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Why Doulas Need to be the Norm, Not the Exception

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Abstract

The rate of cesarean sections is increasing in many countries. The cesarean rate within the United States was reported at 32% in 2015. The risk to mother and baby and the cost of the surgical interventions can burden the healthcare system. Doula support for laboring women has been increasing since the term was first used in 1976. What is the impact of doula support for women during labor? An electronic literature search was conducted utilizing PubMed, CINAHL Plus, and PsychINFO for the search terms "doula", "birth companion", and "continuous labor support" published between January 2012 and June 2017. A total of 10 papers were selected for the review based on the inclusion criteria. The 10 studies were reviewed and categorized according to level of evidence and the quality of scientific evidence based on Johns Hopkins Evidence Rating Scales. Findings suggest that there are numerous benefits and no harms identified to providing doula support.

Introduction

In 2015, 32% of all births in the United States were cesarean sections (C- sections) [1]. While this number seems high, it has actually improved from 2009, when the rate was 32.9% [2]. Not only do C-sections increase medical costs, but they also increase health risks for both mother and child. Although the rate has decreased in the United States over the past few years, worldwide, the rate of C-sections has dramatically increased. One study estimates that between 1990 and 2014, the rate of C- sections from 121 countries has increased to 12.4% (from 6.7% - 19.1%) [3]. In North America alone, that number has increased 10% [3].

Many factors contribute to the increase in C-sections. Sometimes pregnant women do not receive the education, presented in a manner that they clearly comprehend, to make informed decisions about labor and delivery. Interventions such as oxytocin, epidural analgesia, and continuous electronic fetal monitoring, have contributed to an increased rate of operative deliveries [8,9,12,16]. Women often have extraordinary trust in their physicians and do not question the provider's decision to implement an intervention. One study revealed that 33.3% of C-sections occurred due to non-progressive labor, 16.7% due to emergency conditions, 37.5% due to fetal distress, and 12.5% for incompetent fetal positioning [4]. So while some of these reasons for interventions and surgical delivery are unavoidable, many studies suggest continuous labor support is one method to lower the rate of cesarean sections [8,9,12,16]. A doula is the optimal person to provide continuous labor support in the form of physical, emotional, and informational support.

The term doula was first used in 1976 to refer to a skilled woman who supported the mother with breastfeeding education after birth [5]. In the 1980s the role of the doula evolved and expanded as women became concerned about the increasing rate of cesarean sections with the institutionalization of childbirth [5]. The doula became a support person and advocate for women during labor to provide support and thus prevent unnecessary procedures and interventions [5]. Today, the doula's responsibilities include providing continuous presence and support throughout the entire labor and birth. Doula care includes explaining the progress of labor, what is normal, and what is to be expected in lay terms, advocating for the patient to communicate with their provider by helping them identify their questions and concerns, providing comfort measures continuously such as massage, touch, and positioning, and participating in a postpartum visit [6]. The role does not include any clinical responsibilities, documentation, or opinion in the woman's approach to labor [3]. Although the integration of doulas into the medical environment has not always been smooth, the role of the doula is a role that can complement nursing care to improve childbirth outcomes [6]. While the nurse ensures a safe outcome for the laboring woman, the doula ensures that the laboring woman feels safe, supported, and empowered to have the type of labor and delivery that is desired.

Theoretical Framework

Virginia Henderson and her 'need' theory describing 14 basic human needs best supports the use of a doula. One concept within Henderson's theory is to promote independence and completeness in both mind and body [8]. Another important aspect of Henderson's nursing theory identifies the nurse as one who works collaboratively with other healthcare professionals along with the patient. A third

important aspect of Henderson's theory incorporates the idea of assisting one who is sick or well, to perform activities that contribute to health or recovery [8].

The specific aspects of Henderson's nursing theory are easy applied to the physical, emotional, and informational support that a doula provides to a woman during labor. First, a laboring woman is not considered to be ill, but one who is experiencing a normal physiological process of labor to deliver her baby. The doula, working collaboratively with the nurse, provides support to meet the wishes of the laboring woman and her family in having the birth experience she desires and envisions. Thus, the doula facilitates completeness in both mind and body as identified by Henderson. Provision of collaborative care with the nurse is an ideal way in which to provide support and has been proven to be highly effective to provide safe and clinically beneficial outcomes for both the mother and newborn [8]. The act of collaboration between the nurse and the doula improves the quality of care and patient satisfaction [9], while decreasing the number of interventions. Henderson's theory of need as a nursing theory is very supportive of a doula and the support that is provided during labor.

Objectives and Methods

Objectives: To determine if labor support decreases the risk of cesarean section in low- risk mothers and if providing an on-call doula service would be beneficial.

Methods

An electronic literature search was conducted utilizing PubMed, CINAHL Plus and PsycINFO for the search terms " doula", "birth companion", and "continuous labor support" published between January 2012 and June 2017. Inclusion criteria included full text available, academic journal, and English language. Abstracts for the identified articles were reviewed for relevance and duplicate citations were removed. Reference lists were also reviewed for relevancy, resulting in a total of 10 papers being included in the review.

