HHS Public Access

Author manuscript

Matern Child Health J. Author manuscript; available in PMC 2024 April 01.

Published in final edited form as:

Matern Child Health J. 2019 August ; 23(8): 1079–1086. doi:10.1007/s10995-019-02743-2.

Health Care Provider Attitudes Toward Safety of Selected Hormonal Contraceptives in Breastfeeding Women

Allison Mayhew[1], **Yokabed Ermias**[2], **Lauren B. Zapata**[2], **H. Pamela Pagano**[2], **Naomi K. Tepper**[2]

[1]Department of Gynecology and Obstetrics, Emory University, Atlanta, GA, USA

[2]Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 4770 Buford Hwy, MS F-74, Atlanta, GA 30341, USA

Abstract

Objectives—Little is known about provider attitudes regarding safety of selected hormonal contraceptives among breastfeeding women.

Methods—Using a nationwide survey, associations were analyzed between provider characteristics and perception of safety of combined oral contraceptives (COCs) in breastfeeding women ≥ 1 month postpartum without other venous thrombosis risk factors and depot medroxyprogesterone acetate (DMPA) in breastfeeding women < 1 month postpartum and ≥ 1 month postpartum.

Results—Approximately 68% of public-sector providers considered COCs safe for breastfeeding women ≥ 1 month postpartum without other venous thrombosis risk factors, with lower odds among non-physicians versus physicians (adjusted odds ratios [aOR] range 0.34–0.51) and those with a focus on adolescent health/pediatrics versus reproductive health (aOR 0.68, 95% confidence interval [CI] 0.47–0.99). Most public-sector providers considered DMPA safe for breastfeeding women during any time postpartum, with lower odds among non-physicians versus physicians (aOR range 0.20–0.54) and those with primary clinical focus other than reproductive health (aOR range 0.26–0.65). The majority of office-based physicians considered COCs safe for breastfeeding women ≥ 1 month postpartum without other venous thrombosis risk factors, with lower odds among those who did not use, versus those who used, CDC's contraceptive guidance (aOR 0.40, 95% CI 0.21–0.77). Most office-based physicians also considered DMPA safe for breastfeeding women during any time postpartum.

Conclusions for Practice—A high proportion of providers considered use of selected hormonal contraceptives safe for breastfeeding women, consistent with evidence-based guidelines. However, certain provider groups might benefit from education regarding the safety of these methods for breastfeeding women.

✉Naomi K. Tepper, ntepper@cdc.gov.

Conflict of interest The authors declare that they have no conflict of interest.

Disclaimer: The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Keywords

Breastfeeding; Combined oral contraceptives; Depot medroxyprogesterone acetate; Provider survey

Introduction

Approximately half of all pregnancies in the U.S. are unintended (Finer and Zolna 2016) and these pregnancies can be associated with negative maternal and infant health outcomes (Gipson et al. 2008). Short interval pregnancies, occurring with less than 18 months between a live birth and subsequent conception, are also associated with poor fetal outcomes including preterm birth and low infant birth weight (Zhu 2005). Early initiation of contraception following delivery is associated with a decrease in number of short interval pregnancies, particularly among adolescent mothers (Damle et al. 2015). The postpartum period may be an ideal time for women to consider contraception because they are accessing healthcare, are not pregnant, and may be highly motivated to avoid another pregnancy. Thus, ensuring access to a range of contraceptive methods is critical for postpartum women.

However, early initiation of hormonal contraception may be associated with certain risks, particularly related to potential negative impacts on breastfeeding and risk of venous thromboembolism (VTE). Breastfeeding has proven maternal and child benefits including earlier return to maternal pre-pregnancy weight, reduced maternal incidence of breast and ovarian cancer later in life and decreased infant incidence of upper respiratory infections, diarrhea and chronic illness (American Academy of Pediatrics 2012). The postpartum period is associated with an elevated risk of VTE, highest during the first few weeks postpartum (Jackson et al. 2011; Tepper et al. 2014). An understanding of whether hormonal contraception affects breastfeeding and thrombosis risk is critical to safe provision of contraception for postpartum women.

