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RESEARCH NOTES

Personnel training and patient education in medical marijuana dispensaries in Oregon

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ABSTRACT

Objectives: To determine the knowledge and training of Oregon Medical Marijuana Dispensary (OMMD) personnel and describe the information and type of advice provided to patients who use Oregon dispensaries.

Methods: Statewide cross-sectional email survey of OMMD personnel.

Results: Of the 141 surveys, 47 were initiated. The most frequently referenced types of training were on-the-job training and the Internet. Dispensary personnel most commonly used patients' preferences and symptoms as well as personal experiences to determine appropriate strains for patients. The majority of respondents advised patients about precautions and expected effects. Respondents were least likely to advise on drug interactions, or recommend a patient talk to a pharmacist or prescriber.

Conclusion: Dispensary personnel in Oregon use a variety of resources to learn about medical marijuana. Although formal health or medical training was not indicated, personnel advise on marijuana's effects, use, and product selection. Further study is needed to assess the current training and advising on patients' ability to use medical marijuana safely and effectively.

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Cannabis has a long history of medicinal use in the United States and was included in the *United States Pharmacopeia* from 1850 to 1941. However, as part of the Comprehensive Drug Abuse Prevention and Control Act of 1970, the Controlled Substance Act placed marijuana in the Schedule I category.¹ During the 1980s the FDA approved synthetic delta-9-tetrahydrocannabinol (THC), dronabinol, and an isomer, nabilone, as single-agent prescription drugs. Advocacy for the medicinal properties of cannabis has resulted in more than 20 states, including Oregon, enacting legislation allowing the distribution and use of marijuana for qualifying medical purposes.

There is a strong interest in defining the mechanism of action of several major phytocannabinoids, such as THC and

cannabidiol (CBD), in marijuana preparations. Marijuana is used to relieve symptoms associated with a variety of medical conditions, but clinical data to support efficacy and safety are limited. In addition, the potential for adverse effects and drug interactions is well documented.^{2–4}

State laws governing the establishment of medical marijuana dispensaries vary, with most having minimal or no requirements for personnel training and patient counseling. A few states require oversight by either physicians or pharmacists. Arizona requires a physician to be a dispensary medical director, responsible for developing information and training for dispensary agents and customers.⁵ Connecticut requires that a licensed pharmacist be designated as a dispensary facility manager,⁶ and Minnesota requires a licensed pharmacist to consult with patients and determine appropriate dosages.⁷ The expanding use of marijuana as a therapeutic agent prompted the 2015 American Pharmacists Association House of Delegates (APhA HOD) to adopt policies supporting clinical roles for providers, standardization of processes and products for medical marijuana, and facilitation of clinical research into the efficacy and safety of cannabis.⁸

As of January 2015, the Oregon Medical Marijuana Dispensary (OMMD) program had registered more than 200

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businesses.⁹ Dispensary regulations in Oregon focus on registration, business operations, security, product testing, and record keeping, without requirements for dispensary personnel education or training. In contrast, federal and state regulations have strict educational and licensing requirements for individuals who dispense prescription medications. Given the growth of the dispensary program in Oregon, we examined the background of personnel and counseling practices in medical marijuana dispensaries. Our use of the term marijuana is consistent with the terminology used by the Oregon legislature and the Oregon Health Authority.

Objectives

To determine the knowledge and training of OMMD personnel and to describe the information and type of advice provided to patients who utilize Oregon dispensaries.

Methods

A list of registered medical marijuana dispensaries in Oregon was obtained from the Oregon Medical Marijuana Program (OMMP) website.⁹ At the time of the study, more than 200 dispensaries were listed, but only 171 had full contact information. All dispensaries with telephone numbers were contacted to request an e-mail address to receive the survey; 141 e-mail addresses were obtained.

The survey was designed to elicit information in two categories: (1) dispensary and personnel characteristics; and (2) interactions with patients. The survey consisted of 19 questions, and was estimated to take 15 to 20 minutes to complete. (The survey instrument is presented in [Appendix 1](#), available at [JAPhA.org](#) as supplemental content.) Qualtrics was used to create and distribute the survey.

Although most respondents who started the survey completed it, some completed only a portion of the survey. Responses were tabulated even if a respondent did not complete the full survey. Percentages of responses were calculated per question. A chi-square fit test was used to determine if respondents represented the distribution of the registered dispensaries in Oregon.

The study was reviewed by the Oregon State University Institutional Review Board and considered to be exempt. A link to the survey, along with survey instructions, was e-mailed from January 21 to March 17, 2015. Two reminders were sent a week apart before the survey closed. All survey e-mails included an opt-out link.

Results

Forty-seven surveys were initiated. Participants were not required to provide answers to every question, so the total number of responses for each question varied. All completed responses for each question were entered into the study, for a response rate of about 30%.

Dispensary and personnel characteristics

The majority of respondents (64%) were 31 to 50 years old ([Table 1](#)). The distribution of respondents, in terms of the population size of dispensary locations, correlated with the

Table 1

Characteristics of medical marijuana dispensaries in Oregon

Characteristic	n (%)
Age of respondents	
18–30 y	8 (17)
31–50 y	30 (64)
51–60 y	8 (17)
>65 y	1 (2)
Total	47 (100)
Background/training ^a	
On-the-job training	43 (98)
Conferences	15 (34)
Certificate program	4 (9)
Other	25 (57)
Educational background ^a	
High school diploma	26 (60)
College or university	25 (58)
Community college	10 (23)
Specific training or workshops	10 (23)
Other	13 (30)
Information sources ^a	
Internet	39 (91)
Medical literature	35 (81)
Patients	34 (79)
Colleagues	28 (65)
Subscriptions	20 (47)
Workshops	19 (44)
Listservs	5 (12)
Other	17 (40)

^a Respondents could choose more than one item.

data available from OMMP.¹⁰ A chi-square fit test showed that the sample distribution was not significantly different from the OMMP-registered dispensary distribution ($P = 0.63$).

Ninety-eight percent of respondents chose “on-the-job training” for the type of training in medical marijuana. Other types of training included personal experience with using and growing marijuana, undergraduate studies in sociology of cannabis culture, and reading and watching materials about marijuana.

[Table 1](#) presents education levels of respondents. Those that did not mark high school did mark either community college or college/university, indicating that all respondents had a high school degree or equivalent. Of those who marked college/university as their education level, 10 (40%) indicated a business-related field of study. Other areas included sociology, public policy, political science, culinary, and gardening. Two indicated study in biology or health sciences.

More than 90% of respondents selected the Internet as a source of information about medical marijuana. Other sources included medical literature (81%) and patients (79%). The top 3 text entries for medical marijuana information included [Leafly.com](#) ($n = 15$), followed by Skunk Pharm Research ($n = 4$) and Cannabis Pharmacy ($n = 3$). Other sources included books, personal experience, marijuana growers, vendors, local doctors and herbalists, cannabis associations, and conferences. There were no evidence-based medical literature references listed.

Patient interactions

Sixty-two percent of respondents ($n = 26$) spent 15 to 30 minutes with new patients. The remaining spent 1 to 15 minutes (19%; $n = 8$) or 30 to 60 minutes (19%; $n = 8$) with new patients. Most spent less time (1 to 15 minutes) with returning patients (69%; $n = 29$). Approximately one-third of

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