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Marijuana Legislation: Identifying the Impact on the Oral Healthcare Provider

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VCU

Abstract

Objectives/Aims: Since the mid-2000s, the United States has seen a surge in legislation involving the legalization of marijuana, both recreationally and medicinally. The relaxed laws translated into an increase of marijuana consumption and thereby a potential increase in the number of patients a provider will see that are cannabis users. The purpose of this review is to illustrate how the providers begin to see pathologies related to cannabis use more frequently, and how they will need to be prepared for ways this can be addressed. Additionally, oral healthcare providers will face ethical dilemmas and legal challenges when treating patients regarding their ability to give informed consent.

Methods: Research reviewed in this paper was compiled from scholarly articles and peer reviewed journals, including PubMed and CINAHL, published within the last five years. Studies were analyzed on the impact legalization and decriminalization laws have had on marijuana use. Additional research reviewed numerous pathologies related to marijuana use in the dental cavity.

Results: Based on current proposals, it is expected that 40 states will legalize marijuana by the end of 2020. Studies conducted in states such as Oregon, Colorado and Alaska have shown an increase in marijuana usage since legalization has occurred. Research reviewed showed multiple conditions related to marijuana use. Periodontitis, xerostomia, oral cancer, and staining are several of the associated pathologies.

Conclusion: Research suggests an anticipated increase of marijuana users in states that will soon pass legalization. Studies have also shown that there is a higher prevalence of pathologies of the oral cavity in cannabis users versus non cannabis users. The oral healthcare provider will treat more pathologies related to cannabis use and deal with the legal challenges presented to them surrounding informed consent.

Introduction

•Studies conducted in 2017 showed that smoking marijuana was the most common form of usage, at fifty five percent with one in fifteen users reporting multiple ways of consumption ranging from edibles to vaping.(1) Consumption of edibles was also listed as typically being in the form of baked goods and sweets.

•Periodontitis, an irreversible disease in the oral cavity that includes clinical attachment loss and bone loss of the periodontium has been linked to cannabis use.

•“FRC [Frequent Recreational Cannabis] users had a higher number of sites with PDs and AL across thresholds of severity compared with non-FRC users. These findings were corroborated by analysis of the topography of periodontal lesions, as extent (mean number of sites) of PD and AL severity remained significantly higher among FRC users than among non-FRC users across sextants. Average difference of fewer than five affected sites between FRC and non-FRC users can potentially have clinically significant impact, as it may also be associated with increased risk for periodontitis progression among FRC users.”(2)

•The International Journal of Oral and Dental Health published research in 2019 stating that “Cannabis users were at higher risk of development of oropharynx cancer.”(3) This type of cancer is where malignant cells grow around the oropharynx tissues which is a part of the pharynx.(4) While some pathologies associated with cannabis use have been well researched, others are currently in need of greater research. In one report(5), a thirty-four-year-old male, marijuana user with gingival overgrowth was studied but since there are still not many cases of gingival overgrowth reported due to marijuana use it is a connection that needs to be followed up on in future studies.

•One of the most common pathologies we see as oral healthcare providers is xerostomia and as cannabis use increases due to marijuana legislation it is something that we should expect to see more frequently. “Cannabis is a medication with para-sympatholytic properties and consequently can result in xerostomia. It has been accounted that constant dry mouth, loss of teeth and the absence of saliva may interfere with speech, mastication, and quality of life.”(3)

•This research paper talks about how the legalization of marijuana and how oral healthcare providers should be prepared for an increase in pathologies related to the growth in number of marijuana users.

Methods

Research reviewed in this paper was compiled from scholarly articles and peer reviewed journals, including PubMed, CINAHL and Google Scholar, that were published within the last five years. Studies on marijuana legalization and decriminalization laws were analyzed. Additional research reviewed the numerous pathologies such as xerostomia, periodontal disease, oropharynx cancer and gingival overgrowth that are associated with marijuana use in the dental cavity. Further research was reviewed on the ability of patients to give consent while under the influence of marijuana. MeSh Terms searched included: “pathology, oral,” “marijuana use,” “periodontal diseases,” “cannabis,” “oral health”, and “oral hygiene.”



Discussion

The research is very clear that oral healthcare providers will experience a change in their practice as more states pass marijuana legislation. However, there are certain limitations to previous research that must be addressed. Cannabis will no longer be the illicit drug that is abused. It will be used by everyday people and those with chronic medical conditions that need to be treated. How do dental practitioners deal with informed consent when a patient is legally using cannabis for a medical condition? They cannot turn them away but must be aware of contraindications of treatment. “It is imperative that dental care providers make clinical decisions based on scientific evidence regarding the pharmacologic and psychological effects of marijuana, not on the societal stigma associated with illegal drug use.” (6)

There is conflicting research surrounding the influence of cannabis usage on the development of certain cancers. Some research has shown a correlation between oropharynx cancer while other studies have been conducted that show there is little to no association. A study published in 2019 stated that “Oral cancer linked to cannabis usually occurs on the anterior floor of the mouth and the tongue. It is suggested that cannabis smoking may be a possible cause of tongue carcinoma”(7) but also stated that “A case–control study showed no association between marijuana use and oral squamous cell carcinoma after controlling for confounding factors such as sex, education, birth year, alcohol consumption, and cigarette smoking.” Further research will need to be conducted to determine what links between cannabis and cancer there are, if any.