The U.S. Centers for Disease Control and Prevention (CDC) publishes evidence-based recommendations for healthcare providers on the safety of contraception among women with certain characteristics and medical conditions, the *U.S. Medical Eligibility Criteria for Contraceptive Use* (U.S. MEC) (CDC 2010, 2011). The U.S. MEC includes recommendations for breastfeeding women and suggests that progestin-only contraceptives (including progestin-only intrauterine devices [IUDs], implants, depot medroxyprogesterone acetate [DMPA] and progestin-only pills) are safe or generally safe for use by breastfeeding women at any time postpartum. Combined hormonal contraceptives, containing estrogen plus progestin (including combined oral contraceptives [COCs], patch, and vaginal ring), should not or generally should not be used by breastfeeding women < 1 month postpartum, due to concerns about VTE risk and effects on breastfeeding. Beyond 1 month postpartum, combined hormonal contraceptives are considered generally safe for use by breastfeeding women without other VTE risk factors (CDC 2010, 2011).

Despite these recommendations, little is known about health care provider attitudes regarding the safety of such methods among breastfeeding women. In addition, little is known about characteristics of providers associated with certain safety attitudes. The aim

of this analysis is to examine provider attitudes toward the safety of certain hormonal contraceptive methods among breastfeeding women and characteristics associated with these attitudes. This insight could be useful in targeting provider education regarding the safety of hormonal contraception in the immediate and early postpartum period in breastfeeding women.

Methods

Data were collected via a mailed survey distributed between June 2013 and May 2014 to a random sample of 4000 public-sector health centers and 2000 office-based physicians in the United States. The methodology for this survey has been previously described (Simmons et al. 2018). Briefly, public-sector health centers were randomly sampled from a Guttmacher Institute database of all publicly funded family planning centers nationwide (Zolna and Frost 2016) and included those sites that received and did not receive Title X funding. One provider from each sampled health center was asked to complete the survey. Office-based physicians specializing in obstetrics and gynaecology, family medicine and adolescent medicine were randomly sampled using the American Medical Association Physician Masterfile (American Medical Association 2013).

Providers were eligible to participate in the survey if they provided family planning services (any service related to postponing or preventing pregnancy such as contraceptive counseling, contraception prescription or supply, or medical exam related to contraception) to at least two reproductive aged women per week. The survey gathered information on provider demographic characteristics, practice setting, and attitudes regarding safety of various contraceptive methods for women with various characteristics and health conditions.

Of 6000 surveys distributed to public-sector health centers and office-based physicians, 2118 were eligible, 1000 were ineligible (mainly public-sector clinics no longer open and office-based physicians not providing family planning services), and 2882 had unknown eligibility (mainly non-respondents and those with surveys returned as undeliverable). To calculate the response rate, the proportion of eligible providers among those with unknown eligibility was assumed to be the same as the proportion among those with known eligibility. The resulting response rate was 51.2% (n = 2087). The survey was deemed to be exempt from Institutional Review Board review by CDC because it was considered to be public health practice and not research on human subjects.

The outcomes for this analysis were provider attitudes regarding safety of DMPA and COCs for breastfeeding women. Specifically, providers were asked whether they considered DMPA to be safe for breastfeeding women < 1 month postpartum and ≥ 1 month postpartum. Providers were also asked whether they considered COCs to be safe for breastfeeding women ≥ 1 month postpartum without other VTE risk factors. These time periods correspond with the U.S. MEC recommendations for when DMPA and COCs are considered safe or generally safe for breastfeeding women. Response options were the following: very safe, safe, unsafe, very unsafe, or unsure. For data analysis, these responses were grouped into 2 categories: very safe/safe (subsequently referred to as “safe”)

and unsafe/very unsafe/unsure (subsequently referred to as “unsafe”; <2% of respondents reported unsure for each question).

We estimated unweighted frequencies and weighted percentages of sample characteristics, and the prevalence of each outcome, overall, and stratified by sample characteristics. We next examined factors associated with each provider safety attitude using multivariable logistic regression to calculate adjusted odds ratios (aORs) and 95% confidence intervals (CIs); models were conducted separately for public-sector providers and office-based physicians. Multivariable models included covariates selected a priori (i.e., region of practice, provider gender) and those found to be statistically significant ($p < 0.05$) in bivariate analyses. For each outcome, the analysis was restricted to data from clinicians who answered the survey question assessing the specific safety attitude of interest. Therefore, models included 1990 respondents (1591 public-sector providers and 399 office-based physicians) for the analyses examining safety attitudes regarding COCs for breastfeeding women ≥ 1 month postpartum without other VTE risk factors, 1976 respondents (1576 public-sector providers and 400 office-based physicians) for the analyses examining safety attitudes regarding DMPA for breastfeeding women < 1 month postpartum, and 1992 respondents (1596 public-sector providers and 396 office-based physicians) for the analyses examining safety attitudes regarding DMPA for breastfeeding women ≥ 1 month postpartum. The data were weighted to adjust for nonresponse and to adjust for the probability of selection into the sample, resulting in estimates nationally representative of the groups sampled. Analyses were conducted with SAS version 9.4 using the software’s survey functions to account for the complex sampling design.

