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Education for Oncology Providers on the Benefits, Uses, and Local Resources of Medical Marijuana

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Executive Summary

Introduction of the Problem

Medical marijuana, which is often called cannabis, is becoming widely used across the United States to reduce symptoms of various medical conditions including cancer. Medical marijuana has been said to increase quality of life among patients with cancer by successfully treating chronic pain and relieving nausea and vomiting from chemotherapy. Over 35 states have authorized the use of medical marijuana for patients with qualifying conditions since March 2021, and this number is continuing to grow. For physicians and nurse practitioners to care for this patient population, they must understand the medical implications, pharmacological properties, and legal issues associated with medical marijuana use (Dell & Stein, 2021).

A survey was conducted among oncologists in the United States. Only 30% of these physicians felt informed enough to provide recommendations regarding medical cannabis use for their patients (Abu-Amna et al., 2021). Nurse practitioners at a cancer clinic in rural Illinois were unable to prescribe medical marijuana for their patients because they did not have the necessary knowledge or resources. The nurse practitioners wanted us to create a “toolbox” with medical marijuana resources so they could confidently prescribe medical marijuana to their patients.

Literature Review

In 1942, marijuana was removed from the Pharmacopoeia in the United States, and in 1970 the United States Drug Enforcement Agency’s Controlled Substances Act of 1970 classified marijuana as a Schedule 1 drug. Making marijuana a controlled substance prevented physicians from prescribing this drug to their patients, and this led to decreased research regarding the topic (Dell & Stein, 2021). In 1996, California was the first state to legalize marijuana for medical purposes. The federal government was against this and threatened to

revoke privileges of physicians who prescribed it. In 2000, it was decided that physicians could recommend medical marijuana use to their patients, but they could not prescribe it (Dell & Stein, 2021). In August 2013, medical marijuana was legalized in the state of Illinois. Illinois was the twentieth state to legalize marijuana use for medicinal purposes. The Medical Cannabis Registry Program was created to allow patients with qualifying conditions to receive access to medical marijuana (Medical Cannabis Patient Program, 2022).

For providers to confidently prescribe medical marijuana, they must understand the pharmacokinetics. The endocannabinoid system within the body includes two G-protein-coupled receptors. The receptors include cannabinoid receptors 1 and 2. Medical marijuana helps with pain, nausea, anorexia, and insomnia by binding to cannabinoid receptor type 1 (CB1) and cannabinoid receptor type 2 (CB2). Medical marijuana has also been used in cancer patients with nausea and vomiting. It is believed that medical marijuana improves these symptoms because of the presence of CB1 and CB2 receptors within the gastrointestinal tract and the brainstem. Additionally, cannabinoids cause an increased release of substance P within the body. The release of this substance can prevent harmful effects of chemotherapy such as nausea and vomiting (Mouhamed et al., 2018).

Medical marijuana is a safe drug that is tolerated quite well, but it does not come without risks. The side effects were minor side effects such as dizziness, dry mouth, increased appetite, and fatigue, and most patients considered the side effects of medical marijuana to be less severe than those of their prescription drugs. Side effects are often avoidable if the provider initiates therapy at a low dose and titrates the drug slowly. By starting at a low dose, providers are more likely to minimize side effects such as fatigue, dizziness, and tachycardia (Dell & Stein, 2021).

Qualifying conditions for medical marijuana use can be found on the Illinois Department of Public Health website. Common conditions include cancer, intractable pain, lupus, and seizure disorders (State of Illinois, 2022). This information is being updated regularly. It is important for nurse practitioners to provide their patients with education about medical marijuana. Medical marijuana should not be used by patients who are pregnant or breastfeeding. It should be avoided in patients with psychosis. Some patients may experience tachycardia or hypotension with marijuana use, so this drug should be avoided in patients with unstable cardiac conditions. Patients with COPD or chronic bronchitis should avoid smoking as the route of administration (Dell & Stein, 2021).

Medical cannabis has been accepted by many members of the public when it is supervised by a licensed provider, but medical marijuana also carries a negative stigma as it is sometimes seen as a gateway drug to other substances. Medical marijuana costs are not covered by private insurance companies, Medicaid, or Medicare. Patients must purchase medical marijuana out of pocket (Medical Cannabis Patient Program, 2022).

Medical marijuana has been legal in the state of Illinois since 2013. Although the evidence for medical marijuana use is limited due to inadequate research and legal concerns, it has many benefits for patients with chronic conditions. Research has shown that marijuana can help with symptoms such as pain, nausea, vomiting, depression, and anxiety. Many providers do not feel knowledgeable enough to prescribe medical marijuana to their patients (Dell & Stein, 2021). Physicians and nurse practitioners must increase their understanding of medical and recreational marijuana so they can confidently prescribe it to their patients. A strong understanding of the pharmacokinetics, benefits, indications, and risks is imperative for all providers who may prescribe this drug in practice.

