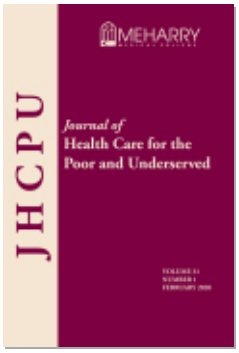
The Birth Sisters Program: A Model of Hospital-Based Doula Support to Promote Health Equity



Julie Mottl-Santiago, Kirsten Herr, Dona Rodrigues, Catherine Walker, Catherine Walker, Emily Feinberg

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The Birth Sisters Program: A Model of Hospital-Based Doula Support to Promote Health Equity

Julie Mottl-Santiago, MPH, CNM
Kirsten Herr, BA
Dona Rodrigues, MPH, CNM
Catherine Walker, MPH, CNM
Emily Feinberg, ScD, CPNP

Summary: Maternity care in the United States is characterized by racial and income disparities in maternal and infant outcomes. This article describes an innovative, hospital-based doula model serving a racially and ethnically diverse, low-income population. The program's history, program model, administration requirements, training, and evaluations are described.

Key words: Doula, community health worker, maternal-child health services, low-income populations, obstetrics.

Racial and income disparities in maternity care outcomes in the United States are large and persistent. Non-Hispanic Black people and Hispanic people have higher rates of preterm birth,[1,2] lower rates of engagement with prenatal care,[3] lower rates of breastfeeding,[4,5] and higher rates of postpartum depression[6] compared with non-Hispanic White people. People of color report lower satisfaction than White people regarding communication with their medical providers.[7] Non-Hispanic Black people have higher rates of cesarean birth[8] and are three to four times more likely to die during pregnancy, birth, and the postpartum period than White people, regardless of socioeconomic status.[9] Low-income people as a group have higher than average rates of preterm birth.[10]

The causes of socioeconomic and racial disparities in maternity care outcomes are multifactorial and not yet fully understood.[11,12] The stress of interpersonal and institutional racism, lack of adequate resources, and higher rates of pre-existing and pregnancy-related medical conditions are some of the factors identified to date.[2,10,13] Other theories, such as the life-course perspective, suggest that multiple physical, environmental, and socioeconomic stressors over time may have a cumulative and transgenerational impact on health for both racial and ethnic minorities and socioeconomically disadvantaged

JULIE MOTTL-SANTIAGO, DONA RODRIGUES, *and* ***CATHERINE WALKER*** *are affiliated with Boston University Medical Center.* ***KIRSTEN HERR*** *is currently affiliated with Loyola University Chicago Stritch School of Medicine.* ***EMILY FEINBERG*** *is affiliated with Boston University School of Public Health. Please address all correspondence to Julie Mottl-Santiago, Boston University Medical Center, 85 East Concord St, 6th floor, room 6617, Boston, Massachusetts 02118*

groups.[14] Recent public attention to persistent racial disparities in maternal mortality between Black and White people also shines a light on the role of implicit racial bias in health care. A qualitative study of the experiences of people of color with maternity care providers makes clear the presence of disrespectful and biased communication from provider to patient, lack of genuine shared decision-making, and structural barriers to high-quality care for people of color.[15]

Higher rates of cesarean birth for Black people than for White people also contribute to higher rates of morbidity and mortality.[16] While cesarean rates have risen dramatically for all people in the United States over the last 20 years,[17] disparities in cesarean birth rates between Black and White people persist even after controlling for differences in medical and social risk-factors.[16,18] This implies additional factors are involved that are an important area for future research.

Community health workers have been effective in empowering and giving voice to individuals in communities of color and low-income populations.[18] They have been shown to improve health outcomes in several areas, including asthma, diabetes, and hypertension.[18] Community doulas are specialized community health workers who focus on the needs of pregnant, birthing, and postpartum people. Community doulas assist with care navigation, health education, and health literacy, and provide culturally congruent social support during pregnancy, birth, and the postpartum period.[19,20] They also provide continuous support during labor and birth, as well as breastfeeding assistance.