Results

Public-sector providers

Characteristics and attitudes of respondent public-sector providers are reported in Table 1. Among public-sector providers, approximately half reported receiving Title X funding. Primary clinical focus was reported as reproductive health by 55% of respondents, family medicine by 25% of respondents, primary care by 13% of respondents, and adolescent health or pediatrics by 6% of respondents. Approximately 46% were nurse practitioners, 24% were physicians, 13% were nurses, 7% were physician assistants and 7% were certified nurse midwives. Among 1591 public-sector providers with available responses, 68% considered COCs to be safe for breastfeeding women ≥ 1 month postpartum without other risk factors for VTE. After adjustment, providers with a primary clinical focus of adolescent health or pediatrics had lower odds of considering COCs safe (62%) than those with a primary clinical focus of reproductive health (70%) (aOR 0.68, 95% CI 0.47–0.99). Non-physician providers had lower odds of considering COCs safe compared with physicians (physician assistants aOR 0.51, 95% CI 0.33–0.81, certified nurse midwives aOR 0.56, 95% CI 0.34–0.91, nurse practitioners aOR 0.49, 95% CI 0.35–0.69, and nurses aOR 0.34, 95% CI 0.23–0.51). Public-sector providers who completed training ≥ 15 years ago had higher odds of considering COCs safe (71%) than those who completed training < 15 years ago (66%) (aOR 1.30, 95% CI 1.06–1.59).

Among 1576 public-sector providers with available responses, 80% considered DMPA to be safe for breast feeding women < 1 month postpartum. After adjustment, providers with primary clinical focus of family medicine (aOR 0.65, 95% CI 0.46–0.92) or adolescent health/pediatrics (aOR 0.58, 95% CI 0.38–0.90) had lower odds of considering DMPA < 1 month postpartum safe than those with a primary clinical focus of reproductive health. Certain non-physician providers had lower odds of considering DMPA < 1 month postpartum safe than physicians (physician assistants aOR 0.38, 95% CI 0.23–0.62, certified nurse midwives aOR 0.54, 95% CI 0.31–0.94, and nurses aOR 0.38, 95% CI 0.24–0.59). Providers with smaller proportions of female patients of reproductive age who receive family planning service had lower odds of considering DMPA < 1 month postpartum safe than providers who reported 50+% of female patients of reproductive age receiving family planning services (reported proportion 1–24% aOR 0.43, 95% CI 0.29–0.62, and reported proportion 25–49% aOR 0.63, 95% CI 0.46–0.87).

Among 1596 public-sector providers with available responses, 93% considered DMPA to be safe for breastfeeding women ≥ 1 month postpartum. After adjustment, providers who reported not receiving Title X funding had lower odds of considering DMPA ≥ 1 month postpartum safe (90%) than those receiving this funding (95%) (aOR 0.40, 95% CI 0.24–0.66). Non-reproductive health providers had lower odds of considering DMPA ≥ 1 month postpartum safe compared with reproductive health providers (family medicine providers aOR 0.33, 95% CI 0.19–0.57, adolescent health or pediatrics providers aOR 0.26, 95% CI 0.13–0.51, and primary care providers aOR 0.36, 95% CI 0.20–0.65). The only statistically significant difference detected by occupation in attitudes about safety of DMPA ≥ 1 month postpartum was for nurses as compared with physicians, with 85% and 92%, respectively, considering such use safe (aOR 0.20, 95% CI 0.10–0.41). Male providers were less likely to consider DMPA ≥ 1 month postpartum safe (87%) compared to female providers (93%) (aOR 0.55, 95% CI 0.30–0.99) (data not shown). Providers with smaller proportions of female patients of reproductive age who receive family planning service had lower odds of considering DMPA ≥ 1 month postpartum safe compared with providers who reported 50+% of female patients of reproductive age receiving family planning services (reported proportion 1–24% aOR 0.48, 95% CI 0.28–0.84, and reported proportion 25–49% aOR 0.57, 95% CI 0.35–0.91).

