

UC Davis

UC Davis Previously Published Works

Title

Racial Inequities in Breastfeeding Counseling Among Pregnant People Who Use Cannabis

Permalink

<https://escholarship.org/uc/item/8136h0cq>

Journal

Obstetrics and Gynecology, 140(5)

ISSN

1099-3630

Authors

Nidey, Nichole

Hoyt-Austin, Adrienne

Chen, Melissa J

et al.

Publication Date

2022-11-01

DOI

10.1097/aog.0000000000004834

Peer reviewed



Published in final edited form as:

*Obstet Gynecol.* 2022 November 01; 140(5): 878–881. doi:10.1097/AOG.0000000000004834.

## Racial Inequities in Breastfeeding Counseling Among Pregnant People Who Use Cannabis

Nichole Nidey, PhD<sup>1</sup>, Adrienne Hoyt-Austin, DO, MAS<sup>2</sup>, Melissa J. Chen, MD, MPH<sup>3</sup>, Brandie Bentley, MSW<sup>4</sup>, Karen M. Tabb, PhD, MSW<sup>4</sup>, Chidiogo Anyigbo, MD, MPH<sup>5</sup>, Christine Wilder, MD<sup>6</sup>, Mishka Terplan, MD, MPH<sup>7</sup>, Jennifer M. McAllister, MD, IBCLC<sup>8</sup>, Scott L. Wexelblatt, MD<sup>8</sup>, Aaron Murnan, PhD<sup>9</sup>, Laura R. Kair, MD, MAS<sup>2</sup>

<sup>1</sup>Division of Biostatistics and Epidemiology & Department of Pediatrics, University of Cincinnati College of Medicine, in Cincinnati, Ohio

<sup>2</sup>Department of Pediatrics, University of California Davis

<sup>3</sup>Department of Obstetrics and Gynecology, University of California Davis

<sup>4</sup>School of Social Work, University of Illinois at Urbana-Champaign

<sup>5</sup>Department of Pediatrics, University of Cincinnati College of Medicine; Division of General and Community Pediatrics, Cincinnati Children's Hospital Medical Center

<sup>6</sup>Center for Addiction Research, University of Cincinnati College of Medicine, Cincinnati, OH

<sup>7</sup>Friends Research Institute, Baltimore, MD

<sup>8</sup>Department of Pediatrics, University of Cincinnati College of Medicine, Perinatal Institute, Cincinnati Children's Hospital Medical Center

<sup>9</sup>College of Nursing, University of Cincinnati

### Abstract

We examined how breastfeeding advice in the context of cannabis use differed by race and ethnicity. Survey data from the 2017–2018 Pregnancy Risk Assessment Monitoring System was used to assess differences in breastfeeding guidance related to cannabis use among 1,213 individuals who self-reported cannabis use three months prior to or during pregnancy. A multivariable logistic regression model was specified to examine the extent to which the odds of receiving prenatal advice against breastfeeding if using cannabis differed by self-reported race and ethnicity. We found that non-Hispanic Black people were four times more likely than non-Hispanic White people to be advised against breastfeeding if using cannabis (aOR 4.1, CI

---

**Corresponding Author:** Nichole Nidey, Division of Biostatistics and Epidemiology, Cincinnati Children's Medical Center, Cincinnati, OH.

The other authors did not report any potential conflicts of interest.

Each author has confirmed compliance with the journal's requirements for authorship.

The authors thank the PRAMS Working Group and the Centers for Disease Control and Prevention for assembling and providing the PRAMS dataset for this study.

Presented at the Pediatric Academic Societies (4/21/22–4/25/22, Denver, Colorado) and Society of Epidemiologic Research (6/14/22–6/27/22, Chicago, IL) annual meetings.

2.1, 8.2). Pregnant non-Hispanic Black people were disproportionately advised not to breastfeed if using cannabis.

### **Précis:**

Pregnant non-Hispanic Black people are four times more likely than pregnant non-Hispanic White people to be advised against breastfeeding if using cannabis.

