

Disparities in postpartum contraceptive use among immigrant women with restricted Medicaid benefits



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BACKGROUND: The Emergency Medicaid program offers restricted Medicaid benefits for people who meet the same financial eligibility criteria as Traditional Medicaid recipients but do not meet the citizenship requirements for enrollment in Traditional Medicaid. By federal law, Emergency Medicaid covers care for life-threatening emergencies or a hospital admission for childbirth. No prenatal or postpartum care is covered. Most of the women enrolled in Emergency Medicaid are Latina.

OBJECTIVE: We assessed postpartum visits and receipt of postpartum contraception and compared the outcomes for Emergency (restricted benefit) Medicaid recipients with those of Traditional (full-benefit) Medicaid recipients in Oregon and South Carolina, 2 states with similar-sized immigrant populations.

STUDY DESIGN: We conducted a retrospective cohort study using linked Medicaid claims and birth certificate data of live births covered by Medicaid (Traditional and Emergency) between January 1, 2010 and September 30, 2017, in Oregon and South Carolina. Our analysis was at the individual level. Primary outcomes were postpartum visit attendance and receipt of postpartum contraception within 2 months. We examined differences in demographic and delivery characteristics by Medicaid type. If women received postpartum contraception, we compared the timing of receipt (immediate postpartum, ≤ 1 month, 1–2 months, and 2–6 months after delivery) by the type of Medicaid. Among women using contraception, we described the type of contraceptive received at each time point, stratified by Medicaid type. Associations between Medicaid type (Traditional vs Emergency) and postpartum visit attendance and contraception use were assessed using adjusted absolute predicted probabilities from logistic regression models. We ran models for the entire cohort and conducted a subanalysis restricted to only Latina women.

RESULTS: Our study included 375,544 live births to 288,234 women, with 12.7% of births among Emergency Medicaid recipients. Women enrolled in Emergency Medicaid tended to be older (age >35 years; 18.1% vs 7.2%; $P<.001$) and were more likely to be multiparous (76.8% vs 60.8%; $P<.001$) and Latina (80.3% vs 9.5%; $P<.001$) than their Traditional Medicaid peers. Among women enrolled in Emergency Medicaid, the probability of having a postpartum visit was 6.1% (95% confidence interval, 5.9–6.4) compared with 58.8% (95% confidence interval, 58.6–58.9) for women covered by Traditional Medicaid. After 6 months following delivery, 97.6% of Emergency Medicaid recipients had no evidence of contraceptive use compared with 55.6% of Traditional Medicaid enrollees ($P<.001$). In our adjusted model, Emergency Medicaid recipients were also significantly less likely to receive postpartum contraception than Traditional Medicaid enrollees (1.9% vs 35.5%; 95% confidence interval, [1.8–2.1] vs [35.4–35.7]). We examined the role that race may play in postpartum contraceptive use by conducting a subanalysis restricted to Latina women only. Latinas with births covered by Emergency Medicaid had a 1.9% (95% confidence interval, 1.8–2.0) adjusted probability of postpartum contraception use within 2 months compared with 39.8% (95% confidence interval, 38.7–39.9) among Latinas enrolled in Traditional Medicaid.

CONCLUSION: Women enrolled in Emergency Medicaid experience large disparities in postpartum care and contraceptive use. Policies that restrict Medicaid coverage following delivery exacerbate inequities in postpartum care, potentially leading to worse health outcomes for low-income immigrants and their children.

Key words: Postpartum, immigrants, contraception, Emergency Medicaid

Introduction

The postpartum period is critical for both maternal and newborn health.¹

The weeks following birth are a time of rapid physiological change for mother and infant, setting the stage for long-

term health.¹ Comprehensive postpartum care includes a full assessment of the woman's physical, social, and

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AJOG Global Reports at a Glance

Why was this study conducted?

This study aimed to understand how differences in the type of Medicaid (Traditional vs Emergency) are associated with postpartum care attendance and contraceptive use.

Key findings

Emergency Medicaid recipients were significantly less likely to both attend a postpartum visit (6.1% vs 58.8%) and receive postpartum contraception (1.9% vs 35.5%) than Traditional Medicaid enrollees.

What does this add to what is known?

Disparities in postpartum contraception use for women with births covered by Emergency Medicaid are explained by the restricted healthcare benefits and not by racial or ethnic differences; Latinas enrolled in Traditional Medicaid are nearly 20-fold more likely to receive an effective form of postpartum contraception than their Latina Emergency Medicaid peers.

psychological well-being, including, ideally, a discussion of birth spacing recommendations and opportunities to provide contraceptive information and services.¹ However, many women do not receive postpartum care, which may be because of loss of health insurance coverage postpartum.^{2–7}

One population that may be at particular risk for suboptimal postpartum care is low-income immigrant women. These women are often covered by a program known as “Emergency Medicaid.” Emergency Medicaid recipients meet the same financial eligibility criteria as full-benefit or Traditional Medicaid recipients but do not meet the citizenship requirements for enrollment in Traditional Medicaid.⁸ Under federal law, recent (<5 years) and unauthorized immigrants are only eligible for Emergency Medicaid.⁸ Emergency Medicaid is a restricted benefit package that includes coverage for life-threatening illnesses and hospitalization for childbirth, but no prenatal or postpartum care, including contraception.⁸ In contrast, Traditional Medicaid covers prenatal, intrapartum, and postpartum care, including full coverage for all approved contraceptive methods.