A robust literature on continuous support during childbirth demonstrates that doulas reduce cesarean birth,[21,22] increase breastfeeding rates,[23,24] and improve the experience of care.[25] Doulas have also been shown in some studies to reduce assisted vaginal delivery and epidural rates, increase maternal-infant bonding, and reduce postpartum depression.[21,25–28] The ability to affect labor intervention rates may position doulas as part of a cost-effective strategy for healthy births.[29–31] The American Congress of Obstetricians and Gynecologists and the Society for Maternal and Fetal Medicine both support the role of doulas in decreasing cesarean birth rates.[32,33]

The prenatal and postpartum role of the doula as a community health worker has also been shown to improve outcomes. The literature shows they increase engagement with health care, increase infant immunization rates, reduce postpartum depression, and, in some models, reduce low birth weight.[25,27,34–40] The impact of postpartum doulas and similar peer support programs on breastfeeding rates is particularly strong.[23,24,41–43]

Despite evidence of their effectiveness, community doulas have not been employed as a standard intervention in maternity care systems. There are multiple reasons for this, including lack of knowledge about the benefits of doula support among maternity care stakeholders, lack of standardized state-level training and certification, and lack of reimbursement mechanisms.[31,44] Families who can afford it may contract with a private doula for a fee. Currently Oregon and Minnesota Medicaid programs reimburse doulas on a fee-for-service basis.[45] However, low Medicaid reimbursement rates that do not cover the cost of providing doula care, as well as cumbersome regulations that require doulas to be paid through a clinical provider, have been barriers to increasing doula support for low-income people.[31,44,45] Recommendations for alternative funding mechanisms include incorporating doula services into managed care organization bundled

maternity care payments, as well as employing doulas as part of a value-based strategy to improve quality and reduce the cost of care.[31,44–45]

Over the last few years, more than 20 federal and state-level bills have been introduced to cover doula services for low-income women.[45] A wide variety of models have been proposed, including a range of funding levels, certification and training requirements, and included services. Out of 13 states proposing legislation in 2019, three have passed legislation permitting, but not mandating, Medicaid coverage for doula services. Federal legislative efforts include doulas as one component in broader strategies to reduce racial disparities in maternal morbidity and mortality by providing equitable, respectful, and high-quality maternity care. Several Black women's health advocacy and community groups emphasize that legislation should support the growth of a culturally and linguistically competent, community-based doula workforce to promote culturally congruent care and the acceptability of maternity care models to people of color.[46,47] Additionally, they emphasize that legislation should ensure doulas have access to adequate training and can work in best-practice models that include high-quality supervision and peer support.[47]

This article describes a hospital-based model of doula support for low-income populations that has been integrated into our urban, tertiary-level maternity care service since 1999. The hospital serves a racially and ethnically diverse, low-income patient population. In 2016, the service saw 2,810 births; 87% of prenatal care was paid by public insurance; 10% of newborns were low birth weight.[48] A collaborative model of labor and delivery care includes midwives, obstetricians, and family medicine physicians. Each provider type attends approximately one third of the births.

History of the Birth Sisters Program

The Birth Sisters model of community-inspired doula support was developed in 1999 by Urban Midwife Associates, a small private practice at our hospital. The model called for intense support for their pregnant, birthing, and postpartum clients from trained, culturally congruent lay people from the community. The target population was people at high social risk for poor pregnancy outcomes. A second goal of the initial model was to provide an entry into health care careers for people from communities historically underrepresented in the American health care system. While there are no formal evaluations of workforce development outcomes, anecdotally the program is aware of many Birth Sisters who have gone on to successful careers in nursing, public health, and midwifery. The model was initially grant-funded by the March of Dimes in 1995 and the name Birth Sisters was chosen to be culturally relevant to the communities served.

The first Birth Sister training took place in 1999. It was led collaboratively by Urban Midwife Associates and the separate, hospital-owned midwifery service, along with Doulas of North America (DONA) trainers. Hundreds of people had responded to a small notice in a local community newspaper. Fifty-eight people representative of multiple racial, ethnic, and linguistic communities completed the application process and an intense, unpaid 56-hour training over five days. Completion of the training made the graduates eligible for certification by the national certifying agency, Doulas of North America (DONA).

