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Desistance, Self-treatment, or Substitution: Decisions about Cannabis Use During Pregnancy

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Cannabis is the most commonly used drug during pregnancy in the United States and Canada, and the American College of Obstetricians and Gynecologists recommends that all pregnant individuals be screened for cannabis use and counseled regarding potential adverse health impacts of use. However, those considering or using cannabis during pregnancy report experiencing stigma and lack of information from health care providers and, thus, frequently rely on friends, family, and the internet for information. This article describes 3 types of decisions individuals may be making about cannabis use during pregnancy and suggests approaches health care providers may take to minimize judgment and provide optimal support for informed cannabis use decisions among pregnant individuals. Desistance decisions involve consideration of whether and how to reduce or stop using during pregnancy. Self-treatment decisions are made by those exploring cannabis to help alleviate troublesome symptoms such as nausea or anxiety. Substitution decisions entail weighing whether to use cannabis instead of another substance with greater perceived harms. Health care providers should be able to recognize the various types of cannabis use decisions that are being made in pregnancy and be ready to have a supportive conversation to provide current and evidence-based information to individuals making desistance, self-treatment, and substitution decisions. Individuals making desistance decisions may require support with potential adverse consequences such as withdrawal or return of symptoms for which cannabis was being used, as well as potentially navigating social situations during which cannabis use is expected. Those making self-treatment decisions should be helped to fully explore treatment options for their symptoms, including evidence on risks and benefits. Regarding substitution decisions, health care providers should endeavor to help pregnant individuals understand the available evidence regarding risks and benefits of available options and be open to revisiting the topic over time.
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Cannabis is the most commonly used drug during pregnancy in the United States and Canada, with prenatal prevalence rates ranging from 4%[1] to 28%[2–5] depending on population and method of measurement. Indications are that although pregnant individuals overall report less use than nonpregnant peers,[1,6] with growing social and legal acceptance of cannabis, use during pregnancy is increasing.[1,2,7] The American College of Obstetricians and Gynecologists recommends that all pregnant individuals be screened for cannabis use and counseled regarding potential adverse health consequences of continued use during pregnancy.[8] However, there is little evidence on whether, or how, counseling for cannabis use is occurring. When counseling does occur, discussions usually focus on legal or child protective implications rather than potential medical or pregnancy consequences.[9] As a result, pregnant individuals often turn to friends, family, and the internet for information when they do not receive tailored information from their care providers.[6]

Given overall rising rates of cannabis use by reproductive-aged women as well as by pregnant individuals, it is important that midwives and other health care providers be equipped to understand and support pregnant individuals' cannabis-related information needs[10] and decision-making. This article draws on the authors' combined expertise in clinical midwifery care, substance use research, and health communication to propose a typology, or classification scheme, for understanding and supporting decisions about cannabis use during pregnancy.

WHY A TYPOLOGY OF CANNABIS USE DECISIONS DURING PREGNANCY IS NEEDED

Use of nonprescription cannabis during pregnancy, similar to use by nonpregnant populations, may be recreational in nature, used for therapeutic or medicinal purposes or part of a substance use disorder, or may fit multiple of these categories.[7,11,12] Cannabis is available in many forms, ranging from smokable dried flower to edible products to topical creams and oils. Some products may contain specific cannabinoids such as tetrahydrocannabinol (THC; the primary psychoactive compound in cannabis) and/or cannabidiol (CBD;

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Quick Points

- Although professional guidance regarding cannabis use during pregnancy may easily tend toward universal recommendations of abstinence, there are at least 3 unique types of decisions about cannabis use that require different types of support.
- Desistance decisions involve consideration of whether and how to reduce or stop using during pregnancy.
- Self-treatment decisions are made by those exploring cannabis to help alleviate troublesome symptoms such as nausea or anxiety.
- Substitution decisions entail weighing whether to use cannabis instead of another substance with greater perceived harms.
- Providers should be able to recognize the various types of cannabis use decisions that are being made during pregnancy and be ready to provide relevant, evidence-based information to clients in a nonjudgmental manner.

the federal legality of which is evolving and not always clear to consumers).