Most Emergency Medicaid recipients are Latina and female, and more than 80% of Emergency Medicaid spending is for obstetrical care.^{8,9} Latinas also experience significant disparities in

contraceptive use.^{10–12} We hypothesized that Emergency Medicaid may exacerbate known disparities in contraceptive use. The purpose of this study was to understand the differences in postpartum care among women whose births were covered by the restricted benefit Emergency Medicaid program vs the Traditional, full-benefit program using data from Oregon and South Carolina. We hypothesized that women covered by Emergency Medicaid would be less likely to have a postpartum visit or receive postpartum contraception than women in Traditional Medicaid.

Materials and Methods
Study population and data

We conducted a retrospective cohort study using linked Medicaid claims and birth certificate data from Oregon and South Carolina from January 1, 2010 to March 31, 2018. Our study sample was live births covered by Medicaid (Traditional and Emergency Medicaid) between January 1, 2010 and September 30, 2017. Women were followed for 6 months postpartum to evaluate postpartum care and contraceptive use. Women enrolled in Traditional Medicaid received a minimum of 60 days of postpartum coverage. Our study was restricted to singleton births with gestational ages between 23 and 44 weeks to women aged 15 through 44 years (Figure).

Data were obtained under data use agreements with the South Carolina Revenue and Fiscal Affairs Office, the Oregon Health Authority, and the vital records departments in both states. The study was approved by the institutional review board at the Oregon Health & Science University. We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines.¹³

