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HEALTH CARE IMPROVEMENT AND EVALUATION

# Evaluation of an Innovative, Hospital-Based Volunteer Doula Program

Rhonda K. Lanning and Stacey L. Klaman

**Correspondence**
Rhonda K. Lanning, DNP, CNM, LCCE, IBCLC, RN, University of North Carolina at Chapel Hill, School of Nursing, Campus Box 7460, Chapel Hill, NC, 27599.
birthpartners@unc.edu

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## ABSTRACT

**Objective:** To evaluate program growth, doula characteristics, patient satisfaction, and characteristics and perceptions of labor and delivery nurses who work with volunteer doulas in a hospital-based volunteer doula program.

**Design:** Descriptive quantitative.

**Setting:** An academic health center in the southeastern United States with approximately 4,000 births per year.

**Participants:** Participants ($N = 519$) included volunteer doulas ($n = 80$), labor and delivery nurses ($n = 24$), and women who were supported by doulas ($n = 415$).

**Methods:** We evaluated program growth by the number of doulas and women supported over time. We developed surveys to evaluate doula characteristics, patient satisfaction, and characteristics and perceptions of labor and delivery nurses who work with volunteer doulas.

**Results:** From 2012 to 2018, the number of Birth Partners doulas increased from 25 to 80. The annual number of women who received intrapartum care from doulas increased from 88 in 2012 to 477 in 2018. Doula characteristics included race, ethnicity, age, student or nonstudent status, and ability to speak Spanish. Of the 1,185 women who received doula support from 2015 to 2018, 415 (35%) responded to the patient satisfaction survey. Most were satisfied with the physical support ($n = 379$, 97.63%), emotional support ($n = 384$, 96.88%), doula care ($n = 410$, 96.34%), and support for family/friends ($n = 346$, 95.38%). All of the labor and delivery nurses who responded ($n = 24$, 100%) agreed or strongly agreed that doulas were important members of the maternity care team.

**Conclusion:** In this evaluation, we highlight rapid program growth, expansion of services, and demographic characteristics of volunteer doulas; patient satisfaction with doula care; and acceptance of volunteer doulas among nursing staff. The data provided herein can be used to inform future development and guide the implementation of similar volunteer doula programs at other institutions.

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## Problem and Available Knowledge

Every family deserves high-quality maternity care. In the United States, disparities in maternal and child health disproportionately affect women of low income and women of color (Kassebaum et al., 2016; Kozhimannil & Hardeman, 2016; Vedam, Declercq, Monroe, Joseph, & Rubashkin, 2017). Prominent disparities in maternal and infant health are evident in maternal and infant mortality rates, cesarean birth rates, and patient satisfaction with birth experiences (Declercq, Sakala, Corry, Applebaum, & Herrlich, 2014; Vedam, Declercq, et al., 2017; Vedam, Stoll, et al., 2017). Professional societies and state legislators recognize continuous labor support as an effective way to optimize maternal and infant outcomes (American College of Obstetricians and Gynecologists et al., 2014; Center for Health Innovation & Policy Science, University of Washington, 2019; Lawrence et al., 2012; Rooks & Norsigian, 2009).

Birth doulas are professionally trained birth companions who can offer continuous physical, emotional, and informational support to women before, during, and after childbirth (Doulas of North America International, 2019). Birth Partners is a hospital-based, volunteer doula program. The program's mission is to provide equal access to compassionate doula support free of

Rhonda Lanning is a paid, part-time program coordinator for Birth Partners, the program described in this article. Stacey Klaman reports no conflict of interest or relevant financial relationships.

charge to anyone giving birth at the University of North Carolina Medical Center (University of North Carolina Medical Center [UNC-MC], n.d.). The team of committed volunteer doulas includes students from local university campuses and community residents from the greater region.

Birth Partners volunteer doulas fill a gap in the provision of continuous labor support for birthing women and their families at the UNC-MC. Doulas also relieve some of the burden on labor and delivery nurses, who often care for multiple women simultaneously and might not have sufficient time to offer physical and/or emotional comfort or support. Birth Partners volunteer doulas provide services to pregnant women, including those who experience incarceration, mental health complications, substance use disorder, pregnancy complications, homelessness, and fetal complications or loss.

