Medical Use of Cannabis “Marijuana”

Mohmmed Ahmad Gazo*
King Khalid University Hospital, Riyadh, Saudi Arabia

Abstract
Medical marijuana is currently a contentious debatable issue. There are strong opponents and proponents opinions but relatively little scientific data on which to base medical decisions. Unfortunately, classifying marijuana as a Schedule I drug result in limiting research studies and only serves to fuel the debate. This position statement paper frames the opponents and proponents viewpoints toward medical use of marijuana, and support the cautious and compassionate use of medical marijuana to treat patients with debilitating medical conditions and symptoms who have failed to respond to other therapies. Based on the reviewed literature, the evidence demonstrates a connection between the use of marijuana and symptom relief. Thus, many patients, physicians, and researchers have voiced support for the use of medical marijuana. Health care providers should be educated toward the efficacy and safety of medical marijuana. Also, further research is needed to improve the knowledge of potential therapeutic benefits and health negative outcomes of marijuana.

Keywords: Cannabinoids; Cannabis; Marijuana; Medical use; position statement

Introduction
Medical use of cannabis (marijuana) have been recognized for hundreds of years, it is reported that the first use of medical cannabis goes back to 2800 BC in China as a painkiller drug [1]. Also, it has been proven that using medical marijuana in alleviating symptoms of a wide range of medical conditions such as HIV/AIDS, Epilepsy, Cancer, Multiple sclerosis, Cohn’s disease, Glaucoma, and Alzheimer’s disease, was very effective, as well as an alternative to narcotic painkillers [2]. However, medical marijuana defined as using any part of the plant Cannabis Sativa (marijuana) and its constituent cannabinoids, prescribed by a trained medical professional to treat diseases or alleviate symptoms, which there is a research demonstrating it is efficacy as a choice of treatment [3]. In the last years, when some countries decided to make smoking marijuana as legal for certain patients, medical use of marijuana became as a contentious debatable issue. The debates on cannabis are about it is legalization, harmful side effect, and the fear of teenagers to believe that marijuana is safe for recreational use [4]. Till Oct 2014, the official number of total medical marijuana users in 19 (out of 23) states and District of Columbia holding identification cards with mandatory registration was 1,137,069 patient [5]. Position statement defined as a comprehensive declaration of the organization or researcher on a particular topic, it contains background information and discussion in order to provide a more complete understanding of the issues involved and the rationale behind the position set forth [6].

Therefore, the purpose of this position statement paper is to present proponents and proponents viewpoints toward medical use of marijuana, and to support the cautious and compassionate use of medical marijuana to treat medical conditions and to alleviate symptoms.

Literature Review
In 1970, Uniform Controlled Substance Act classified marijuana as a Schedule I drug, hence making possession of a Schedule I drug like marijuana, heroin, ecstasy and peyote illegal [7]. Under this Act, there are five schedules of drugs, schedule I, II, III, IV, and V. Schedule I drug has a high potential for abuse and has no accepted medical use in treatment due to a lack of accepted safety for use of the drug under medical supervision. A Schedule II drug has a high potential for abuse like a Schedule I drug but accepted medically for treatment with severe restrictions. Schedule III, IV, and V drugs have a low potential for abuse and are accepted for medical treatment [8]. Today, smoked marijuana is not the only form in circulation. There are many forms of marijuana that are used for medical purposes, including a synthetic form, Marinol (dronabinol), which is taken orally as an analog of cannabis therapeutic use has significantly increased [9]. In recognition and acceptance of the efficacy of medical marijuana, twenty-three states have approved initiatives to make marijuana legal for medical purposes, including: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Minnesota, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington, as well as the District of Columbia [10].

