HHS Public Access

Author manuscript

Am J Public Health. Author manuscript; available in PMC 2025 January 01.

Published in final edited form as:

Am J Public Health. 2024 January ; 114(1): 108–117. doi:10.2105/AJPH.2023.307438.

Breastfeeding by Disability Status in the United States: Pregnancy Risk Assessment Monitoring System, 2018–2020

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CONFLICTS OF INTEREST

The authors have no conflicts of interest relevant to this article to disclose.

HUMAN PARTICIPANT PROTECTION

The PRAMS protocolwas reviewed and approved by CDC's institutional review board (IRB) and each participating site's IRB.

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Abstract

Objectives.—To describe breastfeeding initiation and breastfeeding at 1, 2, and 3 months, and information sources on breastfeeding among women with a recent live birth by disability status.

Methods.—We analyzed October 2018 to December 2020 data from the Pregnancy Risk Assessment Monitoring System for 24 sites in the United States that included the Washington Group Short Set of Questions on Disability (seeing, hearing, walking or climbing stairs, remembering or concentrating, self-care, communicating). We defined disability as reporting "a lot of difficulty" or "cannot do this at all" on any of these questions.

Results.—Among 39 673 respondents, 6.0% reported disability. In adjusted analyses, breastfeeding was lower among respondents with disability at 2 (62.6% vs 66.6%; adjusted prevalence ratio [APR] = 0.94; 95% confidence interval [CI] = 0.89, 0.99) and 3 months (54.7% vs 59.6%; APR = 0.92; 95% CI = 0.86, 0.98) than those without disability. Respondents with disability were less likely to receive information from health care providers or support professionals (89.3% vs 92.3%), but as likely from breastfeeding or lactation specialists (78.1% vs 75.3%).

Conclusions.—Strategies to ensure women with disability, receive breastfeeding support, including breastfeeding information, could improve breastfeeding outcomes.

Approximately 12% to 18% of reproductive-aged women have a disability.[1–3] Disability, as defined by the World Health Organization, encompasses impairments, activity limitations, and participation restrictions a person may experience in their daily lives.[4] Women with disability are as likely as those without disability to desire a future pregnancy, be sexually active, and experience pregnancy.[3,5,6] However, women with disability are less likely to report utilization of reproductive health care and more likely to experience pregnancy complications and adverse birth outcomes.[3,6–9]

The US Dietary Guidelines for Americans, the American Academy of Pediatrics (AAP), the American College of Obstetricians and Gynecologists, and the American Academy of Family Physicians recommend exclusive breastfeeding until about 6 months.[10–14] Many medical organizations recommend physicians and other health care providers offer breastfeeding education and support to patients[11,14–17] and that physicians stay current on best practices and develop skills related to breastfeeding to support patients in overcoming common challenges and continuing to breastfeed as long as desired.[11,14,15] When challenges exceed the expertise of providers, it is recommended that patients be referred to someone with clinical expertise in breastfeeding, such as a lactation consultant.[11,14,16]

National estimates suggest that 83.2%, 78.6%, 73.6%, and 69.1% of infants born in 2019 were ever breastfed, breastfed at 1, 2, and 3 months of age, respectively.[18] Some evidence suggests women with disability breastfeed at lower rates than those without disability[6,19] and are unlikely to receive information concerning how their disability could

affect breastfeeding.[20,21] Receipt of some form of breastfeeding education by health care providers is associated with higher breastfeeding rates among the general population.[22] However, data are limited on the breastfeeding experiences among women with disability. Among a large representative sample of women who gave birth during October 1, 2018, to December 31, 2020, we assessed breastfeeding initiation and at 1, 2, and 3 months and sources of breastfeeding information by disability status. We also assessed associations between breastfeeding information sources and breastfeeding outcomes overall and by disability status.

METHODS

We analyzed data from the Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based, site-specific surveillance system, which collects self-reported data on respondent's behaviors and experiences before, during, and shortly after pregnancy. Women with a recent live birth were randomly sampled from site birth certificate files and contacted 2 to 6 months after delivery to participate. PRAMS is conducted by the Centers for Disease Control and Prevention (CDC) in collaboration with site health departments. Data are collected using both mail and telephone survey methods. PRAMS does not collect data on gender identity; therefore, the term "women" was used to align with the birth certificate.