The motivation and decision to use, or to reduce or stop using, cannabis during pregnancy has clinical import because it is likely related to health outcomes for both the pregnant person and the fetus. However, current practice guidelines, as well as much research to date regarding cannabis use during pregnancy, do not differentiate between reasons for cannabis use or for the mode of ingestion. This limits the utility of recommendations when faced with complex cannabis use decisions, such as substitution of cannabis for another substance known to cause harms. Understanding the cannabis use decisions faced by pregnant individuals is important for health care providers to offer the most appropriate information and support.

Recommendations from governmental bodies[13] and medical associations[8] commonly instruct women to abstain from use during pregnancy and breastfeeding. However, given that pregnant cannabis users are more likely than nonpregnant users to meet criteria for cannabis use disorder,[14] absolute desistance may not always be simple or practical. People who experience nausea and vomiting during pregnancy are approximately twice as likely to use cannabis,[15,16] suggesting that some may be self-medicating for a condition with few approved and effective therapies. Furthermore, given the known teratogenic risks of certain medications including antianxiety drugs, as well as other substances such as alcohol, cannabis may appear at times to be a reasonable alternative, even to prior nonusers.[17] Typically, informed decision-making in pregnancy requires health care providers to impart complex risk information in a way that facilitates understanding and promotes agency. However, in the case of cannabis use during pregnancy there is a risk of *information selectivity*,[18] in which pregnant individuals receive biased information based on the perspectives of their health care providers, essentially undermining the informed decision-making process. Therefore, many pregnant individuals are making decisions around cannabis use without support and full information.

In earlier work, Boyd and McCabe proposed an empirically driven typology that categorized the use of controlled medications by motivation to use (self-treatment and sensation-seeking).[19] Their typology has guided numerous research studies[20] that advance an understanding of substance use disorders[21] associated with prescribed (legal) and unprescribed (illegal) misuse of therapeutic medications.[22–26] The typology and its use in research has contributed to a better understanding of 2 profiles: (1) user subtypes that influence medical and nonmedical misuse of legal substances, and (2) misusers of medications for self-treatment.[27] However, Boyd and McCabe's typology was not developed with self-treatment decisions during pregnancy in mind, and the typology did not consider medical cannabis use. The parallels between cannabis use (both legal and illegal) and controlled medication use (both legal and illegal) are notable, and for this reason, we draw on Boyd and McCabe's typology in development of this new classification of decisions about cannabis use during pregnancy.

DESISTANCE, SELF-TREATMENT, AND SUBSTITUTION

Based on extant research that explored reasons for cannabis use during pregnancy,[5,12] combined with the authors' clinical practice and research experience on perinatal decision-making and substance use, we suggest the following typology for classifying cannabis use decisions during pregnancy: desistance decisions, self-treatment decisions, and substitution decisions (Table 1).

Type 1: Desistance Decisions

Individuals who are users of cannabis prior to pregnancy frequently face decisions regarding whether and how to reduce or cease consumption of cannabis or to switch to other forms of consumption (eg, switch from smoking to edibles or a topical oil) during pregnancy. Desistance decisions may be faced by those who use cannabis for any reason, including social and medical reasons. Support required by those considering desistance during pregnancy may range from clinician affirmation to substantial cessation assistance, potentially including exploration of alternatives to cannabis. Although for some, desistance will carry no negative effects, potential health risks that may be associated with desistance decisions include untreated cannabis use disorder, withdrawal, regrettable substitutions, and untreated symptoms that a user may have been managing with cannabis prior to pregnancy.

