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The clinical implications of legalizing marijuana: Are physician and non-physician providers prepared?

Elizabeth Brooks [a,b,*], Doris C Gundersen [b], Erin Flynn [c], Ashley Brooks-Russell [a], Sheana Bull [a]

[a] University of Colorado Denver, Anschutz Medical Campus, Colorado School of Public Health Department of Community and Behavioral Health, 13001 East 17th Place, Bldg 500, Mail Stop B119, Aurora, CO 80045, United States
[b] Colorado Physician Health Program, 899 Logan St # 410, Denver, CO 80203, United States
[c] Colorado Department of Public Health & Environment, 4300 Cherry Creek Drive South, Denver, CO 80246, United States

HIGHLIGHTS

- Providers are informed about marijuana laws but cautious supporting legalization.
- Providers see risk when marijuana is used by youth or while pregnant/breastfeeding.
- Providers assess marijuana use although conversations about risks are inconsistent.
- Few providers know marijuana risks and are not confident talking to patients.

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ABSTRACT

Introduction: Passage of voter-driven marijuana reform laws signals a shift in public attitudes for marijuana use. For providers, legalization may necessitate practice modifications, particularly regarding patient-provider conversations about use and risk. We examined healthcare providers' knowledge of marijuana laws and health implications, professional practice behaviors, and attitudes about training.

Materials and methods: We surveyed 114 Colorado-based providers who care for children, adolescents, pregnant and breastfeeding women using a Venue-Day-Time survey methodology throughout Colorado. The survey captured providers' (e.g., physicians, nurses, medical assistants) knowledge of state marijuana laws, risk perceptions, counseling practices, and continued training needs.

Results: Providers were knowledgeable about marijuana laws, cautious supporting legalization, and perceived moderate to high risks, particularly for certain groups. About 50% of providers working with adolescents and pregnant or breastfeeding women assessed marijuana use "every" or "most" visits; 23% of those working with children reported such behavior. Conversations about specific risks varied between groups. Few providers felt completely knowledgeable about marijuana health risks and lacked confidence talking to patients about this issue.

Conclusions: Providers frequently assess patients' marijuana use; however, they are uncomfortable and inconsistent talking to patients about specific marijuana health effects.

Additional education is warranted, particularly as it relates to talking to patients about the danger of second hand smoke exposure, underage use, safe storage, and the over-consumption of edibles.

1. Introduction

As of November 2016, 28 U.S. states and the District of Columbia (DC) have approved some form of legalized medical marijuana legislation. Among these, nine permit the use of marijuana for recreational purposes. The passage of these laws reflects a shift in public attitude towards marijuana de-regulation and tolerance for its use (Dyer, 2013; Pew Research Center, 2014), a trend visible over the course of a decade.

* Corresponding author at: University of Colorado Denver, Anschutz Medical Campus, Colorado School of Public Health Department of Community and Behavioral Health, 13001 East 17th Place, Bldg 500, Mail Stop B119, Aurora, CO 80045, United States.
E-mail addresses: elizabeth.brooks@ucdenver.edu (E. Brooks), dgundersen@cphp.org (D.C. Gundersen), erin.flynn@state.co.us (E. Flynn), ashley.brooks-russell@ucdenver.edu (A. Brooks-Russell), sheana.bull@ucdenver.edu (S. Bull).

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Ten years ago, the Gallup Poll found that only 36% of the U.S. population supported legalizing marijuana. Today, an estimated 58% back this effort. During the same period, the proportion of individuals who report ever using marijuana rose substantially from 34% in 1999 to 44% in 2015 (Gallup Poll, 2015). As public attitudes and the legalization status of marijuana shift, the implications for medical practice are unclear. For providers, legalization translates to a number of potential practice changes, such as the need to understand new laws, health risks, and safety factors; modify clinical procedures (e.g., patient-provider communication; increase marijuana screenings); and undergo additional training.

Throughout this manuscript, "provider" refers to *any* clinical worker, such as nurses, physicians, midwives, and medical assistants. We use this term deliberately, and examined our data accordingly, because medical professionals with varying backgrounds talk to patients about marijuana and assess its use. In this respect, it is important to consider the experiences of all providers when examining the clinical preparedness for marijuana.