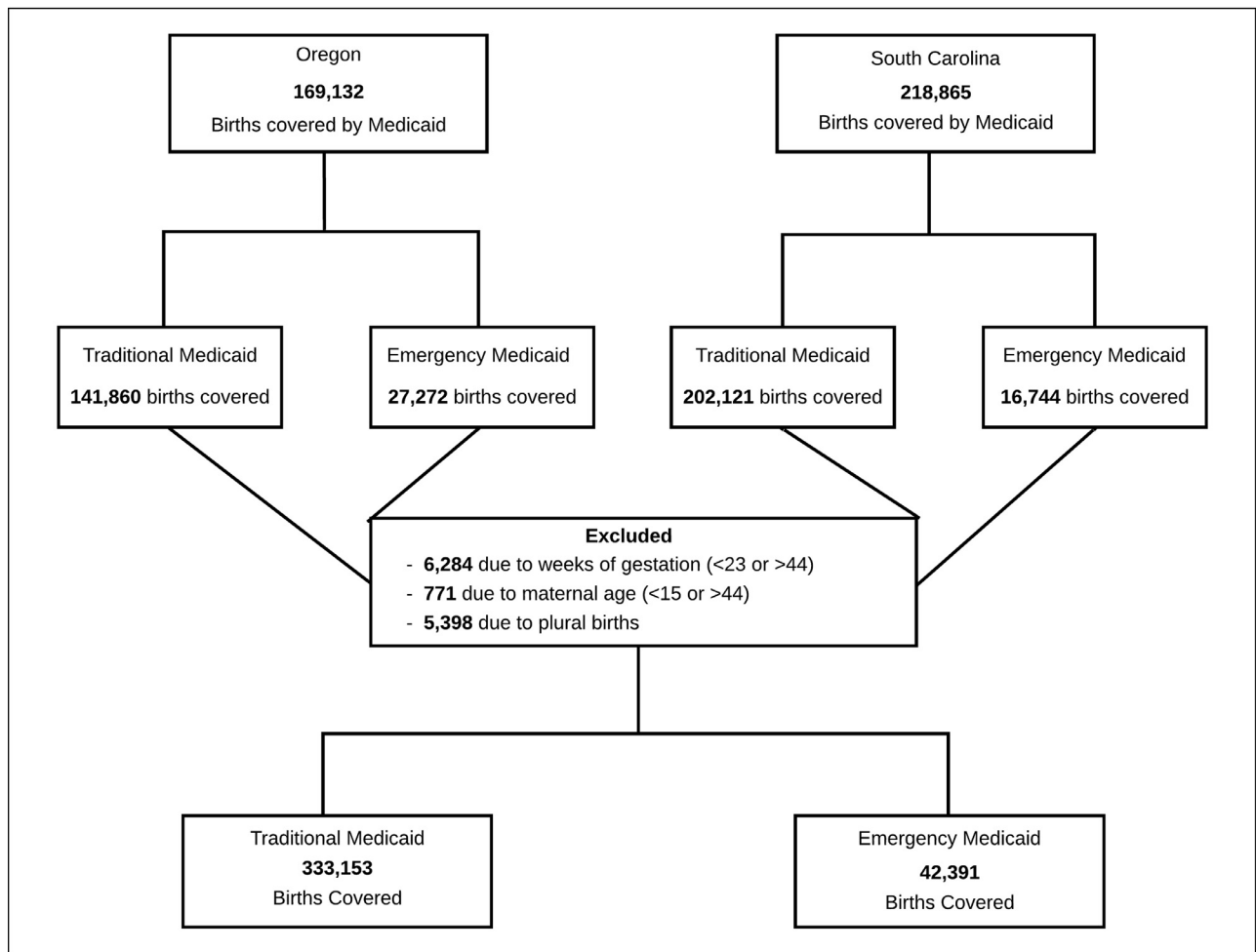
Variables

Our outcomes were the presence of any postpartum visit and the receipt of postpartum contraception within 60 days. We calculated the timing of the postpartum visit as the difference in days between the date of the first postpartum visit claim and the date of delivery. Birth and date of delivery were identified using a previously published algorithm.⁹ We categorized visit timing as occurring within 1 month, >1 month to 2 months, or >2 months to 6 months postpartum. Women with outpatient claims, including diagnosis codes indicative of postpartum care or preventative gynecologic care, were classified as having a postpartum visit (Table A.1).

We classified postpartum contraception methods as sterilization, long-acting reversible contraception (LARC) (intrauterine devices [IUDs] and implants), and short-acting hormonal methods (progestin injectables, oral contraception, patch, and ring). Sterilization, LARC, and injectable progestin were identified through inpatient or outpatient Medicaid procedure claims. Other short-acting methods were identified through Medicaid pharmacy claims for oral contraception, patch, or ring.

We calculated the timing of receipt of contraception as the number of days between the date of the contraception claim and the date of delivery. We created the following 4 categories: immediately postpartum (IPP) (within 4 days), within 1 month, >1 month to 2 months, or >2 to 6 months postpartum. Among women with multiple claims for reversible contraception, we used the first claim to determine the timing of receipt of postpartum contraception. Women

FIGURE
Study Cohort Creation



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without evidence of postpartum contraceptives were classified into 1 of the following 2 categories: women who had a postpartum visit but did not receive contraception and women with no evidence of any visit in the 6 months following delivery.

Our independent variables included Medicaid eligibility type (Emergency or Traditional), maternal age (<20 years, 20–34 years, 35 or older), parity before delivery, race or ethnicity, county of residence (metropolitan, nonmetropolitan, missing), and state. Maternal race and ethnicity were self-reported on the infant's birth certificate. Latina race or ethnicity was defined as individuals who self-identified as Latina for race

and/or Hispanic for ethnicity. We included clinical variables that may impact postpartum care attendance or contraceptive use. These included the number of prenatal visits, mode of delivery, weeks of gestation, and pregnancy complications. We defined adequate prenatal care as having 7 or more prenatal visits.¹⁴ Preterm birth was defined as birth before 37 weeks' gestation. We created a single binary indicator variable for pregnancy complications, defined as the presence of any of the following: preexisting diabetes, preexisting hypertension, gestational diabetes, and gestational hypertensive disorders, collapsed into a binary indicator.

Statistical analysis

We conducted our analysis at the individual level. We compared the differences in demographic and delivery characteristics among women with Traditional vs Emergency Medicaid using chi-square tests. We examined the sociodemographic differences between those with complete and missing data (Table A.2). Next, we determined the presence of any postpartum visits and postpartum contraceptive use among women with Traditional Medicaid and those with Emergency Medicaid. If women received postpartum contraception, we compared the timing of receipt (IPP, ≤1 month, 1–2 months, and 2–6 months) by type of Medicaid. Among

the women using contraception, we described the type of contraceptive received at each time point, stratified by Medicaid type.

We used logistic regression to assess the association of Medicaid type (Emergency or Traditional) with the following 2 binary outcomes: (1) attending a postpartum visit within 60 days of delivery and (2) receipt of contraception within 60 days of delivery. We chose 60 days because Traditional Medicaid coverage ends 60 days after delivery and because 60 days aligns with the standard postpartum schedule of a 6-week visit. We adjusted for the following covariates in both of our models: maternal age, parity, race, ethnicity, county of residence, state, adequate prenatal care, pregnancy complications, preterm birth, and mode of delivery. We calculated predicted probabilities from our logistic regression models to improve interpretability.¹⁵ Standard errors were clustered at the individual level to account for multiple births by the same woman (23.2% of the sample had more than 1 birth in the dataset). We also conducted a sensitivity analysis by stratifying our models by repeat birth status, namely women with 1 birth in the dataset and women with multiple births. The results were unchanged, and only the main model is presented.

Nationally, most of the Emergency Medicaid recipients are Latina and female. Latinas also experience significant disparities in contraceptive use.^{10–12} We therefore, conducted 1 set of subanalyses that restricted the study population to Latina women. All hypothesis tests were 2-sided, and we considered a *P* value of <.05 to be statistically significant. We used R version 3.6.2 (R Project for Statistical Computing, R Core Group, Vienna, Austria) for all analyses.