The PRAMS survey includes a core set of questions on all site surveys and, to address emerging topics, sites periodically add supplements to their survey.[23] The PRAMS disability supplement[24] was made available to sites in 2018 to address the gap in availability of population-based data on disability among women. The number of sites that implemented the disability supplement varied during 2018 to 2020. PRAMS methodology[25] and the disability supplement have previously been described.[23]

MEASURES

Disability.

To measure disability, respondents were asked the Washington Group Short Set of Questions on Disability (WG-Short Set), a validated instrument with 6 questions on functional ability that measure difficulty with seeing (even when wearing glasses or contact lenses), hearing (even if using hearing aid[s]), walking or climbing stairs, remembering or concentrating, self-care (such as washing all over or dressing), and communicating (for example, understanding or being understood).[26] Respondents selected from the following responses: "no difficulty," "some difficulty," "a lot of difficulty," or "cannot do this at all." As recommended by the Washington Group,[27] we defined disability as reporting "a lot of difficulty" or "cannot do this at all" on any of the 6 questions. We defined no disability as reporting "no difficulty" or "some difficulty" to all questions.

Breastfeeding outcomes: initiation and any breastfeeding at 1, 2, and 3 months.

Respondents whose infants were alive and living with them were asked a series of questions on breastfeeding. We considered respondents as having initiated breastfeeding if they answered "yes" to "Did you ever breastfeed or pump breast milk to feed your new baby, even for a short period of time?" To measure any breastfeeding at 1, 2, and 3 months,

respondents who had initiated breastfeeding were asked “Are you currently breastfeeding or feeding pumped milk to your new baby?” If respondents were no longer breastfeeding at the time of the survey, they were then asked, “How many weeks or months did you breastfeed or pump milk to feed your baby?” We categorized breastfeeding outcomes into 4 separate dichotomous yes-no variables: (1) breastfeeding initiation; (2) breastfeeding at 1 month (4 weeks); (3) breastfeeding at 2 months (9 weeks); and (4) breastfeeding at 3 months (13 weeks). For all analyses examining breastfeeding at 3 months, we restricted the sample to those who completed the PRAMS survey 3 or more months after delivery (n = 33 704). We conducted analyses on breastfeeding initiation and breastfeeding at 1 and 2 months among this restricted sample, and findings were consistent with results for the full sample. We present results for the full sample for breastfeeding initiation at 1 and 2 months. Respondents who did not initiate breastfeeding were included as “not breastfeeding” for all outcomes.

Sources of breastfeeding information.

Respondents were asked, “Before or after your new baby was born, did you receive information about breastfeeding from any of the following sources?” Respondents could select multiple responses. We created 2 categories for sources of information: (1) health care providers and support professionals (hereinafter, health care providers), defined as responding “yes” to any of the following response options: “my doctor,” “a nurse/midwife/doula,” or “my baby’s doctor”; and (2) breastfeeding or lactation specialists, defined as responding “yes” to this response option. We reviewed and recategorized “other” responses if they fit into an existing response option. We also created a composite measure which assessed information from both health care providers and breastfeeding or lactation specialists.

Covariates—We selected covariates a priori that were found to be associated with disability or breastfeeding.[1,2,18] We examined the following respondents’ characteristics using birth certificate data available in the PRAMS data set: age (< 20, 20–24, 25–34, ≥ 35 years), race or ethnicity (Hispanic, non-Hispanic American Indian/Alaska Native, non-Hispanic Asian/Pacific Islander, non-Hispanic Black, non-Hispanic other or multiple races [respondents who selected > 1 race or other non-White on the birth certificate], non-Hispanic White), education level (≤ high school, high school diploma or general equivalency diploma [GED], some college or higher), parity (primiparous, multiparous), delivery method (vaginal delivery, cesarean section), participated in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) prenatally (yes, no), and gestational age at delivery (preterm, <37weeks; term, ≥ 37 weeks). Due to insufficient sample sizes for Native Hawaiian and other Pacific Islander to be presented as disaggregated data, they were combined with Asian to create the category non-Hispanic Asian/Pacific Islander.

Analytical Sample—We analyzed October 1, 2018, to December 31, 2020, data from 24 PRAMS sites (Colorado, District of Columbia, Georgia, Kansas, Louisiana, Massachusetts, Maryland, Maine, Michigan, Mississippi, Missouri, Montana, North Dakota, Nebraska, New Hampshire, New Mexico, New York [excluding New York City], Oregon, Rhode Island, South Dakota, Tennessee, Vermont, Virginia, and West Virginia) that implemented the

PRAMS disability supplement and met CDC's 50% response rate threshold for at least 1 study year. Our analytic sample excluded respondents whose infants were not living with them or were deceased (n = 770; 1.1%) at the time of survey completion. After excluding those with missing data on disability (n = 1725; 3.4%), outcomes (range = n = 977; 1.8% to n = 2959; 5.8%), and covariates (n = 812; 2.0%), our final analytic sample included 39 673 respondents (weighted n = 1 767 676).

