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"Anything above marijuana takes priority": Obstetric Providers' Attitudes and Counseling Strategies Regarding Perinatal Marijuana Use

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Abstract

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I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

Conflict of Interest

None of the authors have any conflict of interest to report.

Objective—To describe obstetric provider attitudes, beliefs, approaches, concerns, and needs about addressing perinatal marijuana use with their pregnant patients.

Methods—We conducted individual semi-structured interviews with obstetric providers and asked them to describe their thoughts and experiences about addressing perinatal marijuana use. Interviews were transcribed verbatim, coded and reviewed to identify themes.

Results—Fifty-one providers participated in semi-structured interviews. Providers admitted they were not familiar with identified risks of marijuana use during pregnancy, they perceived marijuana was not as dangerous as other illicit drugs, and they believed patients did not view marijuana as a drug. Most provider counseling strategies focused on marijuana's status as an illegal drug and the risk of child protective services being contacted if patients tested positive at time of delivery.

Conclusions—When counseling about perinatal marijuana use, obstetric providers focus more on legal issues than on health risks. They describe needing more information regarding medical consequences of marijuana use during pregnancy.

Practice Implications—Provider training should include information about potential consequences of perinatal marijuana use and address ways to improve obstetric providers' counseling. Future studies should assess changes in providers' attitudes as more states consider the legalization of marijuana.

1. INTRODUCTION

Marijuana is the most commonly used illicit drug during pregnancy in the United States.[1–3] In the 2009 National Survey on Drug Use and Health report, 4.6% of surveyed women reported using marijuana during pregnancy.[4, 5] Population-based studies using biochemical testing noted rates as high as 12%.[6] In the past few years, there has been recent liberalization in public support of legalizing marijuana use.[7] As of April 2016, adults may legally use marijuana for recreational purposes in four states (Colorado, Washington, Alaska and Oregon) and in the District of Columbia. On April 27, 2016, Pennsylvania became the 24th state to legalize medical marijuana.

Research suggests an association between perinatal marijuana use and pregnancy complications such as shorter gestation, dysfunctional labor, meconium staining, preterm birth, low birth weights, and stillbirth.[8–13] Other research found associations between perinatal marijuana use and child neurobehavioral consequences such as cognitive, learning, and behavioral problems.[14–17] In young children, these manifest as hyperactivity, problems with attention, memory, or abstract thinking, or difficulties with reading and spelling.[14–17] Brain imaging studies of adolescents and young adults exposed to perinatal marijuana show negative impacts on the neural circuitry associated with executive functioning, including response inhibition and visual-spatial working memory.[18, 19]

Despite the potential adverse consequences, there has been little research conducted on physician and other healthcare providers' attitudes and beliefs regarding marijuana use. With the legalization of recreational marijuana in several states and broadening public acceptance regarding marijuana use, it is imperative to understand physician attitudes, beliefs and

counseling practices about marijuana use during pregnancy. Given the number of states that have legalized medical marijuana, there has been some research focused on physician's attitudes toward, the acceptability of and prescribing practices for medical marijuana. A 2013 study assessed the attitudes of family physicians in Colorado and found that 46% thought marijuana should not be recommended as a medical therapy. Further, most of the responding physicians thought that there were significant physical and mental risks associated with marijuana use (61 and 64% respectively[20, 21].

To date, there have not been any studies focused on obstetric care providers' attitudes, beliefs, and self-described counseling approaches regarding marijuana use during pregnancy. We conducted semi-structured interviews with providers to identify their attitudes, beliefs and counseling practices around perinatal marijuana use.

2. METHODS

Study overview

The data presented in this paper are part of a larger study that was conducted on patient-provider communication regarding substance use during pregnancy.[22–25] The study was approved by the University of Pittsburgh Institutional Review Board (IRB # PR008090530); data included in these analyses were collected from September 2011 through May 2015. Participants completed informed consent and were told that the study was protected by a National Institutes of Health (NIH) Certificate of Confidentiality. For this analysis, we used audio-recordings and transcripts of semi-structured interviews with obstetric care providers practicing in urban clinical sites in Pittsburgh, Pennsylvania.

Participants

Obstetric providers were eligible for follow-up interviews if they participated in the first phase of our parent study. These providers were asked to participate in a second phase of the study that involved semi-structured interviews focusing on their attitudes, beliefs, strategies, needs, and concerns regarding asking and talking about perinatal substance use. Interested providers then underwent a second, separate written informed consent process.