---

## **Introduction**

The American College of Obstetrics and Gynecologists and other organizations advise against using cannabis while breastfeeding but do not recommend counseling against breastfeeding if using cannabis.<sup>1-4</sup> It is unclear if the potential harms of cannabis exposure through human milk outweigh the benefits of breastfeeding, as there is insufficient evidence of the risk of cannabis exposure through human milk.<sup>5</sup> Although studies have examined prenatal breastfeeding guidance and postpartum breastfeeding patterns among people with cannabis use,<sup>6</sup> it is unknown how breastfeeding guidance varies by maternal characteristics. Breastfeeding disparities persist in the US, with Black mother-infant dyads experiencing the lowest rates.<sup>7, 8</sup> The patterns by which societies perpetuate racial discrimination, through systems such as healthcare and education is referred to as structural racism.<sup>9</sup> In this study, we examined how breastfeeding advice in the context of cannabis use differed by self-reported race, as an indicator of racism in the context of prenatal care.

## **Methods**

The 2017–18 Pregnancy Risk Assessment Monitoring System (PRAMS) survey from 9 states that completed the marijuana and prescription drug use supplement (weighted N= 544,862) was used for this study.<sup>10</sup> These states included Alaska, Illinois, Maine, North Dakota, New Jersey, New Mexico, New York, Pennsylvania, and West Virginia. Participants who reported the use of cannabis three months prior to or during pregnancy were included in this analysis. Prenatal recommendation against breastfeeding was based on the PRAMS survey question: “During any of your prenatal care visits, did a doctor, nurse, or other health care worker do any of the following things...advise me not to breastfeed my baby if I was using marijuana.”

Differences in receipt of prenatal guidance not to breastfeed by maternal characteristics were assessed using Rao Scott Chi-square tests. Logistic regression models adjusted for insurance, prenatal tobacco use, age, education<sup>11, 12</sup>, state, and year of delivery, were used to estimate the odds of receiving advice against breastfeeding if using cannabis. Analyses included sampling weights to adjust for the PRAMS complex survey design and the domain statement for cannabis use. Analyses were completed in SAS 9.4. This study was deemed exempt by the Cincinnati Children’s Medical Center Institutional Review Board due to the deidentified nature of the dataset.

## Results

9,616 participants were administered the marijuana supplement, of whom 9.5% reported cannabis use. Therefore, the final dataset included 1,213 people (weighted  $n = 51,793$ ). Over one-third (37%, CI 32.0, 41.4) of the study population were advised not to breastfeed if using cannabis. Guidance against breastfeeding if using cannabis varied by maternal characteristics (Table 1). Among non-Hispanic Black pregnant people, 62.7% were advised not to breastfeed, compared to 28.8% of non-Hispanic White people ( $p < .001$ ). Further, non-Hispanic Black people were four times more likely than non-Hispanic White people (OR 4.1, CI 2.1, 8.2) to be advised against breastfeeding if using cannabis (Table 2).

## Discussion

Results demonstrate non-Hispanic Black people were disproportionately advised against breastfeeding, a non-evidenced based recommendation. The use of population-based data is a strength of our study. However, our study has several limitations. PRAMS does not include data that specifically identifies the health care professional type, health care professional cultural background or place where prenatal breastfeeding guidance was given. Additionally, cannabis use and breastfeeding guidance were based on self-reported data; therefore, there is potential for recall bias. Based on our findings and prior studies demonstrating structural and interpersonal racism in the context of breastfeeding support,<sup>13–16</sup> efforts are needed to improve care equity for non-Hispanic Black birthing people. Specifically, maternal-child health researchers have highlighted the need to address the effects of structural racism on breastfeeding outcomes.<sup>13–15, 17, 18</sup> Finally, policies and accountability practices are needed to prevent inequitable access to appropriate breastfeeding advice and support, especially for Black people in the US, as there remains a need for federal policies to directly address breastfeeding equity.<sup>19</sup>

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

## Funding Disclosure:

Dr. Kair's effort was supported by a Building Interdisciplinary Research Careers in Women's Health award (K12HD051958) awarded to PI: Nancy Lane, MD funded by the National Institute of Child Health and Human Development (NICHD), Office of Research on Women's Health, Office of Dietary Supplements, and the National Institute of Aging. This work was also supported by the Center for Advancing Translational Sciences and the National Institutes of Health, through Grant Number UL1 TR001860. The contents of this publication are solely the responsibility of the authors and do not represent the official views of the National Institutes of Health.

## Financial Disclosure

Melissa Chen reports receiving funding from Mayne Pharma. Scott Wexelblatt disclosed receiving funding from Abbot Nutrition.

