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Primary Care Utilization After Pregnancies Complicated by Hypertension and Diabetes: An Analysis of the Medical Expenditure Panel Survey From 2016-2022

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A B S T R A C T

Background: Primary care after pregnancy allows for cardiovascular risk factor modification amidst rising rates of cardiometabolic complications in pregnancy. However, postpartum primary care utilization is understudied, with few national studies among the privately insured. In response to updated professional guidelines and expanded insurance access, we conducted a nationally representative, multipayer study among privately and publicly insured individuals with cardiometabolic complications to explore primary care utilization after pregnancy.
Methods: Using Medical Expenditure Panel Survey (MEPS) data from 2016 to 2022, we conducted a retrospective cohort study examining primary care and other health care utilization (obstetrics/gynecology [OB/GYN], emergency room [ER], hospitalizations) after pregnancy among individuals with hypertension, pregestational diabetes, or gestational diabetes, which we collectively defined as "medically complicated pregnancy." We used multivariable regression models to test for differences among individuals with medically complicated and uncomplicated pregnancy.
Results: Among 696 postpartum individuals, 13% had a medically complicated pregnancy. In the 1 year after pregnancy, 33.3% had one or more primary care visits and 58.2% had any OB/GYN visits. Individuals with medically complicated pregnancies had a significantly higher number of ER visits by .2 visit (95% confidence interval [.1, .3]); there were no other significant differences in primary care or other health care utilization in the postpartum year.
Conclusion: Primary care utilization in the year after pregnancy remains suboptimal, even among individuals with medically complicated pregnancy. These findings highlight a key missed opportunity after pregnancy for cardiovascular risk factor modification and underscore the need for interventions aimed at improving postpartum transitions to primary care.

Maternal deaths in the United States are now *less* likely to be from direct complications of childbirth (e.g., hemorrhage) and *more* likely to be from cardiovascular conditions associated with chronic disease (Creanga et al., 2017; Neggers, 2016). Chronic diseases such as hypertension, type 2 diabetes, and obesity are rising among reproductive-aged individuals and increase their risk for pregnancy complications such as preeclampsia, placental abruption, and preterm birth (Admon et al., 2017; Blue Cross Blue Shield Association, 2020; Bruno et al., 2022; Cameron et al., 2022; Shah et al., 2021). Conversely, among individuals

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without chronic disease, some adverse pregnancy outcomes (APOs) (i.e., preeclampsia, preterm birth, gestational diabetes) increase likelihood for development of chronic disease (Isiadinso & Wenger, 2017; Khan et al., 2023; Stuart et al., 2022; Vounzoulaki et al., 2020). Half of maternal deaths occur in the year after pregnancy, and individuals with cardiometabolic complications either from chronic disease (e.g., hypertension, type 2 diabetes) or APOs (e.g., gestational diabetes) are at highest risk (Declercq & Zephyrin, 2020). Such cardiometabolic complications not only increase pregnancy-related risk, but also increase the likelihood of incident cardiovascular disease over the life course, which is the most common cause of death among individuals in the United States and globally (Petrie et al., 2018; Veerbeek et al., 2015; Vounzoulaki et al., 2020; Wu et al., 2017).

Because of the strong links between pregnancy complications and long-term cardiovascular health, various bodies—including the American College of Obstetricians and Gynecologists (ACOG), the Society for Maternal-Fetal Medicine, and the American Heart Association—have published recommendations for ongoing care to address maternal cardiovascular risk after pregnancies with cardiometabolic complications (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018; Lewey et al., 2024; Obstetric Care Consensus No. 8: Interpregnancy Care, 2019; Parikh et al., 2021). Primary care ideally addresses the need for chronic disease management and cardiovascular risk factor modification after pregnancy through lifestyle modification and medical management (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018; Attanasio et al., 2023). However, regional studies on diverse populations, and a few national studies, all focused on privately insured populations, have found primary care utilization after pregnancy to be low (Bellerose et al., 2022; Bennett et al., 2014; Bernstein et al., 2017; D'Amico et al., 2023; Gemkow et al., 2022; Lewey et al., 2020; Medicaid and CHIP Payment and Access Commission, 2018). Even among individuals with chronic disease, the highest estimate of primary care engagement within 6 to 12 months after pregnancy is 67% (Bennett et al., 2014), and other estimates are substantially lower (Bernstein et al., 2017; D'Amico et al., 2023; Gemkow et al., 2022; Lewey et al., 2020). In recent years, several policy changes have been enacted to improve insurance access after childbirth, which is a major predictor for primary care utilization in the year after pregnancy (Gemkow et al., 2022; KFF, 2021; 2026a). The Affordable Care Act (ACA) of 2010 offered new coverage options for those without employer-sponsored health insurance by expanding Medicaid coverage to almost all adults with incomes up to 138% of the federal poverty level, a change that has been adopted by 41 states (including the District of Columbia) as of 2026 (KFF, 2026a). Furthermore, nearly all states have now extended Medicaid coverage for a full year postpartum (instead of allowing it to expire after 60 days), an option that first became available as part of the Families First Coronavirus Response Act of 2020 to address uninsurance and coverage interruptions (KFF, 2021, 2026b). In view of updated professional guidelines and expanded insurance access after pregnancy, there is a need for a nationally representative study among privately and publicly insured individuals with cardiometabolic complications to explore their primary care utilization after pregnancy.

