Reach Alliance

Improving Black Maternal Health:

Postpartum Care, Mental Health, and Technology in the US and Ghana

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Cover photo: A woman carries a baby on her back in Accra, Ghana (photo by iStock)

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FIGURE 1. Field researcher speaking with a mother in her shop

Executive Summary

In the US, a Black mother often enters a healthcare system that doesn't believe her. In Ghana, a mother often enters a healthcare system fighting to survive on scarce resources. Care in the United States is fragmented and care in Ghana is stretched thin across distance and need. The US spends a much higher amount on healthcare per capita than any other high-income nation, yet Black women in the US die from pregnancy-related causes at rates more than three times higher than white women do — deaths that are preventable. In Ghana maternal death rates remain above the World Health Organization standards. These differences mask a shared failure.

In both countries, health systems treat postpartum care as an afterthought, withdrawing institutional attention when women face the highest risk of preventable complications and death. While the US's global health cuts impacted its own citizens, African clinics were also affected precisely where needs are high. Our research aims to understand the complex and interconnected experience of postpartum health and wellness and how postpartum care fails in both countries.

The study was reviewed and approved by an Institutional Review Board (IRB), which considered the international nature of the research.

Context: The Postpartum Crisis for Black Women Across the Diaspora

Just three weeks after giving birth in 2017, Dr. Shalon Irving, a Centers for Disease Control epidemiologist who had dedicated her career to documenting health inequities, collapsed and died. Despite repeated attempts to get help from her doctors, she died of complications related to high blood pressure, a preventable symptom.[1] Serena Williams, one of the world's most accomplished athletes, nearly died under similar circumstances. The day after delivering her daughter by emergency Caesarean-section, Williams felt short of breath. Having a history of pulmonary embolism, she immediately told a nurse she needed a CT scan and blood thinners. The nurse initially dismissed her concerns, suggesting pain medication instead. Williams's insistence likely saved her life. The scan revealed blood clots in her lungs. Even with access to top-tier care, her concerns were initially minimized.[2]

These cases are not isolated failures of individual clinicians, but reflections of deeper cultural narratives that shape how Black women's symptoms are perceived and how they seek care. In the United States, the "strong Black woman" stereotype often frames Black women as unusually resilient, pain-tolerant, and emotionally self-sufficient, leading clinicians to underestimate the severity of their complaints and contributing to delayed diagnosis and treatment.[3] In Ghana, postpartum distress is frequently understood through spiritual, moral, or social lenses, with symptoms of depression or anxiety interpreted as spiritual attacks, moral weakness, or disruptions in social harmony.[4] As a result, women may seek support from faith leaders or traditional healers rather than biomedical mental health services.

More than half of maternal deaths in the United States occur postpartum, with many happening after women have been discharged from formal care.[5] Black women die from pregnancy-related causes at nearly three times the rate that white women die of these causes. Testimonials of Black women's symptoms being dismissed, their pain being minimized, and their knowledge of their own bodies being ignored until complications become deadly are circulated on the news, social media, and in the nightmares of many families across America.

Known as the "fourth trimester" risk, approximately one-third of maternal deaths globally occur during the postpartum period, yet health systems treat postpartum care as an afterthought.

In Ghana, the barriers look different, but the outcomes are similarly heart breaking. Women travel hours to reach health facilities for postpartum check-ups, only to find clinics without equipment, staff, or — in some cases — power and a patient cot. Complications that should be detected and managed through routine follow-up, including hypertensive disorders, infections, and hemorrhage, escalate silently until they become emergencies. Known as the "fourth trimester" risk, approximately one-third of maternal deaths

1 Nina Martin and Renee Montagne, "Nothing Protects Black Women From Dying in Pregnancy and Childbirth," ProPublica and NPR, 7 December 2017.

2 Serena Williams, "Serena Williams on Motherhood, Marriage, and Making Her Comeback," *Vogue* 10 January 2018.

3 Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt, and M. Norman Oliver, "Racial Bias in Pain Assessment and Treatment Recommendations, and False Beliefs About Biological Differences Between Blacks and Whites," *Proceedings of the National Academy of Sciences* 113, no. 16 (2016): 4296–301.

4 Prince Peprah, Razak M. Gyasi, Prince Osei-Wusu Adjei, et al., "Religion and Health: Exploration of Attitudes and Health Perceptions of Faith Healing Users in Urban Ghana," *BMC Public Health* 18, no. 1 (10 December 2018): 1358.

5 Munira Z. Gunja, Evan D. Gumas, Relebohile Masitha, and Laurie C. Zephyrin, "Insights into the US Maternal Mortality Crisis: An International Comparison," The Commonwealth Fund, Issue Brief, 4 June 2024.

globally occur during the postpartum period, yet health systems treat postpartum care as an afterthought.[6] These are urgent issues in maternal health.

THE US POSTPARTUM CRISIS: WHEN RESOURCES DON'T EQUAL SAFETY

The United States spends more on healthcare per capita than any other high-income country, but it reports the highest maternal mortality rate among its peer nations.[7] Black women die from pregnancy-related causes at nearly three times the rate of white women: approximately 49.4 deaths per 100,000 live births compared to 14.9 for white women. This disparity persists across income and education levels. Dr. Irving in the example held a doctorate and worked for the nation's leading public health agency. Serena Williams is a global sport superstar with resources most people can only imagine. Neither of them could bypass the structural racism embedded in maternal healthcare in the United States. Evidence from maternal mortality review committees documents that Black women's pain and concerns are more likely to be minimized or ignored, delaying diagnosis and treatment of life-threatening conditions such as preeclampsia, cardiomyopathy, and infection.[8] Black women often die not because they lack contact with healthcare, but because of delayed recognition of complications, dismissal of their symptoms, fragmented care across providers, and failures in escalation and follow-up.

Mental health crises, cardiovascular complications, infections, and complications from c-sections all increase during the postpartum period. Yet, clinical monitoring sharply declines after the six-week postpartum visit, leaving women to detect and respond to danger signs largely on their own. Mental health conditions, including depression, anxiety, and substance use, rank among the leading contributors to maternal death postpartum, yet mental health screening and treatment remain inconsistently integrated into maternal health care.[9] Women may be screened once but never again, or identified as high risk but offered no clear pathway to treatment.