Results

Our study sample included 375,544 live births among 288,234 women (Table 1). Most of the births in our sample were covered by Traditional Medicaid (87.3%, n=333,153 individuals) when compared with Emergency Medicaid (12.7%, n=42,391 individuals). A larger

proportion of Emergency Medicaid births occurred in South Carolina than in Oregon (61.0% vs 39.0%; *P*<.001). Most of the births occurred with adequate prenatal care (88.5%), were delivered vaginally (70.4%), and did not have pregnancy complications (85.7%).

Most women who delivered under Emergency Medicaid were Latina women (80.3% vs 9.5% Latina in Traditional Medicaid; *P*<.001). Women covered by Emergency Medicaid were more likely to be ≥35 years (18.1% vs 7.2% in Traditional Medicaid; *P*<.001) and to be multiparous (76.8% vs 60.8% Traditional Medicaid; *P*<.001). Women covered by Emergency Medicaid were more likely to have inadequate prenatal care (14.7% vs 11.1% in Traditional Medicaid; *P*<.001) and pregnancy complications (16.0% vs 14.1% Traditional Medicaid; *P*<.001).

Women in Emergency Medicaid were significantly and substantially less likely to have any postpartum care. Among births to women receiving Emergency Medicaid, only 5.6% had any postpartum visit compared with 63.0% of women in Traditional Medicaid (*P*<.001) (Table 2). This disparity persisted when we examined contraceptive use. Women with restricted benefits in Emergency Medicaid were significantly and markedly less likely to receive postpartum contraception. Six months following delivery, 97.6% of Emergency Medicaid recipients had no evidence of contraceptive use compared with 55.6% of Traditional Medicaid enrollees (*P*<.001) Table 3.

After adjusting for relevant demographic and delivery characteristics, women covered by Emergency Medicaid had a 6.1% (95% confidence interval [CI], 5.9–6.4) adjusted probability of a postpartum visit compared with an adjusted probability of 58.8% (95% CI, 58.6–58.9) among women covered by Traditional Medicaid (Table 4). Women with Emergency Medicaid had a 1.9% (95% CI, 1.8–2.1) adjusted probability of receiving postpartum contraception by 2 months compared with an adjusted probability of 35.5% (95% CI, 35.4–35.7) among women with Traditional

Medicaid (Table A.3 provides the full models).

We then examined the role of race in postpartum care and contraceptive use in a subanalysis that focused exclusively on Latina women (Table A.4 displays the sociodemographics of the Latina subgroup). Latinas with births covered by Emergency Medicaid had a 4.2% (95% CI, 4.0–4.4) adjusted probability of attending a postpartum visit compared with 47.6% (95% CI, 47.0–48.2) for Latinas enrolled in Traditional Medicaid. The same disparity persisted when we examined postpartum contraceptive use. Latinas with births covered by Emergency Medicaid had a 1.9% (95% CI, 1.8–2.0) adjusted probability of postpartum contraception use within 2 months of birth compared with 39.8% (95% CI, 38.7–39.9) among Latinas enrolled in Traditional Medicaid (Table A.3 provides the full models).

Comment Principal findings

Women with restricted Medicaid benefits (Emergency Medicaid) experience stark disparities in receipt of basic postpartum healthcare and contraception. Most Emergency Medicaid recipients are Latina when compared with Traditional Medicaid beneficiaries. Women enrolled in Traditional Medicaid with full benefits were almost 10-fold more likely to receive postpartum care than women receiving Emergency Medicaid. This disparity persisted when we examined postpartum contraceptive use. This disparity in receipt of postpartum contraception is explained by restricted healthcare benefits and not by racial or ethnic differences: Latinas enrolled in Traditional Medicaid are nearly 20-fold more likely to receive an effective form of postpartum contraception than their Emergency Medicaid peers. These findings suggest lifelong, adverse consequences for both women and infants covered by Emergency Medicaid.¹

Results in the context of what is known

The literature is clear on the role that contraception plays in both

TABLE 1

Sociodemographic and clinical characteristics of patients per birth by type of Medicaid, 2010 to 2017

Characteristics	Traditional Medicaid ^a (n=333,153)	Emergency Medicaid ^a (n=42,391)	Overall births ^a (n=375,544)
Number of women	255,205	33,029	288,234
Maternal age at birth (y) ^b			
<20	43,338 (13.0)	2341 (5.52)	45,679 (12.2)
20–34	266,003 (79.8)	32,358 (76.3)	298,361 (79.4)
≥35	23,812 (7.2)	7692 (18.1)	31,504 (8.4)
Multiparous ^b	202,660 (60.8)	32,549 (76.8)	235,209 (62.6)
Race ^b			
White	185,797 (55.8)	1449 (3.42)	187,246 (49.9)
Black	94,108 (28.2)	585 (1.4)	94,693 (25.2)
Latina	31,569 (9.5)	34,045 (80.3)	65,614 (17.5)
Asian ^c	4103 (1.2)	922 (4.5)	6025 (1.6)
American Indian or Alaska Native	3399 (1.0)	69 (0.2)	3468 (0.9)
Native Hawaiian or Pacific Islander ^d	905 (0.3)	743 (1.8)	1648 (0.4)
Other or unknown ^e	13,272 (4.0)	3578 (8.4)	16,850 (4.5)
County of residence ^b			
Metropolitan	198,082 (59.5)	31,666 (74.7)	229,748 (61.2)
Non-metropolitan	75,775 (22.7)	7172 (16.9)	82,947 (22.1)
Missing	59,296 (17.8)	3553 (8.4)	62,849 (16.7)
State ^b			
Oregon	135,013 (40.5)	25,847 (61.0)	160,860 (42.8)
South Carolina	198,140 (59.5)	16,544 (39.0)	214,684 (57.2)
Adequate prenatal care ^{b,f}	293,252 (88.9)	35,539 (85.3)	328,791 (88.5)
Pregnancy complications ^{b,g}	46,985 (14.1)	6793 (16.0)	53,778 (14.3)
Preterm birth ^{b,h}	29,935 (9.0)	3075 (7.3)	33,010 (8.79)
Cesarean delivery ^b	99,880 (30.0)	11,460 (27.0)	111,340 (29.6)