Data Collection

Providers were invited to participate in a semi-structured interview and were compensated for their time. All interviews were conducted by trained research staff in a private office setting. Interviews lasted approximately 22 to 86 minutes (mean length =39 minutes). Topics explored during the interviews included attitudes and beliefs toward patient use and disclosure of substances during pregnancy (i.e., tobacco, alcohol and illicit drugs), screening and counseling practices for substance use, provider concerns addressing substance use with patients, and barriers and facilitators to discussing substance use. In all interviews, providers were asked to reflect on specific substances including tobacco, alcohol, and recreational drugs. We asked all providers to speak about specific drugs such as opioids and marijuana. For this analysis, we focused only on the portions of the interview that addressed marijuana.

Data Analysis

Two coders (MN and CH) independently reviewed and coded the first 26 transcripts. Coders met to review, compare and refine codes. The investigative team developed a codebook with definitions and coding scheme. For all 51 transcripts, two coders (PM and CH) then independently recoded the transcripts using the final codebook, meeting once more to reconcile any differences. No discrepancies in interpretation were noted. Focusing on all codes related to marijuana, a group of the authors (MN, CH, JT, PM, and JC) met several times to review the coding results and note thematic patterns in the codes. We then organized the codes into categories and themes. These themes were reviewed with all authors who expressed agreement in the interpretation. Atlas.ti © was used to organize and manage the qualitative data.

3. RESULTS

Provider Demographics

A total of 66 providers were eligible to participate in this phase of the study. We were unable to obtain interviews with fifteen providers due to challenges coordinating with their schedules; none of these fifteen directly refused participation in the interviews. Fifty-one participated in the semi-structured interviews. A majority of the providers were female (92%), white (83%) and obstetrics and gynecology residents (72%). Their characteristics are shown in Table 1. The characteristics of the subset of providers who participated in the interview portion of the study did not differ significantly from those who participated in the larger parent study.

Themes Identified from Provider Semi-Structured Interviews

Five key themes were identified from the provider interviews: (1) providers thought marijuana was not as dangerous as other illicit drug use in pregnancy; (2) providers stated they were not familiar with or were unaware of definitive evidence regarding potential risks related to perinatal marijuana use; (3) providers thought patients did not view marijuana as a drug; (4) providers described asking about marijuana separately and directly with patients, and (5) providers referenced marijuana's illegal status in Pennsylvania and the risk of child protective services' involvement as their primary method of motivating patients to stop their use. In the following section, we describe each of the key themes in more detail and provide illustrative quotes from the interviews.

Marijuana is not as dangerous as other illicit drugs—During the interviews providers were asked about screening and counseling approaches utilized with patients during first obstetric visits. Providers expressed a variety of medical concerns when patients disclosed to using opiates, cocaine and other drugs such as methadone and benzodiazepines. They identified medical risks and consequences for fetuses as a result of these other drugs such as abruption, prematurity, low gestational weight, and intrauterine growth restriction. Alternatively, providers did not feel there was clear evidence that marijuana is associated with medical issues for the fetus. Providers generally categorizing marijuana use as much less concerning or as dangerous as other drugs, including alcohol and tobacco use. One provider explained this belief, "[Marijuana] is not like cocaine where you could obtain an

abruption, bleeding or…death. Marijuana I think is more difficult to have a direct… correlation [to pregnancy risks].” Another provider expressed similar sentiments in the following:

> [For] marijuana, I try to encourage people to stop, but not really all that strongly. … We always talk about methadone and problems with [opiate] use in pregnancy and… cocaine obviously is another really important one that I would spend a lot of time on….I mean, outcomes [for marijuana use during pregnancy] are not as important. There are no syndromes caused by marijuana that we know of. It doesn’t affect the pregnancy, health outcomes the same way [as other drugs].

Providers stated that because their time is limited with patients and they have many other counseling topics to cover during the first obstetric visit, they often forgo talking about a patient’s marijuana use and reserve the time to address other issues thought to be more important. One provider described how marijuana assumes a lower priority than other substances:

> If a patient said, “Oh I’m using alcohol, cocaine and marijuana and I smoke,” I probably would spend time talking about alcohol and cocaine. … It’s kind of picking your battles a little bit because you have such a quick visit. And it’s frustrating sometimes when [you’re] glossing over [marijuana use]….We don’t talk about it probably to the extent that we should.

Another provider explained that many other topics aside from perinatal substance use may detract from addressing perinatal marijuana use, “There’s limited time to discuss everything that needs to be discussed, and God forbid that they come in with other health issues. That really would take priority over marijuana use….” Or, as another provider summarized, “Anything above marijuana takes priority.”