Statistical Analyses—We performed descriptive statistics (unweighted numbers and weighted percentages and 95% confidence intervals [CIs]) to assess the prevalence of any disability and type of disability overall and by covariates.

We calculated the unadjusted and adjusted prevalence estimates for each breastfeeding outcome using the average marginal predictions approach to logistic regression models and generated prevalence ratios (PRs) with their associated 95% CIs to examine associations between disability status and each breastfeeding outcome. We also calculated unadjusted prevalence estimates and associated 95% CIs for breastfeeding outcomes by type of disability. Because of small sample size for each individual type of disability, we did not conduct further analyses by type of disability. We constructed separate bivariate and multivariable logistic regression models to examine the associations between disability status with each breastfeeding outcome and the source of breastfeeding information. We also examined the adjusted association between each breastfeeding outcome with the breastfeeding information source overall and by disability status. Lastly, we constructed separate multivariable, logistic regression models to examine the adjusted association between each breastfeeding outcome with the breastfeeding information source stratified by disability status. Each multivariable, logistic regression model was adjusted for all aforementioned covariates and PRAMS site.

PRAMS data are weighted for sampling design, noncoverage, and nonresponse to be representative of each site's live birth population. Analyses accounted for PRAMS' complex sampling design by using SAS-callable SUDAAN version 11.0.3 (RTI International, Research Triangle Park, NC).

RESULTS

Among 39 673 respondents, 6.0% reported disability (Table A, available as a supplement to the online version of this article at https://www.ajph.org). Difficulty with remembering (3.7%) was most common, followed by difficulty with seeing (1.6%), walking or climbing stairs (0.6%), hearing (0.6%), communicating (0.5%), and self-care (0.3%). A higher prevalence of respondents with disability than without were non-Hispanic American Indian/Alaska Native (1.3% vs 0.8%), aged 20–24 years (26.8% vs 17.8%), had completed less than high school (15.6% vs 10.1%) or had a high school diploma or GED (36.5% vs 24.7%), were multiparous (65.7% vs 59.6%), participated in WIC prenatally (47.8% vs 31.0%), and had infants who were preterm (11.1 % vs 9.0%; Table 1). Prevalence of disability was higher among respondents who were non-Hispanic American Indian/Alaska Native (9.8%) versus those who were non-Hispanic White (5.8%) and non-Hispanic Asian/Pacific Islander (4.0%); were younger than 20 years (8.1%) or aged 20 to 24 years (8.8%) versus aged 25 to

34 years (5.3%) or 35 years or older (5.0%); had completed less than high school (9.0%) or who had a high school diploma or GED (8.7%) versus some college or higher (4.5%); were multiparous (6.6%) versus primiparous (5.2%); had participated in WIC prenatally (9.0%) versus those who had not (4.6%); and whose infants were preterm (7.3%) versus those whose infants were term (5.9%). The prevalence of disability type by select characteristics generally followed a similar pattern as disability overall (Table A).

In unadjusted analyses, respondents with disability had a lower prevalence of breastfeeding initiation (83.1% vs 87.0%) and breastfeeding at 1 (68.7% vs 76.7%), 2 (56.1% vs 67.0%), and 3 (48.3% vs 60.0%) months than respondents without disability (Table 2). By type of disability: breastfeeding initiation ranged from 72.4% to 84.1% among respondents reporting difficulty communicating and remembering or concentrating, respectively; breastfeeding at 1 month ranged from 57.6% to 71.4% among respondents reporting difficulty communicating and hearing, respectively; breastfeeding at 2 months ranged from 51.5% to 61.6% among respondents reporting difficulty communicating and hearing, respectively; and breastfeeding at 3 months ranged from 45.7% to 54.1% among respondents reporting difficulty remembering or concentrating and hearing, respectively (Table B, available as a supplement to the online version of this article at https://www.ajph.org).

In adjusted analyses, breastfeeding initiation (86.7% vs 86.6%; adjusted PR [APR] = 1.00; 95% CI = 0.97, 1.02) and at 1 month (74.2% vs 76.4%; APR = 0.97; 95% CI = 0.94,1.01) did not differ by disability status. However, breastfeeding remained lower among respondents with disability at 2 (62.6% vs 66.6%; APR = 0.94; 95% CI = 0.89, 0.99) and 3 months (54.7% vs 59.6%; APR = 0.92; 95% CI = 0.86, 0.98) than among respondents without disability.