In this study, we examine primary care and other health care utilization (OB/GYN visits, ER visits, and hospitalizations) after pregnancy among individuals with self-reported diagnoses of hypertension and/or diabetes from 2016 to 2022. We collectively define the presence of cardiometabolic complications, including hypertension, pregestational diabetes, and/or gestational diabetes during pregnancy as "medically complicated pregnancy." We then compare primary care and other health care utilization after pregnancy among individuals with medically complicated pregnancy to those without these cardiometabolic complications and estimate annual trends over time.

Materials and Methods

Data

This study used data from the 2016–2022 Medical Expenditure Panel Survey (MEPS), available from the Agency for Healthcare Research and Quality (AHRQ). MEPS data were collected through nationally representative samples of overlapping panels, with respondents followed for a 2-year period (Agency for Healthcare Research and Quality, n.d.a). Respondents were surveyed through a combination of computer-assisted personal and video interviewing as well as self-administered paper and web questionnaires on topics related to demographic characteristics, health status, diagnoses, and care use. We used the publicly available deidentified survey data. The study was deemed Not Human Subjects Research by the primary author's institutional review board.

Sample Selection

We identified all postpartum individuals based on hospitalizations with a listed reason of "giving birth to a baby." As this birth could have occurred at any point within a respondent's 2-year survey period, we limited the study sample to postpartum individuals with at least 12 months of data after childbirth. We identified medically complicated pregnancies based on hypertension, pregestational diabetes, or gestational diabetes that occurred by the respondent's age at childbirth (listed in Appendix Table 1). During survey completion, individuals were asked to self-report if they had ever been told by a doctor or health professional that they had high blood pressure or diabetes. We were unable to identify hypertensive disorders of pregnancy or additional pregnancy complications due to discontinuation in 2008 of the Pregnancy Detail, which included details such as pregnancy complications, mode of childbirth, and birthweight, and other limitations of the MEPS dataset (Mitchell et al., 2023).

Definition of Outcomes and Key Measures

Our primary outcome for this study was primary care utilization after pregnancy. Secondary outcomes included other health care utilization (OB/GYN visits, office-based or outpatient visits, emergency room [ER] visits, and hospitalizations). We identified primary care utilization by visits to doctors with a specialty in family practice, general practice, or internal medicine. OB/GYN visits were all visits with an OB/GYN provider, including comprehensive postpartum visits, postoperative visits, and noncomprehensive visits for screening, treatment, or monitoring indicators such as blood pressure or mood. Office-based or outpatient visits were defined as visits to medical providers in office or outpatient settings excluding primary care and OB/GYN (e.g., urgent care, dermatology). ER visits were

defined as visits to the emergency department, and hospitalizations were defined as hospital inpatient stays. Outcomes were measured as both the percentage of the sample having any visits of that type as well as the number of visits of that type. We examined outcomes in the 12 months (1 year) after childbirth, also known as the postpartum year. We estimated weighted annual trends in the overall percentage of the sample who had any primary care use within 12 months after childbirth during the 2016–2022 study period. We also examined OB/GYN visits within 3 months after childbirth due to ACOG recommendations for a comprehensive postpartum visit within 12 weeks after childbirth (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018).

We included the following demographic and other variables: maternal age at childbirth (mean age in years); marital status (unmarried, married); educational attainment (high school or less, more than high school); race and ethnicity (non-Hispanic Asian or Pacific Islander, non-Hispanic Black, non-Hispanic white, non-Hispanic other race, Hispanic); family size (mean number of family members); federal poverty level for each year (<100% of poverty, 100–199% of poverty, 200–399% of poverty, 400% of poverty or greater); region (Northeast, Midwest, South, West); insurance status at childbirth (uninsured, private coverage, public coverage); and other cardiometabolic comorbidities (identified by International Classification of Diseases, 10th Revision codes: E66 overweight or obesity, R73 elevated blood glucose level, E78 dyslipidemia, M32 lupus, M06 rheumatoid arthritis, L40 psoriasis, M45 ankylosing spondylitis, M34 systemic sclerosis [scleroderma], M08 juvenile arthritis, I20 angina pectoris, I21 myocardial infarction, I63 and I64 stroke, I24 and I25 ischemic heart disease, G45 transient ischemic attack). These comorbidities are risk factors for or evidence of cardiovascular disease (Akhtari et al., 2024; Alhusain & Bruce, 2013; Garshick et al., 2021; Isiadinso & Wenger, 2017).

