

Preconception cannabis use: An important but overlooked public health issue

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Kara R Skelton¹ and Kelly C Young-Wolff^{2,3} 

Abstract

Cannabis is the most commonly used federally illicit drug among pregnant women in the United States, and the prevalence and frequency of prenatal cannabis use are increasing. The preconception period – typically thought of as the 3–12 months immediately preceding pregnancy – is a distinct and critical period for women's health that has often been overlooked when examining prenatal cannabis use. Given that substance use behaviors typically develop before pregnancy, and risk factors associated with prenatal cannabis use are often present prior to conception, preventive approaches to addressing prenatal cannabis use would benefit from focusing on women who use cannabis prior to pregnancy. In order to ensure preconception cannabis use is brought to the forefront of cannabis prevention efforts, we recommend additional research, patient education, and clinician training focused on preconception cannabis use.

Keywords

clinicians, marijuana, pregnancy, prenatal, women

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Prenatal cannabis use is a growing threat to women's health

Cannabis is the most commonly used federally illicit drug among pregnant women in the United States, and the prevalence and frequency of prenatal cannabis use are increasing.^{1–4} No amount of cannabis use has been shown to be safe during pregnancy, and prenatal cannabis use is associated with adverse perinatal outcomes, including low birthweight, along with potential neurodevelopmental harms in children exposed to cannabis *in utero*.^{5–7} Considering the increased risk of certain adverse health outcomes, national guidelines encourage clinicians to advise women to abstain from cannabis use during pregnancy or while trying to conceive.⁸

The increasing prevalence of prenatal cannabis use can be attributed to an array of individual and ecological level factors. For example, at the individual level, using cannabis in the months prior to pregnancy, having a partner who uses cannabis, mental health diagnoses (e.g. depression and anxiety), and concurrent tobacco use are associated with prenatal cannabis use.^{9,10} At the ecological level, factors such as state legalization and commercialization of cannabis have led to increased access to

cannabis, reduced perceptions of cannabis-related harms, and the proliferation of new cannabis products with increased potency.^{4,11–13} Importantly, recent data suggest that women use a variety of modes of cannabis administration during pregnancy,¹⁴ and it is possible that some women who are opposed to smoking cannabis may be willing to consider other modes of administration (e.g. vaping, use of edibles, concentrates, or topical creams), contributing to rising rates of use. Much of the recent evidence on perinatal cannabis use has centered prenatal cannabis use; leaving many evidence gaps on cannabis use in the period immediately preceding pregnancy.

¹Department of Health Sciences, College of Health Professions, Towson University, Towson, MD, USA

²Division of Research, Kaiser Permanente Northern California, Oakland, CA, USA

³Department of Psychiatry and Behavioral Sciences, University of California, San Francisco, San Francisco, CA, USA

Corresponding author:

Kelly C Young-Wolff, Division of Research, Kaiser Permanente Northern California, 2000 Broadway, Oakland, CA 94162, USA.
Email: Kelly.c.young-wolff@kp.org



Preconception cannabis use: an overlooked area for intervention

The preconception period—typically thought of as the 3–12 months immediately preceding pregnancy—is a distinct and critical period for women's health that has often been overlooked when examining prenatal cannabis use. Given that substance use behaviors typically develop before pregnancy, and risk factors associated with prenatal cannabis use are often present prior to conception, preventive approaches to addressing prenatal cannabis use would benefit from focusing on women who use cannabis prior to pregnancy. Yet, few studies have examined women's cannabis use during the preconception period.^{14–17}

Initial results suggest that preconception cannabis use is common,^{2,4} associated with tobacco and alcohol use and depression symptoms,¹⁷ and may vary with cannabis policies. A recent study using data from eight states in the United States found that overall prevalence estimates of cannabis use prior to pregnancy were highest in states where recreational cannabis was legal (15.78%) in comparison to states that had not legalized (13.46%).⁴ A study in Northern California found that among the ~19% of pregnant women who endorsed preconception cannabis use, 27% reported using daily, and nearly half (46%) used ≥ 1 mode of administration.¹⁵ Importantly, Black and Hispanic women were more likely to report smoking cannabis and use of blunts during the preconception period, modes that are potentially associated with the greatest health risks.¹⁵ Notably, nearly one-third (33.7%) of women with preconception cannabis use continue to use into pregnancy.¹⁶