## REFERENCES

1. Baker T, Datta P, Rewers-Felkins K, Thompson H, Kallem RR, Hale TW. Transfer of Inhaled Cannabis Into Human Breast Milk. *Obstet Gynecol* May 2018;131(5):783–788. doi:10.1097/aog.0000000000002575 [PubMed: 29630019]

2. Reece-Stremtan S, Marinelli KA. ABM clinical protocol #21: guidelines for breastfeeding and substance use or substance use disorder, revised 2015. *Breastfeed Med* Apr 2015;10(3):135–41. doi:10.1089/bfm.2015.9992 [PubMed: 25836677]
3. Wallman C, Baessler C, Hoffman JM. Marijuana, Breastfeeding, and the Use of Human Milk: Position Statement #3071. *Adv Neonatal Care* Jun 1 2021;21(3):176–177. doi:10.1097/anc.0000000000000904 [PubMed: 34010855]
4. Vaughn CJ. Drugs and lactation database: lactmed. *Journal of electronic resources in medical libraries* 2012;9(4):272–277.
5. Ordean A, Kim G. Cannabis Use During Lactation: Literature Review and Clinical Recommendations. *J Obstet Gynaecol Can* Oct 2020;42(10):1248–1253. doi:10.1016/j.jogc.2019.11.003 [PubMed: 31992503]
6. Coy KC, Haight SC, Anstey E, Grant AM, Ruffo N, Ko JY. Postpartum Marijuana Use, Perceptions of Safety, and Breastfeeding Initiation and Duration: An Analysis of PRAMS Data From Seven States, 2017. *J Hum Lact* Feb 13 2021;890334421993466. doi:10.1177/0890334421993466
7. Beauregard JL, Hamner HC, Chen J, Avila-Rodriguez W, Elam-Evans LD, Perrine CG. Racial Disparities in Breastfeeding Initiation and Duration Among U.S. Infants Born in 2015. *MMWR Morb Mortal Wkly Rep* Aug 30 2019;68(34):745–748. doi:10.15585/mmwr.mm6834a3 [PubMed: 31465319]
8. Pineros-Leano M, Tabb KM, Simonovich SD, Wang Y, Meline B, Huang H. Racial Differences in Breastfeeding Initiation Among Participants in a Midwestern Public Health District. *Health Equity* 2018;2(1):296–303. doi:10.1089/heq.2018.0016 [PubMed: 30364880]
9. Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet* 2017/04/08/ 2017;389(10077):1453–1463. doi:10.1016/S0140-6736(17)30569-X
10. Shulman HB, D'Angelo DV, Harrison L, Smith RA, Warner L. The Pregnancy Risk Assessment Monitoring System (PRAMS): Overview of Design and Methodology. *Am J Public Health* Oct 2018;108(10):1305–1313. doi:10.2105/ajph.2018.304563 [PubMed: 30138070]
11. Kogan MD, Singh GK, Dee DL, Belanoff C, Grummer-Strawn LM. Multivariate analysis of state variation in breastfeeding rates in the United States. *Am J Public Health* Oct 2008;98(10):1872–80. doi:10.2105/ajph.2007.127118 [PubMed: 18703441]
12. Schindler-Ruwisch J, Roess A, Robert RC, et al. Smoking and Race Associated with Decreased Breastfeeding Initiation and Duration Among a Low Income Population. *Breastfeed Med* Nov 2021;16(11):878–885. doi:10.1089/bfm.2021.0136 [PubMed: 34582269]
13. Robinson K, Fial A, Hanson L. Racism, Bias, and Discrimination as Modifiable Barriers to Breastfeeding for African American Women: A Scoping Review of the Literature. *J Midwifery Womens Health* Nov 2019;64(6):734–742. doi:10.1111/jmwh.13058 [PubMed: 31710173]
14. Lind JN, Perrine CG, Li R, Scanlon KS, Grummer-Strawn LM. Racial disparities in access to maternity care practices that support breastfeeding - United States, 2011. *MMWR Morb Mortal Wkly Rep* Aug 22 2014;63(33):725–8. [PubMed: 25144543]
15. Sipsma HL, Rabinowitz MR, Young D, Phillipi C, Larson IA, Kair LR. Exposure to Hospital Breastfeeding Support by Maternal Race and Ethnicity: A Pilot Study. *J Midwifery Womens Health* Nov 2019;64(6):743–748. doi:10.1111/jmwh.13048 [PubMed: 31625682]
16. Davis C, Villalobos AVK, Turner MM, Long S, Lapinski MK. Racism and Resistance: A Qualitative Study of Bias As a Barrier to Breastfeeding. *Breastfeed Med* Jun 2021;16(6):471–480. doi:10.1089/bfm.2020.0307 [PubMed: 33784475]
17. Butler M, Allen JA, Hoskins-Wroten J, et al. Structural Racism and Barriers to Breastfeeding on Chicagoland's South Side. *Breastfeed Med* Feb 2021;16(2):112–115. doi:10.1089/bfm.2020.0311 [PubMed: 33316176]
18. Asiodu IV, Bugg K, Palmquist AEL. Achieving Breastfeeding Equity and Justice in Black Communities: Past, Present, and Future. *Breastfeed Med* Jun 2021;16(6):447–451. doi:10.1089/bfm.2020.0314 [PubMed: 33979550]
19. Gonzalez-Nahm S, Grossman ER, Benjamin-Neelon SE. The role of equity in US States' breastfeeding policies. *JAMA pediatrics* 2019;173(10):908–910. [PubMed: 31403682]