Office-Based Physicians

Characteristics and attitudes of office-based physicians are shown in Table 2. Physician specialty was obstetrics/gynaecology in 61% of respondents, family medicine in 39% of respondents, and adolescent medicine in 0.4% of respondents. Among 399 office-based physicians with available responses, 80% considered COCs to be safe for breastfeeding women ≥ 1 month postpartum without other risk factors for VTE. After adjustment, respondents who reported not using the U.S. MEC in practice had lower odds of considering COCs safe (74%) than respondents who reported using the U.S. MEC in practice (85%) (aOR 0.40, 95% CI 0.21–0.77).

Among 400 office-based physicians with available responses, 88% considered DMPA < 1 month postpartum to be safe. After adjustment, male providers were statistically

significantly more likely to consider DMPA < 1 month postpartum to be safe (92%) compared to female providers (85%) (aOR 2.38, 95% CI 1.13–5.00) (data not shown). Respondents who completed training ≥ 15 years ago were less likely to consider DMPA < 1 month postpartum safe (85%) than respondents who completed training < 15 years ago (93%) (aOR 0.26, 95% CI 0.09–0.80).

Among 396 office-based physicians with available responses, 95% considered DMPA to be safe for breastfeeding women ≥ 1 month postpartum. After adjustment, no characteristics were significantly associated with differences in attitudes.

Discussion

Our data demonstrate that, overall, a high proportion of responding health care providers, both in the public and the private sector, consider DMPA to be safe for breastfeeding women during any time period postpartum. These attitudes are consistent with published studies showing no negative breastfeeding or infant outcomes among breastfeeding women using DMPA (Phillips et al. 2016). These attitudes are also consistent with U.S. MEC guidance which states that DMPA is generally safe or safe for use among breastfeeding women during any time period postpartum (CDC 2011). Additionally, a high proportion of respondents reported COCs to be safe in otherwise low risk breastfeeding women in the later postpartum period, which is also consistent with published studies and U.S. MEC guidelines (CDC 2011).

However, despite a high proportion of respondents with views that are consistent with the U.S. MEC guidance, our data demonstrated lower proportions among public-sector providers with clinical focuses other than reproductive health (particularly those with focus on adolescent health and pediatrics), non-physician providers, and providers with a lower proportion of female patients of reproductive age who receive family planning services. This suggests that providers who have less experience with postpartum or breastfeeding women may have lower awareness or understanding of safety of hormonal contraceptives among these women.

Despite recent declines in adolescent pregnancy, the rate in the United States remains higher than that of many countries (Sedgh et al. 2015). Postpartum contraception can reduce the rate of repeat adolescent pregnancy (Damle et al. 2015; Dee et al. 2017). Although providers who focus on pediatrics or adolescent health may not directly care for pregnant or postpartum women, they may have an opportunity to counsel their patients about postpartum contraception if applicable and may have an important role in educating adolescents about safe contraception including while breastfeeding.

This analysis found that that a lower proportion of certified nurse midwives considered COCs and DMPA to be safe during the early postpartum period. This finding may reflect a focus of this provider group on breastfeeding success or concern about any impact of hormones on breastfeeding. Other public sector provider groups with lower proportions considering these methods safe, including physician assistants, nurse practitioners, and nurses, may have less experience with contraceptive provision in the postpartum setting. Our

findings suggest provider groups which can be targeted for educational efforts to increase understanding of safety of DMPA and COCs in the postpartum period among breastfeeding women.

The intent of the U.S. MEC is to reduce barriers to contraception, such that women with medical conditions or specific characteristics, including being postpartum or breastfeeding, can be counseled about the full range of contraceptive methods and not be unnecessarily discouraged from using methods which are safe. If safety concerns exist for women with certain conditions who use certain contraceptives, it is important that women are counseled about the risks and offered methods which are the best fit for their individual circumstances. For breastfeeding women, quality comprehensive counseling includes a discussion about risks of combined hormonal contraceptives in the early postpartum period. Some studies have shown that COCs may have a negative effect on breastfeeding duration and infant weight particularly during the early postpartum period (Tepper et al. 2016a). Combined hormonal contraceptives are associated with an increased risk of VTE compared with non-use (Manzoli et al. 2012), and limited evidence suggests that this effect is also seen among postpartum women (Petersen et al. 2014). Comprehensive counseling also includes a discussion of methods which are safe for postpartum and breastfeeding women, including progestin-only contraceptives and non-hormonal methods (such as copper IUDs). Most studies have found no negative impact of progestin-only contraceptives on breastfeeding or infant outcomes, however interpretation is limited by methodologic challenges of many of the studies, including unclear timing of contraceptive initiation, mixed comparison groups, variable definitions of breastfeeding and infant outcomes, and no long-term follow up of infants (Phillips et al. 2016). In addition, most studies only include healthy women and healthy term infants and very few studies have been published in which women initiate progestin-only contraceptives immediately postpartum, before lactation has been well established (Phillips et al. 2016). Regarding VTE risk, progestin-only contraceptives have generally not been associated with increased risk of VTE, however little is known regarding risk of progestin-only contraceptives among postpartum women (Tepper et al. 2016b).