Statistical Analyses

We described the survey-weighted demographic characteristics of the study sample, including age, marital status, educational attainment, race and ethnicity, federal poverty level, region, insurance status, comorbidities, and family size. We calculated the weighted visit rates and visit numbers for postpartum care outcomes overall and stratified by medically complicated pregnancy. We estimated weighted multivariable linear regression models with medically complicated pregnancy status as the primary independent variable to estimate the adjusted differences in visits by medically complicated pregnancy status, adjusting for age, insurance at childbirth, and race and ethnicity. All analyses were weighted using MEPS-identified survey weights for data to adjust for survey nonresponse and to provide national estimates of the U.S. civilian noninstitutionalized population (Agency for Healthcare Research and Quality, n.d.b). There was no data missingness, as MEPS applies editing and imputation methods to address missing data (Stagnitti et al., 2018).

Supplemental Analyses

We present the frequencies of each medically complicated pregnancy type in the appendix (Appendix Table 1). In supplemental analyses, we stratified health care utilization in the 12 months after pregnancy by type of medically complicated pregnancy condition (Appendix Table 2). As a sensitivity analysis, we estimate unadjusted and adjusted Poisson regression models for all count outcomes in the postpartum year to examine differences in outcomes by medically complicated pregnancy status (Appendix Table 3). We assessed weighted annual trends in the prevalence of medically complicated pregnancy diagnoses overall and stratified by insurance status, race and ethnicity, and region (Appendix Figure 1).

Results

A total of 696 individuals with a full year of postpartum data during the study period, representing a weighted total of 7,687,631 pregnancies nationwide, had an average maternal age of 29.9 overall (Table 1). Among the cohort, 57% of respondents self-identified as non-Hispanic white, 11% as non-Hispanic Black, and 8% as Asian; 21% self-identified as Hispanic. More than 70% of individuals had more than a high school education and 72% were married. The overall average household size was four. Nearly two-thirds lived at or below 400% of the federal poverty level and approximately one-third were publicly insured at childbirth. By geographic distribution, 37% lived in the South, 23% in the Midwest, 25% in the West, and 16% in the Northeast.

Across all 696 postpartum individuals, 13% ($n = 90$) had medically complicated pregnancies based on presence of hypertension, pregestational diabetes, and/or gestational diabetes. We did not find significant differences in demographics between individuals with medically complicated versus uncomplicated pregnancies for maternal age, education, federal poverty level, insurance at childbirth, or family size. Individuals with uncomplicated pregnancies had significantly higher rates of being married and living in the West. Significantly higher shares of individuals with medically complicated pregnancies self-identified as Black compared with individuals with uncomplicated pregnancies (25.2% vs. 9.4%). Five percent of the sample overall had other cardiometabolic comorbidities, with no significant difference in prevalence of other cardiometabolic comorbidities between the medically complicated and uncomplicated cohorts.

Primary Care and Other Health Care Utilization in the Postpartum Year

Primary Care Utilization: Of the 696 postpartum individuals, 33.3% (95% confidence interval [CI] [29.8, 36.8]) of individuals had any primary care visit in the year after childbirth (Table 2). Herein, the proportion of individuals who accessed care reflects how many received any visits, whereas the average number of visits indicates how frequently care was used. Among our study sample, one-third of respondents received any primary care in the postpartum year; however, respondents only received .7 visits (95% CI [.6, .8]) on average during this period. In the postpartum year, the mean month of first primary care visit after childbirth was 5.2 months postpartum (Table 2) and the median month of first primary care visit was 5 months postpartum (Appendix Table 4). Individuals with any diabetes had a mean month of first primary care visit (mean postpartum month 8.8, 95% CI [6.0, 11.6]) that was significantly later in the postpartum period compared with individuals with any hypertension (mean postpartum month 4.2, 95% CI [2.8, 5.6]) or individuals without medically complicated pregnancies (mean postpartum month 5.2, 95% CI [4.8, 5.7]) (Appendix Table 2).

