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John T. Lear-Phillips

*Eastern Kentucky University, john\_learphillips@mymail.eku.edu*

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## Medical Marijuana and the Healthcare System

**John Tyler Phillips**  
*Eastern Kentucky  
University*

**Renee Causey-Upton, OTD**  
*Eastern Kentucky  
University*

**Abstract:** *Many individuals in America suffer from chronic diseases (Glaucoma, Cancer, PTSD, HIV/AIDS, and multiple sclerosis) and medical marijuana can alleviate the side effects associated with these conditions. The federal government should legalize marijuana in order to give individuals with chronic diseases the organic medication they need to manage their symptoms. The current literature discusses how this topic is a national and community healthcare issue due to the large numbers of individuals with chronic conditions who could benefit from access to medical marijuana. Medical marijuana has the ability to improve the cost, access, and quality of healthcare in the United States for persons living with chronic diseases. This paper explores how cannabis impacts the delivery of healthcare as well as populations who are impacted. Additionally, this paper explores how this topic applies to occupational science, the future role of healthcare providers, and current healthcare policies.*

**Keywords:** *Medical Marijuana, Medical Cannabis, healthcare, occupational science*

Medical marijuana is an herbal drug that has existed for thousands of years and is used to help manage certain health issues. Historically, cannabis dates back as far as 12,000 years and is among the oldest cultivated crops with its roots beginning in central Asia (Warf, 2014). Based on carbon-14 dating, the first documented use of medical marijuana was for Chinese Emperor Shen Nung in 2737 BC as an anesthetic during surgery (Warf, 2014). It was also used in ancient China for rope, clothing, sails, and bowstrings. Currently, medical marijuana is illegal by the federal government and any state allowing its use for medical purposes is breaking federal law. Based on research and individual testimonies, marijuana ranks high in its medicinal purposes. It benefits those suffering from Aids/HIV, Glaucoma, multiple sclerosis, cancer, post traumatic stress syndrome, and many more medical conditions (Thompson, 2016; Vargo, 2016). Medical marijuana is an important potential medication because it has low side-effects compared to other medications used to treat these conditions (Grant,

Atkinson, & Gouaux, 2012). This article will be investigating how medical marijuana is used today and how it affects the healthcare system.

## Methods

The purpose of this research project was to find scholarly articles related to medical marijuana to analyze this topic in relation to current legislation, healthcare policies, and occupational science concepts, as well to identify the populations most impacted by lack of access to medical marijuana. The method of this project included an extensive search of the literature through the following scholarly databases such as Academic Search Complete, Google Scholar, and PubMed. Additionally, newspapers, textbooks, and national magazines were also searched for relevant information related to the topic. The following main keywords were used in the literature search process: Medical cannabis, medical marijuana, cancer, glaucoma, AIDS/HIV, multiple sclerosis, PTSD, Marijuana policy, marijuana litigation, occupational marginalization.

## National and Community Healthcare Issue

Medical marijuana is a national and community healthcare issue because nationally it is classified by the federal government as a schedule 1 narcotic; thus, categorizing it as an illegal substance with no “medical value.” Because marijuana is a Schedule 1 narcotic, its possession and sale are subject to the most severe criminal penalties (Titus, 2016). Some states have legalized medical marijuana, but because its use is a federal crime, insurance companies will not cover the cost of this medication (Luthra, 2016).

Nationally, many people suffer from chronic diseases of which marijuana can alleviate side-effects. A recent article tells the story of how marijuana helped a US Army infantryman wean off many high side effect medications. He was able to replace as many as 150 medications a day with medical marijuana (Thompson, 2016). In addition, marijuana has little to no harmful side-effects and is essentially non-addictive. Marijuana use can not be fatal and no deaths have ever been reported from marijuana overdose (Vargo, 2016).

As far as being a community (Kentucky) healthcare issue, marijuana is currently illegal in this state. Kentucky also has high rates of opiate overdose and drug abuse. Medical marijuana is a community healthcare issue because it can be used to treat the same conditions that opiates are “treating” without the fear of addiction or overdosing. In 2015, Kentucky had 1,248 overdose deaths, but it is expected that the number will increase as more reports are available for calculation (Estep, 2016). Research shows that medical marijuana can be useful in the treatment of pain, making it a potentially suitable alternative to opioids for some individuals (Thompson, 2016). If marijuana instead of opiates were being prescribed to individuals

with chronic pain, this overdose rate would go down because one can not overdose on marijuana. Doctors take patients off of opiates after a period of use and this results in a potential heroin user because it is cheaper to buy heroin on the street than it is to purchase an opiate (Narconon International, 2016).