Type 2: Self-treatment Decisions

Regardless of past cannabis use history, individuals may consider trying cannabis to treat symptoms that have become

Table 1. Typology of Cannabis Use Decisions in Pregnancy

Category	Definition	Example	Decisions to Be Discussed
Desistance	Used cannabis prior to becoming pregnant, unsure of whether to continue through pregnancy.	Used socially on weekends and for premenstrual migraines as needed.	Whether, when, and how to reduce or stop use during pregnancy.
Self-treatment	Regardless of past use, now considering or using cannabis for a new issue during pregnancy.	Considering cannabis to try to manage nausea and vomiting of pregnancy.	Whether to use, and if so in what form and dosage. How to assess effectiveness.
Substitution	Regardless of past use, now considering or using in place of another substance (prescription or otherwise) perceived to be riskier to pregnant individual or fetus.	Prescribed paroxetine but considering switching to a cannabinoid tincture during pregnancy because of concerns over teratogenic effects.	Whether to stop using previous substance, whether to use cannabis as a substitute, and, if so, in what form and dosage.

problematic during pregnancy. Self-treatment may be undertaken on the recommendation of a friend or family member, based on information found online or in print materials, or, in some cases, there may be no input. Not only are self-treaters deciding whether to use cannabis, they may face myriad questions regarding form (CBD, THC, or both; tincture, edibles, smoking, dabbing, etc) and dosing, none of which have been standardized at this time. Potential negative health consequences of self-treating include any risks of cannabis use to fetus and pregnant individual, as well as potential lack of effective treatment for the underlying condition spurring the cannabis use.

Type 3: Substitution Decisions

Also affecting individuals across the cannabis use spectrum, from prior nonusers to habitual users, are decisions regarding whether to use cannabis during pregnancy in place of another substance with greater perceived risks. This may be a substitution for prescription medication such as psychotropic or seizure medications, or it could be a harm reduction effort to reduce use of substances such as alcohol, tobacco, or illicit opioids. This third category in the typology may involve the most complex decisions, with the most intense clinical support needs, as the decision to reduce or stop using the previous substance is intertwined with the decision to use cannabis. If the decision is made to substitute, then these individuals often face the same decisions as face self-treaters, regarding form and dosage. Substitution of cannabis for previously-used effective therapies may also risk untreated symptoms or underlying conditions and potential risks to fetus or pregnant individual of cannabis use.

It is important to note that these 3 types of decisions are not mutually exclusive: for example, a regular social user of cannabis might decide to quit when she discovers she is pregnant (desistance) but, later during pregnancy, try CBD oil to alleviate anxiety (self-treatment). Furthermore, the social context in which a pregnant individual lives may influence substance use behaviors and complicate the individual's ability to seek, access, and use expert advice in cannabis use decisions.

COUNSELING SUPPORT INCLUSIVE OF THE COMPLEXITY IN CANNABIS USE DECISIONS

Pregnant individuals considering or using cannabis are motivated by a variety of circumstances and face different types of decisions. They often have unmet information needs or experience individual or systemic barriers to obtaining expert advice to help make and implement their decisions.[5,10,28] Accordingly, they require tailored decision-making support, as some of these decisions are more complex, both socially and informationally. Finally, those making different types of cannabis use decisions may experience different health consequences related to their decisions, based on their specific circumstances.

Cannabis use decisions during pregnancy, whether about desistance, self-treatment, or substitution, take place in a variety of contexts, and individuals' behavior and values vary. Although guidance and discourse regarding cannabis use during pregnancy may easily tend toward reducing context sensitivity in favor of blanket recommendations to fully abstain, we recognize that this may not be a realistic option for all pregnant users. Some cannabis use decisions during pregnancy may be relatively straightforward, such as the choice by an occasional social user of cannabis to desist for the duration of pregnancy. However, certain other decisions, such as substituting cannabis for another substance with greater documented harms, may be more complex. Furthermore, for individuals who have experienced stigma and marginalization by medical or legal services in the past, mere disclosure of the cannabis decision-making process to a clinician may be fraught. Thus, substitution decisions would ideally be made in consultation with an informed and nonjudgmental perinatal care provider.