Only about 60% of office-based physicians in our analysis reported use of the U.S. MEC guidance (Table 2). Although the majority of office-based physicians in our analysis reported contraceptive safety attitudes consistent with the U.S. MEC in regards to DMPA and COCs for breastfeeding women, it is important to acknowledge that as many as 40% of office-based physicians may not be referring to this tool for contraceptive guidance. Targeting office-based physicians for education on available contraceptive guidance may improve awareness of this important resource. In addition, further development of tools and protocols may facilitate better integration of guidance into clinical practice. Over 75% of public-sector providers in our analysis reported using the U.S. MEC (Table 1), which may reflect higher utilization of protocols and tools which incorporate the guidelines.

A strength of this analysis is the use of data from a large, nationally representative sample of family planning providers from varied clinical settings. However, this analysis has several limitations. Our response rate of 51% was less than desired, however data were weighted to account for nonresponse. Additionally, data were collected in 2013–2014 and

findings may not reflect current provider attitudes. Although multiple studies and updated recommendations have been published regarding the safety of contraception in breastfeeding women since our data collection ended (CDC 2011; Phillips et al. 2016; Tepper et al. 2016a), these newer publications are generally consistent with older publications and not likely to impact provider attitudes. Last, the survey did not specifically target providers who care for pregnant and postpartum women or assess provider practice patterns related to provision of hormonal contraception to breastfeeding women or care for postpartum women, therefore results may not completely reflect attitudes of providers caring for breastfeeding women.

In conclusion, our study found that a high proportion of survey respondents had safety attitudes toward hormonal contraception among breastfeeding women which are consistent with evidence and clinical guidelines. However, opportunities exist for improvement in provider understanding of recommendations for contraceptive use by breastfeeding women. Targeted educational efforts toward healthcare providers who are less familiar with breastfeeding guidelines may improve provider knowledge regarding safety of contraception among breastfeeding women. This improved knowledge would allow for optimal counseling of postpartum women regarding risks and benefits of contraceptive use while breastfeeding and may improve access to appropriate contraceptive methods for breastfeeding women.

References

American Academy of Pediatrics. (2012). Policy statement: Breastfeeding and the use of human milk. Pediatrics, 129(3), 827–841.

American Medical Association. (2013). Physician masterfile. https://wwwama-assnorg/practice-management/masterfile/ama-physician-masterfile. Accessed February 11, 2018.

CDC. (2010). U.S. Medical eligibility criteria for contraceptive use. MMWR, 59(RR4), 1–84.

CDC. (2011). Update to CDC's U.S. medical eligibility criteria for contraceptive use, 2010: Revised recommendation for the use of contraceptive methods during the postpartum period. MMWR, 60(26), 878–883. [PubMed: 21734635]

Damle LF, Gohari AC, McEvoy AK, Desale SY, & Gomez-Lobo V (2015). Early initiation of postpartum contraception: Does it decrease rapid repeat pregnancy in adolescents? Journal of Pediatric and Adolescent Gynecology, 28(1), 57–62. https://doiorg/101016/jjpag201404005. [PubMed: 25555302]

Dee DL, Pazol K, Cox S, Smith RA, Bower K, Kapaya M, Fasula A, Harrison A, Kroelinger CD, D'Angelo D, Harrison L, Koumans EH, Mayes N, Barfield WB, & Warner L (2017). Trends in repeat births and use of postpartum contraception among teens—United States, 2004–2015. MMWR Morbidity and Mortality Weekly Report, 66(16), 422–426. https://doi.org/1015585/mmwrmm6616a3. [PubMed: 28448483]

Finer LB, & Zolna MR (2016). Declines in unintended pregnancy in the United States, 2008–2011. New England Journal of Medicine, 374(9), 843–852. 10.1056/NEJMsa1506575. [PubMed: 26962904]

