Supporting Women in Labor: Analysis of Different Types of Caregivers

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Continuous labor support offers multiple benefits for mothers and infants. The type of caregiver that is the best support person in labor has not been identified. A critical review of the English language literature was conducted to describe the current state of knowledge on different types of labor support persons. Randomized trials and other published reports were identified from relevant databases and hand searches. Studies were reviewed and assessed by using a structured format. Eight randomized trials met the selection criteria for inclusion in this analysis. These trials investigated untrained and trained lay women, female relatives, nurses, lay midwives, and student lay midwives as labor support persons. Support by untrained lay women starting in early labor and continuing into the postpartum period demonstrates the most consistent beneficial effect on childbirth outcomes. However, more randomized controlled trials are warranted before firm conclusions may be drawn. J Midwifery Womens Health 2004;49:24–31 © 2004 by the American College of Nurse-Midwives.

keywords: labor, obstetrics, natural childbirth, nurse-midwives, social support

INTRODUCTION

In the last century, birth in the United States (US) moved from a woman-supported experience in the home to a highly medicalized event in the hospital.¹ Although immediate pregnancy outcomes for mother and baby have improved, rates of medical intervention and operative delivery have increased, and problems such as failure to breastfeed, difficulties coping as a mother, and high rates of postpartum depression remain prevalent.² Research suggests that continuous labor support may mitigate some of these adverse outcomes.

To assess who might best provide labor support, one must first understand exactly what labor support is and how it works. The primary theorized mechanism of action involves the cycle of fear-tension-pain observed by Dr. Grantley Dick-Read, an early proponent of childbirth education and labor support.³ The theory states that pain and anxiety during labor lead to an endogenous release of catecholamines, which lower uterine contractility and decrease placental blood flow. Less anxiety means decreased catecholamines, improved uterine contractility and efficiency, and a reduced risk of prolonged labor or fetal distress.^{3,4} Women with continuous labor support feel empowered and in control and, therefore, experience less anxiety than their non-supported counterparts.^{3,5}

The components of labor support that women report finding helpful are emotional support (continuous presence, reassurance, encouragement, and praise); physical support (comfort measures aimed at decreasing hunger, thirst, or pain); information and advice about what is happening and how to cope; advocacy (respecting her decisions and helping to communicate those to the health care team); and caregiver support of the partner/husband.⁶ All of these components imply a human presence that accepts a woman's behaviors, attitudes, and individual preferences.⁶

Systematic review of the literature demonstrates that support in active labor by an experienced female companion is associated with significantly less need for analgesia, forceps or vacuum extraction, and cesarean births, fewer low Apgar scores,^{7,8} shorter duration of labor, decreased oxytocin augmentation,¹ and an increased sense of personal control.⁹ In the long term, support is associated with lower rates of postpartum depression, failed breastfeeding, difficult mothering, and negative perceptions of the birth experience.⁸ According to a 1999 metanalysis,¹⁰ positive outcomes are limited to studies in which continuous labor support is compared with none at all; in trials that include intermittent labor support, no significant differences are seen.¹⁰ To date, no critical review has analyzed the effectiveness of labor support by different types of support persons. The purpose of this article is to review the evidence regarding the types of caregivers who can offer effective support in labor.

METHODS

The keywords for this search, *intrapartum support, labor support, companionship in labor*, and *doula*, were specified at the outset of the project. Although many uses of the term *doula* can be found in the literature, in this review *doula* was defined as an unfamiliar yet trained lay woman. Sources were identified for both computer and hand searches of publications in the English language through July 2003. The goal was to retrieve all relevant materials, including randomized trials and other publications. The following data sources were used to identify an array of articles or book chapters that addressed aspects of labor support: *CINAHL*, *Cochrane Database of Systematic Reviews, Medline, OVID Evidence-Based Medicine, PsychInfo, SciSearch Plus*, and current textbooks of obstetrics and midwifery.

24

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Articles were read by the author, summarized, and assessed for content and quality. Articles were then grouped into five categories: randomized trials or quasirandomized studies, prospective studies (nonrandomized), retrospective studies, metanalyses and systematic reviews, and opinions or commentaries. Studies included in this analysis were required to have been fully published in English between 1980 and 2003; be randomized controlled trials (RCTs) or prospective, nonrandomized studies; use analysis by intention to treat or explain low attrition in full analysis; compare a group with support to a group without support; give a clear explanation of who provided support; use continuous or almost continuous support as the independent variable; and examine maternal outcomes, maternal satisfaction, and/or infant outcomes.

RESULTS

The search returned 284 articles. Because 276 did not meet the selection criteria, 8 articles remained. Reasons for exclusion included publication before 1980; retrospective or nonrandomized design; no analysis by intention to treat or high attrition rates in primary analysis and no reasons given; no clear explanation of who provided support; intermittent versus continuous support or no clear explanation of level of continuity; no relevance to labor support; publication in a language other than English or only as an abstract; and being a commentary or opinion piece.