Table 1
Characteristics of Women With Delivery, Overall and by Medically Complicated (Hypertension, Pregestational Diabetes, or Gestational Diabetes) Versus Uncomplicated Pregnancy Diagnosis: Medical Expenditure Panel Survey, 2016–2022

Category	Overall ($n = 696$)	Uncomplicated Pregnancy ($n = 606$)	Complicated Pregnancy ($n = 90$)	Difference
Maternal age				
Age in years (mean)	29.9 [29.5, 30.3]	30.0 [29.6, 30.5]	29.3 [28.1, 30.5]	−.7 [−2.3, .8]
Marital status				
Unmarried	28.5 [24.6, 32.9]	26.3 [22.3, 30.8]	44.3 [31.1, 58.3]	18.0* [3.6, 32.4]
Married	71.5 [67.1, 75.4]	73.7 [69.2, 77.7]	55.7 [41.7, 68.9]	−18.0* [−32.4, −3.6]
Education				
More than high school	71.1 [66.9, 75.0]	72.4 [67.9, 76.5]	62.2 [48.5, 74.2]	−10.1 [−23.7, 3.5]
High school or less	28.8 [24.9, 33.1]	27.6 [23.5, 32.1]	37.8 [25.8, 51.5]	10.2 [−3.5, 23.8]
Race/Ethnicity				
Asian/Pacific Islander, non-Hispanic	7.7 [5.4, 10.8]	8.2 [5.7, 11.8]	3.7 [0.9, 13.2]	−4.6 [−10.2, 1.1]
Black, non-Hispanic	11.4 [8.9, 14.4]	9.4 [7.0, 12.5]	25.2 [15.9, 37.5]	15.8** [4.8, 26.8]
Hispanic	20.9 [17.5, 24.7]	20.7 [17.2, 24.7]	22.1 [12.5, 36.0]	1.3 [−10.9, 13.5]
White, non-Hispanic	56.9 [52.2, 61.5]	58.3 [53.4, 63.2]	47.0 [33.2, 61.2]	−11.4 [−26.4, 3.6]
Other race, non-Hispanic	3.1 [1.9, 5.1]	3.3 [2.0, 5.4]	2.1 [0.5, 8.5]	−1.2 [−4.6, 2.2]
Federal poverty level				
<100% of poverty level	18.3 [15.3, 21.7]	17.4 [14.3, 21.1]	24.4 [15.5, 36.1]	7.0 [−3.8, 17.7]
100–199% of poverty level	19.3 [16.0, 23.1]	19.1 [15.7, 23.2]	20.3 [11.8, 32.7]	1.2 [−9.8, 12.1]
200–399% of poverty level	25.4 [21.5, 29.7]	25.2 [21.2, 29.8]	26.4 [16.2, 40.0]	1.2 [−11.5, 13.8]
≥400% of poverty level	37.0 [32.3, 42.0]	38.2 [33.2, 43.5]	28.9 [16.4, 45.8]	−9.3 [−25.0, 6.4]
Region				
Northeast region	15.5 [12.2, 19.3]	14.6 [11.4, 18.6]	21.5 [11.4, 36.9]	6.9 [−6.2, 20.0]
Midwest region	22.5 [18.9, 26.6]	22.7 [18.9, 26.9]	21.5 [11.6, 36.3]	−1.2 [−14.0, 11.6]
South region	37.3 [32.8, 42.1]	36.2 [31.4, 41.3]	45.1 [31.8, 59.1]	8.9 [−5.8, 23.5]
West region	24.7 [20.8, 29.0]	26.5 [22.2, 31.3]	11.9 [6.2, 21.7]	−14.6** [−23.3, −5.9]
Insurance at childbirth				
Uninsured at childbirth	2.7 [1.6, 4.6]	2.9 [1.7, 5.0]	1.3 [.4, 3.9]	−1.7 [−3.8, .5]
Private coverage at childbirth	64.9 [60.5, 69.1]	66.2 [61.4, 70.6]	56.2 [42.5, 69.1]	−9.9 [−24.1, 4.2]
Public coverage at childbirth	32.3 [28.3, 36.7]	30.9 [26.7, 35.5]	42.5 [29.9, 56.2]	11.6 [−2.4, 25.6]
Comorbidities				
No comorbidities	95.3 [93.0, 96.9]	95.9 [93.6, 97.4]	91.4 [77.8, 97.0]	−4.5 [−13.2, 4.3]
Any comorbidities	4.7 [3.1, 7.0]	4.1 [2.6, 6.4]	8.6 [3.0, 22.2]	4.5 [−4.3, 13.2]
Household				
Family size (mean]	4.0 [3.9, 4.1]	4.0 [3.9, 4.1]	3.9 [3.6, 4.2]	−.1 [−.5, .2]

Note: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Complicated pregnancy is defined by the presence of hypertension, pregestational diabetes, and/or gestational diabetes. Comorbidities identified by International Classification of Diseases, 10th Revision codes: E66 overweight or obesity, R73 elevated blood glucose level, E78 dyslipidemia, M32 lupus, M06 rheumatoid arthritis, L40 psoriasis, M45 ankylosing spondylitis, M34 systemic sclerosis (scleroderma), M08 juvenile arthritis, I20 angina pectoris, I21 myocardial infarction, I63 and I64 stroke, I24 and I25 ischemic heart disease, G45 transient ischemic attack.