Unfamiliar with potentials risks of marijuana use in pregnancy—Providers in general thought that there was no specific evidence they could share with their patients about the adverse consequences of perinatal marijuana use. As one provider stated, “I don’t think we really know what marijuana does in pregnancy. So I think that’s a harder one to counsel people about.” Another provider echoed the need for more information on the risk of perinatal marijuana use, “If we really knew what marijuana does, I think that would be helpful to have more information because I don’t feel that I have all that much information.” Providers also perceived that existing studies were flawed or limited and that a lack of scientific evidence affected whether and how they counseled their patients. One provider explained, “I don’t tend to counsel a lot about pregnancy outcomes with marijuana because the data isn’t very good. I don’t talk about it.”

Providers believe patients do not view marijuana as a drug—Providers also discussed thinking that patients did not recognize marijuana as a drug and generally did not identify marijuana as harmful to their pregnancy. One provider stated, “Some people don’t really consider marijuana a drug per se. [They think,] ‘That’s not really gonna hurt my baby.’ So they just kind of let that go.” Another provider concurred, “I feel like a lot of times they don’t see it as an issue…There is a mindset in which many people [think] ‘It’s not a

drug, it's like smoking a cigarette. What's the difference?'" In this regard, providers acknowledged that some patients may not disclose marijuana use when asked about drug use. As one provider explained, "We rely a lot on patients to self-identify when they have serious substance abuse problems. But I think that for the marijuana, I usually get met with a lot of denial."

Providers described asking about marijuana use directly—In recognizing that many of their patients do not view marijuana as a drug; providers described asking about marijuana specifically or listing different types of drugs by name. One provider advised, "I found over the years and especially here in [this] clinic that if you say 'Drugs?' they all say, 'No.' So I say, 'Drugs including weed or including marijuana?' and I get better answers." Another provider described a similar strategy, "I specifically ask…'So ok, no history of IV drugs or marijuana?' because I feel like a lot of our patients don't consider marijuana to be a drug….So I try to specifically say 'marijuana.'"

Providers use the illegal status of marijuana as a primary counseling technique—Marijuana is still considered illegal for both medical and recreational use in the state of Pennsylvania. Many of the providers used marijuana's illegal status as their primary counseling approach. One provider described using "a little bit of scare tactics with CYF [child youth and families, i.e. child protective services] type stuff" as a motivator to get their patients to stop using perinatal marijuana. Another provider mentioned that the lack of information on medical risk factors for perinatal marijuana use caused a reliance on counseling about the legal risks: "…When you've got a patient who's clearly continuing to use marijuana,… I can't quote them anything bad that's going to happen. So, my biggest point [to get her to stop using] is about the Child Youth Services [child protective services] because I don't know really what to tell them…."

Providers described hospital and institutional policies in which patients who disclosed to using marijuana would be tested at time of delivery and positive results would require hospital staff to contact child protective services. Providers discussed feeling obligated to ensure patients knew the policies and the legal implications of continuing to use marijuana through their pregnancy. One provider demonstrated their usual counseling as follows:

> [Using marijuana during pregnancy] is particularly bad for you socially because now that we know [about your use], you definitely have to get a urine drug test when you deliver your baby. If you test positive, then social services has to get involved and talk to you about the safety of your baby at home. So it is really important that you know that this is going to happen….You can choose to stop smoking marijuana so you don't test positive when you deliver. Then, you don't have to have them [child protective services] talking about taking your baby."

4. DISCUSSION AND CONCLUSION

4.1. Discussion

Obstetric providers in our study stated in general that they, like their patients, believed marijuana to be less harmful or dangerous than other substances used during pregnancy.

They also perceived that patients did not view marijuana to be a drug. Providers described having limited knowledge and information regarding risks of perinatal marijuana use and thus having little leverage to use in their counseling conversations. As a result, providers described relying on the legal or social services consequences to motivate patient cessation of marijuana use prior to delivery. Our obstetrics providers' more favorable view of marijuana compared to other illicit drugs mirrors a nationwide trend indicating broader public national support of marijuana use and legalization of marijuana. A report released from the Pew Research Center in April 2013 noted that compared to 2010, support for legalization of marijuana rose 11 percentage points. Notably, for the first time since the survey began in 1969, the majority of respondents (52%) indicated support for legalization compared to 45% who reported opposition.[7] The same survey noted a 10% increase in the respondents who admitted to having used marijuana, from 38% in 2003 to 48%.[7]

