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Recommended Citation

Weber, Michael H., "Implementing an Educational Resource on Cannabidiol (CBD) for Patients in Western Connecticut" (2020). *Family Medicine Clerkship Student Projects*. 542.
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IMPLEMENTING AN EDUCATIONAL RESOURCE ON CANNABIDIOL (CBD) FOR PATIENTS IN WESTERN CONNECTICUT

Brookfield Family Medicine

Brookfield, CT


Michael Weber, MS3

Family Medicine Clerkship Project

November 2019-January 2020

2A. PROBLEM IDENTIFICATION

- Six patients inquired about CBD use during my first week at Brookfield Family Medicine in Brookfield, CT
 - Patients reported hearing claims that it was beneficial for many conditions including arthritis, anxiety/depression, and chronic pain
 - Many questioned the legality of CBD in the state of Connecticut
 - A CBD retailer had been operating over a year within a mile of the clinic
 - One provider at the practice told me he had recently had four patients in one day ask about CBD
- According to the CDC, 23% of all adults in the US have some form of arthritis and more than 1 in 4 adults with arthritis report suffering from severe joint pain¹
- Data from Anxiety and Depression Association of America reports that 40 million adults in the US suffer from an anxiety disorder²
- An estimated 1 in 5 adults in the US had chronic pain in 2016 according to a report from the CDC³



2B. DESCRIPTION OF NEED

- CBD has become a popular consumer product over the last decade, especially as American consumers increasingly want more complementary and alternative medicines⁴
- However, CBD is not federally regulated and a 2017 article from JAMA showed only 30% of CBD products were labelled accurately⁵
- Past UVM students have made pamphlets on patient education of CBD in Vermont, but there hasn't been a pamphlet made specifically for consumers in Connecticut where regulations and need may differ¹⁴
- In addition, there is a lack of general public understanding regarding the efficacy, safety, and legality of this increasingly popular product

3A. PUBLIC HEALTH AND COST CONSIDERATIONS



Arthritis contributes to \$140 billion in direct medical costs annually¹



Chronic pain contributes to \$550 billion in direct medical costs each year in the US³



According to the National Institutes of Mental Health, National Survey on Drug Use and Health (NSDUH) in 2016, it is estimated that 300,000 people in CT live with MDD, schizophrenia, or bipolar disorder⁷



The average cost of Anxiety annually in the US is between \$42.3 billion and \$46.6 billion with over 75% attributed to indirect costs²

4. COMMUNITY PERSPECTIVE ON ISSUE AND SUPPORT FOR PROJECT

- “I do have a few patients who ask about it (CBD)... it is increasing... I mean 10 years ago no one was asking about it and now I’m starting to see it on patient’s med lists. Even I bought hemp shampoo/conditioner for my dog. Patients usually have questions for me like ‘is it safe? Do you think it works?’ Honestly, I don’t feel completely comfortable counseling them on it (CBD). I usually recommend looking up an honest website.”

- Jessica Stellato, APRN, Family Practice Nurse Practitioner

- “I have 2 to 3 patients ask about it per week. 5 years ago no one asked about and now patients have a lot of questions about safety and whether it will be helpful for their specific complaint, things like pain... anxiety... I think there’s some data that it isn’t that helpful for anxiety/depression. I try to make them realize that this isn’t highly regulated, and patients need to take that into consideration.”

- Dr. Julia Auerbach, MD, Family Medicine Physician

5. INTERVENTION AND METHODOLOGY

- A pamphlet was created to educate patients on CBD use in Connecticut. This pamphlet included information on:
 - What CBD is and how it is derived from hemp
 - Current legality status of CBD in the state of Connecticut
 - The validity of claims of CBD as backed by peer-reviewed research
 - Considerations when purchasing CBD
 - Answers to frequently asked questions
- Pamphlet was shared with the providers at the Brookfield Family Medicine Clinic and gone over in detail so they could properly educate patients on the use of CBD

Considerations when purchasing CBD

CBD is a product that is not highly regulated by the FDA. Therefore, it's important to ask retailers for a certificate of analysis (COA). This verifies that an independent laboratory has analyzed the product to back claims made by the retailer about the quantity of CBD and THC in their product.