The Schedule I classification of cannabis in the US makes the study of medical marijuana difficult [9]. However, it was approved that medical marijuana has many potential beneficial effects as following:

Nausea and vomiting
Guidelines from the National Comprehensive Cancer Network

*Corresponding author: Mohmmed Ahmad Gazo, MSNc, King Khalid University Hospital, Riyadh, Saudi Arabia, Tel: 966114670011; E-mail: Gazomohammed90@gmail.com

Received March 18, 2016; Accepted February 27, 2018; Published February 28, 2018

Citation: Gazo MA (2018) Medical Use of Cannabis “Marijuana”. J Cancer Sci Ther 10: 041-044. doi:10.4172/1948-5956.1000515

Copyright: © 2018 Gazo MA. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
A systematic review conducted by Whiting and his colleagues in 2015 supports using cannabinoids as a treatment for nausea and vomiting induced by chemotherapy, researchers analyzed data from twenty-eight studies, and found that patients using cannabinoids were more likely to report reductions in nausea and vomiting than those given a placebo [13].

Cancer

Although there has been a small research into using cannabinoids as a cancer treatment in people, medical use of cannabis has been shown to demonstrate some anti-cancer effects in laboratory experiments [12]. Moreover, cannabinoids have been found to help in killing breast cancer cells, and fighting liver cancer [14,15].

Pain

Cannabis appears to be effective for the treatment of chronic pain, it was examined by Lynch and Campbell in 2011 using a randomized controlled trial. The cannabinoids studied were smoked marijuana, oromucosal extracts of cannabis-based medicine, Nabilone, Marinol and a novel THC analog, types of pain were neuropathic pain, rheumatoid arthritis, fibromyalgia, and mixed chronic pain. The results of the study confirmed that cannabinoids are safe and moderately effective in the treatment of the above-mentioned types of pain. Moreover, a review conducted by Whiting and his colleagues in 2015 found moderate quality evidence that cannabinoids were effective for chronic pain [13]. According to American Cancer Society 2015, Nabiximols which is a specific extract of cannabis, has shown beneficial effect in helping people with cancer pain that is unresolved by strong pain medications, but it has not been found to be helpful all the time [16]. In March. 17, 1999, the Institute of Medicine published a report titled “Marijuana and Medicine: Assessing the Science Base”; they conclude that the available evidence from animal and human studies indicates that cannabinoids can have a substantial analgesic effect [17].

Multiple sclerosis (MS)

Current treatment of MS is primarily symptomatic, many research studies have reported enhancement in patients treated with cannabinoids for symptoms including spasticity, chronic pain, sexual dysfunction, bowel and bladder dysfunctions, vision weakness, dysfunctions of walking and balance “ataxia”, and memory loss [18-21].

Public Opinion Census

In 2015, a survey conducted by Harris Poll on 2,221 U.S. adults, they found that support for the legalization of marijuana for both medical treatment and recreational use has increased by 7% over the past four years. Four in five adults (81%) favor legalizing marijuana for medical use. Also, nearly nine in ten democrats (87%) and independents (86%) are in favor of legalizing marijuana for medical treatment [22]. Moreover, a Quinnipiac University study was published in 2015 that confirms the growing support for Florida medical use of marijuana. The study was conducted on the three swing states: Florida, Ohio, and Pennsylvania. They found that 84% of Floridians support legalization of medical use of marijuana [23].

Organizations Position Statements Support the Use of Medical Marijuana

The American Academy of Family Physicians advocates that the medical use of marijuana should be based on high quality, patient-centered, evidence-based research [24]. Moreover, The American Nurses Association strongly advocates patients’ rights to legally and safely use marijuana for symptom management and enhancing quality of life for patients desperately in need for such therapy [25].

Opponents of Using Medical Marijuana

Across various studies in multiple countries, marijuana use has been significantly connected with many negative acute and chronic health outcomes in the physical health, mental health, injury and mortality [26].