Policy responses have focused on expanding insurance coverage, particularly through Medicaid (which finances a substantial portion of all US births), improving data collection, and establishing maternal mortality review committees. While these efforts have improved surveillance and awareness, they haven't substantially reduced racial disparities. Medicaid coverage often ends shortly after delivery, leaving women uninsured during a high-risk period. The recent reversal of *Roe v. Wade* and subsequent cuts to federal reproductive health funding have intensified this crisis, removing protections domestically while emboldening restrictive policies that harm Black women's access to comprehensive maternal care.

GHANA'S POSTPARTUM CARE CHALLENGE

Ghana's intentional policies prioritizing universal healthcare access made its maternal mortality rate decline by 65 per cent since 2000, decreasing deaths from 760 to 263 per 100,000 births.[10] However, while the National Health Insurance Scheme guarantees free maternal care including

6 Dana Smith, "Postpartum Health Is in Crisis," Harvard T.H. Chan School of Public Health, 22 June 2022.

7 Irene Papanicolas, Robert A. Berenson, Tania Sawaya, and Laura Skopec "Maternal Outcomes and Pre, Syn, and Post-partum Care in the United States and Five High-income Countries: An Exploratory Comparative Qualitative Study," *Health Policy* 149 (2024): 105154.

8 Anuli Njoku, Marian Evans, Lillian Nimo-Sefah, and Jonell Bailey, "Listen to the Whispers Before They Become Screams: Addressing Black Maternal Morbidity and Mortality in the United States," *Healthcare* 11, no. 3 (2023):438.

9 Dara Lee Luca, Caroline Margiotta, Colleen Staatz, et al., "Financial Toll of Untreated Perinatal Mood and Anxiety Disorders Among 2017 Births in the United States," *American Journal of Public Health* 110, no. 6 (2020): 888–96.

10 World Health Organization et al., *Trends in Maternal Mortality 2000 to 2020: Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division*. United Nations Population Fund (UNFPA), 2023.

Figure 2. Clinic in the Adenta Municipality, Ghana

three months of postpartum coverage,[11] this promise of "free" care is not reflected in women's lived reality.

Although official fees have been "eliminated," women are nevertheless asked for cash before receiving magnesium sulphate, misoprostol, or even clean delivery kits. They also pay for food during hospital admission, transportation to facilities, and informal payments to staff. Some facilities demand "deposits" before admitting postpartum women with complications. Understaffed nurses often expect "motivation" payments for timely attention.[12] These unofficial charges transform nominally free care into a pay-to-access system, undermining the policy's intent. Fewer than 10 per cent of women complete recommended postpartum visits, not because coverage doesn't exist, but because accessing that coverage remains too expensive. Most postpartum deaths occur after women reach healthcare facilities. Reviews consistently identify blood shortages, medication stockouts, delayed transfers, and inadequate emergency capacity as contributing to death.[13] Severe workforce shortages aggravate these problems. With one physician per 10,000 people, nurses work exhausting shifts covering multiple roles.

Rural facilities often lack electricity and basic supplies. Nearly all capital-region (urban) women deliver with skilled attendants while fewer than half of northern (rural) women do.[14] During the rainy seasons, flooding inhibits geographic access

11 Philip A. Dalinjong, Alex Y. Wang, and Caroline S.E. Homer, "Has the Free Maternal Health Policy Eliminated Out-of-pocket Payments for Maternal Health Services? Views of Women, Health Providers, and Insurance Managers in Northern Ghana," *PLOS One* 13, no. 2 (2018): e0184830; Sophie Witter, Sam Adjei, Margaret Armar-Klemesu, and Wendy Graham, "Providing Free Maternal Health Care: Ten Lessons from an Evaluation of the National Health Insurance Scheme in Ghana," *Global Health Action 2*, no. 1 (2009): 1881.

12 John Kuumuori Ganle, Michael Parker, Raymond Fitzpatrick, and Easmon Otupiri, "A Qualitative Study of Health System Barriers to Accessibility and Utilization of Maternal and Newborn Healthcare Services in Ghana after User-Fee Abolition," *BMC Pregnancy and Childbirth* 14 (2014): 425.

13 Hannah E. Knight, Alice Self, and Stephen H. Kennedy "Why Are Women Dying When They Reach Hospital on Time? A Systematic Review of the 'Third Delay," *PLOS One* 8, no. 5 (2013): e63846.

14 Ganle, et al., "A Qualitative Study of Health System Barriers."

in underdeveloped communities, transforming manageable complications into fatal outcomes. Mental health support is practically absent, which is reflected in unscreened depression and anxiety resulting in such conditions going untreated just because mental health is not considered a legitimate medical concern.[15] External donors provide 40 per cent of health funding, creating fragility during unstable political climates. Disease-specific programs receive substantial support while comprehensive postpartum care struggles, leaving fundamental services chronically under-resourced even with universal coverage guarantees.[16]

WHY SIMILAR FAILURES ACROSS DIFFERENT SYSTEMS MATTER

Comparing Ghana and the United States reveals systemic design flaws rather than local accidents. Ghana represents a lower-resource setting with strong informal support norms, and a health system shaped by colonial legacies and resource constraints. The United States represents a high-resource setting with advanced biomedical care and fragmented insurance-based coverage, but deep racial inequities embedded in clinical practice and policy. When similar postpartum failures appear in both contexts (discontinued care, invisible mental health needs, preventable complications escalating to crisis), the pattern becomes clear. Health systems in both countries withdraw attention from postpartum women after their babies are born. Both fail to integrate mental health as core to maternal health. Both overlook women's self-knowledge about their own bodies. Data systems in both contexts don't adequately capture postpartum morbidity, the often-debilitating complications that women survive. Insurance and payment structures in both settings disincentivize comprehensive follow-up.
The problems aren't about resources alone. They're about who health systems are designed to serve, whose voices are heard, and whose suffering is taken seriously. US policy decisions compound these failures globally. The reversal of *Roe v. Wade* emboldened restrictive reproductive health policies worldwide while signalling retreat from human rights frameworks that had anchored international maternal health advocacy. Subsequent cuts to US global health assistance directly reduced funding for maternal health programs across sub-Saharan Africa, forcing clinic closures, staff reductions, and service contractions in countries like Ghana precisely when need intensified.[17]

Black women in the US lose protections domestically while African women lose resources internationally, demonstrating how regulatory retreat in one context cascades to harm marginalized communities globally. Postpartum care cannot be an add-on. It must be redesigned as a core, continuous component of maternal health, with accountability for outcomes extending well beyond the six-week mark.

