

COMMENTARY

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## Barriers to Achieving Optimal Success with Medical Cannabis: Opportunities for Quality Improvement

Leslie Mendoza Temple, MD,<sup>1-3</sup> Sara L. Lampert, BA,<sup>4</sup> and Bernard Ewigman, MD, MSPH<sup>4</sup>

### Abstract

This commentary describes the clinician experience of certifying patients for medical cannabis (MC) in a north suburban Chicago integrative family medicine practice. The physician and research assistant performed a comprehensive chart review of the first 166 MC patients certified in the practice. Based on this review, barriers and opportunities were elucidated to improve delivery of MC therapy in Illinois within the existing framework of regulation, licensing, certification, and distribution. The following factors have posed challenges for the Illinois Medical Cannabis Pilot Program. These factors are interrelated and include: (1) inadequate scientific knowledge regarding effectiveness, dosage, delivery mechanism, indications, and drug interactions in humans; (2) lack of educational standards for dispensary and medical staff training; (3) lack of communication and coordination of patient care; (4) complexity and inconsistent availability of dosing options; and (5) barriers to access for patients seeking this therapy.

**Keywords:** cannabis, dispensary or dispensaries, marijuana, quality improvement

### Introduction

**T**HE ILLINOIS MEDICAL CANNABIS Pilot Program (IL MCPP) commenced on January 1, 2014. The first dispensary opened for business in November 2015. As of August 2018, an estimated 42,000 adult patients and 305 pediatric patients were registered medical cannabis (MC) cardholders in Illinois. Total retail sales since November 2015 were \$196,056,866.<sup>1</sup> The number of certified patients to date is a fraction of the number of the 100,000 patients estimated in advance of the launch of the program.<sup>2</sup> Physician certification has seen a slow start with only a handful of physicians writing a majority of the certifications.

This commentary aims to describe the clinical experience of one physician (L.M.T.) in a north suburban Chicago integrative family medicine practice certifying and following 166 patients in the early stages of the IL MCPP. The physician (L.M.T.) and research assistant (S.L.L.) performed comprehensive chart review of 166 MC certified patients and identified a number of opportunities to improve clinical care involving MC in Illinois.

The following factors have posed challenges for the IL MCPP. These factors are interrelated and present opportunities for quality improvement within the existing framework of regulation, licensing, certification, and distribution.

- (1) Inadequate scientific knowledge regarding effectiveness, dosage, delivery mechanism, indications, and drug interactions in humans;
- (2) lack of educational standards for dispensary and medical staff training;
- (3) lack of communication and coordination of patient care;
- (4) complexity and consistent availability of dosing options; and
- (5) barriers to access for patients seeking this therapy.

### Problem: Inadequate Scientific Knowledge and Training

Due to the lack of standardized training in Illinois, dispensary workers may guide patients differently regarding strain, route of delivery, dose, and frequency compared with

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<sup>1</sup>Integrative Medicine Program, NorthShore University HealthSystem, Glenview, IL.

<sup>2</sup>Department of Family Medicine, Pritzker School of Medicine, University of Chicago, Chicago, IL.

<sup>3</sup>Illinois Department of Public Health, Springfield, IL.

<sup>4</sup>Department of Family Medicine, NorthShore University HealthSystem, Glenview, IL.

their counterparts. In addition, dispensary workers should fully understand the scope of potential drug interactions between pharmaceuticals and cannabis, although there is much need for more research on these interactions. At least one dispensary in Lake County, Chicago and Rockford has a registered pharmacist on staff, but this is not a consistent offering in other dispensaries. Haug et al. surveyed 55 dispensary workers in a national online questionnaire regarding formal training, patient care characteristics, cannabis recommendation practices, and dispensary features.<sup>3</sup> Thirteen percent of surveyed dispensary workers suggested tetrahydrocannabinol (THC) for anxiety, when the literature suggests that cannabis higher in THC may exacerbate anxiety.<sup>4-6</sup> Of note, 80% of the surveyed workers had no formal medical or scientific training, yet 94% provided specific MC or other health advice to their clients.

Most physicians have little to no knowledge about cannabis beyond the basics learned in medical school and residency.<sup>7</sup> Hence, another opportunity exists to improve physician and medical staff education on cannabis. Currently, a small but growing number of self-taught physicians have written the majority of MC certifications in Illinois. Per the 2017 MCPP Progress Report to the Illinois General Assembly, ~2100 physicians submitted written MC certifications between July 1, 2016 and June 30, 2017. The majority certified <25 qualifying patients each. Sixteen physicians certified >100 patients each.<sup>2</sup> The limited supply of “cannabis-literate” physicians serves as a bottleneck for qualified patients who cannot find a physician willing to certify them.