Subsequently, the OB/GYN department offered financial support and the pilot program grew into a hospital-based one. From 1999–2008, the program was funded by the hospital and all pregnant people were offered Birth Sisters starting at any point in pregnancy. Over time, demand grew and, in 2007, approximately 40% of laboring people at our hospital received Birth Sister services. From 2008–2015, funding for the doulas was raised through philanthropy due to economic constraints on the hospital. The referral criteria were limited to socially high-risk mothers, and the timing of services was narrowed to the third trimester and beyond. Referral criteria include social isolation, lack of adequate resources, teen pregnancy, depression/anxiety symptoms, trauma history, poor prior or current pregnancy outcomes, and other individualized concerns that would benefit from additional support and navigation. In 2016, referrals were again started at 24 weeks of pregnancy due to a slight increase in grant funding.

Birth Sisters Program Model

Recruitment and training. Birth Sisters are recruited from the communities served by the hospital maternity service. Job requirements include a high-school education or its equivalent, cultural and language congruence with the clients, proficient English language skills, experience with or belief in breastfeeding, knowledge of community resources, demonstrated interest and motivation in serving community people and families, and the ability to be on call for labor support. Today there are approximately 20 Birth Sisters on staff with the hospital; their cultural congruence and language skills reflect the diverse population served by our maternity service. In our setting, doulas are recruited primarily to serve African American, Hispanic, Haitian, Cape Verdean, Vietnamese, and Albanian communities.

Birth Sisters are hired into the Birth Sister basic entry level-one position. With experience and additional skills in lactation support or community health work, Birth Sisters can move to a level-two position. This allows them to train new Birth Sisters, as well as receive referrals for people with more complex needs. Birth Sister training is standardized and provided by the Birth Sister Program. It includes two components: a didactic training with skill check-outs and knowledge review, and on-site training with an experienced Birth Sister. The Program Director implements the curriculum and oversees the training process to ensure each Birth Sister has met the requirements. A final review of skills is required prior to the Birth Sister working on her own. The didactic training is outlined in Box 1. The training is conducted using adult-learner philosophy and plain language information that is accessible to staff regardless of education level or first language. The program director, experienced Birth Sister staff, and invited subject matter experts conduct the training.

After didactic training, new Birth Sisters shadow an experienced Birth Sister trainer and complete a checklist of competencies signed off by the Birth Sister trainer and the program director. Monthly staff meetings provide continuing education and supervision by the director to discuss educational topics, difficult client issues, and personal challenges. Birth Sisters also can elect to participate in the Community Health Worker training program provided by the Boston Public Health Commission's Community Health Education Center.

Box 1.

DIDACTIC CURRICULUM FOR BIRTH SISTER TRAINING

Didactic Training Topics

Anatomy and physiology of pregnancy, birth and the postpartum period
Labor support techniques
Health education for pregnancy, labor and the postpartum period
Effective home visiting approaches
Community resources
Orientation to the hospital environment and team work
Breastfeeding
Supporting the mother and newborn in the first hour after birth
Basics of postpartum support
Postpartum depression: Recognition and referrals
Newborn care basics
Overview of special circumstances: domestic violence, sexual assault, sexual abuse, substance use, medical complications, perinatal loss
Scope of practice

The current payment model for the program includes an hourly wage for all services, including prenatal visiting, labor support hours and postpartum visiting, as well as a bonus for the completed package of services. The package includes at least one prenatal visit, attendance at the labor, and at least one postpartum visit. The cost of the program, including training, direct services, and administration, is approximately $1,000 per mother and baby pair. It is funded entirely through philanthropy.

Currently all Birth Sisters are per diem employees. Over half of the current Birth Sisters have been with the program for more than 10 years. The others were hired within the previous one to two years. The Birth Sisters give consistently positive responses on employee engagement surveys, suggesting they are satisfied with their job.

Direct services. Prenatal home visits focus on creating a relationship, identifying psychosocial needs of the mother, and providing childbirth and breastfeeding education. The Birth Sister also assesses whether the woman is lacking in essential resources such as housing, food, and baby care items. She then refers her client to social service agencies and helps her navigate those services as needed. During labor, the Birth Sister offers physical and emotional comfort measures, advocacy for the mother, and help with the first breastfeeding. She serves as a cultural bridge between the mother and the health care team to facilitate communication. During postpartum home visits, Birth Sisters aid in the transition to motherhood and help with baby care or light errands so that the mother can rest; they provide education on breastfeeding, parenting, and infant care, as well as connections to needed medical and social services. Figure 1 outlines the service delivery model.