Gipson JD, Koenig MA, & Hindin MJ (2008). The effects of unintended pregnancy on infant, child, and parental health: A review of the literature. Studies in Family Planning, 39(1), 18–38. 10.1111/j.1728-4465.2008.00148.x. [PubMed: 18540521]

Jackson E, Curtis KM, & Gaffield ME (2011). Risk of venous thromboembolism during the postpartum period: A systematic review. Obstetrics and Gynecology, 117(3), 691–703. 10.1097/AOG.0b013e31820ce2db. [PubMed: 21343773]

Manzoli L, De Vito C, Marzuillo C, Boccia A, & Villari P (2012). Oral contraceptives and venous thromboembolism: A systematic review and meta-analysis. Drug Safety, 35(3), 191–205. 10.2165/11598050-000000000-00000. [PubMed: 22283630]

Petersen JF, Bergholt T, Nielsen AK, Paidas MJ, & Lokkegaard EC (2014). Combined hormonal contraception and risk of venous thromboembolism within the first year following pregnancy. Danish nationwide historical cohort 1995–2009. Thrombosis and Haemostasis, 112(1), 73–78. [PubMed: 24499991]

Phillips SJ, Tepper NK, Kapp N, Nanda K, Temmerman M, & Curtis KM (2016). Progestogen-only contraceptive use among breastfeeding women: A systematic review. Contraception, 94(3), 226–252. 10.1016/j.contraception.2015.09.010. [PubMed: 26410174]

Sedgh G, Finer LB, Bankole A, Eilers MA, & Singh S (2015). Adolescent pregnancy, birth, and abortion rates across countries: Levels and recent trends. Journal of Adolescent Health, 56(2), 223–230. 10.1016/j.jadohealth.2014.09.007.

Simmons KB, Zapata L, & Curtis KM (2018). Health care provider perceptions of the safety of IUDs for women with HIV. Perspectives on Sexual and Reproductive Health, 50(2), 67–73. 10.1363/psrh.12056. [PubMed: 29603597]

Tepper NK, Boulet SL, Whiteman MK, Monsour M, Marchbanks PA, Hooper WC, & Curtis KM (2014). Postpartum venous thromboembolism: incidence and risk factors. Obstetrics and Gynecology, 123(5), 987–996. 10.1097/AOG.0000000000000230. [PubMed: 24785851]

Tepper NK, Phillips SJ, Kapp N, Gaffield ME, & Curtis KM (2016a). Combined hormonal contraceptive use among breastfeeding women: An updated systematic review. Contraception, 94(3), 262–274. 10.1016/j.contraception.2015.05.006. [PubMed: 26002804]

Tepper NK, Whiteman MK, Marchbanks PA, James AH, & Curtis KM (2016b). Progestin-only contraception and thromboembolism: A systematic review. Contraception, 94(6), 678–700. 10.1016/j.contraception.2016.04.014. [PubMed: 27153743]

Zhu BP (2005). Effect of interpregnancy interval on birth outcomes: Findings from three recent US studies. International Journal of Gynaecology and Obstetrics, 89(Suppl 1), 25–33. 10.1016/j.ijgo.2004.08.002.

Zolna MR, & Frost JJ (2016). Publicly funded family planning clinics in 2015: Patterns and trends in service delivery practices and protocols. Guttmacher Institute. https://www.guttmacher.org/report/publicly-funded-family-planning-clinic-survey-2015. Accessed 9 Dec 2018.

Significance

What is already known on this subject? Contraception is important for postpartum women to avoid unintended pregnancy and short interval pregnancies, however providers may be concerned about safety of hormonal contraception for postpartum women who are breastfeeding. *What this study adds?* Certain provider groups, such as non-physicians, those with clinical focus outside of reproductive health, and those who do not use CDC's contraceptive guidance, might benefit from education regarding the safety of contraception for breastfeeding women in the early postpartum period

Table 1

Attitudes of public-sector providers regarding the safety of COCs or DMPA for breastfeeding women