Project Methods

The purpose of the project was to create a “toolbox” of medical marijuana resources for the nurse practitioners at an oncology clinic in Illinois. We visited the clinic in June to share the toolbox with the nurse practitioners. The toolbox included information including uses for medical marijuana, benefits and risks, ethical considerations, dispensaries near the clinic, and frequently asked questions. The advanced practice nurses completed a pre-quiz prior to the presentation to test their knowledge about the subject. Then, the toolbox was presented to them. They were given the opportunity to ask questions and each provider was given their own toolbox to keep as a reference. Following the presentation, the advanced practice nurses were asked to complete a post-quiz. This quiz was utilized to determine if the presentation increased their knowledge about medical marijuana usage. The goal for this presentation was to increase the knowledge of the nurse practitioners so they could confidently and effectively prescribe medical marijuana for their patients. The project has been determined “Not Human Research.” IRB approval was not necessary.

Evaluation

Prior to the Medical Marijuana Toolbox presentation, the nurse practitioners at the clinic were asked to complete a pre-test to determine their knowledge of medical marijuana use in oncology patients. The test consisted of ten multiple choice questions. Following the presentation, the nurse practitioners were asked to complete a post-test with the same questions. Three nurse practitioners were present for the implementation education, and they completed the tests. Two of the nurse practitioners scored higher on their post-test than their pre-test. One nurse practitioner increased from a 50% to a 90% and another increased from 80% to a 90%. The third nurse practitioner scored 100% on both tests. While preparing for the project implementation, we

recognized that some people prefer verbal learning tools and others prefer physical materials. We tried to utilize various teaching methods within our presentation to ensure the information was understood by all. We believe our efforts were successful based on the improved post-test scores.

Along with the previous questions, the post-test also included three true or false statements for the nurse practitioners to answer. These statements asked the nurse practitioners if the presentation increased their knowledge of medical marijuana use in oncology patients, if they could confidently educate their patients about medical marijuana use, and if they could confidently locate credible information about medical marijuana. Each nurse practitioner answered “true” for these questions. This indicated that the nurse practitioners agreed with these statements, and the presentation increased their understanding of medical marijuana use in oncology patients.

We recognized many limitations while preparing for our implementation and during our implementation. A major limitation for our project was the small group size for our project implementation education. We were only able to present the project to three nurse practitioners at the clinic. We set up an option for other nurse practitioners within the clinic to join via Zoom, but they were unavailable. The nurse practitioners who attended the presentation were willing to distribute additional Medical Marijuana Toolboxes to other nurse practitioners in the office. The other nurse practitioners could have benefited from attending the presentation in person so they could participate in the tests and ask questions. The other limitation our group faced is that information about medical marijuana use is constantly changing, and the list of conditions in which medical marijuana is approved for is constantly being updated. We educated the nurse practitioners in the office about evidence-based resources and where to locate updated practice guidelines.

Impact on Practice

The implementation of the Medical Marijuana Toolbox immediately impacted the clinical site because it increased the knowledge of the nurse practitioners on medical marijuana use in oncology patients as evidenced by their post-test scores. The predicted long-term impact is that these nurse practitioners will share the Medical Marijuana Toolbox with the other nurse practitioners and physicians in the office. Our goal was to share the toolbox with these providers to increase their knowledge so they can confidently prescribe medical marijuana to their cancer patients. We have reached out to our site contact multiple times via email to ensure they do not have any further questions about the toolbox content.

Conclusion

Medical marijuana was legalized by the state of Illinois in 2013. It was determined that medical marijuana has benefits in treating symptoms such as pain, nausea, and vomiting. There is a lack of medical marijuana research available since this substance is a Schedule 1 drug in the United States. There are numerous legal concerns associated with medical marijuana as it is not legalized in every state. Despite these issues, it has been shown that medical marijuana provides many benefits in patients with chronic conditions such as cancer. It is important to educate oncology providers about medical marijuana use because this drug can be beneficial for their patients. This project was beneficial because it increased the knowledge of medical marijuana among providers in the oncology clinic. Based on our findings, we recommend creating a virtual version of the Medical Marijuana Toolbox, so information can be easily updated as changes occur. This toolbox could be utilized in other oncology clinics. If the toolbox is implemented at other clinics, the list of nearby dispensaries should be updated to include dispensaries near the clinic.