Overall, 92.2% of respondents reported receiving breastfeeding information from health care providers, with respondent's doctor being most common (78.3%), followed by nurse, midwife, or doula (75.4%), and baby's doctor (71.0%; data not shown). Precisely 75.5% of respondents received information from breastfeeding or lactation specialists. Overall, 72.3% of respondents received information from both health care providers and breastfeeding or lactation specialists, 19.8% received information from only health care providers, 4.7% did not receive information from either source, and 3.1% received information from only breastfeeding or lactation specialists (Table 3). In adjusted analyses, regardless of disability, respondents who received information from both health care providers and breastfeeding or lactation specialists or received information from only breastfeeding or lactation specialists were more likely to breastfeed across all outcomes than respondents who had not received information from either source.

Respondents with disability were less likely to receive breastfeeding information from health care providers (89.3% vs 92.3%; APR = 0.97; 95% CI = 0.94, 0.99) and as likely to receive information from breastfeeding or lactation specialists (78.1% vs 75.3%; APR = 1.04, 95% CI = 1.00, 1.08) compared with respondents without disability (Table 4). Among respondents without disability only, those who received information from health care providers were more likely to be breastfeeding at 1 and 2 months than respondents who did not receive information from health care providers (Table C, available as a supplement

to the online version of this article at https://www.ajph.org). Respondents who received information from breastfeeding or lactation specialists were more likely to be breastfeeding across all outcomes than respondents who did not receive information from breastfeeding or lactation specialists, regardless of disability status.

DISCUSSION

Breastfeeding initiation and breastfeeding at 1, 2, and 3 months were lower among women with disability than without disability in unadjusted analyses by 4 to 12 percentage points. In adjusted analyses, breastfeeding at 2 and 3 months remained lower among women with disability by 4 to 5 percentage points.

Although the absolute differences in prevalence of breastfeeding outcomes were modest, our findings suggest that women with disability might face additional challenges to breastfeeding than those without disability. Regardless of disability, many barriers to breastfeeding exist, including lack of knowledge, poor family and social support, lack of parental leave and lactation support at work, lactation problems, social norms, embarrassment, and health services.[28] In addition, additional challenges accessing breastfeeding support might exist, such as the availability of community support and distance to lactation counselors.[29] Limited evidence exists on breastfeeding experiences of women with disability in the United States. Data on breastfeeding experiences are primarily from qualitative studies with small sample sizes ($n \leq 25$) among women who are predominantly White, in their thirties, married, with at least some college education. In these studies, women with a range of disabilities reported challenges, including lack of support, limited information on disability-related health considerations, milk supply and latch problems, and challenges communicating lactation difficulties with lactation consultants.[20,21] Furthermore, women with disability might have difficulty accessing health care,[1] which could impact their ability to seek guidance when they encounter breastfeeding difficulties. Women with disability have also reported breastfeeding facilitators, such as peer support, positive support from health care providers, use of a breast pump, and physical support to breastfeed.[20] In a recent cohort study, conducted in Canada, women with an intellectual or developmental disability or multiple disabilities were less likely to receive in-hospital breastfeeding assistance than women without disability.[30]

Overall, we found respondents who received information from health care providers were more likely to initiate breastfeeding and be breastfeeding at 1 and 2 months than those who did not, suggesting that receiving information from providers may facilitate breastfeeding. However, this association was not found among women with disability at 1 and 2 months, suggesting women with disability may not receive the same benefit from information from providers alone. Regardless of disability status, we found respondents who received information from both health care providers and breastfeeding or lactation specialists and those who received information from only breastfeeding or lactation specialists were more likely to breastfeed than those who received information from only health care providers or neither source. However, respondents with disability were less likely to receive breastfeeding information from health care providers compared with those without disability.