Evidence shows that continuous labor support is a potential intervention to mitigate disparities in maternal and newborn outcomes. Continuous labor support is associated with the likelihood of shorter labor, spontaneous vaginal birth, fewer instrumental births, reduced rates of cesarean birth, higher Apgar scores among newborns (Bohren, Hofmeyr, Sakala, Fukuzawa, & Cuthbert, 2017; Hodnett, Gates, Hofmeyr, & Sakala, 2013), and increased patient satisfaction with the birth experience (Bohren et al., 2017; Declercq, Sakala, Corry, Applebaum, & Herrlich, 2014).

Although continuous labor support is associated with improved outcomes for women and newborns, doulas may experience challenges as members of the maternity care team (Roth, Henley, Seacrist, & Morton, 2016). The doula role is not always well understood by other members of the health care team. Therefore, the scope of practice for doulas should be clarified for providers, nurses, and women so that doulas can be accepted as part of an interprofessional, maternity care team.

In the United States, doula support is underused because of lack of information (Declercq et al., 2014; Thomas, Ammann, Brazier, Noyes, & Maybank, 2017), limited availability, and cost of services (Kozhimannil et al., 2014; Thomas et al., 2017). In 2012, an estimated 6% of women who gave birth reported that they received doula support (Declercq et al., 2014). On average, the fees for doula services range from $300 to $2,500 (Howland, 2018; What to Expect, 2019), and health insurance payers do not routinely reimburse for doula services (Kozhimannil, Hardeman, Attanasio, Blauer-Peterson, & O'Brien, 2013). These barriers limit access to doula support and its benefits, particularly for women of low income and limited resources. Furthermore, these barriers also likely exist across the United States for vulnerable populations such as pregnant women with substance use disorders and those incarcerated during pregnancy and birth.

**This program evaluation was carried out to examine the characteristics and potential for improvement of a large hospital-based volunteer doula program.**

### Rationale and Objectives

The framework for the Birth Partners program is the doula model of care in which trained companions offer continuous physical, emotional, and informational support during labor and birth (Morton & Clift, 2014; Simkin, 2012). The objective of this project was to evaluate a hospital-based, volunteer birth doula program. Our intention is to share useful information that may lead to further proliferation of accessible, effective, and sustainable hospital-based doula programs across the United States.

## Methods

### Context

Birth Partners is the volunteer doula program at UNC-MC. This academic health center is a Baby-Friendly designated facility (The World Health Organization and The United Nations Children's Fund, 2009) and is well regarded in the community as an innovative, patient- and family-centered setting for birth (Lanning, Oermann, Waldrop, Brown, & Thompson, 2019). Approximately 4,000 births take place on the 15-bed labor and delivery (L&D) unit annually. Three operating suites and two postanesthesia care unit beds are dedicated to the unit. The L&D unit serves a diverse patient population, including women with low- and high-risk pregnancies. A 58-bed level IV newborn critical care center is adjacent to the unit. Obstetric providers include nurse-midwives, obstetricians, maternal-fetal medicine specialists, and family medicine physicians. The cesarean birth rate is approximately 30% of all births (Lanning et al., 2019).

Rhonda K. Lanning, DNP, CNM, LCCE, IBCLC, RN, is an assistant professor at the School of Nursing, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Stacey L. Klaman, PhD, MPH, is a recent graduate of the Department of Maternal and Child Health, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC.