Characteristics	COCs for breastfeeding women ≥ 1 month postpartum without other risk factors for VTE			DMPA for breast feeding women < 1 month postpartum			DMPA for breastfeeding women ≥ 1 month postpartum		
	n[a] (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)
Overall	1591	1078 (68.2)		1576	1273 (80.4)		1596	1488 (92.6)	
Title X funding									
Yes	1017 (52.7)	676 (66.7)	1.00	1008 (52.7)	826 (81.9)	1.00	1021 (52.7)	972 (95.3)	1.00
No	574 (47.3)	402 (69.9)	1.02 (0.80, 1.29)	568 (47.3)	447 (78.6)	0.89 (0.67, 1.18)	575 (47.3)	516 (89.6)	0.40 (0.24, 0.66)
Primary clinical focus									
Family medicine	323 (24.9)	228 (70.3)	0.79 (0.58, 1.08)	324 (25.0)	246 (75.7)	0.65 (0.46, 0.92)	326 (25.0)	287 (87.4)	0.33 (0.19, 0.57)
Reproductive health	943 (55.4)	653 (69.8)	1.00	929 (55.2)	786 (84.7)	1.00	943 (55.3)	916 (97.0)	1.00
Adolescent health or pediatrics	110 (6.4)	66 (61.7)	0.68 (0.47, 0.99)	105 (6.2)	79 (74.9)	0.58 (0.38, 0.90)	109 (6.3)	97 (87.8)	0.26 (0.13, 0.51)
Primary care	211 (13.1)	130 (61.7)	0.79 (0.57, 1.08)	214 (13.4)	158 (73.2)	0.73 (0.51, 1.04)	214 (13.2)	184 (87.8)	0.36 (0.20, 0.65)
Occupation									
Physician	319 (24.0)	254 (79.6)	1.00	321 (24.3)	260 (81.7)	1.00	323 (24.2)	297 (92.1)	1.00
Physician assistant	105 (7.3)	69 (65.3)	0.51 (0.33, 0.81)	103 (7.3)	70 (67.2)	0.38 (0.23, 0.62)	105 (7.3)	95 (89.7)	0.60 (0.28, 1.30)
Certified nurse midwife	111 (7.2)	79 (70.2)	0.56 (0.34, 0.91)	107 (7.0)	86 (80.4)	0.54 (0.31, 0.94)	110 (7.1)	109 (99.3)	3.04 (0.56, 16.61)
Nurse practitioner	759 (45.5)	512 (66.9)	0.49 (0.35, 0.69)	753 (45.5)	653 (85.7)	0.86 (0.58, 1.28)	761 (45.4)	731 (95.1)	0.66 (0.37, 1.19)
Nurse	260 (13.6)	142 (55.4)	0.34 (0.23, 0.51)	255 (13.5)	178 (69.0)	0.38 (0.24, 0.59)	261 (13.6)	227 (85.7)	0.20 (0.10, 0.41)
Time since completed formal clinical training									
< 15 years	807 (52.8)	527 (65.5)	1.00	802 (53.0)	648 (79.9)	1.00	810 (52.8)	750 (91.6)	1.00
≥ 15 years	770 (46.3)	541 (71.2)	1.30 (1.06, 1.59)	759 (46.1)	612 (80.7)	1.03 (0.80, 1.32)	772 (46.3)	725 (93.7)	1.16 (0.76, 1.76)
Proportion of female patients of reproductive age who receive family planning services[c]									
1–24%	157 (11.9)	103 (65.0)	0.80 (0.55, 1.15)	158 (12.0)	106 (65.3)	0.43 (0.29, 0.62)	160 (12.0)	133 (82.4)	0.48 (0.28, 0.84)
25–49%	254 (17.8)	177 (70.1)	1.00 (0.75, 1.35)	254 (17.9)	189 (74.8)	0.63 (0.46, 0.87)	257 (17.9)	229 (88.8)	0.57 (0.35, 0.91)
50+%	1161 (69.2)	783 (68.2)	1.00	1144 (68.9)	962 (84.4)	1.00	1160 (68.9)	1109 (95.4)	1.00
Use of U.S. MEC in practice[d]									
Yes	1285 (78.2)	873 (68.3)	1.00	1276 (78.5)	1042 (81.2)	1.00	1290 (78.3)	1213 (93.5)	1.00

Matern Child Health J. Author manuscript; available in PMC 2024 April 01.