However, it should be noted that there are no regulations for how CBD should be extracted from hemp, handled, or stored and this can greatly affect CBD concentration and quality.

There have also been case reports of urine testing positive for THC in patients who use CBD products.

Frequently Asked Questions

Is CBD Sedating?

- While research has shown pure CBD to be non-sedating in low to moderate doses, there are other compounds present in CBD extractions that may cause sedating effects.

Can I get a prescription?

- The only FDA approved formulation of CBD is Epidiolex, which is approved only for refractory seizures.

Are there any side effects?

- Side effects include nausea, decreased appetite, dizziness, low blood pressure and liver injury.

Is it safe to take with my other medications?

- CBD is metabolized by the hepatic p450 enzyme system. Many medications are also metabolized by this system including warfarin, antidepressants, antipsychotics, and anticonvulsants among others.
- Always discuss with your doctor prior to starting CBD.

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CBD: The Connecticut Patient's Guide

What is CBD?

Cannabinoids are a group of compounds derived from the cannabis plant, *Cannabis sativa*. Largely considered to be non-psychoactive, cannabidiol (CBD) is the most abundant cannabinoid in cannabis. CBD is frequently confused with THC, a separate cannabinoid known for its psychoactive properties.

Cannabinoids interact with the body's endocannabinoid system, a system with receptors in the central nervous system and immune system. Although the endocannabinoid system is not completely understood, the system has been implicated in regulation of immune processes, inflammation, and mood disorders.

Is CBD legal in the state of Connecticut?

Yes. Although Marijuana is illegal under federal law, the Agricultural Improvement Act of 2018 removed hemp from the Controlled Substances Act. As CBD is sourced from hemp containing no more than 0.3% THC, it is legal to produce in the US.

According to the Connecticut Department of Consumer Protection, CBD products are legal to purchase outside of medical marijuana dispensaries if they are manufactured from hemp with THC concentrations less than 0.3%.

Growers of hemp in the state of Connecticut need a license from the Department of Agriculture.



What is CBD Used to Treat?

There is preliminary data that CBD has therapeutic effects for multiple ailments, however these studies are limited by several factors including poor study design and use of unregulated CBD products.

CBD is only proven to be effective in the treatment of refractory seizures associated with Dravet syndrome and Lennox-Gastaut syndrome. Epidiolex is an oral CBD solution approved for use by the FDA. It is the only approved use of CBD by the United States FDA.

However, there are several other conditions that CBD may be helpful in treating. The table below outlines the level of evidence demonstrated by current data for the efficacy of CBD in treating different conditions.

Strong Evidence	Refractory seizures associated with Dravet syndrome and Lennox-Gastaut syndrome
Mixed Evidence	Sleep Disorders MS Induced Spasticity Arthritic Pain Chronic Pain
Limited Evidence	Anxiety Depression PTSD Psychosis Appetite Stimulation Weight Gain
No Evidence	Cancer Neurodegenerative disorders such as ALS