Trends in Primary Care Utilization: Across the 2016–2022 study period, primary care visit completion in the 12 months after pregnancy steadily increased and peaked in 2018 at 38% before seeing a sharp decrease in 2020 (Figure 1). From 2020, visit completion started a recovery from 25% to the end of the study period at 33%. The rates for postpartum primary care completion did not significantly differ over the study period as CIs overlapped for all years.

Other Health Care Utilization: In the year after pregnancy, 58.2% (95% CI [54.5, 61.9]) had any OB/GYN visits (Table 2). Only 21.2% (95% CI [18.2, 24.2]) of individuals had both primary care and OB/GYN visits in the year after childbirth. Overall, 84.3% (95% CI [81.6, 87.0]) had any office-based or outpatient visits, 13.6% (95% CI [11.0, 16.1]) had any ER visits, and 3.5% (95% CI [2.1, 4.9]) had any hospitalization.

OB/GYN Visits Within 3 Months After Pregnancy: 50.9% (95% CI [47.2, 54.7]) had any OB/GYN visits, with .8 OB/GYN visits (95% CI [.7, .8]) on average in the 3 months after pregnancy (Table 2).

Adjusted Differences: There were no significant differences in primary care visits in the 12 months after pregnancy among individuals with medically complicated pregnancies compared with individuals with uncomplicated pregnancies (Figure 2). Individuals with medically complicated pregnancies had a significantly higher number of ER visits by .2 visits (95% CI [.1, .3]) in the year after pregnancy. We found no statistically significant difference between medically complicated and uncomplicated pregnancies with regard to their rates or numbers of visits for OB/GYN or any other health care utilization in the year after pregnancy.

Sensitivity Analyses

In sensitivity analyses using Poisson regression models for count outcomes during the 12 months after pregnancy, we found estimates comparable to those from the main models, with overlapping CIs across all outcomes (Appendix Table 3). However, unlike the primary models, the adjusted Poisson regression did not show a statistically significant difference in the number of ER visits for medically complicated pregnancies versus uncomplicated pregnancies (.8 visits; 95% CI [−.0, 1.6]).

When conducting analyses of primary care and other health care utilization in the 6 months after pregnancy, we found that most of the health care utilization that occurred in the postpartum year occurred in the first 6 months after pregnancy (Appendix Table 5; Appendix Figure 3).

Discussion

In this nationally representative study, we compared primary care and other postpartum health care utilization among

Table 2
Health Care Utilization in the Postpartum Year: Medical Expenditure Panel Survey, 2016–2022

Outcome	Overall ($n = 696$)	Uncomplicated Pregnancy ($n = 606$)	Complicated Pregnancy ($n = 90$)
Within 12 months after childbirth			
Mean month of first postpartum primary care visit	5.2 [4.8, 5.7]	5.3 [4.8, 5.7]	5.0 [3.6, 6.4]
Had any primary care visits	33.3 [29.8, 36.8]	34.1 [30.3, 37.9]	27.7 [18.3, 37.2]
Had any OB/GYN visits	58.2 [54.5, 61.9]	57.9 [53.9, 61.8]	60.4 [50.1, 70.7]
Had both primary care and OB/GYN visits	21.2 [18.2, 24.2]	21.0 [17.8, 24.3]	22.2 [13.5, 31.0]
Had any office-based or outpatient visits	84.3 [81.6, 87.0]	84.1 [81.2, 87.0]	85.7 [78.4, 93.1]
Had any ER visits	13.6 [11.0, 16.1]	12.6 [9.9, 15.2]	20.6 [12.0, 29.1]
Had any hospital stays	3.5 [2.1, 4.9]	3.1 [1.7, 4.5]	6.4 [1.2, 11.5]
Number of primary care visits	.7 [.6, .8]	.7 [.6, .8]	.6 [.4, .9]
Number of OB/GYN visits	1.1 [1.0, 1.2]	1.1 [1.0, 1.2]	1.3 [.9, 1.6]
Total number of primary care and OB/GYN visits	1.8 [1.6, 2.0]	1.8 [1.6, 1.9]	1.9 [1.4, 2.4]
Number of office-based or outpatient visits	5.4 [4.7, 6.1]	5.4 [4.6, 6.2]	5.7 [3.4, 7.9]
Number of ER visits	.2 [.1, .2]	.1 [.1, .2]	.4 [.1, .6]
Number of hospital stays	.0 [.0, .1]	.0 [.0, .0]	.1 [.0, .1]
Within 3 months after childbirth			
Had any OB/GYN visits, %	50.9 [47.2, 54.6]	50.7 [46.7, 54.7]	52.5 [42.0, 63.0]
Number of OB/GYN visits	.8 [.7, .8]	.7 [.7, .8]	.9 [.7, 1.2]

Abbreviations: ER, emergency room; OB/GYN, obstetrics/gynecology.
Note: Complicated pregnancy is defined by the presence of hypertension, pregestational diabetes, and/or gestational diabetes.

individuals with and without the cardiometabolic complications of hypertension, pregestational diabetes, and/or gestational diabetes, which we collectively defined as "medically complicated pregnancy." We found primary care utilization after pregnancy remained low among those both with and without cardiometabolic complications, with only one-third of individuals having primary care in the postpartum year. Only about half of individuals completed a postpartum/obstetric care visit in the 3 months after pregnancy.