The Birth Partners program is staffed by volunteer doulas who are on-site during 12-hour shifts. Doulas provide continuous support to women during labor, birth, and the immediate postpartum period. They also provide follow-up visits with women in the later postpartum period and visit women who are hospitalized for antepartum high-risk conditions. The program also includes innovative operating and recovery room support that began as a quality improvement project and has become standard of care at UNC-MC (Lanning et al., 2019). Birth Partners doulas provide nonclinical support in the operating room to initiate skin-to-skin care for medically stable women and their newborns after cesarean births. The doula program currently has approximately 80 volunteer doulas, but we estimate that 120 doulas are needed to meet the growing demand for services. The UNC-MC and Birth Partners are working to provide continuous intrapartum support, including in the operating room, to all women who give birth at the medical center and want this type of care during childbirth and the early postpartum period. The Birth Partners leadership team consists of two paid, part-time staff members, the program coordinator and the program administrative associate; a volunteer associate program coordinator; a volunteer program mentor coordinator; and a volunteer program intern. Leadership roles are described in Table 1.

## Program: Birth Partners Volunteer Doula Program

**Entry to program.** We do not have active recruitment for the Birth Partners program because we have waiting lists of individuals interested in joining. We send information about upcoming program trainings and orientations and a Web link to the online application by e-mail to those on the interest lists twice per year.

**Table 1: Birth Partners Volunteer Doula Program Leadership Roles**

Program coordinator
- Oversee all aspects of Birth Partners program
- Provide leadership and support to all doulas
- Supervise volunteer members of the administrative team
- Coordinate teamwork with L&D nurse managers, nurses, other maternity care providers, and staff
- Collaborate with women's hospital leadership team to further Birth Partners' mission
- Develop and train new doulas (community/student); provide continuing education for current doulas

Program administrative associate
- Assist program coordinator to strategize and implement new projects and programmatic elements
- Track volunteer doula shifts and communicate program updates to all doulas
- Select potential candidates for entry into program through Pathways 1 and 2
- Co-lead new doula orientations
- Coordinate with health care providers who refer prenatal clients for a prenatal doula team

Volunteer associate program coordinator
- Collaborate with program coordinator about long-term strategic program planning
- Develop program goals and objectives
- Provide 24-hour on-call Dial-a-Doula service

Volunteer program mentor coordinator
- Co-lead new doula orientations
- Develop mentoring procedures
- Develop mentoring workshops to enhance and improve mentor skill sets
- Provide 24-hour (emotional) comfort and guidance to support mentors as they process labor support experiences

Volunteer program intern
- Support program coordinator and program administrative associate
- Collect and enter program data into REDCap software program (University of North Carolina at Chapel Hill, Chapel Hill, NC)
- Assist with organizing new doula trainings and monthly meetings
- Ensure program resources (data collection forms and doula bag supplies) are stocked on the L&D unit

*Note.* L&D = labor and delivery.

There are three different pathways to become a Birth Partners doula, and each has a unique application and time line. The first pathway is for those who have already attended a professional doula training through Doulas of North America International or another similar organization. Individuals accepted through Pathway 1 are required to attend a 4-hour orientation to review the skills they learned in their professional training and to orient them to the team approach and processes used in our setting. Doulas learn how to log volunteer hours, collect birth data and patient feedback, and complete shift reports. Doulas also learn how to sign up for shifts with a free employee scheduling and shift planning mobile application.

The second pathway is for those who have not had any previous doula training. Individuals accepted through Pathway 2 participate in the Birth Partners training workshop. The program coordinator developed this unique training that includes various approaches to doula training and childbirth education. Topics include defining the role of a doula, characteristics of labor, breastfeeding, common medical interventions, complications of labor and birth, and collaboration with other members of the health care team. We provide educational materials and use labor and childbirth videos throughout the training to provide context. Participants engage in role playing, group discussions, and team-building exercises. Current Birth Partners program doulas participate in interactive breakout sessions designed to educate trainees about physical and emotional support during various stages of labor. Current doulas also take part in panel discussions with trainees. Newly trained doulas are required to attend a 2-hour orientation on the L&D and postpartum units. This orientation includes logistical information about beginning service in the program.

Via the third pathway, UNC undergraduate students (rising juniors or seniors) or students enrolled in any of the graduate programs (eg, nursing, medicine, public health, or social work) during the fall academic semester can apply to enroll in the course Supporting the Childbearing Family. This three-credit elective is an interdisciplinary, service-learning approach to the study of maternity care in the United States. The seminar-style class includes weekly classes and online discussions. Students begin volunteer service with Birth Partners while taking the course.