Addiction

There is a debate on the addictive potential of marijuana. According to the National Institute on Drug Abuse, about 9% of those who experiment with marijuana will become addicted. This number increase to 17% for those who start using marijuana as teenagers and up to 50% for those who smoke marijuana daily [27]. Marijuana addiction is linked to a mild withdrawal syndrome. Symptoms reported was: irritability, mood and sleep disturbances, decreased appetite, cravings, restlessness, and various forms of physical discomfort that peak within the first week after quitting and last up to 2 weeks [28,29].

Adverse health effect

Evidence supporting serious cardiovascular complications including myocardial infarction, stroke, sudden cardiac death, and cardiomyopathy has been reported to be temporally associated with marijuana use [30].

The other evidences supporting an association between marijuana use and sexual and reproductive effects are weak. However, a number of studies show an association between marijuana use and increased risk of testicular cancer [31]. Also, marijuana use during pregnancy does not appear to increase the risk of miscarriage or birth abnormalities but has been consistently associated with lower birth-weight babies and pre-term birth [32]. While, children, adolescents, and young adults who consume marijuana are at a higher risk than older adults for marijuana-related harms, including suicidal ideation, illicit drug use, cannabis use disorder, and long-term cognitive impairment as it is strongly suggested by current evidence [27]. Moreover, marijuana seems to induce psychotic symptoms and worsen conditions in patients already diagnosed with schizophrenia or other psychotic disorders [33].

Risk of abuse and misuse

Marijuana misuse is relatively common and associated with significant negative consequences [34]. Marijuana has been described as a “gateway” drug because its use usually precedes use of “harder” drugs such as cocaine and heroin, and frequent marijuana users have a much greater probability than nonusers of using heroin or cocaine in their lifetime [35].

Organizations Position Statements Oppose the Use of Medical Marijuana

National Association of Drug Court Professionals opposes “the legalization of smoked or raw marijuana; and opposes efforts to approve
any medicine, including marijuana, outside of the FDA process” [36]. Adolescents are especially susceptible to adverse consequences of marijuana use. Thus, the American Academy of Child and Adolescent Psychiatry opposes medical marijuana dispensing to adolescents [37]. In summary, after reviewing relevant scientific data and grounding the debate in medical use of marijuana, there is a strong argument for allowing physicians to prescribe marijuana. Proponents of medical marijuana argue that it can be a safe and effective treatment for the symptoms of many debilitating diseases supported by classical and evident research. On the other hand, proponents of medical marijuana argue that it is too dangerous to use, lacks FDA-approval, and that various legal drugs make marijuana use unnecessary. They say that medical marijuana is a front for drug legalization and recreational use since it is connected with a lot of negative health consequences.

**Discussion**

**Position statement**

The author of this paper is supporting the cautious and compassionate use of medical marijuana to treat medical conditions and to alleviate symptoms whenever regular medications have been exhausted. Compassion dictates that a distinction be made between medical and non-medical uses of marijuana.

While conclusive evidence regarding the safety of marijuana as a medical treatment is limited, the evidence demonstrates a connection between therapeutic use of marijuana and symptom relief. Thus, many patients, physicians, and researchers have voiced support for the use of medical marijuana.

There was no evidence that prescribing medical marijuana would increase illicit drug use. Therefore, the association between early marijuana use and later drug use and abuse or dependence may arise from the effects of the peer and social context within which marijuana is used and obtained [38].

Finally, in order to achieve a cautious and compassionate use of medical marijuana, several recommendations should be taken in consideration to be implemented. So, patients with debilitating symptoms who had been exhausting the regular conventional therapies could maintain a good quality of life [39]. The following recommendations are synthesized based on the reviewed latest research evidences and updated practices literature:

- Increase health care provider education toward the efficacy and safety of cannabis, and comprehensive clinical management of patients using cannabis and its various components.
- Health care provider should provide patients and families with education and resources about medical marijuana as secondary treatment in certain conditions.
- Opposes prescribing of marijuana and its various components for medical purposes unless performed by licensed health care professionals whose scope of practice includes the dispensing of prescription medications and who comply with state and federal regulations.
- Close observation of patients will ensure appropriate use of medical marijuana, and training and education should be made available to providers whose patients use these medications.
- Health care providers can play a major role in the early identification of patients at risk of adverse health outcomes from marijuana use.
- Support the reclassifying of medical marijuana as a Schedule II drug to facilitate the process of studying medical marijuana, ensure patient access and allow for marijuana’s legal regulation.
- Further research is needed to improve the knowledge of potential therapeutic benefits and health negative outcomes of marijuana, including the best practice treatment methods that provide the most benefit for the patients.