Hardly Reached: Who Are the Underserved?

The women at the centre of this case study are underserved. Women during the postpartum phase are often eager for support, information, and care. What they lack is access to systems designed around their lives. They face barriers involving financial costs, geographic distance, inconvenient hours, disrespectful treatment, and fragmented pathways between providers. They are hardly reached.

15 Emmanuel Keku, Sandra Asabea, Seth Junior Nti, Abigail Kwamekyi, "Prevalence of Postpartum Depression in Ghana: A Systematic Review Study," *Scientific Electronic Archives* 17, no. 1 (2023):

16 Witter et al., "Providing Free Maternal Health Care."

17 "The Trump Administration's Foreign Aid Review: Status of US Global Maternal and Child Health Efforts," Kaiser Family Foundation, 23 July 2025.

Figure 3. Howard University Hospital

IN THE UNITED STATES

In the United States, the hardly reached include women whose circumstances make consistent postpartum care nearly impossible despite living in a high-resource setting. Black women lose Medicaid coverage shortly after delivery, becoming uninsured during the postpartum period when complications are most likely to emerge.

PREGNANCY-RELATED MEDICAID COVERAGE

Medicaid finances more than four in ten births in the United States and is required to cover pregnancy-related care through 60 days postpartum. After that point, however, states have discretion over whether and how coverage continues. In states that have not expanded Medicaid under the *Affordable Care Act*, many women do not qualify for another eligibility category once pregnancy-related coverage ends and therefore become uninsured as early as two months after giving birth. A higher proportion of Black women depend on pregnancy-related Medicaid coverage. Medicaid finances about 65 per cent of births to Black mothers, compared with a lower share for white mothers. Therefore, when that coverage ends, more Black women are at risk of losing insurance than white women are.

The US does not guarantee paid maternity or parental leave across all workers. Federal law (FMLA) guarantees up to only 12 weeks of unpaid, job-protected leave for eligible employees. Access to paid family leave depends heavily on the employer, job type, and state. This lack of maternity leave compounds the challenges postnatal women face.

Women working multiple low-wage jobs without paid leave cannot afford to miss work for follow-up appointments, so they have to choose between income and care. Women living in maternity care deserts must travel an hour or more to reach providers who may not accept Medicaid insurance.[18] This turns routine check-ups into day-long expeditions requiring transportation, childcare arrangements, and lost wages.

Women navigate fragmented care systems where obstetricians, primary care providers, and mental health specialists do not communicate or coordinate handoffs, leaving women responsible for transferring their own medical records and explaining their histories repeatedly to providers who have no access to previous care documentation. Women who have experienced medical racism or dismissal carry deep distrust of formal systems, learned through encounters where their concerns were ignored, their pain undertreated, and their knowledge of their own bodies dismissed as unreliable.

In our US survey, women described feeling unheard during labour and delivery. Some expressed regret about medical interventions they felt unprepared for or did not want. Mental health screening, when it occurred at all, happened once with no follow-up, even when women scored positive for depression or anxiety. These experiences teach women that seeking care does not necessarily result in receiving care, that reporting symptoms may not lead to investigation or treatment, and that their survival after giving birth is their own responsibility rather than a system priority.

18 A maternity care desert is a geographic area/region — mostly rural, but also some urban neighbourhoods — where there is little or no access to maternity health services. Typically this means no hospitals offering obstetric care, no birthing centres, and/or no practising obstetric providers within reasonable distance. Note that a maternity care desert can also include underserved urban neigbourhoods

ACROSS BOTH CONTEXTS

The "hardly reached" are women whose health systems fail by design, not by accident. Women survive childbirth only to confront institutional abandonment during the weeks and months when complications emerge, mental health deteriorates, and chronic conditions escalate. Systems measure success by counting deliveries while ignoring whether women survive afterward. These women do not lack motivation or knowledge. They lack health systems accountable for their survival beyond the delivery room.

About This Research

This study examined how postpartum care and mental health support can improve for Black and African women across the diaspora, and what role technology might play in closing critical gaps.[19] We focused specifically on the postpartum period because this is when many preventable deaths occur, yet it remains the most neglected phase of maternal care. Women formally access health systems during pregnancy and delivery but often disappear from institutional view afterward, left to manage recovery, newborn care, and mental health challenges without adequate support or follow-up.

Our initial plan was to create an AI-powered digital doula companion that women could access on their smartphones. We designed this study with the vision of creating a technology tool connecting women to postpartum mental health screening, danger sign alerts, and peer support. Initial funding allowed us to develop a prototype. We secured initial funding from Howard University and the PNC Historically Black Colleges and Universities (HBCU) Startup Scholars program to develop a functional prototype.

We began this research in November 2024 under one political administration and completed it under another. That transition fundamentally altered our research environment. In just a few days, the Trump administration's January 2025 executive actions froze US global health funding, dissolved USAID, and intensified restrictions on reproductive health discussions. Organizations we had approached for partnerships lost funding, closed programs, or withdrew from maternal health work entirely to avoid political targeting. Individual participants, though assured of anonymity, expressed fear about discussing postpartum mental health and care access in an increasingly hostile policy climate.

When our funding ended we sought additional support but potential funders who had previously expressed interest in maternal health technology suddenly declined. Maternal health had become too controversial. The same policy shifts that eliminated federal programs made private funders reluctant to invest in solutions.