**The Birth Partners doula program experienced rapid growth, diversity among volunteer doulas, patient satisfaction, and acceptance among nursing staff.**

Students work in interdisciplinary peer teams and benefit from the collaborative team approach to patient-centered maternity care. Each team is paired with a Birth Partners volunteer doula mentor and matched with a woman and her family. The team meets with the family in the prenatal period to discuss the birth plan, and the team provides intrapartum and immediate postpartum care.

**After training.** Following training and/or orientation, individuals in all three pathways must become UNC-MC volunteers and agree to adhere to Birth Partners program requirements and commitments. To become a UNC-MC volunteer, individuals must do the following:

- Complete an online compliance module.
- Agree to a criminal background check.
- Attend a hospital orientation.
- Show proof of documented immunity to influenza; measles, mumps, and rubella; pertussis (whooping cough); tuberculosis; varicella (chicken pox); and hepatitis B (recommended but not required).

Volunteer doulas need to live within 45 minutes of UNC-MC and commit to volunteering with the program for a minimum of 9 months. Volunteers also commit to one 12-hour L&D shift or two 6-hour operating room shifts per month and to attend monthly program meetings. We require newly trained doulas to partner with mentor doulas for at least one shift before working independently. This structure is designed to foster a new doula's confidence in providing labor support and building relationships with L&D nurses and providers.

Volunteer doulas interested in providing support in the operating room attend a separate 3-hour training workshop. The workshop is led by the program coordinator, intern, and an L&D nurse and includes hands-on training focused on women who experience cesarean birth, a cesarean birth simulation with safe skin-to-skin contact and newborn positioning, and mother and newborn transfer to the postanesthesia care unit.

**Work assignments and responsibilities.** Doulas are assigned to shifts from 6:00 a.m. to 6:00 p.m. and from 6:00 p.m. to 6:00 a.m.; they meet their clients on the L&D unit. If no women are currently in labor, doulas may accompany L&D staff on shift report and patient rounding, assist with skin-to-skin contact and breastfeeding for women who recently gave birth, make postpartum visits to women who had doula support the previous day, or visit women on the high-risk antepartum unit. A 24-hour on-call Dial-a-Doula service is available to provide backup coverage in cases of illness or additional needs for services. Nurses contact the volunteer associate coordinator when one or more doulas are needed on the unit in addition to the in-house doula. The service alerts all program doulas by text and coordinates doulas who respond. Doula shift assignments in the operating room are from 7:00 a.m. to 1:00 p.m., and doulas meet their clients on the L&D unit on the day of the scheduled cesarean birth.

Doulas are required to attend seven of the nine 2-hour monthly meetings each year. Meetings provide an opportunity to socialize, share experiences, and learn about program updates. Each meeting includes a continuing education component. For example, guest health care professionals prepare doulas for the care of women with substance use disorders, psychosocial concerns, trauma, or perinatal loss and those who are incarcerated. We have also provided continuing education programs on massage, mindfulness techniques, and self-care measures.

**Funding.** We established Birth Partners with funding from a small grant and individual contributions. At that time, we created a trust account through the institution's medical philanthropic foundation. Expansion and sustainability of the program began when UNC-MC committed to fund the part-time program coordinator through the general budget. The program coordinator's salary is currently contracted with the UNC School of Nursing as a buyout of a 0.4 full-time equivalent. Currently, the program pays a part-time program administrative associate with funds from the trust account. In addition, the fund is used for training materials for new doulas, refreshments for monthly meetings, small gifts and refreshments for biannual doula appreciation events, and honoraria for guest speakers. Fundraising continues to be a significant challenge and a priority as Birth Partners expands.

## Plan for Program Evaluation

We evaluated the Birth Partners program in several ways, and ongoing program metrics include program growth, characteristics of doulas, patient satisfaction, and characteristics and perceptions of L&D nurses. We measured program growth over time, including the total number of volunteer doulas and the total number of women supported in L&D rooms and in the operating room. We collected characteristics of doulas in the program's entrance survey, which is included in the onboarding process. This survey includes questions to gather information about the race, ethnicity, gender, and age of the doulas, whether they are students or community residents, and whether they are Spanish language speakers.