Authors	Sample Size	Purpose	Method	Findings
Kozhimannil et al. (2016)	65,147 Medicaid-funded singleton births at hospitals in the West North Central and East North Central US in the 2012 Nationwide Inpatient Sample 1,935 singleton births who were supported by doulas in the Upper Midwest from 2010-2014	To compare whether doula presence during birth affected rates of preterm and cesarean birth among Medicaid beneficiaries regionally and to determine the potential cost savings of doula coverage.	Retrospective secondary data analysis of two large data sets (Level 3 Study)	Women who received doula support had lower preterm and cesarean birth rates than Medicaid beneficiaries regionally (4.7 vs 6.3%, and 20.4 vs 34.2%). After adjustment for covariates, women with doula care had 22% lower odds of preterm birth (AOR 0.77 [95% CI 0.61-0.96]). Cost effectiveness analyses reveal potential savings associated with doula support reimbursed at an average of $986 (ranging from $929 to $1,047 across states). Coverage reimbursement for doula services might be cost saving or cost-effective for state Medicaid programs.
Kozhimannil et al. (2013)	279,008 Medicaid-funded singleton births nationwide from 44 states in the 2009 National Inpatient Sample. 1,079 Medicaid beneficiaries who were supported by doula care provided by Everyday Miracles in Minneapolis, Minnesota.	To compare childbirth related outcomes between ethnically/racially diverse Medicaid beneficiaries who received childbirth classes and doula support and a group of similar women receiving Medicaid and to compare potential cost-savings with doula support.	Retrospective, secondary data analysis (Level 3)	Women who were supported by doulas had a cesarean rate of 22.3%, whereas women who were not supported had a cesarean rate of 31.5%. Doula-supported women had preterm birth rates of 6.1%, whereas other women had preterm birth rates of 7.3%. After control for clinical and sociodemographic factors, odds of cesarean delivery were 40.9% lower for doula-supported births Potential cost savings to Medicaid programs associated with cesarean rate decreases are significant but depend on states' reimbursement rates, birth volume, and current cesarean rates.

Bohren et al. (2017)	26 trials with 15,858 women from 17 countries.	To determine the effectiveness of continuous labor support for women and infants compared to routine care without continuous support.	Meta-analysis, Retrospective review of 26 randomized controlled trials. (Level 1)	Women who received continuous labor support were less likely to have a cesarean birth. Improved outcomes associated with continuous labor support also include increased spontaneous vaginal birth, shorter length of labor, decreased instrumental vaginal births, decreased use of analgesics, decreased or low Apgar scores, and improved feelings about childbirth.
Chapple et al. (2013)	Data from the 2012 Cochrane Review on continuous labor support.	To determine the cost-savings per delivery in Wisconsin using doulas for continuous labor support.	Description of secondary analysis of Cochrane Review data Cost-savings formulas were used using confidence intervals. (Level 3)	Estimated savings of $28,997,754.80 could have been achieved if every low-risk birth were attended in-hospital by a professional doula. This is an estimated cost savings of $424.14 per delivery or $530.89 per low-risk delivery.
Harris et al. (2012)	2476 women living in Vancouver, Canada from April 2004 - October 2010. 1238 ethnically diverse, low-income women from Vancouver, Canada who attended a Community Birth Program. Control group: 1238 women matched for neighborhood, maternal age, parity, gestational age receiving standard care in community based obstetrician or midwife practices	To examine perinatal outcomes in physiological normal birth and women that are encouraged to play an active role in their maternity care.	Retrospective, cohort study (Level 3)	Women in the birth program group were less likely to have a cesarean section than the control group. Women in the birth program group with a previous cesarean section were more likely to plan a vaginal birth than the control group.
The American College of Obstetrician and Gynecologists (2017)	Cochrane Review	To encourage obstetricians to familiarize themselves with low-interventional techniques for the intrapartum management of low-risk women in spontaneous labor.	Committee opinion	Benefits shown in randomized controlled trials (RTC) include shortened labor, decreased need for analgesia, fewer operative deliveries and fewer reports of dissatisfaction with the experience of labor. Labor support techniques used by friends or family members in a RTC of 600 nulliparous women resulted in significantly shorter length of labor, greater cervical dilation at time of epidural, and higher Apgar scores at 1 and 5 minutes. Continuous labor may also be cost effective considering the associated lower cesarean rate.
Challiet et al. (2014)		To assess the effects of nonpharmacologic approaches to pain relief during labor	Meta-analysis of randomized control trials that compared non-pharmacological approaches for pain relief during labor to usual care. Cochrane library, Medline Embase, CINAHL, and MRCT databases used to screen studies from January 1990 to December 2012. (Level 1)	Non-pharmacologic approaches are associated with a reduction in epidural analgesia and a higher maternal satisfaction with childbirth