For clinical guidance to be most accurate and effective, it should reflect the multiplicity of types of cannabis use

decisions made during pregnancy: those pertaining to desistance, self-treatment, and substitution, to promote effective counseling during the prenatal period. Information resources and decision-support aids should be tailored to the real-life cannabis use decisions being made, and counseling by health care providers should consider the substance use history and available social support of each decision-maker. Health care providers should be able to recognize the various types of cannabis use decisions that are being made during pregnancy and be ready to have a supportive conversation with current and evidence-based information for individuals making desistance, self-treatment, and substitution decisions.

In particular, health care providers should examine their own biases and assumptions about cannabis use during pregnancy, to minimize the risk of appearing judgmental. When supporting individuals making desistance decisions, attention should be paid to potential adverse consequences such as withdrawal or return of symptoms for which cannabis was being used, and support should be provided for those for whom cannabis was a part of meaningful social interactions. In cases of self-treatment decisions, health care providers should help pregnant individuals explore the full array of treatment options for their symptoms, and evidence provided on associated effectiveness and risks. Regarding substitution decisions, health care providers should endeavor to help pregnant individuals understand the available evidence regarding risks and benefits of available options and be open to revisiting the topic over time.

CONCLUSION

Substantial new investments have been made in recent years into the science of cannabis, including potential developmental effects on exposed fetuses or infants, as well as potential therapeutic uses. Thus, we should soon begin to have more reliable and empirical evidence regarding risks, and potential therapeutic benefits, of cannabis during pregnancy. We are hopeful that with this new medical and research evidence will come nuanced and context-sensitive decision-making supports for anyone considering cannabis use during pregnancy. Meanwhile, to provide optimal care for pregnant and birthing individuals, it is important to lay a framework for understanding the various desistance, self-treatment, and substitution decisions people make during pregnancy. Health care providers should be able to acknowledge the various reasons for use and provide the most appropriate information and support for each individual's circumstances. Use of this proposed typology will help health care providers in this process.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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REFERENCES