**Table 1:**

Association of Maternal Characteristics and Advice Not to Breastfeed if using Cannabis

Maternal Characteristics	Total Weighted Sample %: (95% CI)	Advised Not to Breastfeed: Row % (95% CI)	Advised Not to Breastfeed: Column % (95% CI)	Chi-Square P Value
<b>Race/Ethnicity</b>				<.001
Hispanic	13.3 (9.4–17.2)	41.1 (25.5–56.7)	14.9 (8.4–21.4)	
NH American Indian	2.0 (1.1–2.9)	42.6 (21.0–64.2)	2.4 (0.8–3.9)	
NH Asian	0.8 (0.1–1.4)	9.5 (0.0–23.8)	0.2 (0.0–0.5)	
NH Black	16.2 (12.2–20.1)	62.7 (50.2–75.2)	27.6 (19.5–35.7)	
NH Mixed	3.2 (1.4–5.0)	52.3 (23.8–80.8)	4.6 (1.0–8.2)	
NH White	64.2 (59.3– 69.1)	28.8 (23.8–33.8)	50.3 (42.1–58.5)	
NH, none of the above	0.3 (0.0– 0.7)	9.4 (0.0–32.1)	0.1 (0.0–0.2)	
<b>Prenatal Smoking</b>				0.01
Yes	26.7 (22.3–31.1)	47.1 (37.3–56.8)	34.3 (26.5– 42.1)	
No	73.3 (68.9–77.8)	32.8 (27.6–38.2)	65.7 (57.9–73.5)	
<b>Maternal Age at Delivery</b>				0.001
<20	7.6 (4.9–10.2)	52.9 (34.8–71.0)	10.9 (5.3–16.5)	
20–29	56.9 (52.0– 61.7)	42.0 (35.6–48.5)	65.2 (57.6–72.7)	
30–39	33.3 (28.8–37.9)	24.3 (17.7–30.8)	22.1 (16.0–28.1)	
40+	2.2 (0.4–4.1)	30.5 (0.0–61.6)	1.9 (0.1–3.6)	
<b>Maternal Education</b>				0.001
Less than High School	14.6 (10.9–18.3)	46.4 (32.9–59.9)	18.4 (12.6–24.3)	
High School	31.0 (26.6–35.4)	47.8 (39.3–56.2)	40.2 (32.3–48.2)	
More than High School	54.4 (49.6– 59.3)	27.9 (21.8–34.1)	41.3 (33.2–49.5)	
<b>Insurance During Pregnancy</b>				<.001
Medicaid	44.3 (39.4–49.1)	51.1 (43.8–58.4)	61.0 (53.0–68.9)	
None	8.6 (6.3–11.0)	42.2 (28.8–55.6)	9.8 (5.9–13.7)	
Other	5.1 (2.8–7.5)	35.2 (13.1–57.3)	4.9 (1.3– 8.4)	
Private	42.0 (37.1–46.8)	21.5 (14.9–28.1)	24.3 (17.0–31.6)	
<b>State</b>				0.8
Alaska	1.7 (1.2–2.1)	38.3 (25.9–50.6)	1.7 (1.0–2.5)	
Illinois	32.4 (27.8–37.1)	37.7 (29.2–46.2)	33.3 (25.6–41.0)	
Maine	5.9 (4.8–6.9)	40.7 (32.9–48.6)	6.5 (4.7– 8.3)	
North Dakota	3.5 (2.7–4.3)	32.6 (22.2– 43.0)	3.1 (1.8–4.4)	
New Jersey	8.0 (5.7–10.3)	38.2 (24.0–52.4)	8.3 (4.5–12.2)	
New Mexico	6.7 (5.5–7.8)	41.5 (34.0–49.1)	7.6 (5.5–9.6)	
New York	15.5 (10.8–20.2)	27.9 (11.7–44.2)	11.8 (4.3–19.4)	
Pennsylvania	22.7 (18.3–27.0)	38.1 (27.1–49.0)	23.6 (16.1–31.0)	
West Virginia	3.6 (2.7–4.6)	40.3 (27.7–53.0)	4.0 (2.3–5.7)	
<b>Year of Delivery</b>				0.99
2017	61.1 (56.5–65.7)	36.7 (30.2–43.1)	61.2 (53.7–68.7)	
2018	38.9 (34.3–43.5)	36.6 (30.2–43.3)	38.8 (31.3–46.3)	