OUR APPROACH

We used a mixed-methods design combining surveys, interviews, and existing health data to capture both the scale of postpartum care gaps and the lived experiences of women navigating these systems. Because we were working on a digital doula companion, our survey included questions about women's interest in a smartphone app.

Survey data collection. We developed a 30-item survey examining postpartum care experiences, mental health, barriers to accessing follow-up services, technology access and preferences, and desired features for digital health interventions. The survey asked women about concrete experiences, that is, how many times they returned for postpartum care, what stopped them from accessing services, whether

19 Part of the motivation to consider Ghana was personal. Our faculty mentor's mother came to the US because she wanted to give birth to children in the US, and thought of escaping a low-resourced struggling system to come a full-resourced system. However, as Dr. Quarkume put it, "as a Black woman she has faced many pregnancy and postpartum horror stories so I'm not sure she truly escaped anything."

Table 1. Survey participant demographics

Characteristic	Category	Ghana n (%)	United States n (%)
Age	18–25 years	13 (22.4%)	4 (25.0%)
	25–34 years	20 (34.5%)	8 (31.2%)
	35–44 years	19 (32.8%)	11(43.8%)
	45 years or more	6 (10.3%)	0 (0.0%)
Residence type	Big city	38 (65.5%)	8 (50.0%)
	Small town	11 (19.0%)	8 (50.0%)
	Village	9 (15.5%)	0 (0.0%)
Parity (number of children)	0	0 (0.0%)	1 (6.2%)
	1	21 (36.2%)	7 (43.8%)
	2	17 (29.3%)	4 (25.0%)
	3	7 (12.1%)	2 (12.5%)
	4	5 (8.6%)	2 (12.5%)
	5	4 (6.9%)	0 (0.0%)
	6	3 (5.2%)	0 (0.0%)
	7	1 (1.7%)	0 (0.0%)
Place of delivery	Hospital	53 (91.4%)	16 (100.0%)
	Small clinic	4 (6.9%)	0 (0.0%)
	Home with nurse/midwife	1 (1.7%)	0 (0.0%)

providers explained danger signs, who asked about their emotional well-being, what support they needed but could not access, and whether they trust technology-based care solutions. In total 58 Ghana participants and 22 US participants completed the survey.

In Ghana, our research team member visited markets and households in Accra, approaching women directly and offering to administer surveys on mobile devices. This face-to-face approach allowed us to reach women engaged in informal work who might not respond to online surveys. In the United States, we distributed the survey through multiple channels such as social media platforms including Facebook, LinkedIn, and Instagram, partnerships with community-based organizations serving Black mothers, and messages to family members and church networks. Surveys were distributed online nationwide; however, respondents were primarily located in the Northeast, Midwest, Mid-Atlantic, and Southern regions of the United States, including New York, Michigan, Ohio, Maryland, and Louisiana. We offered the survey in English only, which may have limited participation from non-English speakers.

Interview data collection. We invited survey respondents to participate in follow-up interviews

Table 2. Survey domains and corresponding questions

Survey domain	Question code	Survey question
Sociodemographic characteristics	Q1	How old are you?
	Q2	Please provide your city, state/region, and ZIP code
	Q3	Is it a big city, small town, or village?
	Q4	How many children do you have?
	Q5	How old is your child? (in months)
Pregnancy and delivery experience	Q6	Where did you have your baby?
	Q7	Did you have any big problems when pregnant or giving birth?
	Q8	If yes, what happened?
Postpartum care utilization	Q9	After your baby was born, how many times did you go back to see a nurse or doctor in the first 6 weeks?
	Q10	Did anyone tell you what danger signs to look for after having your baby?
Postpartum health outcomes	Q11	What problems did you have after your baby was born?
	Q12	If other, please describe the problem
Access barriers and logistics	Q13	What stopped you from going to the clinic after having your baby?
	Q14	How long does it take to get to the clinic?
Quality of care and emotional support	Q15	Were the nurses/doctors nice to you when you went for check-ups?
	Q16	After your baby was born, did anyone ask how you were feeling in your heart/mind?
Postpartum support systems	Q17	Who helped you the MOST after your baby was born?
	Q18	What help did you need but didn't get?
Postpartum information sources and cultural context	Q19	Where did you learn about taking care of yourself after birth?
	Q20	Do your traditions or religion change how you take care of yourself after birth?
Digital access and technology use	Q21	Do you have a phone that uses the internet (smartphone)?
	Q22	How often do you use the internet?
	Q23	Have you used your phone to find health information?
Digital health intervention acceptability	Q24	If there was a phone app to help mothers after birth, would you use it?
	Q25	What would you want in an app to support you after giving birth?
	Q26	Would you trust a nurse/doctor/midwife on an online video call to support you?
Care facilitators and system improvements	Q27	What would make it easier to get care after having a baby?
	Q28	If you could fix ONE thing to help mothers after they have babies, what would it be?
Study follow-up and additional insights	Q29	Would you consider being interviewed?
	Q30	Is there anything else you would like to share about your experience?

to explore their experiences in greater depth. Interview participants shared detailed accounts of their postpartum care journeys. They described interactions with providers, decisions about seeking care, experiences with mental health screening or lack thereof, use of technology for health information, and relationships with family and community support systems. In total we conducted seven US interviews and eight Ghana interviews that lasted between 20 and 30 minutes each. In Ghana, some interviews occurred in person at community locations convenient for participants. Ghana participants (both survey respondents and interviewees) were from Accra, Kumasi, Prakash, Tema, Afienya, Tema, Hohoe, Kpone Katamanso, Anfoega, Ashiaman and Vakpo. In the United States, all interviews were conducted virtually via video calls, accommodating participants' schedules. Interviewees were from New York, Michigan, Ohio, Maryland, and Louisiana. Interviews were semi-structured, allowing conversations to follow participants' priorities while ensuring we covered key topics across all interviews.