In 2015, we developed and collected a patient survey that includes five questions about satisfaction with Birth Partners doula support. All women who receive volunteer doula care are asked to complete the paper and pencil survey during their postpartum hospital stays. Doulas provide the survey to women shortly after birth and ask them to place the completed survey in a sealed envelope. The envelope is given to an L&D nurse or a doula before discharge from the hospital. The survey asks women to rate their level of satisfaction with the birth experience, doula care, physical support provided by the doula, emotional support provided by the doula, and support of family/friends provided by the doula. The survey uses a 4-point Likert scale with responses that represent various degrees of satisfaction: 1 = *dissatisfied*, 2 = *somewhat dissatisfied*, 3 = *somewhat satisfied*, and 4 = *satisfied*.

Birth Partners program staff created a survey to assess L&D nurse characteristics and perceptions of the Birth Partners program. Part 1 of the survey was focused on nurse characteristics, including number of years as a UNC-MC L&D nurse and number of birth experiences with a Birth Partners doula. Part 2 of the survey included 11 questions about the role of Birth Partners doulas in maternity care teams. The survey was categorized into knowledge of the doula role ($n = 9$), attitudes about doulas ($n = 1$), and beliefs about doulas ($n = 1$). Nurses were asked to rate the question(s) in each category using a 5-point Likert scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*. The

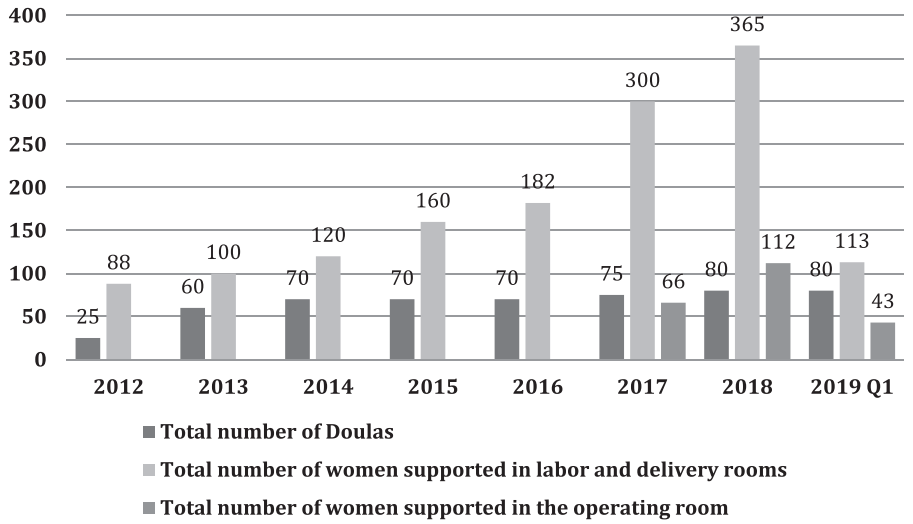


**Figure 1.** The growth of the Birth Partners volunteer doula program, 2012 to 2019.

voluntary survey was distributed to nurses for 1 designated week. During the week before the distribution of the survey, announcements were left at each nurse's station and in the break room. The paper and pencil survey was available for 1 designated week on day and night shifts. Nurses were instructed to fold and place completed surveys into a sealed envelope in a secure box in the staff break room.

### Analysis and Ethical Considerations

We used descriptive statistics, including frequency, percentage, mean score, and standard deviation. The institutional review board confirmed this program evaluation as exempt from review.

## Results

### Program Growth

Since 2012, the total number of program doulas increased by 220%, from 25 to 80. From 2012 to 2018, the total number of women supported annually by a doula in an L&D room increased by 315%, from 88 to 365. From 2017 to 2018, the total number of women supported annually in the operating room increased by 70%, from 66 to 112. Based on preliminary 2019 data, the projected number of women to be served in 2019 is approximately 400 women in L&D rooms and 150 women in the operating room (see Figure 1).