Data are presented as number (percentage).

^a Individual variable denominators differ depending on missingness. Fewer than 2.1% of variables are missing; ^b Significant difference at $P < .001$ by Medicaid type; ^c This category includes the variable reported subgroups "Asian Indian," "Chinese," "Filipino," "Japanese," "Korean," "Vietnamese," and "Other Asian;" ^d This category includes the variable reported subgroups "Native Hawaiian," "Gaumanian or Chamorro," "Samoan," and "Other Pacific Islander"; ^e This category includes the variable reported subgroups "other" and "unknown"; ^f Adequate prenatal care defined as ≥ 7 visits; ^g Pregnancy complications included gestational and preexisting diabetes or hypertension; ^h Preterm births included all deliveries < 37 weeks' gestation.

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reproductive justice and the promotion of maternal health.^{1,16} Contraception allows individuals to determine if and when they want to conceive; unintended pregnancies carry meaningful health risks and opportunity costs for both the woman and infant.¹⁷ Unintended pregnancy is associated with a significantly increased risk for preterm birth and low birthweight infants, which can have life-long consequences for both the woman and child.^{17–19} Nationally, Latina women are less likely to use effective postpartum contraception and more

likely to experience unintended pregnancy than White women.^{11,12,20,21}

Postpartum contraception is particularly important because it prevents unintended pregnancies and helps to achieve healthy interpregnancy intervals among women who desire a subsequent child.^{1,22,23} Postpartum care, including receipt of contraception, is even more essential for women with high-risk pregnancies, such as those complicated by hypertension, diabetes, or preterm birth. Failure to provide ongoing healthcare for these women likely

contributes to increased maternal morbidity and mortality. Colorado significantly reduced the risk for preterm birth by expanding access to the most effective forms of reversible postpartum contraception, namely the IUD and implant. The odds of preterm birth for women living in counties with expanded access to contraception was significantly reduced.²⁴

Recognizing the association between LARC and improved maternal health, most of the states have now expanded access to IPP LARC.²⁵ It is important to

TABLE 2

Postpartum visit and timing of receipt of contraception by type of Medicaid, 2010 to 2017

Postpartum variables	Traditional Medicaid(n=333,153)	Emergency Medicaid(n=42,391)	Overall births(n=375,544)
Postpartum visit timing (mo) ^a			
≤1	121,249 (36.4)	1860 (4.4)	123,109 (32.8)
>1 to 2	74,909 (22.5)	420 (1.0)	75,329 (20.1)
>2 to 6	13,591 (4.1)	80 (0.2)	13,671 (3.6)
No postpartum visit within 6	202,660 (60.8)	40,031 (94.4)	163,435 (43.5)
Postpartum contraception timing (mo) ^a			
Immediately postpartum	28,507 (8.6)	407 (1.0)	28,914 (7.7)
≤1	31,842 (9.6)	319 (0.8)	32,161 (8.6)
>1 to 2	58,789 (17.6)	180 (0.4)	58,969 (15.7)
>2 to 6	28,621 (8.6)	96 (0.2)	28,717 (7.6)
No contraception within 6	185,394 (55.6)	41,389 (97.6)	226,783 (60.4)
Postpartum visit and contraception timing ^a			
Postpartum visit and contraceptive use	110,656 (33.2)	334 (0.8)	110,990 (29.6)
Postpartum visit and no contraceptive use	99,093 (29.8)	2026 (4.8)	101,119 (26.9)
Contraceptive use and no postpartum visit	37,103 (11.1)	668 (1.6)	37,771 (10.0)
No contraceptive use or postpartum visit	86,301 (25.9)	39,363 (92.8)	125,664 (33.5)

Data are presented as number (percentage).

^a Significant difference at $P < .001$ by Medicaid type.