The eight published reports provided information about labor support by 1) unfamiliar, untrained lay women; 2) unfamiliar, trained lay women; 3) female relatives; 4) nurses; and 5) monitrices, or lay midwives acting solely as labor support persons. No studies meeting the selection criteria reported on labor support by fathers, lesbian partners, certified nurse-midwives, certified midwives, or physicians. Furthermore, no studies were found that addressed specifically the issue of who does labor support best.

Untrained Lay Women

Two randomized trials^{11,12} compared outcomes of women attended by untrained lay women with outcomes of women who did not have these caregivers present during labor. In both studies, unfamiliar women provided emotional support (either friendly conversation¹¹ or explanation and encouragement¹²) and physical support in the form of rubbing the woman's back and holding her hands. Dependent variables assessed were duration of labor, use of oxytocin, use of analgesia, mode of delivery, and newborn health. One study¹¹ also assessed maternal-infant bonding behavior during the first 22.5 minutes postpartum. Effects were greater on women living alone.¹² This type of support does not appear to influence use of analgesia.^{11,12} Support by untrained lay women may improve maternal-infant bonding behavior¹¹ and newborn health,^{11,12} but more research is needed to validate these findings (Table 1).

Trained Lay Women (Doulas)

Doulas are supportive companions trained to provide continuous physical, emotional, and informational support to a mother and her family during and immediately after giving birth. Simkin and O'Hara¹³ have noted that the prevailing model of doula care in North America, in which a woman establishes a relationship with a doula prenatally and receives support early in labor, has not been investigated. Two randomized trials^{4,14} have compared outcomes of women attended by trained doulas with outcomes of women who did not have doulas present during labor. Dependent variables assessed were duration of labor, use of oxytocin, use of epidural analgesia, mode of delivery, maternal satisfaction with the experience, newborn outcomes, and rates of breastfeeding at 1 month (Table 1). These trials suggest that continuous support by an unfamiliar but trained lay woman shortens the duration of labor by 1 to 2 hours. Maternal feelings of control over the birth experience and rates of breastfeeding at 1 month may increase with support by a trained lay woman, but one study¹⁴ does not permit firm conclusions. The findings related to use of medications, mode of delivery, or newborn health demonstrate no consistency and no conclusions can yet be drawn.

Female Relatives

One randomized trial⁵ compared outcomes of women attended by a female relative with outcomes of women who did not have a female relative present during labor. Dependent variables included use of oxytocin, use of analgesia, amniotomy to augment labor, and mode of delivery. The results of the trial suggest that continuous support by a female relative may decrease augmentation with oxytocin or amniotomy, lessen the use of analgesia, and increase the rate of unassisted vaginal births. However, because this was only one trial with a small sample size, no firm conclusions can be made (Table 1).

Nurses

Two randomized trials^{15,16} compared outcomes of women attended by nurses trained to provide specialized support with outcomes of women who had usual nursing support. In one study,¹⁵ nurses were trained to include in their care emotional support, physical comfort, instruction for relaxation and coping techniques, partner support, and regular communication with the health care team. In the other study,¹⁶ nurses were trained by a professional labor nurse

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Author/Country	Type of Study	Results
Untrained volunteer lay women a	s labor support persons	
Sosa et al., 1980,11 Guatemala	RCT; $n = 40$ Primagravidas at term	Support group had shorter labors,* less use of oxytocin,* fewer assisted and operative deliveries,* fewer depressed infants,* more time awake, ⁺ stroking,* talking with, [‡] and smiling at [‡] their infants
		No differences in use of analgesia or in amount of time spent in body- to-body contact, en face, looking at the baby, or nursing
Klaus et al., 1986, ¹² Guatemala	RCT; n = 465 Primigravidas at term	Support group had shorter labors,* less use of oxytocin,* fewer assisted,* and operative [‡] deliveries, and fewer NICU admissions No differences in use of analgesia
Unfamiliar trained lay women (do	oulas) as labor support persons	
Kennell et al., 1991, ⁴ USA	RCT; n = 616 Nulliparas at term 3 groups: support, no support, and observed only	Among women with SVDs, support and observed groups had less use of epidural analgesia*
		Among all participants: support group had shorter labors, [†] less use of oxytocin,* fewer assisted,* and operative [‡] deliveries, fewer newborn sepsis evaluations,* and fewer NICU admissions [‡] ; observed group had shorter labors, [†] less use of oxytocin,* fewer assisted* and operative [‡] deliveries, fewer newborn sepsis evaluations, [†] and fewer NICU admissions [†]
Langer et al., 1998, ¹⁴ Mexico	RCT; n = 363 Nulliparas	Support group had shorter labors, higher rates of breastfeeding at 1 month and greater perceived control over delivery experience No differences in use of oxytocin or epidural analgesia, mode of delivery, or Apgar scores
Female relatives as labor support	t persons	
Madi et al., 1999, ⁵ Botswana	RCT; $n = 109$ Primigravidas at term	Support group had less use of oxytocin [†] less use of analgesia, [†] fewer amniotomies to augment labor, [†] more vaginal deliveries, [†] fewer assisted and operative deliveries [†]

RCT = randomized controlled trial; n = number; SVD = spontaneous vaginal delivery; NICU = neonatal intensive care unit.