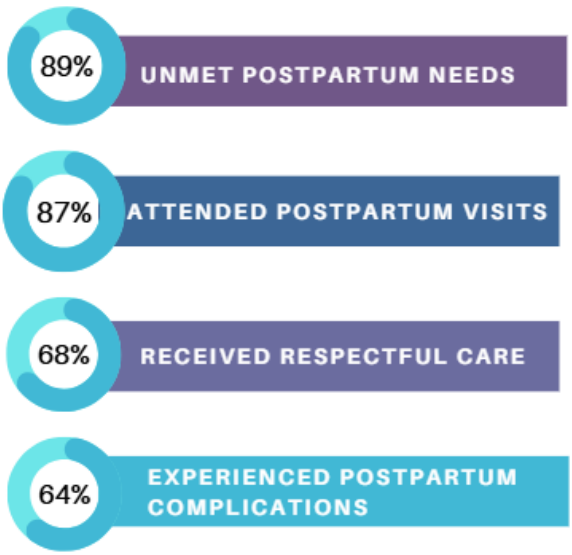


Figure 4. Key postpartum experiences that participants reported

Figure 5. Field researcher interviewing a mother during a household visit

For survey data, we conducted bivariate analysis examining relationships between demographic characteristics (age, education, income, location) and postpartum care access, mental health screening experiences, and technology preferences. We looked for patterns in who received follow-up care, who was asked about their mental health, and who expressed interest in digital health solutions. For interview data, we identified common themes across participants' data. We looked for repeated patterns in how women described barriers to postpartum care, interactions with providers, mental health experiences, and technology use. We paid particular attention to differences and similarities between US and Ghana experiences, noting where systemic failures appeared despite vastly different resource levels.

What Women Told Us

We surveyed 80 postpartum women, 73 per cent in Ghana and 27 per cent in the United States. While 87 per cent attended postpartum visits, 89 per cent reported unmet postpartum needs. Despite attending visits, nearly nine out of ten women left with their critical needs unaddressed. The most frequent was emotional support, described as "someone to talk to about feelings." Almost two-thirds (64%) experienced postpartum complications. These data points tell a clear story: postpartum care fails not because women are "hard to reach" but because systems withdraw attention after delivery. Women attend appointments while they're experiencing complications. The gap is not just between women and services, but what systems promise and what they deliver.

Postpartum care fails not because women are "hard to reach" but because systems withdraw attention after delivery.

GHANA: WOMEN SHOW UP BUT SYSTEMS DON'T FOLLOW THROUGH

The dominant narrative blames women for poor postpartum outcomes. The story goes that women don't attend follow-up visits. Women don't prioritize their health. Women in rural areas are "hard to reach." Our data contradicts this story. Seventy-six percent of respondents attended postpartum visits despite facing significant barriers. This is not a population avoiding care. Yet 67 per cent experienced postpartum complications, and only 33 per cent reported no health problems. This means 43 per cent attended care while experiencing complications but received minimal follow-up. Women showed up but systems did not follow through.[20]

The most common complications were trouble breastfeeding (21%), exhaustion severe enough to interfere with daily functioning (26%), heavy bleeding (14%), and emotional distress (12%). One-quarter reported pregnancy or birth complications that required additional monitoring, including emergency caesareans, severe hypertension, and surgical injuries.[21]

One woman described severe complications: "I had complications and my intestine was punctured during the surgery." She needed home visits for wound care but received only brief clinic check-ups. Another spent days hospitalized for postpartum preeclampsia. Several described prolonged bleeding or dangerously high blood pressure. These were medically significant conditions requiring proactive follow-up, yet many women reported that systems waited for them to seek care rather than following up on known risks. This places the burden of surveillance on women themselves during their most vulnerable period.

Among the 24 per cent who faced barriers preventing them from attending postpartum visits, the most common barriers were cost (11%), feeling well enough to skip care (11%), work obligations (5%), and lack of childcare (3%). The barrier "I felt okay" is particularly revealing. Women weigh symptoms against costs and time. If they feel okay enough, they skip care. This reflects economic precarity and learned expectations that postpartum care is not urgent unless something is very wrong. Systems have taught women that their recovery does not warrant attention.

20 Leanne Jackson, Emily O'Donoghue, Jasmin Helm, Rita Gentilcore, and Anisha Hussain, "'Some Days Are Not a Good Day to Be a Mum': Exploring Lived Experiences of Guilt and Shame in the Early Postpartum Period," *European Journal of Investigation in Health, Psychology and Education* 14, no. 12 (2024): 3019-38.

21 Timothy Abuya, "Manifestations and Drivers of Mistreatment of Women During Childbirth in Kenya: Implications for Measurement and Developing Interventions," *BMC Pregnancy and Childbirth* 17, no. 1 (2017).

GHANA: ECONOMIC INSECURITY IS A HEALTH CRISIS

Eighty-nine percent of the women surveyed reported unmet postpartum needs. When asked what they needed most, emotional support appeared most frequently, often described as "someone to talk to about feelings." But emotional needs rarely appeared alone. Women described needing emotional support alongside practical needs like childcare help, housework assistance, money, or teaching about newborn care.

Thirty percent explicitly mentioned economic needs, always in combination with other stressors. Without money, women could not rest, eat nutritious food, or travel for care when complications arose. One woman explained what she would fix: "As a teen mom with no support I would want every mother to have support financially and a supportive family to help make recovery faster and better." Another stated: "For there to be an organization that helps poor mothers after birth for six months to reduce financial burdens."

Many women spoke of asking for just dignity during care, a level presence during engagement, and basic security for both mother and child. When participants are unable to afford transportation to attend follow-up visits, cannot take time off informal work without losing income, and cannot pay for childcare while attending appointments, medical care becomes inaccessible regardless of whether it is technically "free."

Twenty-six percent reported exhaustion too severe to function normally. One woman described "a very dull brain that forgets everything and takes time to understand basic things. This really took a toll on my career." Systems treat postpartum exhaustion as normal — an expected part of early motherhood. But exhaustion this severe can also signal anemia, thyroid dysfunction, infection, or depression. It deserves investigation, not dismissal. The normalization of extreme exhaustion means women do not seek care for treatable conditions, and providers do not screen for complications that present as fatigue.