6. RESULTS AND RESPONSES

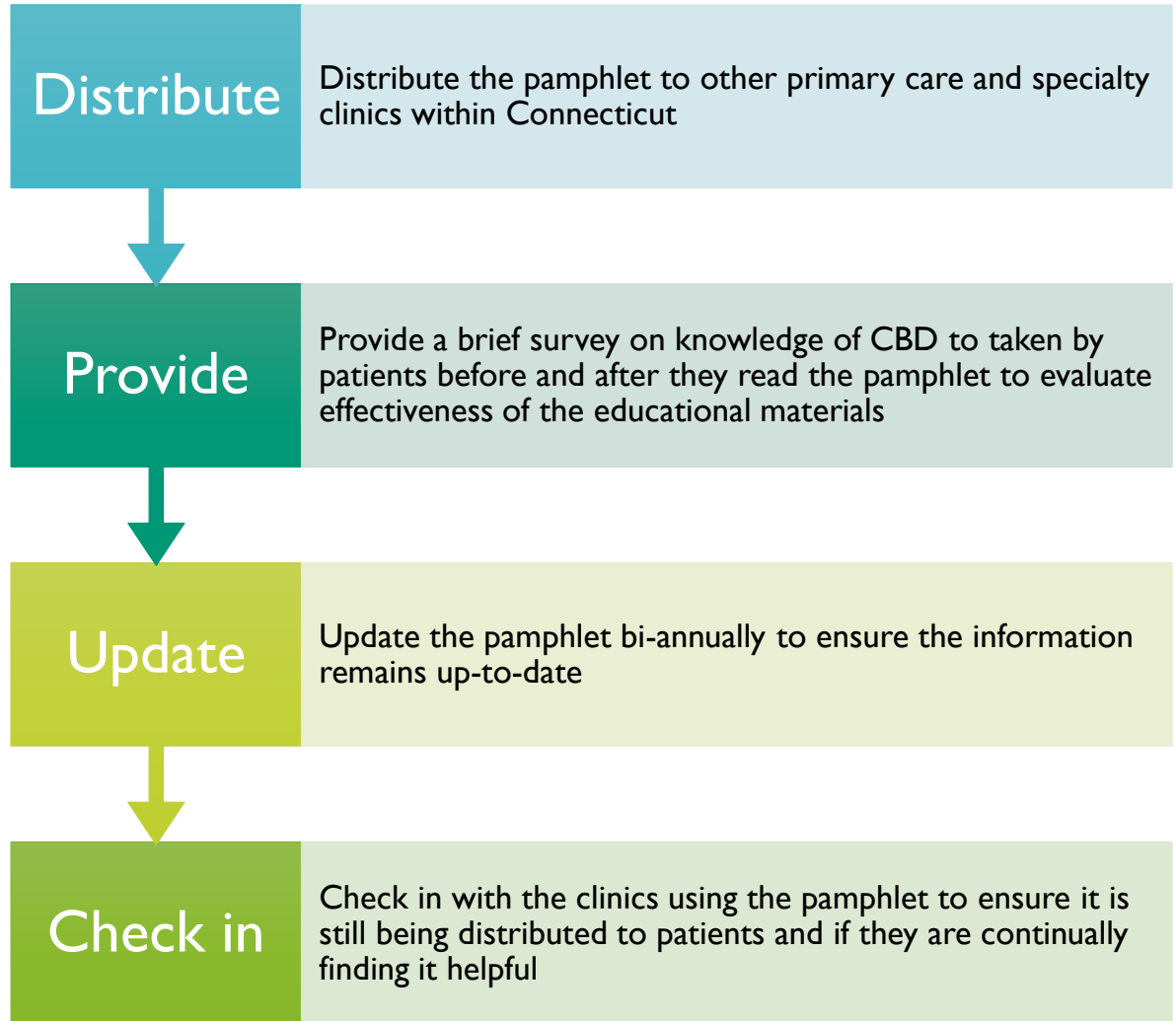
- Pamphlet was made available to the providers at Brookfield Family Medicine. It was also distributed to the head of Family Medicine for the health network
- Responses from providers and patients was positive
- Providers appreciated having more information readily available to them when counseling patients on the pros and cons of CBD use
- Patients appreciated having information that they could take home with them
- No formal data was collected from patients about the efficacy or quality of the pamphlet

- No formal data was collected on the effectiveness of the provided pamphlet due to time limitations
 - Future surveys can guide what information should be in the pamphlet and what information may not be helpful
- There are many limitations regarding the effectiveness of the pamphlet
 - The pamphlet was only provided in English and may be inaccessible to non-English speakers
 - Future data collected can help guide who this pamphlet should be distributed to. Now, it's given to those who ask about CBD but there may be patients who use CBD and are not disclosing this with their providers
 - The pamphlet will need periodic updating as new data is published



7. EVALUATION OF EFFECTIVENESS AND LIMITATIONS

8. RECOMMENDATIONS FOR FUTURE PROJECTS



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