Health care providers might need additional resources to support women who choose to breastfeed, regardless of disability.[11,31] Providing referrals to lactation or breastfeeding specialists for patients, when appropriate, might be another opportunity for health care providers to offer breastfeeding support when they are unable to provide the care directly.[14,16] In a survey of obstetrician-gynecologists, pediatricians, and family physicians, medical education related to breastfeeding was found to be inadequate, and several gaps in training were identified, including the need for breastfeeding education to be prioritized throughout training.[31] Providers might need additional support to follow guidance from professional organizations to support patients in overcoming breastfeeding challenges.[11,14,15] Efforts to improve breastfeeding education among physicians, such as AAPs' Physician Engagement and Training Focused on Breastfeeding Project, a collaborative effort between multiple medical and health organizations, aim to improve physician training to support patients in reaching their breastfeeding goals.[13,32] Provider resources specific to breastfeeding support for women with disability may be needed. Beyond breastfeeding, qualitative studies have demonstrated women with disability face challenges in receiving reproductive health care that is inclusive of their disability.[20,21] Challenges in seeking and receiving health care for women with disability include inaccessible equipment, lack of transportation and lack of provider experience.[7,8,33] In a survey of obstetrician-gynecologists, providers reported that they are not trained to properly care for the needs of women with disability.[34]

Receipt of information on breastfeeding from health care providers that is tailored to the needs of women with disability and referrals to breastfeeding or lactation specialists when warranted might be important strategies to improve breastfeeding outcomes.

LIMITATIONS

This analysis is subject to several limitations. Our findings were limited to PRAMS sites that included the disability supplement on their site-specific survey and met CDC's 50% response rate threshold criteria, limiting the generalizability of our findings. Findings were also subject to recall and social desirability biases. Because we did not disaggregate Asian and Pacific Islander, we may have masked important differences among this population. Due to the small sample size of women with disability, we report the prevalence of each breastfeeding outcome among respondents reporting each type of disability; however, we did not conduct further analyses. Additionally, our definition of disability status is heterogenous and may have masked variability in the associations. While the WG-Short Set is intended to identify persons who report difficulty across 6 functional domains, it might not capture all persons with disability.[35] Our estimates of disability might be an underestimate as the prevalence of disability was lower than what other sources have reported among reproductive-aged women (6% vs 12 – 18%).[1–3] This could be due to differences in how disability was measured or defined, surveys were administered, or differences in disability prevalence in the general versus postpartum population. While PRAMS offers multiple modes to complete the survey,[25] persons with disability might need additional accommodations that are unavailable. We were unable to assess whether there was a difference in survey responses or reasons for nonparticipation by disability status.

The PRAMS core questionnaire does not measure breastfeeding intentions, reasons women breastfed or did not breastfeed (any or exclusivity) and we did not analyze breastfeeding outcomes beyond 3 months. We were therefore unable to assess whether respondents' decision to breastfeed or not was influenced by their disability or other reasons impacted their decision. We were also unable to assess the mode of delivery (in-person, phone, or virtual), content, timing, or frequency of the information received. The category of health care providers included nurse, midwife, and doula; however, the support offered by doulas might differ from other providers. There could be variation in the quality of the information received from breastfeeding or lactation specialists as the training required varies widely.[36] We were also unable to assess respondents' access to breastfeeding information. It is possible that respondents who reported they did not receive information did have access to information, but declined or did not seek or utilize the information for various reasons (e.g., past breastfeeding experiences). There are individual reasons (e.g., stronger desire to breastfeed) and structural drivers (e.g., socioeconomic inequities) that could affect a person's ability to seek out and access additional support if they were experiencing problems. It's also possible that women with disability might be more likely to be taking medications than women without disability and were advised to pause or stop breastfeeding as a result. However, PRAMS does not have detailed information on medical conditions, including medication use. Few medications are contraindicated while breastfeeding, and in most cases if contraindicated, a safe substitute can be found.[11] However, some evidence suggests women are often advised unnecessarily to stop breastfeeding.[37]

Another limitation of these data is that the latter portion of data were collected duringthe early part of the COVID-19 pandemic when access to health care was interrupted.[38] While telehealth consultations were more common during the COVID-19 pandemic,[39] we were unable to assess the mode through which women received information on breastfeeding. Lastly, while we were able to adjust for many covariates reported to be associated with breastfeeding[1,2,22] (e.g., race or ethnicity, age), we could not adjust for all factors that could have contributed to differences in breastfeeding outcomes (e.g., breastfeeding intentions).[40] Despite these limitations, this study provides valuable information on breastfeeding outcomes and sources of breastfeeding information by disability status using population-based data.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

ACKNOWLEDGMENTS

Research reported in this publication was supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health under an interagency agreement. S. Ramer was supported by an appointment to the Research Participation Program at the CDC administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the US Department of Energy and the CDC.