Available research shows that initiation of cannabis use during pregnancy is low,¹⁶ indicating that the preconception period is an optimal time for cannabis use prevention and cessation interventions for women, including patient-provider discussions.¹⁷ Moreover, waiting until the onset of pregnancy and subsequent prenatal care appointments to screen for and discuss cannabis use with women fails to safeguard women from potential risks associated with cannabis use. However, screening for cannabis use by clinicians is inherently complex. Although preconception care guidelines recommend screening all adults for tobacco use, alcohol use, and unhealthy drug use,^{18–20} there are few clinical recommendations and guidelines to assist women's health clinicians with cannabis use during the preconception period. Some organizations, such as the American College of Obstetricians and Gynecologists (ACOG), recommend screening women who are contemplating pregnancy, trying to conceive, or pregnant for drug use for non-medical reasons—including tobacco, alcohol, and cannabis; however, it is unclear the extent to which these guidelines are followed.⁸ We note that about half of all pregnancies are unintended (approximately 121 million worldwide),²¹ and these

guidelines overlook preconception use among women who did not intend to become pregnant. Another challenge to preconception cannabis use screening is that for decades cannabis was—and in many geographic areas still is—categorized with other illicit substances (e.g. opiates), and few existing screening tools used by clinicians ask about cannabis use as a distinct drug.

The preconception period is an ideal time to provide women with health education and preventive messages around the potential harms of prenatal cannabis use. Integrating clinician training around screening and brief interventions for cannabis use with training and education done for alcohol and tobacco holds promise to better support women during the preconception period. Utilization of interventions with long-standing effectiveness in reducing substance use among pregnant women, such as motivational interviewing²² and screening, brief intervention, and referral to treatment (SBIRT) can be implemented by clinicians with non-pregnant women who disclose cannabis use. Linking women in the preconception period with resources and supports necessary to reduce or halt cannabis use, particularly for those with cannabis use disorder, have immense promise for not only reducing prenatal cannabis use but promoting women's health across the life span. Ultimately, it is imperative that women's health clinicians are trained to use evidence-based approaches to answer questions about health effects and potential risks of cannabis use. Furthermore, clinicians can screen for and address other issues associated with prenatal cannabis use (e.g. depression, anxiety, and sleep problems) during the preconception period, to help women gain additional coping tools that may in turn decrease the likelihood they turn to cannabis use during pregnancy.

Importantly, it is well-documented that pregnant women report dissatisfaction with cannabis-related communications with clinicians. This frustration stems from a lack of obstetric clinician communication about cannabis and a focus on punitive consequences of use (as opposed to health effects).²³ Consequently, women seek information from other sources, such as cannabis dispensaries, the Internet, and social media.²⁴ Thus, non-punitive, non-stigmatizing methods of cannabis screening should be used in effort to increase disclosure and spark clinician-directed evidence-based discussion about potential health risks of prenatal cannabis use prior to pregnancy. Screening and early interventions for preconception cannabis use must respect patient autonomy,²⁵ and avoid increasing stigma, loading reproductive-aged women with responsibility and scrutiny, or appearing to offer paternalistic or controlling advice. Collaborative conversations where clinicians truly listen to patients' reasons for cannabis use, take time to discuss patients' questions and concerns, and provide non-judgmental information about potential risks have high potential to empower women to be active critical thinkers and make informed choices about cannabis use.

A look into the future research on preconception cannabis use

Given the paucity of evidence on cannabis use practices, behaviors, and clinician communication prior to pregnancy, additional research is urgently needed. Specifically, because many existing surveillance systems (e.g. the National Survey on Drug Use and Health) categorize women based on pregnancy status (i.e. pregnant or not-pregnant) enhanced surveillance systems and healthcare system data that capture preconception cannabis use trends will allow for improved research on this topic. Epidemiologic studies are needed to test whether certain modes of preconception cannabis administration are associated with a higher likelihood of prenatal cannabis use, and to examine whether socio-demographic differences in modes of preconception and prenatal cannabis administration contribute to health disparities among women of reproductive age. This information is also a necessary precursor to developing interventions aimed at reducing prenatal cannabis use (via reductions in uptake and use prior to pregnancy) and associated harms during the preconception period. Future research should examine factors that contribute to the lack of discussion of cannabis use (e.g. gaps in provider knowledge, discomfort discussing substance use, uncertainty about state-specific cannabis policies) with women who are contemplating pregnancy or actively trying to conceive.

Conclusion

To truly understand and ultimately reduce cannabis use and subsequent adverse health effects during pregnancy, it is imperative that women's health researchers, clinicians, and other advocates broaden the sphere of focus beyond pregnancy alone to examine patterns of cannabis use and risk factors for cannabis use prior to conception. Indeed, women with preconception cannabis use account for the vast majority of women who use cannabis during pregnancy,² supporting the notion that a focus on preventing or reducing cannabis use prior to pregnancy could reduce prenatal use.^{15,16} Research, patient education, and clinician training and communications that include a focus on the preconception period hold great promise to reduce the upward trajectory of prenatal cannabis use.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Author contribution(s)

Kara R Skelton: Conceptualization; Writing—original draft.

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ORCID iD

Kelly C Young-Wolff  <https://orcid.org/0000-0002-6177-534X>

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