## **How Marijuana Impacts the Delivery of Healthcare**

Medical marijuana impacts the delivery of healthcare because it changes and will continue to change the way pharmacists perform their job. A recent pharmaceutical publication suggested that pharmacists need to understand the legal framework surrounding medical marijuana so they can protect themselves and better serve their patients (Seamon, 2007). Pharmacy schools are already considering and planning how they will incorporate medical marijuana into the curriculum if it becomes legalized nationally. A study examining pharmacy student's attitudes on marijuana explained that if this medication becomes legal, students will need education and training to address its safe and effective use (Moeller & Woods, 2015).

Furthermore, marijuana impacts the delivery of healthcare because it changes and will continue to change the way doctors do their job. In states that have legalized marijuana, doctors are already "recommending" marijuana to their patients. "In 2002, the Ninth Circuit affirmed the grant of an injunction barring the federal government from punishing physicians who recommend marijuana to their patients for medical use in *Conant v. Walters*" (Mccarthy, 2004, p. 333). Doctors no longer fear being punished for recommending marijuana. However, in the states that do allow the use of medical cannabis, doctors are not allowed to prescribe it, they can only recommend its use (Marcoux, Larrat, & Vogenberg, 2013). Until the federal government legalizes medical marijuana doctors will not be allowed to formally "prescribe" it in the traditional manner needed for insurance coverage. Currently, insurance companies do not cover medicinal marijuana.

Medical marijuana has also impacted the delivery of healthcare by creating collaboration between physicians and marijuana dispensaries, adding a new specialty area to doctors' resume. Doctors are collaborating with dispensaries and other clinicians to utilize their specialized knowledge on the best strains of marijuana for the particular condition, safest administration route, and lowest effective dose (Metts, Wright, Sundaram, & Hashemi, 2016). Legalizing marijuana will impact health care providers (doctors/pharmacist) by allowing them to legally provide at times the best and safest care through an additional medical route.

## **Population Impacted and in What Ways**

The population that will be impacted by the legalization of medical marijuana will be individuals suffering with chronic diseases such as glaucoma, cancer, HIV/AIDs, PTSD, and MS. Hospice health professionals

were assessed in a survey and approximately 90% supported legalization of marijuana (Uritsky, McPherson, & Pradel, 2011). With large support from Hospice, which specializes in chronic condition management, this reflects professional support that medical marijuana can positively impact individuals with chronic conditions.

Medical marijuana impacts individuals with glaucoma by reducing the intraocular pressure associated with this condition (Chapkins, 2007). The intraocular pressure is the fluid pressure inside of the eye that builds up over time. This can cause pain and also lead to cranial nerve II (optic nerve) damage, which can result in blindness. Cannabis also impacts individuals with AIDS/HIV who experience appetite loss. Trials in AIDS patients with clinically significant weight loss indicated that dronabinol significantly outperformed a placebo in terms of appetite enhancement (Grant, Atkinson, & Gouaux, 2012). Dronabinol is essentially tetrahydrocannabinol (pill form), which is a byproduct derived from marijuana. In addition, a systematic review and meta-analysis found evidence suggesting that cannabinoids like dronabinol and others were associated with weight gain in patients with HIV/AIDs (Metts, Wright, Sundaram, & Hashemi).

Individuals with cancer are also highly impacted by medical marijuana. Marijuana is known to stimulate appetite, making its use in reducing chemotherapy-associated nausea and vomiting widespread (Vargo, 2016). Medical cannabis also alleviates the chronic pain associated with chemotherapy and helps prevent chemo induced anorexia associated with the loss of appetite. Despite the variation in state laws regarding the conditions approved to use medical marijuana, cancer is included as a qualifying illness in every state that allows it (Vargo, 2016). Essentially, marijuana is commonly believed to alleviate the side-effects associated with cancer, given its access in all states that have it legalized.

Marijuana also impacts individuals with PTSD. A recent study showed that patients who smoked cannabis saw a 75 percent reduction in PTSD symptoms (“State Approves PTSD for Medical Marijuana”, 2016). According to the Veterans Administration, nearly 30 percent of veterans who served in the Iraq and Afghanistan wars suffer from PTSD (State Approves PTSD for Medical Marijuana, 2016). The federal government estimates that 500,000 of the 2.7 million troops who served in those wars may have the condition (Thompson, 2016). Marijuana reduces PTSD symptoms such as but not limited to anxiety, flashbacks, and depression (Thompson, 2016). Medicinal marijuana has strong potential to make a positive impact on the lives of those suffering from PTSD.