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note that IPP LARC is not a covered benefit for Emergency Medicaid recipients. Similarly, although IPP LARC and postpartum LARC have been shown to be safe, effective, and beneficial for preventing preterm birth, not all women will choose to use LARC. IPP LARC is not a solution to fix a fragmented healthcare system; it is 1 option that will benefit the women who freely elect to use it. A human rights–based approach to contraception requires that an individual have their choice of a range of methods and can discontinue them on demand.¹⁶ Ensuring that all low-income individuals, regardless of citizenship, have access to their choice of contraceptive methods postpartum may improve maternal health and reduce public costs.^{26,27}

A public health priority in the United States is to reduce maternal mortality, in part by increasing the proportion of

women using an effective form of contraception postpartum.^{28–30} In 2012, 53.2% of women delivering a live birth in the United States used a moderately or highly effective form of contraception postpartum.²⁸ Recognizing the importance of postpartum contraception, Healthy People 2020 has an explicit objective to improve the proportion of women utilizing a Tier 1 (IUD, implant, sterilization) or Tier 2 (injectable, pill, patch, ring) contraceptive method by 10%.³¹ This national benchmark is significantly higher than what we observed in the Emergency Medicaid population in 2 states: only 1.9% of women were using an effective form of contraception by 2 months postpartum.

Clinical implications

Postpartum care is broader than contraceptive use; it is a comprehensive

evaluation and management of all of a woman's health needs.¹ Recognizing the importance of postpartum care, the American Recovery Act allows states the option to extend Medicaid coverage postpartum from 60 days to 12 months.³² Although these are critical steps to strengthen maternal health, explicit attention to the health needs and restricted coverage that immigrant women experience postpartum is needed. An estimated 250,000 undocumented immigrant women gave birth in the United States in 2016. We found that 16% of all Emergency Medicaid parturients experienced a pregnancy complication including diabetes or hypertension. Both hypertensive disorders of pregnancy and diabetic complications are among the leading causes of maternal mortality in the United States and affect Latinas disproportionately more than White women.³³ Restricting

TABLE 3**Postpartum contraceptive method use by timing of contraception and type of Medicaid for births who received postpartum contraception, 2010 to 2017**

Contraception use	Traditional Medicaid ^a (n=147,759)	Emergency Medicaid ^a (n=1002)	Overall births ^a (n=148,761)
Immediate postpartum^b			
Sterilization	24,347 (85.4)	124 (30.5)	24,471 (84.6)
Implant	3324 (11.7)	166 (40.8)	3490 (12.1)
IUD	836 (2.9)	117 (28.7)	953 (3.3)
Within 1 month^b			
Sterilization	1519 (4.8)	2 (0.6)	1521 (4.7)
Implant	4222 (13.3)	13 (4.1)	4235 (13.2)
IUD	3827 (12.0)	3 (0.9)	3830 (11.9)
Injectable	1507 (4.7)	20 (6.3)	1527 (4.8)
Pill	20,087 (63.1)	273 (85.6)	20,360 (63.3)
Patch or ring	680 (2.1)	8 (2.5)	688 (2.1)
>1 to 2 mo^b			
Sterilization	3399 (5.8)	0 (0.0)	3399 (5.7)
Implant	9259 (15.7)	15 (8.4)	9274 (15.7)
IUD	23,101 (39.3)	53 (29.4)	23,154 (39.3)
Injectable	3259 (5.5)	28 (15.6)	3287 (5.6)
Pill	18,559 (31.6)	80 (44.4)	18,639 (31.6)
Patch or ring	1212 (2.1)	4 (2.2)	1216 (2.1)
>2 to 6 mo^b			
Sterilization	2254 (7.9)	0 (0.0)	2254 (7.9)
Implant	4556 (15.9)	17 (17.7)	4573 (15.9)
IUD	9718 (34.0)	35 (36.5)	9753 (34.0)
Injectable	1868 (6.5)	14 (14.6)	1882 (6.5)
Pill	9442 (33.0)	29 (30.2)	9471 (33.0)
Patch or ring	783 (2.7)	1 (1.0)	784 (2.7)

Data are presented as number (percentage).

IUD, intrauterine device.

^a Individual variable denominators are the number of births within each contraception timing category; ^b Significant difference at $P < .001$ by Medicaid type.

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access to postpartum care by citizenship status is a missed opportunity to prevent maternal morbidity and mortality among Medicaid recipients.

Our study demonstrates the role that Medicaid policy may play in perpetuating racial and ethnic disparities in contraceptive use and unintended pregnancy among Latina women. We found that Latinas enrolled in Traditional Medicaid were nearly 11-fold more likely to attend a postpartum visit and significantly more likely to use postpartum contraception than

Latinas receiving Emergency Medicaid. This suggests that insurance benefits, not race or ethnic differences, drive disparities in the utilization of postpartum care and contraceptives. Although federal policy changes have allowed for the option to expand prenatal care to low-income immigrants using federal funds, states must cover the entirety of postpartum care for this population.³⁴ Few states have chosen to cover postpartum care for undocumented or recent immigrants, thereby propagating the maternal

health crisis and contributing to generational inequity.^{17,19}

Research implications

A few states have recently passed legislation to expand postpartum coverage and access to reproductive healthcare to all individuals who meet financial need, regardless of citizenship status. Oregon's Reproductive Health Equity Act is 1 of these laws.³⁵ Future research should examine the health impact and health system costs of expanding coverage.