A typical prenatal visiting schedule includes a first visit for the mother-to-be and

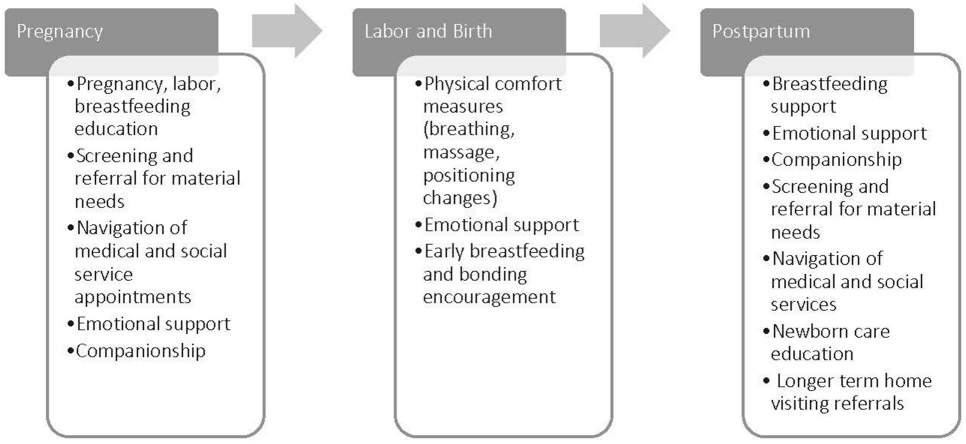

Figure 1. Components of the Birth Sisters program.

the Birth Sister to become acquainted at home or in the clinic. At this visit, the Birth Sister learns what would be most helpful for the mother using a prenatal visiting assessment form. For people with food or housing insecurity referral indications, the Birth Sister can accompany the woman to the housing office or food pantry. For poor prior birth outcomes, anxiety, depression or trauma referral indications, the Birth Sister may accompany the mother on her medical or behavioral health visit. She can review the information given by the health care provider to ensure it made sense to the mother. Anticipatory guidance concerning labor or breastfeeding is given to all clients. Typical postpartum visits might include one visit on the postpartum floor to see how breastfeeding is going, accompanying the mother on a social service visit to address social determinants of health concerns, or reviewing with an inexperienced or anxious mother the basics of baby care. Culturally congruent support and information sharing helps meet the needs of people with all referral indications.

Work flow implementation. Pregnant people are most commonly referred to the program through a prenatal care provider, although health center staff or the mother herself can request services. The demographic characteristics and referral indications for all referrals from January 2013–June 2018 are outlined in Table 1. Socioeconomic status is not included because all people referred to the program are low-income. The program does not require proof of income, but almost all people are insured by Medicaid, which requires income below 200% of the federal poverty level.

After receiving the referral, the program's administrative assistant matches the client to the Birth Sister based on language or cultural needs. The Birth Sister contacts the woman and begins providing services. The number, timing, and location of prenatal and postpartum visits depends on the needs and preferences of the mother. An average of two prenatal visits and one postpartum visit are provided, each lasting an average of two hours, but up to eight prenatal and four postpartum visits are allowed. The referral is entered into the client's medical record, so that the on-call Birth Sister can be paged by nursing or provider staff when the mother is admitted to the hospital in labor. The

Table 1.

BIRTH SISTER CLIENT DEMOGRAPHICS, 2013–2018

Characteristic	n (%)
Age at referral	
<20	319 (15)
20–30	994 (48)
30–40	676 (33)
40+	71 (3)
Unknown	19 (1)
Parity	
Nulliparous	1276 (61)
Multiparous	800 (38)
Unknown	3 (<1)
Ethnicity	
Hispanic	817 (40)
Black	785 (38)
Asian	229 (11)
White	64 (3)
Other or unknown	160 (8)
Referral Indication[a]	
social isolation	767 (37)
labor support needs	556 (27)
navigation needs	426 (20)
trauma or DV	387 (19)
teen pregnancy	319 (15)
anxiety or depression symptoms	260 (13)
homelessness	249 (12)
poor current or prior birth outcome	106 (5)

Notes:
[a]one client may have multiple referral indications

Birth Sister arranges postpartum visits in the home or during a clinic visit as preferred by the mother. This workflow is depicted in Figure 2.