### Characteristics of Birth Partners Volunteer Doulas

The program included 80 volunteer doulas in 2018; most were non-Hispanic White ($n = 50$, 63%) followed by non-Hispanic Black ($n = 14$, 17%) and Hispanic/Latina ($n = 8$, 10%). Nearly all doulas identified as female ($n = 78$, 98%) with a mean age of 26 years (range, 19–72 years). More than half ($n = 51$, 64%) were students. More than one fourth spoke Spanish ($n = 22$, 28%; see Table 2).

### Patient Satisfaction

Of 1,185 women who received doula support from 2015 through 2018 (see Table 3), 415 (35%) returned the patient surveys. Of those 415 women, not all answered all questions on the survey. The highest scoring item on the survey was satisfaction with physical support ($3.96 \pm 0.29$ out of a possible 4.00 with 379 women, 97.63%). This was followed by satisfaction with emotional support ($n = 384$, 96.88%), satisfaction with doula care ($n = 410$, 96.34%), and support for family/friends ($n = 346$, 95.38%).

### L&D Nurse Characteristics and the Role of Doulas in Maternity Care Teams

Characteristics of L&D nurses are shown in Table 4. Of the 55 available nurses staffing the unit during the designated week of the survey, 24 nurses participated in the assessment. Nurses reported an average of nearly 7 years (range,

**Table 2: Characteristics of Birth Partners Volunteer Doulas, 2018 ($N = 80$)**

| Characteristic | Value |
|---|---|
| Race/ethnicity, *n* (%) | |
| American Indian/Alaskan Native | 0 (0) |
| Asian | 0 (0) |
| Hispanic/Latina | 8 (10) |
| Native Hawaiian/Pacific Islander | 0 (0) |
| Non-Hispanic Black | 14 (17) |
| Non-Hispanic White | 48 (60) |
| Other | 9 (11) |
| Gender identity, *n* (%) | |
| Female | 78 (98) |
| Male | 1 (1) |
| Nonbinary | 1 (1) |
| Age in years | |
| Range | 19–72 |
| Mean | 26 |
| Classification, *n* (%) | |
| Student | 51 (64) |
| Nonstudent community resident | 29 (36) |
| Spanish speaking, *n* (%) | 22 (28) |

0.5–27 years) of experience in working as a UNC-MC L&D nurse. Nurses reported an average of 34.58 ± 35.71 experiences working with Birth Partners doulas during vaginal births and 10.58 ± 11.71 experiences during cesarean births. More than half ($n = 14$, 58.33%) responded *strongly agree* and 10 responded *agree* to the knowledge item *provide emotional comfort* and to the belief item *doulas are important on maternity care teams* (see Table 5). All nurses ($N = 24$, 100%) *strongly agreed* or *agreed* with the attitude item *positive experience of doulas*.

## Discussion

Our evaluation highlights the rapid growth of a hospital-based volunteer doula program. The increase in the number of doulas has allowed for an expansion of services and increased access to doula care. Analysis of the demographic characteristics of volunteer doulas in the program provided important information about the diversity of backgrounds of members of the team. Assessment of patient satisfaction with doula care through survey data revealed high levels of satisfaction with doula care. The nurses who completed surveys were also very positive with regard to their experiences with volunteer doulas.

The Birth Partners program experienced dramatic growth over the last several years. The combination of expanded leadership, resources, and strong relationships among the doula program and nursing and other health care staff have been key to the expansion of the program. The addition of a dedicated shift for women scheduled for cesarean births has also contributed to the increased number of women who access doula support. To meet the current demand for services, the program is training and orienting an