#### **Solution: Develop Educational Standards and Improve Dispensary Staffing**

Evidence-based education standards should be developed and required curriculum for MC dispensary staff and all levels of health care training, particularly medicine, nursing, pharmacy, and mental health. Various institutions have created CME-accredited online resources that may partially fulfill dispensary training requirements, like the District of Columbia Center for Rational Prescribing.<sup>8</sup> The National Academy of Science also created a comprehensive evidence-based summary of MC for various conditions.<sup>9</sup>

With respect to dispensary staff health care training, dispensaries in Pennsylvania must have a physician or pharmacist always on site during business hours. Illinois and other states have no such requirement and may benefit from increased medical expertise on-site in their facilities.<sup>10</sup>

#### **Problem: Poor Communication**

Inadequate and inconsistent communication between certifying physicians and dispensary staff leads to conflicting advice on MC strength of dose, frequency of use, route of administration, cannabinoid and terpene profile, and strain selection.

The largely self-directed nature of MC regimens requires patients to independently keep track of what doses, routes, strains, and frequencies work best for their symptoms while minimizing side effects. The plethora of MC choices available in dispensaries can confuse patients, particularly those who have never tried cannabis. Edibles, infused patches, creams, suppositories, tinctures, and oil doses vary widely. Patients may feel uncomfortable trying the first doses without supervision. Personal MC coaches can instruct patients on

how to take the medicine properly, and this service line is developing in Illinois, although it is unlicensed.

#### **Solution: Professionalize Communication Channels**

Electronic, written, and verbal collaboration between medical staff and dispensaries can help patients determine MC regimens, particularly for those on medications with psychoactive effects, narrow therapeutic windows, or high potential for interactions such as opioids, benzodiazepines, antipsychotics, antidepressants, antiepileptics, and anticoagulants. In addition, more data-driven guidelines are necessary to better describe potential cannabis–pharmaceutical interactions.

#### **Problem: Complexity and Inconsistency of MC Options**

Another area for improvement involves product consistency in dispensaries. Varying dispensary menus create confusion and frustration for patients and physicians. The *Cannabis* plant contains hundreds of compounds, including cannabinoids, terpenes, and sesquiterpenes. Given the high complexity of this plant and its many varieties, the industry should strive to simplify their offerings and maintain consistent stock of the most popular strains and forms. Patients who are novice to cannabis often struggle for weeks to months to find the right strain and route to control their symptoms. When they eventually find an acceptable regimen, they can be frustrated by lack of availability at the dispensary when they need to refill their supply. With no knowledge of the dispensary’s current inventory nor a fund of knowledge regarding cannabis selection, the physician is unable to give reliable advice, and healing opportunities may be lost.

#### **Solution: Simplify and Stabilize MC Supply Chain**

MC cultivators and dispensaries should establish and consistently supply the most effective cannabis preparations to ease confusion and frustration over overabundant choices and inconsistent MC supply.

#### **Problem: Barriers to Access**

Other factors that may slow physician or patient uptake for certifications include cultural bias, personal and religious beliefs, stigma, lack of high-quality evidence on safety and efficacy, limited time during office visits, and paperwork burden.<sup>11</sup> In Delaware, 34% of primary care physicians and 39% of specialists reported being “very unlikely” to certify eligible patients for MC.<sup>12</sup> Satterlund et al. found that patients were reluctant or did not start conversations about MC with their physicians due to anticipated negative responses.<sup>13</sup>

Some hospital systems and physician groups are barring their employed physicians from certifying patients. At the start of the MCPP, two major health care organizations in southern Illinois prohibited employed physicians from certifying patients for MC, citing federal law of cannabis as a Schedule 1 controlled substance with “no accepted medical use.”<sup>14</sup>

#### **Solution: Remove MC As a Schedule 1 Drug**

Rescheduling cannabis from its current restrictive federal status would allow increased human research on efficacy, safety, pharmacology, pain management, and immune function

impact. In the face of the current opioid crisis and preliminary evidence for MC as a viable alternative to opioids, this move is critical for more robust scientific study of MC in humans.<sup>15,16</sup>

The challenges of inadequate scientific knowledge, education, communication, complexity of options, and access barriers are intertwined. As the evidence base grows, this complex botanical substance should be shifted away from the hype of politics and pop culture labels ranging from “cure-all” to “evil weed.” MC should continue to be studied rigorously, like any medical therapy.

### Acknowledgments

The authors are grateful for the mentorship and article review by Christopher Masi, MD, PhD, FACP, former director of the Quality and Patient Safety Fellowship at NorthShore University HealthSystem and clinical professor of Medicine, University of Chicago Pritzker School of Medicine; Margaret A. Chesney, PhD, at the University of California San Francisco; and Mikhail Kogan, MD, ABOIM from George Washington University.

### Author Disclosure Statement

No competing financial interests exist.

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Address correspondence to:  
 Leslie Mendoza Temple, MD  
 2400 Chestnut Avenue  
 Glenview, IL 60026

E-mail: [lmendoza@northshore.org](mailto:lmendoza@northshore.org)