TABLE 4

Predicted probabilities of postpartum visit and contraception timing by type of Medicaid

Predicted probabilities	% (95% CI)	
	Traditional Medicaid	Emergency Medicaid
Postpartum visit within 2 mo		
Complete cohort	58.8 (58.6–58.9)	6.1 (5.9–6.4)
Latina subgroup	47.6 (47.0–48.2)	4.2 (4.0–4.4)
Postpartum contraception within 2 mo		
Complete cohort	35.5 (35.4–35.7)	1.9 (1.8–2.1)
Latina subgroup	39.3 (38.7–39.9)	1.9 (1.8–2.0)

CI, confidence interval.

Rodriguez. Disparities in postpartum care by Medicaid type. *Am J Obstet Gynecol Glob Rep* 2022.**Strengths and limitations**

Our study has limitations. Our results are from 2 states, namely Oregon and South Carolina, and may not be generalizable to other states. We included Oregon and South Carolina because both states have experienced similar growth in their immigrant population and have comparable immigrant populations residing in each state.³⁶ Oregon differs from South Carolina and 17 other states, because it leverages the Children's Health Insurance Program's Unborn Child Clause to provide prenatal care for the Emergency Medicaid population. It is anticipated that during prenatal care, women would receive counseling on the importance of birth spacing and postpartum contraceptive use; this would bias our result toward the null. Our study population does not include individuals living in border states; it is possible that our findings would be attenuated in areas where women can access care in a different country.

We relied on administrative data for our analysis, which carries the possibility of errors in coding. However, problems with coding would typically bias results toward the null. Furthermore, we mitigated the risk of coding errors by using 2 distinct data sources (Medicaid claims and birth certificates) to identify and corroborate demographic information and utilization and health outcomes. Our study focused on the

role of Medicaid coverage. We did not account for care received outside of Medicaid through charity programs, Title X clinics, or federally qualified health centers.

Conclusions

Women receiving Emergency Medicaid are significantly less likely to receive basic postpartum healthcare, potentially exacerbating health disparities. Medicaid coverage for all individuals meeting financial need requirements should parallel what is recommended for clinical care postpartum: an ongoing, continuous process tailored to the individual's needs.¹ ■

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.xagr.2021.100030](https://doi.org/10.1016/j.xagr.2021.100030).

REFERENCES

1. American College of Obstetricians and Gynecologists. Committee Opinion No. 666 Summary: optimizing postpartum care. *Obstet Gynecol* 2016;127:1192–3.
2. Gemmill A, Lindberg LD. Short interpregnancy intervals in the United States. *Obstet Gynecol* 2013;122:64–71.
3. Ball SJ, Pereira G, Jacoby P, de Klerk N, Stanley FJ. Re-evaluation of link between interpregnancy interval and adverse birth outcomes: retrospective cohort study matching two intervals per mother. *BMJ* 2014;349:g4333.
4. Hanley GE, Hutcheon JA, Kinniburgh BA, Lee L. Interpregnancy interval and adverse pregnancy outcomes: an analysis of succes-

sive pregnancies. *Obstet Gynecol* 2017;129:408–15.

5. Clapp MA, James KE, Kaimal AJ, Daw JR. Preconception coverage before and after the Affordable Care Act Medicaid expansions. *Obstet Gynecol* 2018;132:1394–400.

6. Daw JR, Hatfield LA, Swartz K, Sommers BD. Women in the United States experience high rates of coverage 'churn' in months before and after childbirth. *Health Aff (Millwood)* 2017;36:598–606.

7. Ranji U, GI SA. Expanding postpartum Medicaid coverage. Kaiser Family Foundation. 2019. Available at: <https://www.kff.org/womens-health-policy/issue-brief/expanding-postpartum-medicare-coverage/>. Accessed June 16, 2021.

8. DuBard CA, Massing MW. Trends in emergency Medicaid expenditures for recent and undocumented immigrants. *JAMA* 2007;297:1085–92.

9. Swartz JJ, Hainmueller J, Lawrence D, Rodriguez MI. Expanding prenatal care to unauthorized immigrant women and the effects on infant health. *Obstet Gynecol* 2017;130:938–45.

10. Thiel de Bocanegra H, Braughton M, Bradsberry M, Howell M, Logan J, Schwarz EB. Racial and ethnic disparities in postpartum care and contraception in California's Medicaid program. *Am J Obstet Gynecol* 2017;217:47.. e1–7.

11. Dehlendorf C, Park SY, Emeremni CA, Comer D, Vincett K, Borrero S. Racial/ethnic disparities in contraceptive use: variation by age and women's reproductive experiences. *Am J Obstet Gynecol* 2014;210:526.. e1–9.

12. Dehlendorf C, Foster DG, de Bocanegra HT, Brindis C, Bradsberry M, Race Darney P. ethnicity and differences in contraception among low-income women: methods received by Family PACT Clients, California, 2001–2007. *Perspect Sex Reprod Health* 2011;43:181–7.

13. von Elm E, Altman DG, Egger M, et al. [The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies]. *Rev Esp Salud Publica* 2008;82:251–9.