Our providers' expressed need for more information about perinatal marijuana corroborates findings from other studies. A recent study in France with family physicians on their attitudes towards adolescent marijuana users found that the main barriers related to communication about adolescent marijuana use as lack of education about marijuana, lack of training in the management of its use and difficulty discussing the topic of marijuana overall.[26]

Our providers' complaints about limitations in the scientific literature on perinatal marijuana have been expressed by others as well.[27–29] Several recent reviews highlighted concerns regarding specific study designs including reliance on self-report to determine marijuana use during pregnancy, not addressing tobacco as a potential confounder, and focusing on specific study populations.[29, 30] They also note that for some pregnancy outcomes, such as preterm birth and lower gestational weights, some studies found associations with perinatal marijuana use while others did not.[29, 30]

Despite these concerns, the findings of negative consequences was compelling enough for the American Academy of Pediatrics to assert that childhood physical and behavioral health risks of perinatal marijuana use exist and that marijuana use be discouraged.[31] Similarly, the American College of Obstetricians and Gynecologists (ACOG) recently issued a recommendation that all obstetric providers should screen pregnant women for marijuana use and encourage cessation during pregnancy, they also released a Committee Opinion regarding marijuana use during pregnancy that supports encouraging pregnant women to discontinue marijuana use and be counseled on the potential adverse health consequences.[32, 33] Several researchers have argued that although individual studies may have had their limitations, the general trend noting negative consequences—even in very different study populations—support the concern about its risks.[29, 34]

This study provides some insights regarding obstetric providers' counseling behaviors and demonstrates how their attitudes and beliefs regarding perinatal marijuana affect their communication. A separate analysis of the audio-recorded first obstetric visit conversations between obstetric providers and women who disclosed marijuana use found that providers did not provide any counseling response in 40% of this visits. When counseling did occur, it was more likely to focus on describing the need for urine toxicology assessments either at

that visit and/or at the time of delivery and warning patients that testing positive for marijuana at the time of delivery would necessitate the involvement of child protective services.[24]

In this study, providers explained that their discussion of child protective services was perceived to be one of the few motivators that providers could offer to encourage cessation during pregnancy. With a greater knowledge, understanding and training on the medical and pregnancy risks associated with marijuana use, providers' counseling, like that of tobacco and alcohol, would likely shift more toward a discussion of on these medical risks.

There are limitations to our study that also deserve mention. All providers practiced in an urban setting with the majority being young, female, Caucasian resident obstetrics and gynecology physicians. Their views thus may not represent beliefs, attitudes, and strategies of obstetric providers who may be older, male, more experienced, or from other racial or cultural backgrounds. Additionally, all providers participating in this study practiced in a region where marijuana, including medical marijuana, is not legal. Our providers' focus on legal consequences of perinatal marijuana use may be related to this illegal status of marijuana in Pennsylvania. Performing this study in regions where marijuana is legal may reveal other themes, attitudes, and counseling approaches.

4.2. Conclusion

Our obstetric providers described a perception that marijuana was not as harmful as other substances when used during pregnancy and, as a result, tended to deprioritize the topic during the first obstetric visit discussion. When they did counsel, they described raising the possibility of legal consequences or involvement of child protective services as their primary approach. They also described that having little understanding of the medical consequences for perinatal marijuana contributed to their limited counseling.

4.3 Practice Implications

There are several implications of our study. One area our findings highlight is our obstetrics providers' limited understanding regarding the potential consequences of perinatal marijuana use and how they feel this limits their ability to effectively counsel. This speaks to the need for additional training. A 2013 survey of family physicians in Colorado also noted that most respondents expressed a need for further medical training on medical marijuana and that such trainings should be incorporated to medical school curricula, residency training or offered as continuing medical education.[20, 21] Another survey of physicians in Washington similarly noted providers' need for additional training on marijuana.[35] Several studies have noted that training in addiction and substance use disorders overall in medical schools and in residency programs is minimal or lacking.[36] In order for providers to be effective in counseling pregnant patients for marijuana use, more education for providers on existing research describing potential negative outcomes and longer term effects of marijuana use during pregnancy should be a regular part of residency training and curricula.