Maternal Characteristics	Total Weighted Sample %: (95% CI)	Advised Not to Breastfeed: Row % (95% CI)	Advised Not to Breastfeed: Column % (95% CI)	Chi-Square P Value
<b>Breastfeeding Outcomes</b>				0.04
Initiated breastfeeding	84.0 (80.4–87.5)	34.1 (28.9–39.3)	79.1 (72.7–85.5)	
Did not initiate breastfeeding	16.0 (12.5–19.6)	47.2 (35.2–59.3)	20.9 (14.5–27.3)	

Total Weighted Sample Size n=51,793, Actual Sample Size n = 1,213

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

**Table 2:**

Odds of Receiving Prenatal Advice Not to Breastfeed When Using Cannabis Among Pregnant People with Self-Reported Prenatal Cannabis Use by Self-reported Race & Ethnicity

	Unadjusted OR (95% CI) (n = 1213, weighted n = 51,257)	Adjusted <sup>†</sup> OR (95% CI) (n = 1129, weighted n = 49,717)
<b>Maternal Race &amp; Ethnicity</b>		
American Indian	1.8 (0.7, 4.6)	1.3 (0.6, 3.0)
Asian	0.3 (0.1, 1.4)	0.4 (0.1, 2.6)
Black	4.2 (2.3, 7.5) ***	4.1 (2.1, 8.2) ***
Hispanic	1.7 (0.9, 3.4)	2.0 (1.0, 4.1)
Mixed	2.7 (0.9, 8.7)	2.6 (0.8, 8.2)
White	REF	REF
None of the above	0.3 (0.0, 3.7)	0.20 (0.0, 2.0)
<b>Maternal Insurance</b>		
Medicaid		2.3 (1.31, 3.9) *
No Insurance		1.8 (0.9, 3.6)
Other		1.1 (0.4, 3.0)
Private		REF
<b>Maternal Education</b>		
Less than high school		REF
High school		1.0 (0.5, 2.0)
More than high school		0.7 (0.4, 1.5)
<b>Maternal age</b>		
Less than 20		1.6 (0.7, 3.9)
20–29		REF
30–39		0.7 (0.4, 1.2)
40		1.5 (0.4, 5.1)
<b>Prenatal Smoking</b>		
No		REF
Yes		1.8 (1.1, 3.1) *
<b>State of Residence</b>		
Alaska		1.1 (0.4, 3.4)
Illinois		REF
Maine		1.8 (0.8, 3.7)
New Jersey		1.5 (0.6, 3.5)
New Mexico		1.6 (0.8, 3.1)
New York		0.8 (0.3, 2.1)
North Dakota		1.0 (0.5, 2.2)
Pennsylvania		1.2 (0.6, 2.7)
West Virginia		1.2 (0.5, 2.7)
<b>Year of delivery</b>		



	<b>Unadjusted OR (95% CI)</b> <b>(n = 1213, weighted n = 51,257)</b>	<b>Adjusted<sup>†</sup> OR (95% CI)</b> <b>(n = 1129, weighted n = 49,717)</b>
2017		1.2 (0.7, 2.1)
2018		REF

\*  
=p <.05

\*\*  
= p <.01

\*\*\*  
=p <.001

<sup>†</sup> model adjusted for insurance type, state of residence, year of delivery, prenatal smoking, maternal education, maternal age

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript