The court declined to extend the "special relationship" to a former employee so as to impose *"a duty on an employer to prevent the future behavior of a former employee, with respect to unknown customers and clients of unknown future employers [emphasis added]."*

The court's ruling applies familiar legal concepts to a recurrent dilemma facing employers: how much to disclose about a former employee's misconduct to a potential future employer? There are a number of points to make about the court's analysis that suggest a potential broadening of an employer's duty in that situation.

First, note that the court denied to extend a duty to "prevent the future behavior of a former employee." Only one of the plaintiffs' legal theories was founded on a claim that the hospital was negligent for failing to take action to prevent the physician from abusing the future patients. The other two counts argued that the hospital intentionally concealed and prevented the disclosure of past misconduct to the subsequent employer and were based on the premise that the hospital had knowledge, while the physician was employed by the hospital, of his sexual abuse of pediatric patients. The question of an employer's preventing future behavior of a former employee is much different than the one of disclosing information about the past behavior of a physician while employed by the employer.

Second, the court suggests that in more limited circumstances, a duty to future patients and/or employers might be considered. The court stated, "While the responsibilities of medical providers to vulnerable patients might extend beyond those of other service-providing employers, *the geographic and temporal breadth of the duty the plaintiffs seek to impose reaches too far*, and would potentially expose the employer to liability to an *essentially limitless class* of unknown parties for acts committed *long after* the employer had any ability to supervise, monitor, or discipline the former employee's conduct [emphasis added]." The rationale of not imposing such uncertainty on former employers is used to draw a line around an employer's duty to future employers and others. The court in this case cited a Wisconsin decision in which that state's Supreme Court noted that there is "no state in which employers are recognized as being negligent for failing to seek out, find, and warn future employers of sexually dangerous former employees." The difficulties of carrying out such a duty are obvious, but in Massachusetts, the court's analysis suggests that where the subsequent employment is not too distant in time and space, the class of persons harmed by the former employee might not be so large as to prevent imposition on the former employer of some duty to warn future employers or patients.

Third, the plaintiffs in this case did not allege that the hospital "affirmatively misrepresented" the former physician's employment history in response to inquiries from UNC or others. The court interpreted the plaintiffs' claim as imposing a duty on the hospital of seeking out the physician's future employers in order to warn them of past allegations of abuse made against him. The court noted in a footnote, however, that "We leave open the question what, if any, duty Children's Hospital might have with respect to inquiries made of it by prospective employers in the medical field with regard to abuse allegations arising out of the work of former employees." Assuming the hospital had some level of knowledge about such allegations, the court suggests here that the hospital might have a duty to disclose that knowledge in response to an inquiry from a potential employer about those allegations. Thus, it appears that the court may be inclined to impose such a duty to disclose in a case where the prospective employer asks the right questions.

The movement of incompetent or dangerous caregivers from one health care employer to another without notice of past transgressions is troubling. Lawyers have traditionally counseled employers to say the minimum necessary in response to inquiries about former employees. However, the interests of patient safety and quality of care may support a broader duty of disclosure. The Massachusetts Supreme Judicial Court's opinion in the case of Dr. Levine suggests that, given the right circumstances, the law might evolve to require the type of disclosure that could prevent harmful caregivers from being handed off without warning by their employers. Employers of health care professionals would do well to stay informed about this area of the law.

*Peter J. Martin, Esquire, is a partner in the Worcester office of Bowditch & Dewey, LLP, his practice concentrating on health care and nonprofit law.*



# WDMS Congratulates its 2014 Award Recipients

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Pictured is our UMASS Medical Student Representative on the Editorial Board of *Worcester Medicine*, Emily Tsanotelis, at her White Coat Ceremony in 2011 with White Coat guest speaker and WDMS member Peter Metz, along with her father, Dr. Nicholas Tsanotelis. Emily, now a fourth-year student, was recently honored as being part of the inaugural induction of members to the newly established UMMS Chapter of the Gold Humanism in Medicine Society. The Gold Society seeks to recognize students, residents and attending physicians who have kept the flame of humanism alive in their practice and teaching. She was elected by her peers, and we at WDMS could not be more proud of her.

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**Richard V. Aghababian, M.D.**

**July 7, 1948 – October 1, 2014**

Dr. Richard Aghababian died at home with his family by his side on Oct. 1, 2014. Dick was born in Boston and raised in Newton. He graduated from Newton South High School, Harvard College and the University of Massachusetts Medical School, where he was a member of the first class. He was the founding chairman of UMass' Department of Emergency Medicine and a professor of emergency medicine and retired associate dean for continuing medical education at UMass. He was also past commander of MA-2 Disaster Medical Assistance Team and past president of the American College of Emergency Medicine.

Dick was also past president of our Worcester District Medical Society and the Massachusetts Medical Society. I have fond memories of our time together as officers at MMS. I remember his thoughtful comments at our meetings, his knowledge on many topics – especially related to emergency care and continuing medical education – and his understanding of financial issues. But my best memory is of his sense of humor. We would try to outdo each other with corny jokes and puns as we sat in numerous meetings, whether at the MMS headquarters, the State House in Boston or the American Medical Association meetings. He usually won with his wry comments.

Dr. Aghababian is survived by Ann, his wife of 42 years; his daughter, Emily, and her husband, Michael, who await the birth of Richard's first grandchild; and his son, Andrew. He also leaves his siblings, Robert Aghababian and his wife, Sandra; Alice Hagopian and her husband, Mark; and Victoria Wicks and her husband, Bruce.

**– Lynda Young**



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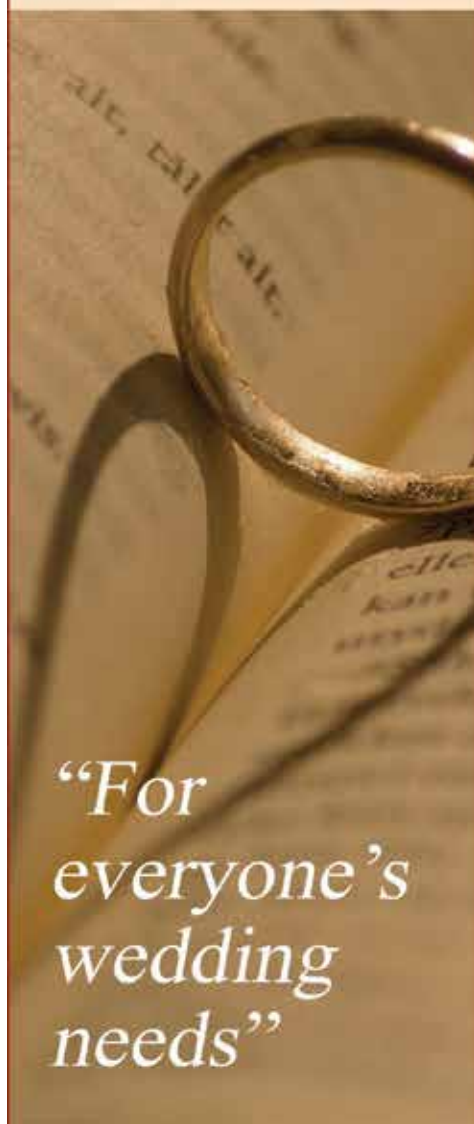
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