**Summary and Conclusion**

Debate about medical marijuana is challenging the basic foundations of the accepted practice in the medical, legal and ethical communities. However, the purpose of this position statement paper has been to frame the debate, with the latest evidence-based research and practice, and to support the treatment of medical conditions and alleviating symptoms by using the medical marijuana [1].

Proponents in the medical field argue for medical use of marijuana based on its effectiveness in managing debilitating diseases [40,41]. The current another is supporting the use of medical marijuana cautiously and compassionately with patients who have debilitating symptoms and medical condition. In order to achieve that several recommendations were synthesized based on the reviewed literature [42].

**Acknowledgment**

The current author would like to express his special appreciation and thanks to Professor Dr. Majd Moryan, you have been a tremendous mentor for me. I would like to thank you for encouraging my research and for allowing me to grow as a research scientist. Your advice on both research as well as on my career have been priceless.

**References**

1. Deiana S (2012) Medical use of cannabis. Cannabidiol: A new light for schizophrenia? Drug Test. Analysis Drug Testing and Analysis 5: 46-51.
2. http://www.drugpolicy.org/issues/medical-marijuana
3. Disabled World (2015) Medical Marijuana: Legallities and Health Condition Uses.
4. Belackova V, Ritter A, Shanahan M, Chamlers J, Hughes C, et al. (2015) Medicinal cannabis in Australia – Framing the regulatory options. Sydney: Drug Policy Modelling Program.
5. ProCon.org (2015) Number of legal medical marijuana patients, USA.
6. American Academy of Family Physicians (2015) AAFP Definitions for Policy Statement, Position Paper and Discussion Paper
7. Thomas J (2010) The past present and future of medical marijuana in the United States. Psychiatric Times 27: 1
8. MedShadow Foundation (2014) Drug Classification Schedules.
9. Borgelt LM, Franson KL, Nussbaum AM, Wang GS (2013) The pharmacologic and clinical effects of medical cannabis. Pharmacotherapy 33: 195-209.
10. ProCon.org (2015) 23 Legal Medical Marijuana States and DC, USA.
11. Basch E, Hesketh P, Kris M, Prestrud A, Temin S, et al. (2011) Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update. J Clin Oncol 35: 395-398.
12. Bowles D, O’Bryant C, Camridge D, Jimeno A (2012) The intersection between cannabis and cancer in the United States. Critical Reviews in Oncology/ Hematology 83: 1-10.
13. Whiting PF, Wolff RF, Deshpande S, Di Nisio M, Duffy S, et al. (2015) Cannabinoids for Medical Use: A Systematic Review and Meta-analysis. JAMA 313: 2456-2473.
14. Shrivastava A, Kuzontkoski P, Groppman J, Prasad A (2011) Cannabidiol induces programmed cell death in breast cancer cells by coordinating the cross-talk between apoptosis and autophagy. Mol Cancer Ther 10: 1161-1172.
15. Vara D, Salazar M, Olea-Herrero N, Guzman M, Velasco G, et al. (2011) Anti-
tumoral action of cannabinoids on hepatocellular carcinoma: Role of AMPK-dependent activation of autophagy. Cell Death Differ 18: 1099-1111.

16. American Cancer Society (2015) Marijuana and Cancer, USA.

17. Watson S (2000) Marijuana and medicine: Assessing the Science Base: A Summary of the 1999 Institute of Medicine Report. Arch Gen Psychiatry 57: 547-552.