All health care providers, including obstetric providers, will also need to keep abreast of the rapidly changing policy and legal landscape related to marijuana. One resource for monitoring and understanding the various state laws regarding marijuana as well as the

federal government's position on marijuana is the White House Office of National Drug Policy website: https://www.whitehouse.gov/ondcp/state-laws-related-to-marijuana.[37]

Additional research is needed to further understand the effects of perinatal marijuana use on the pregnancy, infant, child and mother. With an expanded breadth and depth of the information on this topic, obstetric providers would feel more prepared to address the issue with their pregnant patients. Research also is needed to better understand what screening and counseling approaches are more effective when addressing perinatal marijuana use. Our providers suggested that patients who do not identify marijuana as a drug may not disclose in response to general substance use screening approaches. Empiric assessments are needed to evaluate the performance of different screening communication or tools. While screening instruments specific to marijuana use have been developed, [38, 39] they have not yet been assessed for use during pregnancy.

Despite limited training and resources and perceptions that perinatal marijuana may be a reduced priority compared to other pregnancy issues, obstetric providers will need to improve their ability and comfort addressing the topic with their pregnant women. With growing public acceptance and support of marijuana use and the spread of legalization across the nation, the prevalence of perinatal marijuana use is likely to increase in the near future. Another study noted that pregnant women who use marijuana expressed concern about potential effects, want more information about risks and strategies to quit, and will actively seek out this information. However, they also mentioned that they felt uncomfortable or unhappy discussing this topic with obstetric providers due to limited responses and concerns about legal implications.[40] Rather than focusing on risks of child protective services involvement, obstetric providers may wish to consider creating a safe space to have conversations about perinatal marijuana with their pregnant patients. Even in the setting of uncertain consequences, obstetrics providers can engage pregnant women in the topic by asking in an open-ended fashion about their beliefs, concerns, and needs related to perinatal marijuana use. Counseling could employ discussion of pregnancy goals and hopes for their children and examining the woman's own perception of benefits and disadvantages for using marijuana during pregnancy.

Our providers' identification of competing time demands and need to prioritize what topics get covered is a real and valid concern. ACOG clinical guidelines already advocate that obstetrics providers should address many other topics including prenatal genetic testing,[41] pregnancy weight gain,[42] breastfeeding,[43] perinatal depression,[44] and tobacco use cessation[45] during obstetric visits, particularly during the first obstetric visit. Currently, it is not well understood how perinatal marijuana should fit within the number of topics that deserve discussion during routine prenatal care. Nor is there guidance regarding when, who, and how such counseling should be delivered. As clinical practice guidelines and policies expand to address perinatal marijuana use, these issues will need to be considered.

This study provides insight into the beliefs and attitudes of obstetric providers regarding marijuana use during pregnancy, including their perceptions of patients' attitudes and beliefs. However, it highlights the necessity to also examine the perspectives of pregnant patients, particularly those who use marijuana during pregnancy. To identify appropriate and

effective methods of counseling, providers need to understand the perceptions, needs, and concerns of their patients. Understanding how patients think and feel about perinatal marijuana use will assist providers in their ability to tailor and personalize their discussions.

Finally, our findings suggest that the legal or policy environment may also influence obstetric providers' communication practices. To inform future policies and regulations regarding perinatal marijuana use, we need to gain a better understanding of how different policy environments regarding legalization of marijuana impact beliefs, attitudes, behaviors, practices and concerns regarding marijuana use among pregnant patients and their obstetric providers.

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Highlights

- Obstetric providers are not familiar with risks of marijuana use in pregnancy
- Providers perceive marijuana is not as dangerous as other perinatal substance use
- Providers admit prioritizing other counseling topics over perinatal marijuana.
- Providers describe counseling strategies focused on policy and legal consequences.
- Providers need more information and training on addressing perinatal marijuana.

Table 1

Provider Characteristics

Provider Characteristics (N=51)		
Variable	**Category**	**N(%)**
Age (Mean = 33 SD= 8.430 Min/Max =25/63)	<30	23 (45.1)
	30–39	18 (35.3)
	40–49	5 (9.8)
	50–59	3 (5.9)
	60+	2 (3.9)
Ethnicity	White	42 (82.4)
	Black/African Amer	2 (3.9)
	Asian	3 (5.9)
	Other	4 (7.8)
Type of provider/year in residency when interviewed	2nd yr resident	4 (7.8)
	3rd yr resident	17 (33.3)
	4th yr resident	16 (31.4)
	Nurse midwife	4 (7.8)
	Nurse practitioner	8 (15.7)
	Faculty physician	2 (3.9)
Years in residency or years in obstetric practice	Mean=5.24, SD=5.652 Min/Max=1/30	