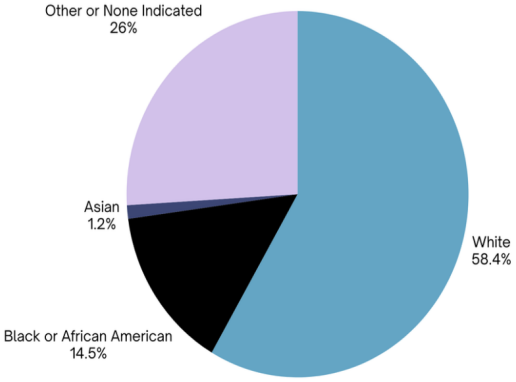
Figure 6. Doula walking with a family in Washington, DC

UNITED STATES: DISREGARD DURING LABOUR CREATES LASTING POSTPARTUM TRAUMA

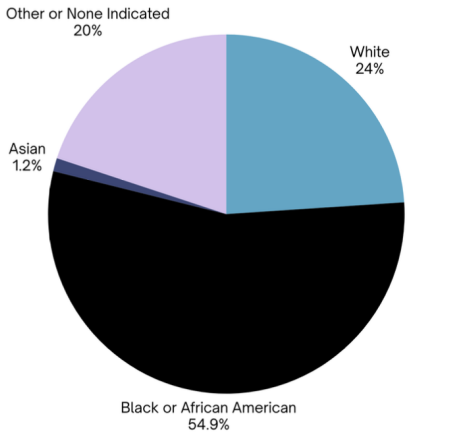
US survey respondents described strikingly similar patterns to Ghana despite operating in a high-resource setting: disregard during labour, rushed interactions, minimal emotional follow-up, and lasting mental health consequences. The convergence suggests these are not resource problems but design problems.

Several women reported feeling unheard during labour and delivery. Others expressed regret about medical interventions they felt unprepared for or did not want. One respondent focused her answer on what needed to change: "Better care for mothers with postbirth depression." Another emphasized the gap in preparation: "Emotional support — we never prepared enough." These brief statements capture the reality that mental health screening, when it happens at all, occurs once with no follow-up. Women might be identified as high risk but then are not offered any clear pathway to treatment. This pattern appears at every level of resources and recognition. If Serena Williams's concerns can be minimized or ignored, it happens even more to women without her resources, recognition, or ability to demand care.

Percentage of Women in the All of Us Dataset Who Have Experienced Labor, by Race (n=392,863)



Percentage of Women With Diagnosed Mental Health Conditions Who Have Experienced Labor, by Race (All of Us)



Disrespectful care during delivery has lasting postpartum consequences. It determines whether women return for follow-up visits, whether they report symptoms when they arise, and whether they trust that systems will respond to their needs. Respectful treatment is not a "soft skill" but a core mechanism determining maternal outcomes. When postpartum depression goes undetected and untreated, it can persist for months or years, affecting women's ability to bond with their infants, maintain employment, sustain relationships, and manage daily functioning. The trauma of dismissal compounds the general challenges women face during the postpartum period, creating mental health burdens. Women carry these consequences long after systems have stopped paying attention.

UNITED STATES: BLACK WOMEN BEAR DISPROPORTIONATE MENTAL HEALTH BURDEN

Disrespectful care during delivery has lasting postpartum consequences. It determines whether women return for follow-up visits, whether they report symptoms when they arise, and whether they trust that systems will respond to their needs.

Analysis of *All of Us* research data reveals stark racial disparities in diagnosed mental health conditions among postpartum women.[22] Among women who experienced labour, Black women represent 14.5 per cent of the population but 54.9 per cent of those with diagnosed mental health conditions. This 3.8-fold overrepresentation cannot be explained by individual factors alone. It points to systemic

22 The *All of Us* Researcher Workbench is a secure, cloud-based platform developed by the NIH to enable approved researchers to analyze diverse health data from over a million participants, including electronic health records, genomics, and surveys. *All of Us* Research Program, National Institutes of Health, "*All of Us* Research Program Researcher Workbench." Regional Medical Centers: SNOMEDCode: 413307004; OMOP Concept Id: 4131548

failures in how mental health is screened, diagnosed, and treated. The cohort was defined by:

> "**Demographics** | Sex Assigned at Birth — Female
>
> OR
>
> **Conditions** | Parent Disorder of labor / delivery"

Mental health was filtered under "Conditions."

This over-representation of Black women with postnatal mental health disorders suggests two possibilities, both troubling. First, Black women may face higher exposure to stressors that trigger or worsen mental health conditions during the perinatal period, including experiences of racism, economic insecurity, and medical mistreatment. Second, Black women's mental health conditions may go undetected until symptoms become severe enough to warrant formal diagnosis, meaning the population captured in this data represents only those whose distress escalated to crisis.

The data do not tell us whether Black women experience more perinatal mental health conditions or whether their conditions are simply more likely to be formally diagnosed only once they reach crisis severity. Either explanation indicates a failing system. If Black women face disproportionate stress, systems must address the structural conditions creating that stress. If Black women's distress goes unrecognized until it becomes a crisis, systems must improve early screening and intervention. What the data make clear is that mental health burdens during and following childbirth are not evenly distributed across racial groups. Black women carry a disproportionate burden, and current approaches to perinatal mental health are failing to address it.

Across Context: Technology Interest Meets Infrastructure Reality

Survey respondents' digital readiness was higher than we expected, challenging assumptions that mobile health tools are inappropriate for under-resourced settings. Eighty-six percent of respondents in both countries had smartphones with internet access, and 61 per cent already used phones to find health information. When asked if they would use a postpartum support app, 80 per cent said *yes* and another 11 per cent said *maybe*.

What the data make clear is that mental health burdens during and following childbirth are not evenly distributed across racial groups. Black women carry a disproportionate burden, and current approaches to perinatal mental health are failing to address it.