Administration. Skilled and adequate supervision and support have been shown to be a critical component of successful community health worker programs.[33] The Birth Sisters Program is administered by a director (currently a nurse-midwife) and an administrative assistant. The director hires, trains, and provides direct supervision to the Birth Sisters. The administrative assistant receives referrals from the provider and matches the Birth Sister to the client, as well as completing other routine administrative tasks.

A Microsoft Access database is used to track key process measures, including number, length, and dates of visits, number of referrals, and details of activities for both home visits and labor support. Monthly quality reports track missed visits, lost clients, and referral issues.

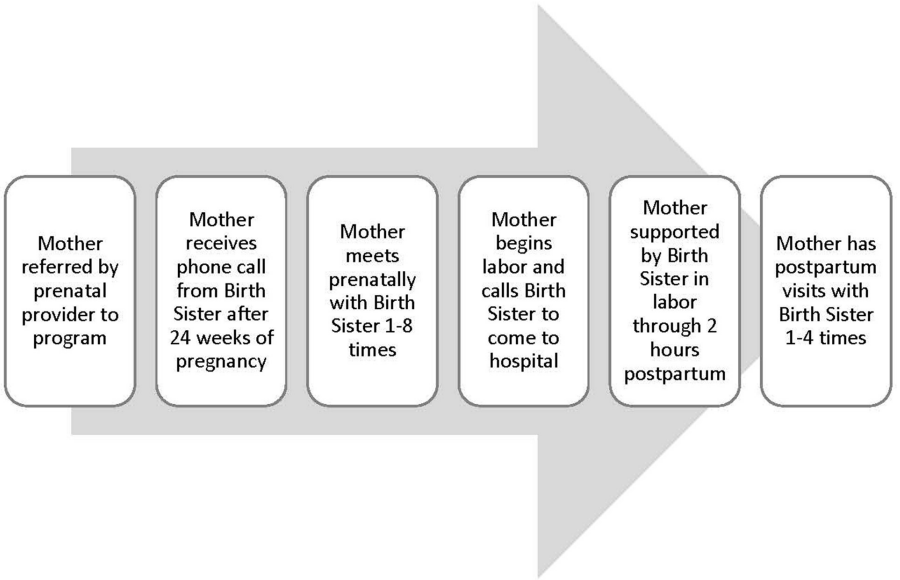

Figure 2. Birth Sister program workflow from the client perspective.

Research and evaluation. An earlier retrospective cohort analysis of the Birth Sister Program demonstrated a reduction in cesarean rates and increase in breastfeeding initiation.[21] This association was strongest for first-time mothers with midwifery clinical providers, a lower-risk population than those cared for by the physician service.

To understand the impact of the program on health care costs and social determinants of health, a pragmatic randomized controlled trial was conducted from 2015–2018. The trial compares routine maternity care without Birth Sister support with an enhanced Birth Sister intervention. The trial includes first time mothers who are: 1) 18 years of age or older; 2) insured by Medicaid; and 3) at lower medical risk (defined in our system as anyone not requiring prenatal care in the hospital's high-risk prenatal clinics). The primary outcome is cesarean birth, because this is the major driver of cost for lower-risk people. Return on investment is the principal secondary outcome. Additional outcome measures include housing, food or energy insecurity; preterm birth and low birth weight; breastfeeding exclusivity and continuation; and postpartum depression. The intervention includes routine Birth Sister services starting at 24 weeks of pregnancy. For this study, the Birth Sister intervention is enhanced by additional Birth Sister training and consultation resources from a lawyer specializing in social determinants of health, such as housing eviction. The purpose of this enhancement is to maximize the ability of the Birth Sister to influence housing, food security and other social determinants of health. The control group receives routine maternity care without Birth Sister support. The trial is currently in the analysis phase.

Implications and relevance. The Birth Sisters Program demonstrates one model of doula support for low-income people. Integration into hospital-based maternity services has been sustainable over time, as providers, nurses, and administrators are

familiar with both the individuals and the systems involved in the Birth Sisters Program. Information gathered from the trial described above will provide more insight into the costs and potential cost-effectiveness of this model. Future research should compare outcomes and costs of this hospital-based model with those of community-based doula models situated outside the health care system. Robust doula models may be one approach that improves value and reduces racial and socioeconomic disparities in maternity care outcomes.

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