We thank the PRAMS Working Group for its role in conducting PRAMS surveillance. PRAMS Working Group Representatives: Tim Feuser, MPH, Alabama; Kathy Perham-Hester, MS, MPH, Alaska;Gina Herrera, MPH, Arizona;Letitia de Graft-Johnson, DrPH, MHSA, Arkansas;Ashley Juhl, MSPH, Colorado;Jennifer Morin, MPH, Connecticut;George Yocher, MS, Delaware; Pamela Oandasan, MPH, District of Columbia; Heather Lake-Burger,

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the CDC.

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PUBLIC HEALTH IMPLICATIONS

There is very limited information on how disability affects breastfeeding, and our analyses provide additional insight into how disability might affect breastfeeding. Women with disability generally reported a lower prevalence of breastfeeding at 2 and 3 months than women without disability and were less likely to receive information from health care providers, but as likely to receive information from breastfeeding or lactation specialists. Strategies to ensure women with disability, receive breastfeeding support, including information from health care providers and breastfeeding or lactation specialists can improve breastfeeding outcomes.[21,22]

TABLE 1—

Respondent Characteristics by Disability Status: Pregnancy Risk Assessment Monitoring System (PRAMS), 24 US Sites, October 31, 2018–December 31, 2020

Respondent Characteristics	Unweighted No.	Weighted % (95% CI)	
		Disability[a]	No Disability[b]
Total	39 673		
Age at delivery, y			
< 20	1 641	5.4 (4.1, 6.9)	3.9 (3.6, 4.3)
20 – 24	6 782	26.8 (23.8, 29.9)	17.8 (17.1, 18.5)
25 – 34	23 665	52.7 (49.3, 56.0)	59.7 (58.9, 60.6)
≥ 35	7 585	15.2 (12.9, 17.8)	18.6 (17.9, 19.2)
Race/ethnicity			
Hispanic	6 393	14.4 (12.2, 17.0)	14.4 (13.8, 15.1)
Non-Hispanic American Indian or Alaska Native	1 840	1.3 (0.9, 1.9)	0.8 (0.7, 0.8)
Non-Hispanic Asian or Pacific Islander	2 574	2.7 (1.8, 3.9)	4.1 (3.8, 4.5)
Non-Hispanic Black	7 167	21.3 (18.6, 24.2)	18.5 (17.8, 19.1)
Non-Hispanic Other race (not specified or multiple races)	2 029	3.2 (2.3, 4.5)	2.9 (2.6, 3.1)
Non-Hispanic White	19 670	57.1 (53.8, 60.4)	59.4 (58.6, 60.2)
Education level			
< high school	4 231	15.6 (13.3, 18.2)	10.1 (9.6, 10.7)
High school diploma or GED	9 092	36.5 (33.2, 39.9)	24.7 (23.9, 25.4)
≥ some college	26 350	47.9 (44.6, 51.2)	65.2 (64.3, 66.0)
Parity			
Primiparous	15 817	34.3 (31.1, 37.6)	40.4 (39.6, 41.3)
Multiparous	23 856	65.7 (62.4, 68.9)	59.6 (58.7, 60.4)
Delivery method			
Vaginal delivery	26 694	66.5 (63.3, 69.6)	68.7 (67.9, 69.5)
Cesarean section	12 979	33.5 (30.4, 36.7)	31.3 (30.5, 32.1)
Prenatal WIC Participation			

Respondent Characteristics	Unweighted No.	Weighted % (95% CI)	
		Disability[a]	No Disability[b]
Yes	13 583	47.8 (44.5, 51.2)	31.0 (30.2, 31.8)
No	26 090	52.2 (48.8, 55.5)	69.0 (68.2, 69.8)
Gestational age at delivery, wk			
Preterm, < 37	6 793	11.1 (9.6, 12.8)	9.0 (8.6, 9.4)
Term, ≥ 37	32 880	88.9 (87.2, 90.4)	91.0 (90.6, 91.4)

Note. CI = confidence interval; GED = general equivalency diploma; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children. The 24 PRAMS sites were CO, DC, GA, KS, LA, MA, MD, ME, MI, MS, MO, MT, ND, NE, NH, NM, NY (excluding New York City), OR, RI, SD, TN, VT, VA, and WV.

[a]Disability was defined as having "a lot of difficulty" or "cannot do at all" on 1 or more of the Washington Group Short Set of Questions on Disability (WG-Short Set)[26] that assess difficulty with seeing, hearing, walking/climbing stairs, remembering/concentrating, self-care, and communicating.

[b]No disability was defined as reporting "no difficulty" or "some difficulty" to all of the WG-Short Set.