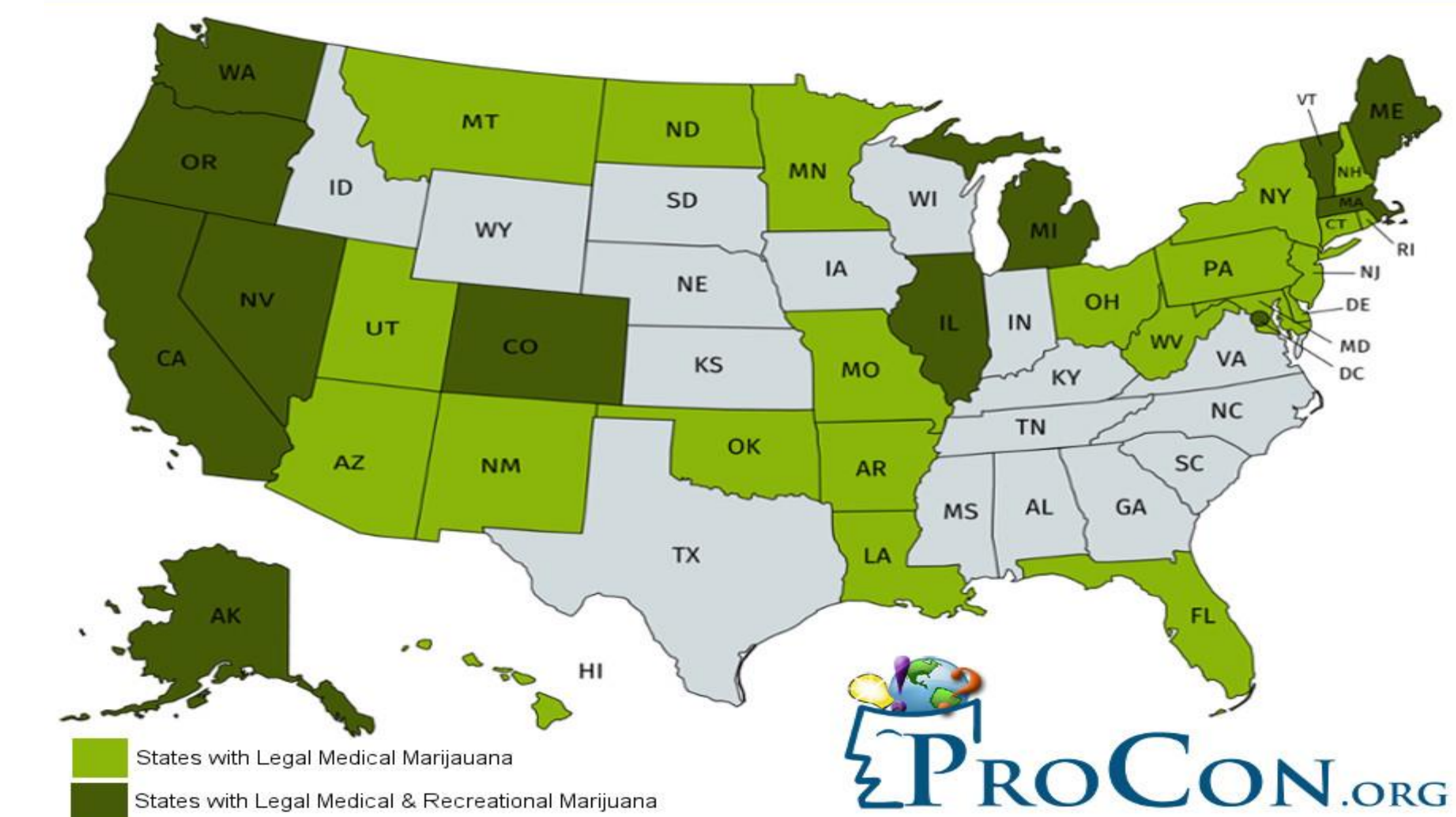
What if a patient uses marijuana prior to coming to their dental appointment? How does a dental practitioner handle a patient who is under the influence? Some users only use marijuana occasionally during social events or on the weekends while others are chronic users, consuming marijuana heavily. They may consume cannabis prior to their appointment, and their provider will need to know how to proceed with treatment. Researchers from the University of Pacific voiced concern that “due to the mind-altering implications of being under the influence of marijuana, obtaining informed consent from high patients is high risk for misunderstandings and mismanagement” (8). There are several reasons why receiving informed consent is vital for every dental appointment.