Women wanted features combining information with human connection. They most frequently selected:

- remind me about clinic visits
- talk to a nurse on video
- help when feeling sad
- tell me danger signs
- talk to other mothers
- help with breastfeeding.

This pattern reveals that women value both information (danger signs, baby growth, breastfeeding guidance) and relational support (connecting with nurses, other mothers, and

emotional help). However, 14 per cent lacked smartphones, and among those with phones, many noted that data costs limited usage.

While technology cannot substitute for human support, it can provide some pathways to support. An app cannot address provider dismissal, extend Medicaid coverage, or staff rural health facilities. But technology can extend reach between in-person contacts, provide reminders when memory is compromised by exhaustion and stress, and connect women to navigators who can advocate within systems that routinely ignore women's concerns. While women had some evident enthusiasm for digital tools, the infrastructure to support equitable access was not clear. This suggests that technology solutions, when provided, could potentially reproduce existing inequalities, reaching women who already have the most access while bypassing those facing the greatest barriers. Technology works best when it connects women to community support and human care rather than replacing it.

The system's failure is not that women did not speak. It is that no one was listening.

WHAT WOMEN WANT FIXED

When asked "If you could fix ONE thing to help mothers after they have babies, what would it be?" responses clustered around three themes: economic security, emotional validation, and relational continuity. Women were not asking for complex interventions. They were asking for dignity, presence, and basic security. The system's failure is not that women did not speak. It is that no one was listening.

Gender Equality and Women's Empowerment

This case study advances gender equality by challenging healthcare systems that systematically dismiss and devalue Black women at home and abroad. Maternal mortality and morbidity are not simply health outcomes. They are measures of how societies value women's lives and whether institutions invest in women's survival beyond their reproductive function. Canada's Feminist International Assistance Policy recognizes that gender equality requires addressing discriminatory social norms, strengthening women's voice and leadership, and ensuring access to comprehensive sexual and reproductive health services. This research puts those principles to work by centring Black women's lived experiences as authoritative evidence, documenting how healthcare systems silence women's concerns, and identifying interventions that shift power from institutions to communities.

CHALLENGING EPISTEMIC VIOLENCE IN HEALTHCARE

Healthcare systems routinely position women as unreliable narrators of their own experiences. Providers dismiss symptoms women report, minimize pain women describe, and attribute complications to women's noncompliance rather than system failures. Our study treated women's accounts as primary evidence. When women reported that providers did not explain danger signs, we documented screening failures. When women described feeling unheard during delivery, we documented dismissal as a structural pattern. When women identified barriers preventing them from accessing care, we examined what systems failed to provide rather than what women failed to overcome.

This methodological choice challenges the epistemic violence embedded in clinical practice where professional authority overrides women's self-knowledge. Healthcare interactions reproduce gender-based power hierarchies: providers make decisions without explaining options, women receive interventions they did not want, and

mental health distress is ignored until crisis. These patterns reflect broader gender inequalities where women's autonomy, informed consent, and bodily integrity are treated as negotiable rather than fundamental rights.

INTERSECTIONALITY AND BLACK WOMEN'S SURVIVAL

Gender inequality does not operate in isolation. For Black women, gender-based discrimination intersects with racism, creating compounded vulnerability. Black women face higher maternal mortality not because of biological differences but because of how healthcare systems treat them. They are more likely to have symptoms dismissed, pain undertreated, and concerns ignored. Their survival matters less to institutions designed around white women's experiences.

The barriers we faced became evidence supporting our central argument: maternal health quality and accessibility should not fluctuate with political opinion, yet they do. Women's survival should not depend on whether their healthcare is currently considered controversial, yet it does.

This study explicitly centred Black women across the diaspora, recognizing that gender equality work must address how race, class, geography, and other identities shape access and outcomes. Interventions designed for generic "women" often bypass those facing the greatest marginalization. Gender equality requires naming and addressing the specific barriers that Black women, rural women, low-income women, and women in informal work face.

Barriers to Success

The barriers we encountered as researchers in the early days of the Trump administration were not incidental. They exemplified the crisis we were documenting. When political administrations can eliminate maternal health funding overnight, when community organizations must choose between mission and survival, when women fear consequences for naming their experiences, the system has already failed. Our research faced the same institutional abandonment and policy hostility that our survey respondents described in their postpartum care journeys.

Resources for Black maternal health appear and disappear based on political climate rather than need. Funding flows when maternal mortality makes headlines, then evaporates when administrations change or attention shifts. Communities cannot build sustainable support systems when resources depend on whether their survival is currently politically convenient.

The business case for maternal health equity does not align with venture capital models. Public funding that could fill this gap has been systematically withdrawn.

Despite these obstacles, we completed the study. We reached just about 80 women across two countries. We documented care gaps that systems prefer not to acknowledge. We captured voices expressing needs that policies ignore. We demonstrated that similar postpartum failures appear in vastly different contexts, proving these are design flaws rather than resource constraints.

The barriers we faced became evidence supporting our central argument: maternal health quality and accessibility should not fluctuate with political opinion, yet they do. Women's survival should not depend on whether their healthcare

is currently considered controversial, yet it does. The difficulty of conducting this research mirrors the difficulty women face accessing postpartum care. Both require navigating systems designed to withdraw support precisely when it is most needed. This case study exists because community partnerships, participant courage, and research team persistence overcame institutional barriers. That these barriers existed at all confirms why this research matters. Health systems claim they cannot reach certain populations. In reality, systems create barriers, then blame communities for not overcoming them. Our experience conducting this research proved that point more powerfully than any survey statistic could.

Lessons Learned

COMMUNITY VOICES MUST PRECEDE TECHNICAL SOLUTIONS

Before designing any features of our pilot app, we conducted extensive interviews with doulas and birth workers across organizations including DC Metro Maternity, Birthing Beautiful Communities (Ohio), and Community of Hope (in Washington, DC). These conversations revealed that Black mothers need two things technology cannot provide alone: access to culturally competent care and education to advocate for themselves during medical encounters. This insight fundamentally shaped our approach. The technology tool could not replace doulas, midwives, or community health workers. It could only supplement their work by extending reach when human support is unavailable. Any technology solution that begins with features rather than listening will miss what communities need.