Primary care visit attendance after pregnancy remained low in the year after pregnancy among individuals with and without medically complicated pregnancy across all demographics. From 2016 to 2022, primary care utilization within 1 year after pregnancy ranged from 25% to 38%. To our knowledge, this study represents the first nationally representative multipayer study of publicly and privately insured individuals exploring primary care utilization after pregnancy. Our work expands on national work exploring primary care after pregnancy among individuals with hypertension, pregestational diabetes, and/or gestational diabetes, which suggests 6-month follow-up rates exclusively among the privately insured ranging from 6–22% and 1 year follow-up rates of 14–67% (Bernstein et al., 2017; D'Amico et al., 2023). Our findings also align with existing literature that suggests that when compared with healthy individuals, those with pregnancies characterized by elevated cardiometabolic risk have similar rates of preventive health care utilization after pregnancy, a salient missed opportunity for cardiovascular risk factor modification (Bennett et al., 2011; Bryant et al., 2016). Despite updated professional guidelines and policy changes that have sought to address uninsurance and postpartum coverage interruptions (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018; KFF, 2021; Mitchell, 2021), primary care after pregnancy remains suboptimal. Our findings support the existence of multifactorial

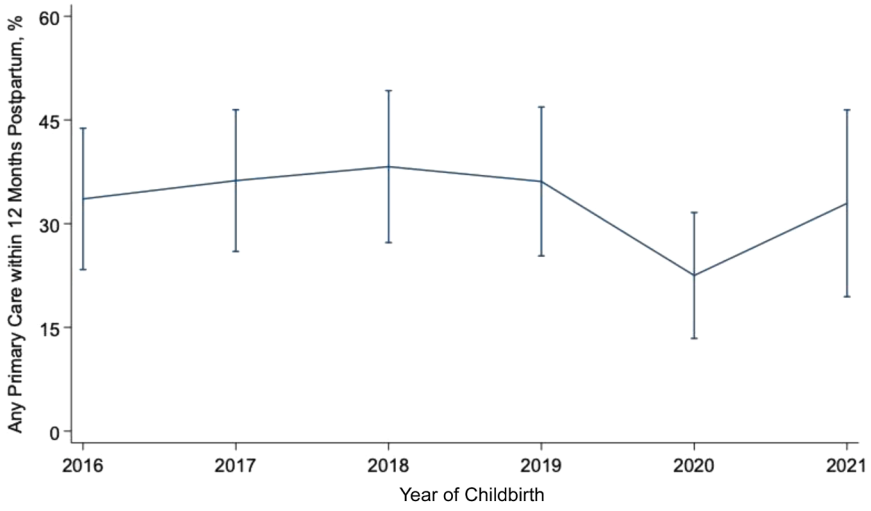

Figure 1. Trends in any primary care visits within 12 months postpartum, by childbirth year: Medical Expenditure Panel Survey, 2016–2022.

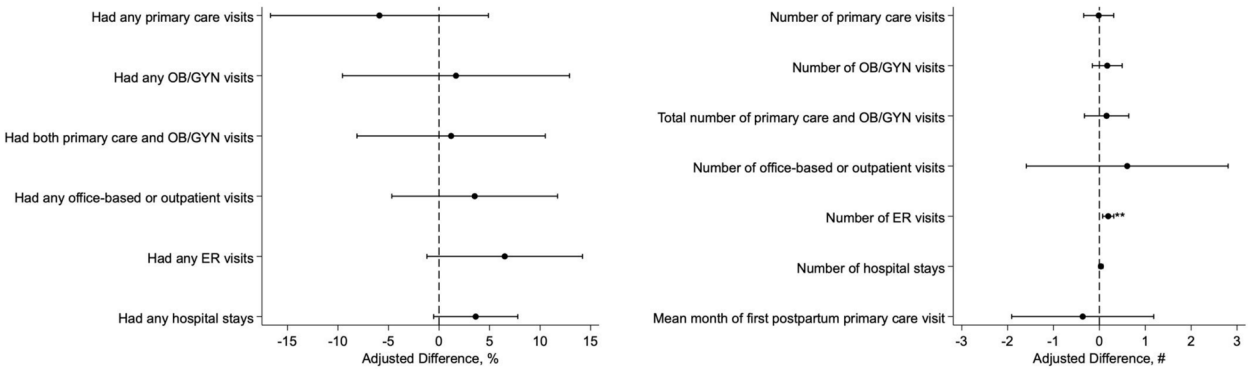

Figure 2. Adjusted differences in health care utilization in the postpartum year by medically complicated pregnancy status: Medical Expenditure Panel Survey, 2016–2022, Notes: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Adjusted models include covariates for age, insurance at childbirth, and race and ethnicity. All outcomes are in the 12 months postpartum.