14. World Health Organization. WHO recommendations on antenatal care for a positive pregnancy experience. 2016. Available at: <https://www.who.int/publications/i/item/9789241549912>. Accessed June 16, 2021.

15. King G, Tomz M, Wittenberg J. Making the most of statistical analyses: improving interpretation and presentation. *American Journal of Political Science* 2000;44:341–55.

16. World Health Organization. Ensuring human rights in the provision of contraceptive information and services. 2014. Available at: https://www.who.int/reproductivehealth/publications/family_planning/human-rights-contraception/en/. Accessed June 16, 2021.

17. Dehlendorf C, Rodriguez MI, Levy K, Borrero S, Steinauer J. Disparities in family planning. *Am J Obstet Gynecol* 2010;202:214–20.

18. Shah PS, Balkhair T, Ohlsson A, Beyene J, Scott F, Frick C. Intention to become pregnant and low birth weight and preterm birth: a systematic review. *Matern Child Health J* 2011;15:205–16.
19. Gipson JD, Koenig MA, Hindin MJ. The effects of unintended pregnancy on infant, child, and parental health: a review of the literature. *Stud Fam Plann* 2008;39:18–38.
20. Finer LB, Zolna MR. Declines in unintended pregnancy in the United States, 2008–2011. *N Engl J Med* 2016;374:843–52.
21. Borrero S, Moore CG, Qin L, et al. Unintended pregnancy influences racial disparity in tubal sterilization rates. *J Gen Intern Med* 2010;25:122–8.
22. Thiel de Bocanegra H, Chang R, Menz M, Howell M, Darney P. Postpartum contraception in publicly funded programs and interpregnancy intervals. *Obstet Gynecol* 2013;122:296–303.
23. Isquick S, Chang R, Thiel de Bocanegra H, Chabot M, Brindis CD. Postpartum contraception and interpregnancy intervals among adolescent mothers accessing public services in California. *Matern Child Health J* 2017;21:752–9.
24. Goldthwaite LM, Duca L, Johnson RK, Ostendorf D, Sheeder J. Adverse birth outcomes in Colorado: assessing the impact of a statewide initiative to prevent unintended pregnancy. *Am J Public Health* 2015;105:e60–6.
25. Associates HM. American College of Obstetricians and Gynecologists (2021). “Medicaid Reimbursement for Immediate Post-Partum LARC.” from <https://www.acog.org/programs/long-acting-reversible-contraception-larc/activities-initiatives/medicaid-reimbursement-for-postpartum-larc>. Accessed August 1, 2021
26. Rodriguez MI, Jensen JT, Darney PD, Little SE, Caughey AB. The financial effects of expanding postpartum contraception for new immigrants. *Obstet Gynecol* 2010;115:552–8.
27. Rodriguez MI, Caughey AB, Edelman A, Darney PD, Foster DG. Cost-benefit analysis of state- and hospital-funded postpartum intrauterine contraception at a university hospital for recent immigrants to the United States. *Contraception* 2010;81:304–8.
28. Office of Disease Prevention and Health Promotion. Healthy People 2020. MICH-16.6 Increase the proportion of women delivering a live birth who used a most effective or moderately effective contraception method postpartum. 2017. Available at: <https://www.healthypeople.gov/2020/topics-objectives/topic/Maternal-Infant-and-Child-Health/objectives#4850>. Accessed March 29, 2021.
29. Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2015;386:743–800.
30. Hoyert DL, Minino AM. Maternal mortality in the United States: changes in coding, publication, and data release, 2018. *Natl Vital Stat Rep* 2020;69:1–18.
31. Hatcher RA. *Contraceptive technology*. 21st ed. New York, NY: Ardent Media; 2018.
32. Ranji U, SA GI. Postpartum coverage extension in the American rescue plan act of 2021. 2021. Available at: <https://www.kff.org/policy-watch/postpartum-coverage-extension-in-the-american-rescue-plan-act-of-2021/>. Accessed March 29, 2021.
33. Petersen EE, Davis NL, Goodman D, et al. Racial/ethnic disparities in pregnancy-related deaths—United States, 2007–2016. *MMWR Morb Mortal Wkly Rep* 2019;68:762–5.
34. Brooks T, Roygardner L, Artiga S, et al. Medicaid and CHIP eligibility, enrollment, and cost sharing policies as of January 2020: findings from a 50-state survey. 2020. Available at: <https://www.kff.org/report-section/medicaid-and-chip-eligibility-enrollment-and-cost-sharing-policies-as-of-january-2020-findings-from-a-50-state-survey-introduction/>. Accessed June 20, 2021.
35. Oregon Health Authority. Reproductive health equity act. Available at: <https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/REPRODUCTIVESEXUALHEALTH/Pages/reproductive-health-equity-act.aspx>. Accessed June 20, 2021.
36. Migration Policy Institute. U.S. Immigrant population by state and county. Available at: <https://www.migrationpolicy.org/programs/data-hub/charts/us-immigrant-population-state-and-county>. Accessed March 29, 2021.