1.1. Regulatory issues

Currently, marijuana is illegal under federal law and remains classified as a Schedule I drug (Drug Enforcement Agency, 2017). Schedule I categorization is used when a substance is believed to have a high potential for abuse and possibly severe psychological or physical dependence. The strict classification not only limits access to a substance, but makes it difficult to conduct research with the drug. Each state that has passed some form of marijuana reform follows its own set of legal codes and penalties. Colorado, for example, allows residents to grow up to six plants for individual use whereas Washington State - while also permitting recreational consumption - prohibits personal cultivation. Moreover, state regulations continue to evolve. Recently, Colorado altered the allowable tetrahydrocannabinol (THC) concentration for edibles and required that manufacturers wrap products individually or demark them in increments of 10 or fewer milligrams of THC (Domino, Hornbein, Polissar, et al., 2005). Such changes are important from the provider standpoint because it may affect the type of information discussed, the content of screenings, and clinical recommendations for use.

1.2. Providers' perception of risks

In the health arena, the changing atmosphere of marijuana legalization has given rise to a number of new (or increasingly recognized) risks (Bell et al., 2015; Retail Marijuana Public Health Advisory Committee, 2014; Slim, Flaten, Lindberg, Arek, & Monte, 2015). This includes short and long-term health problems due to consumption or to exposure (e.g., secondhand smoke). It may give rise to several potential safety risks (e.g., driving while impaired, hash oil extraction explosions, children's unintentional ingestion). Although we know that public attitudes about marijuana are changing, we know little about providers' beliefs, particularly as they relate to these risks. Some evidence suggests that providers' are mixed in their perceptions of marijuana health risks. In a series of focus groups with prenatal care providers, participants were confused about marijuana's health risks and their assessment procedures varied considerably. The authors noted that, "[Marijuana] … seemed to fall through the cracks of standard assessment or counseling procedures because of questions about whether it should be categorized with other drugs and how risky it might be." (Herzig et al., 2006)

1.3. Professional practice

In many ways, clinical procedures surrounding marijuana is a variant of typical practice. Due to its Schedule I classification, prescriptions cannot be written for patients. Instead, eligible providers may only offer a *recommendation*, which is akin to a doctor's statement that, in his or her professional opinion, you might benefit from using marijuana. Because marijuana can be distributed in plant-form, the levels of THC can vary, making the dosage difficult to control consistently. Unlike prescriptions, eligible providers do not recommend a specific quantity or frequency of ingestion, nor do they direct a patient about how to use the drug (Gundersen, 2015; Kleber & DuPont, 2012; Vertes & Barbantini, 2012). Furthermore, the list of conditions that marijuana effectively treats is unclear and qualified conditions vary by state, making practice guidelines difficult to construct.

Beyond variations in laws and prescribing practices, legalizing marijuana has important implications for how frequently providers assess marijuana use and the information that they offer to patients. The need may be especially true now, when people are more willing to try marijuana and use it (either recreationally or medically) while concurrently receiving treatment for a variety of health conditions (Gallup Poll, 2015). However, communicating marijuana risk information to patients can be challenging because the evidence-base is often mixed and is certainly limited. There are moderate and strong data to support health risks associated with child exposure to edibles and second hand smoke, use for adolescents, and use by pregnant or breastfeeding women (Committee, 2014; Volkow, Swanson, Evins, et al., 2016). Whether these conversations are occurring between providers and patients, however, is undocumented. Many physicians say they are concerned about the lack of robust health data in this area (Owens, 2014), making it possible that risk information is not consistently translated to patients.

1.4. Training needs

Lastly, marijuana legal reforms are likely to alter the training needs of providers in order to improve their knowledge about marijuana risks and learn how to communicate this information to patients. Training may occur during one's academic curriculum (e.g., medical school, counseling programs, nursing education) or post-degree (e.g., residency, continuing education, professional conferences). In a cross-sectional survey of physicians in Delaware, the majority of respondents felt ill-prepared to recommend marijuana as a treatment option and uncertain about the parameters of their state's marijuana legislation (Michalec, Rapp, & Whittle, 2015). Both Colorado- and Canadian-based family physicians said they needed formal training opportunities about marijuana in general and specific direction about writing marijuana recommendations (Hathaway, 2008; Kondrad & Reid, 2013).

1.5. Aim

Given these considerations, it is surprising that 20 years after the first U.S. state legalized medical marijuana, there remains a dearth of information about providers' knowledge, practice, and training needs in this area. In fact, in our recent review of the literature, it appears that this study is one of the first to systematically gather this type of information from providers. In the present study, we surveyed Colorado-based providers to determine: 1) their knowledge of current state laws and marijuana health and safety risks; 2) clinical practices surrounding marijuana assessment and patient communication; 3) needs and preferences for additional training opportunities; and 4) the impact of educational resources and outreach to change provider behavior. We focused on providers serving children, adolescents, pregnant and breastfeeding women because the patient populations have unique risk considerations that require specific clinical knowledge (Committee, 2014). Moreover, the State of Colorado has identified health professionals working with these patient groups as those particularly in need of marijuana educational information.