systemic barriers to postpartum primary care transitions (Bellerose et al., 2022; Davis et al., 2025), affecting individuals of all demographic groups, and leaving those with elevated cardiometabolic risk most vulnerable to unmediated disease progression.

Barriers to primary care utilization after pregnancy have been identified at the individual, provider, institutional, and societal levels (Davis et al., 2025; Ditosto et al., 2023). Individuals may navigate challenges with childcare and health-related social needs such as transportation, financial instability, and health literacy, which disproportionately impact populations that bear a greater burden of cardiometabolic risk factors (Centers for Medicare and Medicaid Services, 2025; Davis et al., 2025; Ditosto et al., 2023). Many do not receive information from their care team about their cardiovascular risk factors, long-term sequelae over the life course, and the benefits of engaging with primary care (Cohen & Daw, 2021; Davis et al., 2025). Lack of communication between obstetrics and primary care may preclude a "warm handoff" to primary care after pregnancy (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018; Cohen & Daw, 2021). Furthermore, institutions may lack the infrastructure for coordination of care and timely access to primary care (Davis et al., 2025; Pettus et al., 2023). In view of our findings, greater investment is needed in implementing effective interventions to improve primary care engagement in the postpartum year. Behavioral economics interventions, postpartum transition clinics, and use of dedicated schedulers are among recent initiatives that have shown promise to improve care transitions from obstetrics to primary care for those at increased risk for adverse outcomes (Celi et al., 2019; Clapp et al., 2024; Green et al., 2023). Such interventions can be applied to increase postpartum primary care uptake, and thus allow for risk factor modification and improved long-term cardiovascular outcomes among individuals with elevated cardiometabolic risk.

On average, the first primary care visit occurred at 5 months after childbirth. Individuals with any diabetes had a mean month of first primary care visit that was significantly later in the postpartum period compared with that of individuals with any hypertension or individuals without medically complicated pregnancies. Prior studies show that chronic hypertension, pregestational diabetes, and gestational diabetes are predictive of primary care visit completion within 6 to 12 months postpartum when compared with individuals without these conditions (D'Amico et al., 2023; Lewey et al., 2020). Our findings add to current literature by quantifying when postpartum individuals begin to utilize primary care, both overall and stratified by the presence of medically complicated pregnancy. Although individuals with chronic diseases (e.g., hypertension, pregestational diabetes) are more likely to engage with primary care than those with pregnancy-specific conditions such as gestational diabetes (D'Amico et al., 2023; Lewey et al., 2020), individuals with pregestational diabetes may receive subspecialty care from endocrinology, particularly during the pregnancy and postpartum period (Wyckoff et al., 2025). These variations in care utilization patterns may explain the earlier timing of postpartum primary care engagement by individuals with hypertension compared with those with diabetes. Our findings on time to primary care utilization after childbirth can be used to inform future interventions to support postpartum transitions to primary care.

Compared with individuals without medically complicated pregnancies, individuals with medically complicated pregnancies had a higher number of ER visits but did not have more primary care visits following pregnancy. Our study builds on prior work by underscoring these findings in a nationally representative sample of individuals with hypertension and diabetes (Bennett et al., 2014; Lewey et al., 2020). Pregnant individuals with elevated cardiometabolic risk have higher rates of preeclampsia, fetal macrosomia, assisted vaginal delivery, and cesarean sections, which can complicate the immediate postpartum period and lead to more frequent emergency department utilization (Blue Cross Blue Shield Association, 2020; Mehta et al., 2023; Mydam et al., 2023). Such pregnancies are also associated with other contributors to maternal mortality, such as co-occurring mental health comorbidities in the postpartum year (Chen et al., 2025; Main et al., 2015). Unfortunately, reactive treatment in response to elevated risk, reflected by more frequent emergency department visits in the 3 weeks after childbirth, often fails to result in long-term care utilization for risk factor modification (Bernstein et al., 2017; Cohen & Daw, 2021; Obstetric Care Consensus No. 8: Interpregnancy Care, 2019). This represents a missed opportunity to prioritize preventive care.