18. Corey-Bloom J, Wolfson J, Gamst A, Jin S, Marcotte T, et al. (2012) Smoked cannabis for spasticity in multiple sclerosis: A randomized, placebo-controlled trial. CMAJ 184: 1143-1150.

19. Flachenecker P, Henze T, Zell U (2014) Nabiximols (THC/CBD Oromucosal Spray, Sativex®) in Clinical Practice - Results of a Multicenter, Non-Interventional Study (MOVE 2) in Patients with Multiple Sclerosis Spasticity. Eur Neurol 71: 271-279.

20. Kavia R, Ridder D, Constantinescu C, Stott C, Fowler C (2010) Randomized controlled trial of Sativex to treat detrusor overactivity in multiple sclerosis. Mult Scler 16: 1349-1359.

21. Koppel B, Brust J, Fife T, Bronstein J, Youssof S (2014) Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders: Report of the Guideline Development Subcommittee of the American Academy of Neurology. Neurology 82: 1556-1563.

22. The Harris Poll (2015) Increasing percentages of Americans are ready for legal marijuana.

23. Quinnipiac University (2015) Florida Medical Marijuana Study.

24. American Academy of Family Physicians (2014) Marijuana Position Statement, USA.

25. American Nurses Association (2008) In Support of Patients’ Safe Access to Therapeutic Marijuana, USA.

26. Repp KK, Raich AL (2014) Marijuana and health: A comprehensive review of 20 years of research.

27. Volkow N, Balter R, Compton W, Weiss S (2014) Adverse health effects of marijuana use. N Engl J Med 370: 2219-2227.

28. Chesney T, Matsos L, Couturier J, Johnson N (2013) Cannabis withdrawal syndrome: An important diagnostic consideration in adolescents presenting with disordered eating. Int J Eat Disord 47: 219-223.

29. Gorelick D, Levin K, Copersino M, Heishman S, Liu F, et al. (2012) Diagnostic criteria for cannabis withdrawal syndrome. Drug Alcohol Depend 123: 141-147.

30. Thomas G, Kloner R, Rezkalla S (2014) Adverse cardiovascular, cerebrovascular, and peripheral vascular effects of marijuana inhalation: What cardiologists need to know. Am J Cardiol 113: 167-170.

31. Lacson JC (2012) Population-based case-control study of recreational drug use and testis cancer risk confirms an association between marijuana use and nonseminoma risk. Cancer 118: 5374-5383.

32. Hayatbakhsh M, Flendy V, Gibbons K, Kingsbury A, Hurion E, et al. (2012) Birth outcomes associated with cannabis use before and during pregnancy. Pediatr Res 71: 215-219.

33. Harvard Medical Study (2010) Medical marijuana and the mind - Harvard Health, USA.

34. Agrawal A, Budney AJ, Lynskey MT (2012) The co-occurring use and misuse of cannabis and tobacco: a review. Addiction 107: 1221-1233.

35. Kandel D, Kandel E (2015) The Gateway Hypothesis of substance abuse: developmental, biological and societal perspectives. Acta Paediatr 104: 130-137.

36. National Association of Drug Court Professionals. (2012). Marijuana Position Statement. Retrieved

37. American Academy of Child and Adolescent Psychiatry (2012) AACAP Medical Marijuana Policy Statement.

38. American Academy of Pediatrics (2004) Legalization of Marijuana: Potential Impact on Youth.

39. College of Physicians and Surgeons of Ontario (2015). Marijuana for Medical Purposes.

40. Haden M, Emerson B (2014) A vision for cannabis regulation: a public health approach based on lessons learned from the regulation of alcohol and tobacco. Open Med 8: e73.

41. Hadland SE, Knight JR, Harris SK (2015) Medical marijuana: Review of the science and implications for developmental-behavioral pediatric practice. J Dev Behav Pediatr 36: 115-123.

42. Paterno S (2014) New York Does Medical Marijuana Right, USA.