**Table 3: Patient Satisfaction With Birth Partners Volunteer Doula Support, 2015 to 2018 ($N = 415$)**

| Item | *n* | 1 *Dissatisfied* (%) | 2 *Somewhat Dissatisfied* (%) | 3 *Somewhat Satisfied* (%) | 4 *Satisfied* (%) | Mean (*SD*) |
|---|---|---|---|---|---|---|
| Overall satisfaction with birth experience | 371 | 0.81 | 0.54 | 6.74 | 91.91 | 3.90 (0.39) |
| Overall satisfaction with doula care | 410 | 0.73 | 0 | 2.93 | 96.34 | 3.95 (0.30) |
| Satisfaction with physical support the doula provided | 379 | 0.79 | 0 | 1.58 | 97.63 | 3.96 (0.29) |
| Satisfaction with emotional support the doula provided | 384 | 0.78 | 0 | 2.34 | 96.88 | 3.95 (0.30) |
| Satisfaction with support of family/friends the doula provided | 346 | 0.87 | 0 .29 | 3.47 | 95.38 | 3.93 (0.35) |

*Note. SD* = standard deviation.

**Table 4: Characteristics of Labor and Delivery Nurses, 2019 ($n$ = 24)**

| Characteristic | Mean (*SD*) |
|---|---|
| Years as UNC-MC L&D nurse | 6.86 (7.02) |
| Number of vaginal births with Birth Partners doula | 34.58 (35.71) |
| Number of cesarean births with Birth Partners doula | 10.58 (11.71) |

*Note.* *SD* = standard deviation; UNC MC L&D nurse = University of North Carolina Medical Center labor and delivery nurse.

additional 40 to 50 doulas with a goal of 120 doulas on the team by the end of 2019.

More than half of Birth Partners' doulas identify as students. Students bring passion, energy, and a contemporary perspective to the program, and we are committed to the inclusion of student volunteer doulas on the team. Many of the students are planning careers as health professionals, and the experiences they gain as doulas will likely inform their future approach to patient care. Future work may include tracking outcomes of our student doula volunteers and assessing their perceptions of the effect doula service had on their career.

As we take steps to scale up the number of volunteer doulas needed to meet the demands of women who give birth, we aim to continue to recruit community members who are passionate about long-term service to the program. These individuals are considered anchors on the team of doulas, and their presence is critical to the success of the program. Outreach initiatives to retired community members and other individuals who have time to dedicate may be an important strategy to increase the number of long-term volunteers. Soliciting feedback about the program from our community volunteers may also be an important next step as we work to increase the number of long-term volunteer doulas.

Making doula training accessible to individuals who are dedicated to serving as volunteers is important to program leaders. By offering unique training within the hospital, Birth Partners provides professional training on a sliding scale. Offering an alternative training opportunity likely

**Table 5: Labor and Delivery Nurse Knowledge, Attitudes, and Beliefs About the Role of Birth Partners Doulas on Maternity Care Teams, 2019 ($n$ = 24)**

| Item | 1 *Strongly Disagree, n* (%) | 2 *Disagree, n* (%) | 3 *Neutral, n* (%) | 4 *Agree, n* (%) | 5 *Strongly Agree, n* (%) | Mean (*SD*) |
|---|---|---|---|---|---|---|
| Knowledge of doula role | | | | | | |
| Provide continuous presence | 0 (0) | 0 (0) | 2 (8.33) | 9 (37.50) | 13 (54.16) | 4.46 (0.66) |
| Encourage communication | 0 (0) | 0 (0) | 2 (8.33) | 14 (58.33) | 8 (33.33) | 4.25 (0.61) |
| Provide physical comfort | 0 (0) | 0 (0) | 1 (4.16) | 12 (50.00) | 11 (45.83) | 4.42 (0.58) |
| Provide emotional comfort | 0 (0) | 0 (0) | 0 (0) | 10 (41.66) | 14 (58.33) | 4.58 (0.50) |
| Provide informational support | 0 (0) | 0 (0) | 3 (12.50) | 16 (66.60) | 5 (20.83) | 4.08 (0.58) |
| Involve patient's partner | 0 (0) | 0 (0) | 3 (12.50) | 12 (50.00) | 9 (37.50) | 4.25 (0.68) |
| Initiate skin-to-skin | 0 (0) | 1 (4.16) | 3 (12.50) | 9 (37.50) | 11 (45.83) | 4.25 (0.85) |
| Initiate breastfeeding | 1 (4.16) | 4 (16.66) | 3 (12.50) | 12 (50.00) | 4 (16.66) | 3.50 (1.10) |
| Nurse understands role of doulas | 0 (0) | 0 (0) | 2 (8.33) | 9 (37.50) | 13 (54.16) | 4.46 (0.66) |
| Attitudes about doulas | | | | | | |
| Positive experience of doulas | 0 (0) | 0 (0) | 0 (0) | 12 (50.00) | 12 (50.00) | 4.50 (0.51) |
| Beliefs about doulas | | | | | | |
| Doulas are important on maternity care teams | 0 (0) | 0 (0) | 0 (0) | 10 (41.66) | 14 (58.33) | 4.58 (0.50) |