REPRESENTATION IN DESIGN IS NOT COSMETIC

Every design choice, from language to imagery to user interface, either signals belonging or exclusion. We prioritized cultural inclusivity not as a diversity checkbox but as a core accessibility feature. Black women navigate health systems that routinely dismiss their concerns and erase their experiences. Technology that reproduces those dynamics, even unintentionally, becomes another barrier rather than a bridge. Ensuring the application felt familiar, affirming, and trustworthy required centring Black women's perspectives throughout development, not adding them at the end. (This project ended with a concept map of what the app would look like. We did not create the app.)

FUNDING MODELS DETERMINE WHICH PROBLEMS GET SOLVED

We secured initial funding from Howard University and the PNC HBCU Startup Scholars program to build a functional prototype. When that funding ended and we sought additional support, we discovered that maternal health equity tools do not fit standard investment models. Investors fund consumer health apps targeting affluent users with disposable income. They do not fund tools serving Medicaid populations, uninsured women, or communities in maternity care deserts, even when these populations face the highest mortality risk. This mismatch means that the communities who need technological support most have the fewest technology solutions designed for them. Until funding structures reward equity over profit, technological innovation will continue to bypass the populations experiencing the greatest harm.

TECHNOLOGY CAN EMPOWER BUT CANNOT REPLACE ACCOUNTABILITY

An AI-powered doula companion can provide information, reminders, and emotional support between clinic visits. It cannot address the structural failures that cause clinic visits to be inadequate in the first place. Technology cannot force providers to listen when women report symptoms. It cannot extend Medicaid coverage beyond 60 days postpartum. It cannot staff rural health facilities or reopen maternal care units that

have closed. Positioning technology as the solution to maternal health disparities allows systems to avoid accountability for policy choices that create those disparities. Technology tools work best when they complement strong public health infrastructure, not when they substitute for it.

REMAINING QUESTIONS

Who pays for maternal survival? What long-term funding mechanisms are needed to ensure the continuity of maternal health innovations, particularly those supporting Black women in Ghana and the United States, given the volatility of political climates, the instability of global health assistance, and the limited private-sector investment in postpartum and mental health care?

Can technology close the gaps infrastructure created? How do disparities in physical healthcare infrastructure, hospital closures in Black US neighbourhoods, and lack of obstetric equipment in rural Ghana shape maternal outcomes across the diaspora? Can telemedicine and mobile health tools reduce prenatal and postpartum care gaps when unequal broadband access prevents these technologies from reaching the mothers facing highest risk? How should systems address shortages of trained maternal health providers when brain drain pulls Ghanaian healthcare workers to wealthier nations while US maternity-care deserts expand?

WHAT THIS STUDY COULD NOT ANSWER

This case study could not track how care gaps evolve over the full postpartum year or document long-term health consequences of inadequate follow-up. Our sample in both countries primarily included urban, relatively educated women with access to the internet while rural women, without smartphones, and women most disconnected from formal systems were underrepresented. The findings demonstrate demand for technology-enabled postpartum support but this study did not assess its effectiveness in improving health outcomes. Although gaps in postpartum mental health screening were identified, determining which screening and treatment models are most effective was not included in the study design. We demonstrated that US policy decisions harm maternal health globally but could not measure the full magnitude of that impact.

STUDY LIMITATIONS

Women with the most limited resources and access may be underrepresented in our sample. The Ghana sample's urban concentration (86%) means rural experiences are not fully captured. We surveyed women who had recently given birth and could recall postpartum experiences, but we may have missed women who experienced the most severe complications or who were too overwhelmed to participate.

Our analysis of *All of Us* data reflects only diagnosed mental health conditions, missing women whose symptoms were never detected or documented. Our cross-sectional survey design captures experiences at one point in time rather than tracking changes over the full postpartum year. Despite these limitations, the patterns we identified, particularly across both contexts, point to systemic failures requiring institutional responses (policy change, health-system reform) not just individual-level interventions.

Research Team

Josephine Agbakpe-Kafui is a Howard University master's graduate in applied data science and analytics focused on using health research and data to drive policy change. Her work centres on strengthening the collection, accessibility, and use of women's health data, particularly within African contexts. Her mission is to advance evidence-based policymaking by making high-quality women's health data more visible, usable, and impactful.

Davynn Agormeda is an interdisciplinary studies major with a focus in bioethics and a strong interest in maternal health and healthcare equity. Passionate about improving outcomes for underserved communities, she is especially committed to projects that address critical challenges in reproductive and maternal care. Through her experiences shadowing physicians and working with the Reach Alliance, Davynn has developed a deeper understanding of patient-centred care and the importance of ethical, community-driven solutions. Beyond her academic and professional pursuits, she is dedicated to service through her church and local outreach initiatives. She hopes to combine her passion for medicine, research, and social responsibility to create lasting impact in healthcare and beyond.

Zoey Hall is a junior computer science major with a minor in maternal and child health. She is also a member of the Karsh STEM Scholars Program, Cohort 7. Hall has been a part of the CORE Futures Lab in Washington, DC, for the past two years.

Madison Winfield is an environmental science graduate with an emphasis in policy. She is passionate about how our political landscapes shape our environments. Madison is committed to creating positive political and environmental change and hopes to actualize that goal by becoming an environmental lawyer.

Amy Yeboah Quarkume, known as Dr. A, is a scholar, data scientist, and associate professor at Howard University. Her work sits at the intersection of race, health, environment, and technology, with a focus on data equity and community-centered research. She holds a PhD in African American studies, master's degrees in sociology and African American studies, and certificates in data analytics from Harvard Extension School and the University of Massachusetts. Dr. Quarkume is an Andrew Mellon New Directions Scholar, a National Center for Atmospheric Research Innovator Fellow, and a White House Initiative on HBCUs All-Star Campus Mentor, bringing interdisciplinary expertise to advancing health equity for Black and historically underserved communities.

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