Cannabis also impacts individuals with multiple sclerosis by relieving chronic neuropathic pain and spasticity (Vargo, 2016). In addition to this, “a 2015 systematic review and meta-analysis found moderate quality evidence to support its use for the treatment of chronic and neuropathic pain and spasticity associated with multiple sclerosis” (Metts, 2016, p. 78). Essentially, multiple sclerosis is a progressive disease that damages the myelin sheaths in the brain and spinal chord that can cause symptoms such

as numbness, impaired muscular coordination and fatigue. Marijuana can have a large impact on individuals with MS by alleviating the neuropathic pain and spasticity associated with the disease.

Chronic pain affects more Americans than diabetes, heart disease, and cancer combined with over 100 million people living with chronic pain (American Academy of Pain Medicine, 2017). Due to the nature of chronic pain, a significant portion of this population likely has reduced occupational performance, meaning they struggle to perform the required activities, tasks, and roles of everyday living. Given the amount of individuals impacted from pain such as those with cancer, MS, and Glaucoma, medical marijuana has a role in chronic pain management. Essentially, cannabis can enhance occupational performance in individuals who experience chronic pain by alleviating their discomfort and allowing them to perform without the burden of pain to achieve greater functional levels.

Many individuals in America suffer from chronic diseases (Glaucoma, Cancer, PTSD, HIV/AIDS, and multiple sclerosis) and medical marijuana can alleviate the side effects associated with these conditions. The federal government should legalize marijuana in order to give individuals with chronic diseases the organic medication they need to manage their symptoms.

### **Medical Marijuana and Healthcare Principles**

The healthcare delivery system and medical marijuana are related through the discussion of: cost, access, and quality (Shi & Singh, 2015). Legalizing medical marijuana could improve those three aspects of healthcare. Medical marijuana is cost effective. For example, giving an HIV/AIDS patient a prescription for medical marijuana to increase their appetite and reduce their nausea, vomiting, and pain would be more cost effective than prescribing three different medications that one medication (medical marijuana) can treat. Medical marijuana price varies from state to state. Although, Denver dispensaries charge medicinal customers around \$10 per gram (Ross, 2014). It is difficult to compare other individual drug prices to medical marijuana, as many publically available drug prices provided online are listed at the insurance discounted rate. This same scenario and condition can be applied to the quality aspect of healthcare. For example, the AIDS/HIV patient is receiving an unjust quality of care by being placed on opiates for pain. They are being put at unnecessary risk for addiction and liver damage, among other risk. In relation to access, there is no safe access because the federal government can step in at any time at the state level to convict a medical marijuana user even in a state where it is legalized. Also, not all states have legalized marijuana.

### **How Medical Marijuana Applies to Occupational Science**

Medical marijuana applies to occupational science because the

federal government not allowing individuals to use this medication is occupational marginalization. Occupational marginalization occurs when individuals are oppressed by a higher power, such as the government, from making decisions and choices regarding their occupational participation (Christiansen & Townsend). Essentially, persons with chronic conditions and other illnesses are marginalized and have no autonomy in the occupation of using medical marijuana to reduce their symptoms to support function. The government creates restrictions, policies, and laws that prevent individuals with chronic diseases from fully engaging in health maintenance as an occupation, even with a doctor's recommendation. Individuals also experience barriers in the occupation of growing marijuana, which could be experienced as a relaxing occupation to promote restoration while living with a debilitating and stressful disease. Clients may not be able to complete other valued occupations, such as work and leisure task, because the symptoms associated with their condition are not alleviated due to lack of access.

Kielhofner (2008) describes volition as "pattern of thoughts and feelings about one-self as an actor in one's world which occur as one anticipates, chooses, experiences, and interprets what one does" (p. 47). How one takes care of oneself, decides their health treatment plan, and lives their life are aspects of one's volition. Many individuals with chronic conditions value and have interest in medical marijuana because it is an organic and low side-effect treatment option for their condition. Having more options and autonomy related to medications for symptom management would increase a client's volition by giving them choice in their treatment to support their health.