In our study, half of individuals completed a postpartum/obstetric care visit in the 3 months after pregnancy, which is consistent with known suboptimal rates of postpartum obstetric care (ACOG Committee Opinion No. 736: Optimizing

Postpartum Care, 2018). The postpartum visit serves key functions for those with increased cardiovascular risk, including blood pressure management, diabetes-related care, discussion of long-term cardiometabolic implications for chronic disease, contraceptive guidance, and transitions to primary care (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018; D'Amico et al., 2023; Obstetric Care Consensus No. 8: Interpregnancy Care, 2019). However, postpartum obstetric care rarely extends beyond 6–12 weeks after childbirth, reemphasizing the need for primary care providers' role in longer term care of chronic conditions (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018). In light of high postpartum maternal mortality, updated ACOG guidelines recommend obstetric provider contact within 3 weeks postpartum and a comprehensive visit within 12 weeks (ACOG Committee Opinion No. 736: Optimizing Postpartum Care, 2018). However, provider and health system barriers must be addressed to accommodate these recommendations, including expanded outpatient infrastructure for earlier and more frequent postpartum visits and increased staffing (Pettus et al., 2023). Recent work has explored alternative models for increasing postpartum care utilization, including dyadic maternal-infant care, telehealth, and home-based visit models, with most of these interventions showing improved postpartum visit attendance compared with control groups in quasi-experimental studies (Arias et al., 2022; Bose Brill et al., 2022; Fauth et al., 2026; Rokicki et al., 2024; Wainwright et al., 2025). Because primary care referrals are sometimes made during the postpartum visit, increasing obstetric postpartum care engagement represents a step toward improving primary care after pregnancy.

Implications for Practice and/or Policy

Despite policy changes that have sought to address uninsurance and postpartum coverage interruptions, primary care after pregnancy remains low. Our findings support the existence of multifactorial systemic barriers to primary care after pregnancy that affect individuals of all demographic groups, leaving those with elevated cardiometabolic risk most vulnerable to unmediated disease progression. Greater investment is needed in identifying, testing, and implementing effective interventions to improve primary care engagement in the postpartum year.

Limitations

There are several limitations to this study that should be acknowledged. First, we relied on survey data, which could be subject to recall and response bias. Second, pregnancy occurred at various intervals in the period of 2-year follow-up captured in the MEPS dataset, limiting our ability to access consistent 1 year postpartum follow-up information on health care utilization. Dates such as childbirth date and health care utilization were based on month estimates instead of specific dates, due to the deidentified nature of the dataset. Visit types were assumed based on provider specialty and we were unable to differentiate or account for telehealth visit utilization. Third, the size of our sample did not allow for in-depth racial and socioeconomic stratification. Fourth, our study reflects partial overrepresentation of privately insured individuals (64%) when compared with rates of privately insured births (52%) in the general population (Valenzuela & Osterman, 2023). Fifth, while reporting on regional differences in the dataset, we lacked state-level identifiers to comment on the implications of state-level postpartum policy implementation. Sixth, while we provided reports on cardiometabolic risk factors including hypertension, pregestational diabetes, and/or gestational diabetes, we were unable to identify and distinguish hypertensive disorders of pregnancy or additional pregnancy complications due to discontinuation of the Pregnancy Detail in 2008 and other limitations of the MEPS dataset (Mitchell et al., 2023). Inclusion of all hypertensive disorders of pregnancy into the "medically complicated pregnancy" group would likely have resulted in higher rates of medically complicated pregnancies and higher ED utilization and hospitalization in the medically complicated pregnancies group, as patients with hypertensive disorders of pregnancy more frequently require ED care and rehospitalization.

Conclusion

Primary care utilization after pregnancy remains low for individuals of all demographics, including those with cardiometabolic complications. Suboptimal rates of primary care in the year after pregnancy reflect a key missed opportunity to improve maternal cardiovascular health. Despite expanded insurance access and updated professional guidelines for ongoing care to address maternal cardiovascular risk after pregnancies with cardiometabolic complications, additional interventions are needed to support postpartum transitions to primary care.

CRediT authorship contribution statement

Ceshae Harding: Writing – review & editing, Writing – original draft, Supervision, Project administration, Conceptualization. **Erica Eliason:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Natalie Cameron:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **S. Michelle Ogunwole:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Wendy Bennett:** Writing – review & editing, Methodology, Conceptualization. **Clarissa Diamantidis:** Writing – review & editing, Conceptualization. **David Stamilio:** Writing – review & editing, Conceptualization. **Alain Bertoni:** Writing – review & editing, Conceptualization. **Ejiro Obioma:** Writing – review & editing, Conceptualization. **Deepak Palakshappa:** Writing – review & editing, Methodology, Conceptualization.

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Supplementary Data

Supplementary data to this article can be found at https://doi.org/10.1016/j.whi.2026.05.001.

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Author Descriptions

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