Characteristics	COCs for breastfeeding women ≥ 1 month postpartum without other risk factors for VTE			DMPA for breast feeding women < 1 month postpartum			DMPA for breastfeeding women ≥ 1 month postpartum		
	n[a] (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)
No	306 (21.8)	205 (67.8)	0.93 (0.71, 1.22)	300 (21.6)	231 (77.4)	1.09 (0.79, 1.50)	306 (21.7)	275 (89.4)	0.98 (0.61, 1.59)

CI confidence interval, *COC* combined oral contraceptive, *DMPA* depot medroxyprogesterone acetate, *MEC* Medical Eligibility Criteria for Contraceptive Use, *OR* odds ratio, *VTE* venous thromboembolism

[a] Unweighted numerators and weighted percentages; percentages may not sum to 100 due to rounding and/or missing data

[b] Adjusted for all factors shown in table, region of practice, and gender

[c] A family planning service was defined as any service related to postponing or preventing pregnancy. This may include a medical examination related to provision of a method, contraceptive counseling, method prescription, or supply visits. A patient may receive a family planning service even if the primary purpose of the visit is not for contraception

[d] Categorized as “yes” if respondent reported U.S. MEC as “important” or “minor” source of recommended contraceptive practices or if they reported use of any U.S. MEC materials

Table 2

Attitudes of office-based physicians regarding the safety of COCs or DMPA for breastfeeding women

Characteristics	COCs for breastfeeding women ≥ 1 month postpartum without other risk factors for VTE			DMPA for breast feeding women < 1 month postpartum			DMPA for breastfeeding women ≥ 1 month postpartum		
	n[a] (column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)	n (Column %)	Proportion reporting very safe/safe n (%)	Adjusted[b] OR (95% CI)
Overall	399	323 (80.3)		400	352 (88)		396	376 (94.6)	
Physician specialty									
Obstetrics/ gynaecology	261 (61.1)	210 (80.5)	1.00	263 (60.8)	236 (89.7)	1.00	259 (60.5)	247 (95.4)	1.00
Family medicine	60 (38.6)	48 (80.0)	1.55 (0.78, 3.08)	61 (38.8)	52 (85.3)	0.52 (0.20, 1.37)	61 (39.2)	57 (93.4)	0.80 (0.21, 2.95)
Adolescent medicine	78 (0.4)	1165 (83.3)	1.09 (0.61, 1.93)	76 (0.3)	64 (84.2)	0.63 (0.32, 1.24)	76 (0.3)	72 (94.7)	0.76 (0.28, 2.05)
Time since completed formal clinical training									
< 15 years	164 (43.7)	132 (78.7)	1.00	163 (43.0)	152 (93.0)	1.00	163 (43.4)	160 (98.5)	1.00
≥ 15 years	232 (54.7)	189 (82.2)	1.45 (0.76, 2.76)	234 (55.5)	198 (84.9)	0.26 (0.09, 0.80)	230 (55.0)	214 (92.6)	0.15 (0.02, 1.01)
Proportion of female patients of reproductive age who receive family planning services[c]									
1–24%	58 (19.7)	46 (73.3)	0.51 (0.22, 1.19)	59 (19.7)	51 (88.8)	1.34 (0.40, 4.53)	58 (19.7)	53 (91.1)	0.23 (0.04, 1.33)
25–49%	106 (27.2)	90 (87.3)	1.68 (0.76, 3.73)	106 (26.9)	91 (86.6)	0.75 (0.30, 1.90)	105 (26.9)	96 (93.9)	0.44 (0.10, 1.89)
50+%	232 (51.6)	185 (80.0)	1.00	232 (51.9)	208 (89.2)	1.00	230 (51.9)	225 (97.4)	1.00
Use of U.S. MEC in practice[d]									
Yes	261 (58.2)	220 (85.0)	1.00	259 (57.6)	229 (89.5)	1.00	256 (57.4)	244 (95.3)	1.00
No	138 (41.8)	103 (73.7)	0.40 (0.21, 0.77)	141 (42.5)	123 (86.0)	1.11 (0.47, 2.64)	140 (42.6)	132 (93.7)	1.17 (0.33, 4.12)

CI confidence interval, *COC* combined oral contraceptive, *DMPA* depot medroxyprogesterone acetate, *MEC* Medical Eligibility Criteria for Contraceptive Use, *OR* odds ratio, *VTE* venous thromboembolism

[a] Unweighted numerators and weighted percentages; percentages may not sum to 100 due to rounding and/or missing data

[b] Adjusted for all factors shown in table, region of practice, and gender

[c] A family planning service was defined as any service related to postponing or preventing pregnancy. This may include a medical examination related to provision of a method, contraceptive counseling, method prescription, or supply visits. A patient may receive a family planning service even if the primary purpose of the visit is not for contraception

[d] Categorized as “yes” if respondent reported U.S. MEC as “important” or “minor” source of recommended contraceptive practices or if they reported use of any U.S. MEC materials