TABLE 2—

Prevalence and Prevalence Ratios of Breastfeeding Initiation and Any Breastfeeding at 1, 2, and 3 Months by Disability Status: Pregnancy Risk Assessment Monitoring System (PRAMS), 24 US Sites, October 31, 2018–December 31, 2020

	Breastfeeding, Unadjusted			Breastfeeding, Adjusted[a]		
Breastfeeding Outcomes	**Disability,[b] Weighted %**	**No Disability,[c] Weighted %**	**PR (95% CI)[d]**	**Disability,[b] Weighted %**	**No Disability,[c] Weighted %**	**APR (95% CI)[d]**
Breastfeeding Initiation (unweighted n = 39 673)	83.1	87.0	0.96 (0.93, 0.99)	86.7	86.6	1.00 (0.97, 1.02)
Breastfeeding 1 mo (unweighted n = 39 673)	68.7	76.7	0.90 (0.86, 0.94)	74.2	76.4	0.97 (0.94, 1.01)
Breastfeeding 2 mo (unweighted n = 39 673)	56.1	67.0	0.84 (0.79, 0.89)	62.6	66.6	0.94 (0.89, 0.99)
Breastfeeding 3 mo (unweighted n = 33 704)[e]	48.3	60.0	0.80 (0.74, 0.87)	54.7	59.6	0.92 (0.86, 0.98)

Note. APR = adjusted prevalence ratio; CI = confidence interval; PR = prevalence ratio. The 24 PRAMS sites were CO, DC, GA, KS, LA, MA, MD, ME, MI, MS, MO, MT, ND, NE, NH, NM, NY (excluding New York City), OR, RI, SD, TN, VT, VA, and WV.

[a]Adjusted for respondent race or ethnicity; age; education level; parity; type of delivery; participation in Special Supplemental Nutrition Program for Women, Infants, and Children during pregnancy; preterm birth; and PRAMS site. Covariates were obtained from birth certificate data available in the PRAMS data set.

[b]Disability was defined as reporting “a lot of difficulty” or “cannot do at all” on ≥ 1 of the Washington Group Short Set of Questions on Disability (WG-Short Set)[26] that measure difficulty with seeing, hearing, walking/climbing stairs, remembering/concentrating, self-care, and communicating.

[c]No disability was defined as reporting “no difficulty” or “some difficulty” to all of the WG-Short Set.

[d]We constructed separate survey-weighted logistic regression models to examine the association with each breastfeeding outcome by disability status. The reference group for each model was respondents with no disability.

[e]Sample was restricted to those respondents who had completed their PRAMS survey at or after 3 months after giving birth.

TABLE 3—

Adjusted Prevalence and Prevalence Ratios of Breastfeeding Outcomes by Sources of Breastfeeding Information and Disability Status: Pregnancy Risk Assessment Monitoring System (PRAMS), 24 US Sites, October 31, 2018–December 31, 2020

Sources of Breastfeeding Information	Weighted %	Breastfeeding Initiation (Unweighted n = 39 673), APR (95% CI)[a,b]	Any Breastfeeding, APR (95% CI)[a,b]		
			1 Month (Unweighted n = 39 673)	2 Months (Unweighted n = 39 673)	3 Months (Unweighted n = 33 704)[c]
Total (n = 39 673)					
Neither source	4.7	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Health care providers or support professionals only[d]	19.8	1.01 (0.96, 1.07)	1.00 (0.93, 1.07)	0.97 (0.90, 1.05)	0.92 (0.85, 1.01)
Breastfeeding or lactation specialist only	3.1	1.34 (1.26, 1.41)	1.39 (1.29, 1.50)	1.36 (1.24, 1.48)	1.31 (1.17, 1.45)
Both health care providers or support professionals[d] and breastfeeding or lactation specialist	72.3	1.32 (1.26, 1.39)	1.37 (1.29, 1.46)	1.32 (1.23, 1.41)	1.22 (1.13, 1.32)
No disability[e] (n = 37 108)					
Neither source	4.6	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Health care providers or support professionals only[d]	20.0	1.01 (0.96, 1.07)	1.00 (0.94, 1.07)	0.97 (0.90, 1.05)	0.92 (0.84, 1.00)
Breastfeeding or lactation specialist only	3.1	1.32 (1.25, 1.40)	1.38 (1.28, 1.49)	1.36 (1.24, 1.49)	1.30 (1.16, 1.44)
Both health care providers or support professionals[d] and breastfeeding or lactation specialist	72.4	1.31 (1.25, 1.38)	1.37 (1.28, 1.45)	1.32 (1.23, 1.42)	1.21 (1.11, 1.31)
Disability[f] (n = 2 565)					
Neither source	6.6	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Health care providers or support professionals only[d]	17.4	0.93 (0.75, 1.16)	0.86 (0.63, 1.16)	0.84 (0.60, 1.19)	0.86 (0.56, 1.34)
Breastfeeding or lactation specialist only	4.4	1.44 (1.20, 1.72)	1.53 (1.15, 2.02)	1.32 (0.89, 1.96)	1.36 (0.81, 2.30)
Both health care providers or support professionals[d] and breastfeeding or lactation specialist	71.6	1.37 (1.15, 1.63)	1.40 (1.09, 1.79)	1.27 (0.95, 1.69)	1.36 (0.94, 1.98)