*Note.* *SD* = standard deviation.

**Volunteer doula programs may provide increased access to continuous labor support and greater acceptance of the doula as a member of the health care team.**

contributes to the diversity of volunteers within the program. Because we aim to create a team that closely reflects the population of women served by the program, it will be important to also assess the ethnic and cultural characteristics of women who receive doula care. Assessment of the preferred language spoken by women and recruitment of doula volunteers who are multilingual will also be beneficial to expanding culturally sensitive care.

Birth Partners' clients who returned feedback surveys were highly satisfied with their experiences. One limitation of these results is the number of completed surveys compared with the number of women served. Of the 1,185 women supported from 2015 to 2018, 415 women returned surveys. Of those 415, not all women completed the survey in its entirety. The total number of surveys handed out to women is unknown. In 2019, we modified our process for the collection of patient satisfaction surveys to improve the return rate. Doulas now discuss the importance of receiving confidential feedback and ensure women that once the envelope is sealed, doulas will not see the completed form. Doulas check on women in the postpartum setting to assess how they are feeling and to collect any outstanding surveys. In addition to completing the survey, women are invited to share their e-mail addresses and to join the Friends of Birth Partners mailing list. This list provides ongoing engagement between the program doulas and their clients.

Nurses' positive regard for Birth Partners doulas is shown in their agreement with items related to knowledge, attitude, and belief (see Table 5). Although these data are limited by an untested, investigator-developed survey, convenience sampling, a low response rate, and potential bias, the findings suggest that L&D nurses are positive about their experiences with Birth Partners doulas. The area rated lowest by nurses pertains to the doula role of assisting with breastfeeding initiation. This finding supports recent discussions with Birth Partners doulas who have requested additional continuing education on the provision of breastfeeding support in the immediate postpartum period. In addition to measuring nurses' perceptions of doula volunteers, future evaluation should include doulas' satisfaction with their collaboration with nursing and medical staff. The positive feedback from nursing staff provides important information about volunteer training and orientation to the program's leaders. Through training, orientation, and continued education, the program staff aim to instill in volunteers that a respectful and collaborative approach to care delivery requires a shared understanding of what is expected of each maternity care team member and defining how team members interact.

Information gained from this evaluation provides important evidence to inform further growth of Birth Partners. Program staff plan to focus on securing financial resources to support the continued growth and sustainability of the program. The coordination of a large hospital-based doula program requires tremendous oversight by a knowledgeable and committed staff. With appropriate financial resources, we hope to expand access to increased prenatal doula support for women with significant needs as well as support the development of a companion community-based doula program. In addition, plans are underway for analysis of care data routinely collected by doulas. These data will be analyzed along with patient outcome data from the electronic health record. We are currently developing plans to synthesize data collected by doulas with data in the health record to examine and compare health outcomes for women with doula support and women without doula support. We plan to use this information to inform the future direction of the program.

## Conclusion

This program evaluation includes several measures of success. In addition to providing information to Birth Partners' program leaders, these findings offer valuable insights for clinicians in other hospitals who are considering initiating a volunteer doula program. The Birth Partners program structure, process, and outcomes model can provide a trigger and guide for discussion. Volunteer doula programs such as Birth Partners contribute to expanding access to doula support for birthing women who may otherwise be unable to receive services. Clinicians who aim to provide supportive and evidence-based maternity care should consider adoption of a hospital-based volunteer doula program.

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