Zandt et al. (2016)	1511 records of women who had Birth Companions (BCs) and were served from 1998 - 2014.	To provide a description of the outcomes of vulnerable groups of mothers and newborns served by BCs from 1998 to 2014. To Inform all nurses about the unique needs of these populations. To provide feedback to the program to enhance services.	Retrospective program review Data was collected in a Family Folder after completion of prenatal appointment, labor and delivery, and postpartum appointments. Data was analyzed using SPSS software and women were divided into 2 groups (vulnerable and non-vulnerable) based off of age, income, education, race, and primary language. Maternal indicators such as Pitocin augmentation/ induction, epidural use, and C-section as well as newborn health indicators such as birth weight, gestational age, and breastfeeding attempt were analyzed and compared (Level 3)	Vulnerable women in the BCP had a lower C-section rate (26.8%) than the current national rate (32.7%) though higher than the non-vulnerable women served by the BCP. Vulnerable women were significantly more likely to be alone (8.4%), being without another person at their birth other than the BC. Non- vulnerable women were far more likely to have a support person at their birth with only 2.2% being alone.
Kozhimannil et al. (2016)	13 racially/ ethnically diverse low-income pregnant women	To assess perspectives of racially/ethnically diverse, low-income pregnant women on how doula services may influence the outcomes of pregnancy and childbirth.	Descriptive Survey 4 in-depth focus group discussions with low-income pregnant women Used a selective coding scheme based on agency, personal security, connectedness, respect, and knowledge. (Level 3)	By addressing health literacy and social support needs, pregnant women noted that doulas affect access to and the quality of health care services received during pregnancy and birth. Improving access to doula services for pregnant women who are at risk of poor birth outcomes may enhance clinical efforts to overcome the pervasive influence of social determinants of health (SDOHs) on pregnancy and childbirth.

Gruber et al. (2013)	289 women were served by the YWCA Greensboro in their childbirth education program between January 2008 and December 2011. 226 included in sample; 129 women without a doula and 97 women with a doula.	To present a comparative analysis of birth outcome results of two groups of mothers served by the same childbirth education program.	Non-randomized controlled trial The expectant mothers included in the sample were identified by health professionals, social workers, counselors, school nurses, obstetrics and gynecology (OB/GYN) offices, nonprofit agencies, schools, college campuses, community settings such as churches and libraries, through peers, and self-referral. 226 women included in the sample. Inclusion in the sample for this study was limited to expectant mothers who attended at least three Healthy Moms, Healthy Babies childbirth classes. Of these 226 women, 129 gave birth without the assistance of a doula, and 97 worked with a doula. (Level 2)	Rates of C-section were higher for non-doula group Non-doula-assisted mothers were four times more likely to have an Low Birth Weight (LBW) baby than mothers who were assisted by a doula. Doula involvement is a cost-effective method to improve outcomes for mothers and infants.

Results

All 10 studies reveal incredibly similar findings. Substantial evidence demonstrates that continuous labor support decreases the risk for cesarean section, whether the support person is a professionally trained doula [9,11-13], trained family member or friend [14], or trained nursing student [15]. Additional health benefits of doulas include: lower preterm birth [12,16], shorter length of labor [11,14], less use of analgesics [11,14,17], fewer low Apgar scores [11,14], less instrumental vaginal births[11], improved feelings about childbirth [11], and higher maternal satisfaction [17]. Investigators reported on the cost-effectiveness of continuous labor support, especially among mothers receiving Medicaid [9,12,16,18]. In fact, doula-care might help improve health in especially vulnerable populations that are prone to poor birth outcomes [12,15]. Despite all of this incredible knowledge about how continuous labor support enhances the birth experience, major gaps still remain in the research. Further research should investigate the expectant father's perspective, subjective and physical outcomes of doula support, and doula workforce issues [18]. Overall, these ten studies suggest that continuous labor support has countless benefits and no reportable harms.

Discussion

Doula care should be routine, not the exception. With overwhelming evidence, continuous labor support improves labor experiences and outcomes for pregnant mothers, while posing no harm. Women receiving doula care are less likely to have a C- section, and more likely to have a positive birth experience with improved neonatal outcomes [14]. One meta-analysis estimated cost savings of approximately $28 million dollars in Wisconsin hospitals by having a doula present at every low-risk birth. If Medicaid programs offered doula care free of cost, then the potential cost-savings might total $2.5 million for most states [16].

By having a trained person to be fully present, to listen, empathize, observe and respond to a woman's need for support and education can help to alleviate an unmeasurable amount of physical and/or emotional pain. In addition, having a doula may prevent an economic hardship resulting from surgical interventions. Implementing free doula-care would also help vulnerable women who are at-risk for poor birth outcomes [15].

Conclusion

Both the private and public sector should subsidize the cost of doulas in order to ensure that every pregnant woman has the option to have a doula if she wants one. So far, only Minnesota and Oregon's Medicaid programs have included doula services as a part of their coverage. Since it might take longer for the rest of the states to catch up, other changes need to be made that can be implemented sooner. Trained doulas should hold doula-training sessions at the community level so that friends and family of pregnant women can learn how to serve as a lay-doula. Additionally, hospitals should hire on-call doulas to be present twenty-four hours a day, seven days a week. Although women would not have an established relationship with this doula, they would still reap the benefits of having an emotional support person by their side. If these policy changes were put into place, there's no telling how great the outcomes might be. There are no known contraindications for continuous labor support and immeasurable benefits. Policy change could promote doulas being more appropriately utilized [19,20].

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