Note. APR = adjusted prevalence ratio; CI = confidence interval. The 24 PRAMS sites were CO, DC, GA, KS, LA, MA, MD, ME, MI, MS, MO, MT, ND, NE, NH, NM, NY (excluding New York City), OR, RI, SD, TN, VT, VA, and WV.

[a]Adjusted for respondent age; race or ethnicity; education level; parity; type of delivery; participation in Special Supplemental Nutrition Program for Women, Infants, and Children during pregnancy; preterm birth; and PRAMS site. Covariates were obtained from birth certificate data available in the PRAMS data set.

[b]We constructed separate multivariable survey-weighted logistic regression models to examine the association with each breastfeeding outcome by sources of breastfeeding information. The reference group for each model were respondents who reported they had received information on breastfeeding from neither source.

[c]Sample was restricted to those respondents who had completed their PRAMS survey at or after 3 months after giving birth.

[d]Health care provider or support professional included those that reported “my doctor,” “my baby’s doctor,” or “nurse/midwife/doula.”

[e]No disability was defined as reporting “no difficulty” or “some difficulty” to all of the Washington Group Short Set of Questions on Disability (WG-Short Set).[26]

[f]Disability was defined as reporting “a lot of difficulty” or “cannot do at all” on 1 or more of the WG-Short Set that measure difficulty with seeing, hearing, walking/climbing stairs, remembering/concentrating, self-care, and communicating.

TABLE 4—

Prevalence and Prevalence Ratios of Sources of Breastfeeding Information by Disability Status: Pregnancy Risk Assessment Monitoring System (PRAMS), 24 US Sites, October 31, 2018–December 31, 2020

	Received Source of Information, Unadjusted			Received Source of Information, Adjusted[a]		
Source of Breastfeeding Information (Unweighted n = 39 673)	**Disability,[b] Weighted %**	**No Disability,[c,d] Weighted %**	**PR (95% CI)**	**Disability,[b] Weighted %**	**No Disability,[c] Weighted %**	**APR (95% CI)[d]**
Health care provider or support professional[e]	89.0	92.4	0.96 (0.94, 0.99)	89.3	92.3	0.97 (0.94, 0.99)
Breastfeeding or lactation specialist	76.0	75.4	1.01 (0.97, 1.05)	78.1	75.3	1.04 (1.00, 1.08)

Note. APR = adjusted prevalence ratio; CI = confidence interval; PR = prevalence ratio. The 24 PRAMS sites were CO, DC, GA, KS, LA, MA, MD, ME, MI, MS, MO, MT, ND, NE, NH, NM, NY (excluding New York City), OR, RI, SD, TN, VT, VA, and WV.

[a]Adjusted for respondent race or ethnicity; age; education level; parity; type of delivery; participation in Special Supplemental Nutrition Program for Women, Infants, and Children during pregnancy; preterm birth; and PRAMS site. Covariates were obtained from birth certificate data available in the PRAMS data set.

[b]Disability was defined as reporting "a lot of difficulty" or "cannot do at all" on ≥ 1 of the Washington Group Short Set of Questions on Disability (WG-Short Set)[26] that measure difficulty with seeing, hearing, walking/climbing stairs, remembering/concentrating, self-care, and communicating.

[c]No disability was defined as reporting "no difficulty" or "some difficulty" to all of the WG-Short Set.

[d]We constructed separate multivariable survey-weighted logistic regression models to examine the association with each source of breastfeeding information by disability status. The reference group for each model was respondents with no disability.

[e]Health care provider or support professional included those that reported "my doctor," "my baby's doctor," or "nurse/midwife/doula."