The mainstay of informed consent is a continuing process whereby the patient is given enough information to allow them to take a decision voluntarily and without coercion. They need to be given explanations (in appropriate language and terminology) to allow them to understand the nature of their condition, the nature of the proposed treatment and other alternatives, their benefits and the risks, and the consequences if no action is taken. It must also be ensured that the patient has the capacity to consent.(9)

With the increased usage of marijuana, it is important for the patient to be able to confide in their healthcare provider. For many people, it is easier for them to disclose that they are smoking tobacco, and some may feel that if they do disclose that they are using marijuana that they will fall into legal troubles. With the increase in the legalization of marijuana, it can be assumed that the number of patients willing to inform their provider that they are using cannabis will increase. It is important that oral healthcare providers build rapport with their patients, so they feel that they can comfortably share their practices. This information is just as important as any other information that would be added into their medical history. The patient should understand that this information will make it easier for their provider to provide a administer a plan for the patient.

Future Indications

33 Legal Medical Marijuana States & DC
11 Legal Recreational Marijuana States & DC



With the **increase** in the amount of states that are legalizing **both** the **recreational and medicinal use of marijuana**, oral healthcare providers need to remain up to date with existing as well as **FUTURE** etiologies that can be associated with increased usage of cannabis. Relaxed laws have translated into an increase of marijuana consumption and thereby a potential increase in the number of patients a dental provider will see that are cannabis users.

Future Research

- Additional research must be completed to determine the link between oropharynx cancer and cannabis use.
- Further studies on informed consent and ethics must be reviewed and considered when treating medical marijuana users.

References

1. Steigenwald S, Wong PO, Cohen BE, Ishida JH, Vali M, Madden E, et al. Smoking, Vaping, and Use of Edibles and Other Forms of Marijuana Among U.S. Adults. [Internet]. Vol. 169, *Annals of Internal Medicine*. Northern California Institute for Research and Education and San Francisco VA Medical Center, San Francisco, California: American College of Physicians; 2018. p. 890–2. Available from: <http://proxy.library.vcu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,url,cookie,uid&db=ccm&AN=133645696&site=ehost-live&scope=site>
2. Shariff JA, Ahluwalia KP, Papapanou PN. Relationship Between Frequent Recreational Cannabis (Marijuana and Hashish) Use and Periodontitis in Adults in the United States: National Health and Nutrition Examination Survey 2011 to 2012. *J Periodontol* [Internet]. 2017 Mar 1;88(3):273–80. Available from: <https://doi.org/10.1902/jop.2016.160370>
3. Singh H, Katz J, Saleh W, Cha S. Impact of Cannabis on the Port of Entry-Oral Tissues: An Overview. *Int J Oral Dent Heal* [Internet]. 2019;5(3). Available from: <https://clinmedjournals.org/articles/ijodh/international-journal-of-oral-and-dental-health-ijodh-5-098.php?jid=ijodh#cit>
4. Coffey C, Ghanem T. Cancer of the Oropharynx: Risk Factors, Diagnosis, Treatment, and Outcomes [Internet]. 2016 [cited 2020 Mar 9]. Available from: <https://www.ahns.info/oropharyngeal-carcinoma-overview/>
5. Dhakal R, Chaudhary SK, Singh R, Sharma S, Shrestha A. Marijuana Induced Gingival Enlargement. *J Nepal Soc Periodontol Oral Implantol* [Internet]. 2019;3(1):25–8. Available from: <https://www.nepjol.info/index.php/jnspoi/article/view/24824>
6. Grafton SE, Huang PN, Vieira AR. Dental treatment planning considerations for patients using cannabis: A case report. *J Am Dent Assoc* [Internet]. 2016;147(5):354–61. Available from: <http://www.sciencedirect.com/science/article/pii/S0002817715011496>
7. Liu C, Qi X, Yang D, Neely A, Zhou Z. The effects of cannabis use on oral health. *Oral Dis* [Internet]. 2019 Dec 2;n/a(n/a). Available from: <https://doi.org/10.1111/odi.13246>
8. BS D, Fielding A. Marijuana a Dental Dilemma. *Oral Heal Dent Sci*. 2017 Dec 30;1:1–3.
9. Hajivassiliou EC, Hajivassiliou CA. Informed consent in primary dental care: patients' understanding and satisfaction with the consent process. *Br Dent J* [Internet]. 2015 Sep 11;219(5):221–4. Available from: <http://10.0.4.14/sj.bj.2015.687>