### **Application as A Future Healthcare Provider**

Medical marijuana applies to the future role as a healthcare provider because one could potentially encounter a patient prescribed medical marijuana. This topic is important because as a future health care provider, it is one's responsibility to ensure that the patient gets the best quality of therapy out of every session. Therefore, if a client is suffering from chronic pain, the provider could advise nursing to administer their medical marijuana 30 minutes before the therapist arrives to ensure the client is not suffering from pain during the therapy session. This is a common practice in acute care therapy, in which the nurse will give patients pain medication before rehabilitation staff provide care to the individual. As a healthcare provider, it is also one's responsibility to counsel the patient about safety. If an OT is providing an intervention to a patient to help them establish a weekly medication routine, they could read the pharmacist's recommendations and medication side-effects and make a sign in the medicine cabinet to remind the patient about contraindications. The therapist could also be an advocate for the patient by attending local and national legislative events to promote the medical benefits of marijuana.

Occupational therapists are seeing more patients with chronic pain in their daily practice. OTs need to stay informed of the techniques doctors are using with patients to alleviate pain, including prescription marijuana (Karplus, 2014). As a future healthcare provider, it is one's responsibility to stay current on medications that patients are taking, including medical marijuana. Occupational therapy practitioners have a direct role in chronic pain management. They help identify, teach, implement, facilitate, collaborate, and recommend chronic pain management strategies to clients (AOTA, 2016). This is why it is paramount that OTs be informed about medical marijuana.

### **Relevance of Medical Marijuana to Current Healthcare Policies**

Medical marijuana is relevant to current healthcare policies because it is a healthcare policy movement that has been gaining a large amount of attention in the United States. Nationally, federal laws prohibit medical and recreational marijuana. At the state level, it is only legal in 26 states. All states that have medical marijuana have approved it for cancer care (Vargo, 2016). This is the only condition in which all states allow a mutual access to medical marijuana. States vary on the approval for other conditions such as AIDS/HIV, glaucoma, MS, and PTSD. However, the policies in most states allow all of these.

Medical marijuana is a schedule 1 narcotic, which is why it is illegal. Doctors are allowed to "recommend" it without prosecution; however, insurance companies do not cover medical marijuana. Recently, "the DEA approved the first-ever study of the use of the marijuana plant itself, not individual extracts, as a therapeutic drug" (Thompson, 2016, p. 36). This could shift current healthcare policies because if the DEA made marijuana a schedule 2 drug, this would put it in the category of drugs such as morphine and oxycodone. This would make it easier for doctors to prescribe and more likely that insurance companies would cover this medication (Luthra, 2016). This would make medical marijuana accessible to individuals with chronic conditions.

### **Implications and Consequences on Healthcare Service Delivery**

The federal government should drop marijuana from a schedule 1 narcotic to a schedule 2 narcotic so doctors can formally prescribe it instead of only recommending it. This process would have to be completed through legislation. Following the legalization from the federal government, insurance companies would begin to cover medical marijuana because it would be in the same category as morphine and oxycodone, which are covered by insurance companies (Luthra, 2016). One major consequence of legalizing medical marijuana is that doctors and pharmacists would have to be trained on this drug. In the beginning of legalization, the novelty of this medication could cause over or under prescription. Necessary education



on dosage, strands, and ingestion routes could be incorporated into pharmacy schools and medical schools during academic preparation. For professionals who are already practicing, they could obtain this education through continuing education units. Medical marijuana would also affect big pharmaceutical companies by decreasing the amount of other drugs being prescribed because marijuana has such a wide scope of practice, which could lower pharmaceutical company profits. In states that have already legalized medical marijuana, research showed a decline in the number of Medicare prescriptions for chronic pain, anxiety and depression. They also saw reductions in Medicare part D spending, which covers the cost of prescription medications (Luthra, 2016). Legalizing medical marijuana has the potential to decrease healthcare spending, while also reducing symptoms to improve quality of life and increase function.

### Conclusion

Medical marijuana is a schedule 1 narcotic; therefore, it is federally illegal, but is legal in some geographic areas at the state level. This drug has the potential to reduce the opiate problem in Kentucky. Medical marijuana can impact the delivery of healthcare because it will change the way healthcare providers perform their jobs, specifically physicians and pharmacists. Medical marijuana can be beneficial for persons with cancer, HIV/AIDS, MS, PTSD, and glaucoma as well as having the potential to improve cost, access, and quality of healthcare for these individuals. Medical marijuana is a drug that healthcare providers may need to become familiar with in the future as practicing clinicians. Medical cannabis is relevant to healthcare because it is already legal in 26 states and may eventually become legalized nationally. Marijuana should be reduced from a schedule 1 narcotic to a schedule 2 for federal legalization. Access to medical marijuana can reduce symptoms and improve quality of life for individuals with a variety of conditions

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