1. Brown QL, Sarvet AL, Shmulewitz D, Martins SS, Wall MM, Hasin DS. Trends in marijuana use among pregnant and nonpregnant reproductive-aged women, 2002-2014. *JAMA*. 2017;317(2):207-209.
2. Young-Wolff KC, Tucker LY, Alexeeff S, et al. Trends in self-reported and biochemically tested marijuana use among pregnant females in California from 2009-2016. *JAMA*. 2017;318(24):2490-2491.
3. Metz TD, Silver RM, McMillin GA, et al. Prenatal marijuana use by self-report and umbilical cord sampling in a state with marijuana legalization. *Obstet Gynecol*. 2019;133(1):98.
4. Howard DS, Dhanraj D, Devaiah G, Lambers D. Marijuana use in pregnancy and its effects on birth weight and gestational age at delivery [17R]. *Obstet Gynecol*. 2017;129(5):187S.
5. Bayrampour H, Zahradnik M, Lisonkova S, Janssen P. Women's perspectives about cannabis use during pregnancy and the postpartum period: an integrative review. *Prev Med*. 2019;119:17-23.
6. Mark K, Terplan M. Cannabis and pregnancy: maternal child health implications during a period of drug policy liberalization. *Prev Med*. 2017;104:46-49.
7. Volkow ND, Han B, Compton WM, McCance-Katz EF. Self-reported medical and nonmedical cannabis use among pregnant women in the United States. *JAMA*. 2019;322(2):167-169.
8. Braillon A, Bewley S. Committee opinion no. 722: marijuana use during pregnancy and lactation. *Obstet Gynecol*. 2018;131(1):164.
9. Holland CL, Rubio D, Rodriguez KL, et al. Obstetric health care providers' counseling responses to pregnant patient disclosures of marijuana use. *Obstet Gynecol*. 2016;127(4):681-687.
10. Greyson D. Unmet information needs regarding cannabis decisions in pregnancy. *Proc Assoc Infor Sci Technol*. 2020;57(1):e335.
11. Chang JC, Tarr JA, Holland CL, et al. Beliefs and attitudes regarding prenatal marijuana use: perspectives of pregnant women who report use. *Drug Alcohol Depend*. 2019;196:14-20.
12. Barbosa-Leiker C, Burduli E, Smith CL, Brooks O, Orr M, Gartstein M. Daily cannabis use during pregnancy and postpartum in a state with legalized recreational cannabis. *J Addic Med*. 2020;14(6):467-474.
13. What you need to know about marijuana use and pregnancy. Centers for Disease Control and Prevention. 2018. Accessed January 25, 2020. https://www.cdc.gov/marijuana/factsheets/pregnancy.htm
14. Ko JY, Farr SL, Tong VT, Creanga AA, Callaghan WM. Prevalence and patterns of marijuana use among pregnant and nonpregnant women of reproductive age. *Am J Obstet Gynecol*. 2015;213(2):201.e1-201.e10.
15. Young-Wolff KC, Sarovar V, Tucker LY, et al. Association of nausea and vomiting in pregnancy with prenatal marijuana use. *JAMA Intern Med*. 2018;178(10):1423-1424.
16. Roberson EK, Patrick WK, Hurwitz EL. Marijuana use and maternal experiences of severe nausea during pregnancy in Hawai'i. *Hawaii J Med Public Health*. 2014;73(9):283-287.
17. Takakuwa KM, Schears RM. Why pregnant women may justifiably choose to use cannabis. *JAMA Intern Med*. 2019;179(1):120.
18. Shorten A, Shorten B, Kennedy HP. Complexities of choice after prior cesarean: a narrative analysis. *Birth*. 2014;41(2):178-184.
19. Boyd CJ, McCabe SE. Coming to terms with the nonmedical use of prescription medications. *Subst Abuse Treat Prev Policy*. 2008;3:22.
20. McCabe SE, Boyd CJ. Do motives matter? Nonmedical use of prescription medications among adolescents. *Prev Res*. 2012;19(1):10-13.
21. McCabe SE, Wilens TE, Boyd CJ, Chua K-P, Voepel-Lewis T, Schepis TS. Age-specific risk of substance use disorders associated with controlled medication use and misuse subtypes in the United States. *Addict Behav*. 2019;90:285-293.
22. Boyd CJ, West B, McCabe SE. Does misuse lead to a disorder? The misuse of prescription tranquilizer and sedative medications and subsequent substance use disorders in a U.S. longitudinal sample. *Addict Behav*. 2018;79:17-23.

23.McCabe SE, West BT, Veliz P, McCabe VV, Stoddard SA, Boyd CJ. Trends in medical and nonmedical use of prescription opioids among US adolescents: 1976-2015. *Pediatrics*. 2017;139(4): e20162387.
24.McCabe SE, Veliz P, Boyd CJ, Schulenberg JE. Medical and nonmedical use of prescription sedatives and anxiolytics: adolescents' use and substance use disorder symptoms in adulthood. *Addict Behav*. 2017;65:296-301.
25.Young A, McCabe SE, Cranford JA, Ross-Durow P, Boyd CJ. Nonmedical use of prescription opioids among adolescents: subtypes based on motivation for use. *J Addict Dis*. 2012;31(4):332-341.
26.McCabe SE, Boyd CJ, Teter CJ. Subtypes of nonmedical prescription drug misuse. *Drug Alcohol Depend*. 2009;102(1):63-70.
27.Voon P, Kerr T. "Nonmedical" prescription opioid use in North America: a call for priority action. *Subst Abuse Treat Prev Policy*. 2013;8: 39.
28.Jarlenski M, Tarr JA, Holland CL, Farrell D, Chang JC. Pregnant women's access to information about perinatal marijuana use: a qualitative study. *Womens Health Issues*. 2016;26(4):452-459.