* *P* < .001.

 $^{+} P \leq .05.$

 $^{\ddagger} P \leq .01.$

and doula to include in their care emotional support, physical comfort, information/advice, and advocacy. These aspects of support are similar to those provided by trained doulas. Dependent variables included duration of labor support, use of oxytocin, use of epidural analgesia, continuous electronic fetal monitoring (EFM), perineal trauma, mode of delivery, newborn health, women's perceptions of control during childbirth, postpartum complications and length of stay, postpartum depression, and preferences for labor support (Table 2).

These two studies suggest that continuous support by intrapartum nurses decreases the use of oxytocin and continuous EFM, but has no significant effect on duration of labor, use of epidural analgesia, likelihood of perineal trauma, mode of delivery, newborn health, women's perceptions of control during childbirth, postpartum complications, or postpartum depression. The findings of the larger, multisite trial indicate that most women prefer continuous versus intermittent support by a nurse in childbirth.¹⁶ The authors concluded that in hospitals characterized by high rates of routine interventions, continuous labor support by

26

nurses does not affect the likelihood of cesarean birth or other medical or psychosocial outcomes of labor and birth.

Monitrices

Details of the only randomized trial¹⁷ evaluating support by lay midwives or lay midwives-in-training are summarized in Table 3. These midwives were self-employed birth attendants, or "monitrices," and did not manage the care of the women they supported. The study examined the effect of this type of caregiver on duration of labor, use of oxytocin, analgesia/anesthesia, and stirrups, mode of delivery, and perineal trauma.

Continuous support by a monitrice appears to decrease the use of analgesia and/or anesthesia, decrease the use of stirrups, increase the likelihood of an intact perineum, and increase the use of oxytocin. Support by a monitrice does not appear to influence mode of delivery. The authors concluded that type of prenatal education, anxiety (trait or state), and commitment to unmedicated labor had little impact on outcomes. The important predictors of outcomes were continuous professional support and expectations of
 Table 2.
 Nurses as Labor Support Persons

Author/Country	Type of Study	Results
Gagnon et al., 1997, ¹⁵ Canada	RCT; n = 413 Nulliparas at term	Support group had less use of oxytocin No differences in duration of labor, use of oxytocin or epidural analgesia, mode of delivery, perineal trauma, or NICU admissions
Hodnett et al., 2002, ¹⁶ USA/Canada	RCT; n = 6,915 Women with live singleton fetus or twins ≥34 weeks' gestation	Support group had less augmentation of labor* and less continuous EFM, [†] and supported women experienced greater control during childbirth [†] No differences in duration of labor, epidural use, mode of delivery, perineal trauma, postpartum complications and length of stay, neonatal outcomes, perceived control over delivery, or postpartum depression

RCT = randomized controlled trial; n = number; NICU = neonatal intensive care unit; EFM = electronic-fetal monitoring.

* $P \le .05$.

[†] $P \le .01$.

/ _ .01.

control. Because this was only one trial with a small sample size, these conclusions must be viewed with caution. Furthermore, the results of this study cannot be generalized to practicing midwives.

DISCUSSION

Chalmers and Wolmer¹⁸ assert that the most impressive, consistent, and methodologically sound results on labor support come from research on untrained lay women. The earliest studies on labor support took place in Guatema-

Table 3. Monitrices as Labor Support Persons

Author/Country	Type of Study	Results
Hodnett and Osborn, 1989, ¹⁷ Canada	RCT; $n = 103$ Women in last trimester whose husband or partner attended the birth	Support group had less use of analgesia,* anesthesia,* and stirrups,* had more intact perineums,* and had more use of oxytocin* No differences in rates of assisted or operative birth

Monitrice denotes a lay midwife or midwife-in-training acting solely as a birth attendant; RCT = randomized controlled trial; n = number. * P < .001. la^{11,12} and used the term "doula" to describe an untrained female volunteer who supported women by rubbing their backs and holding their hands, talking with them, and being a friendly presence. In these early studies, women customarily labored in a crowded and unfamiliar environment where hospital policy prohibited family members, friends, or continuous nurse caretakers.¹⁸ According to the investigators,¹¹ these circumstances may have significantly increased maternal anxiety and exaggerated the effect of a supportive companion. The authors concluded that this type of labor support might be useful for low-income, single, young mothers who lack support from family and may have no formal or strong cultural preparation for childbirth.¹¹

The emergence of such positive outcomes despite adverse circumstances has several potential explanations. First, the lay women were not part of a hospital hierarchy and so may have been seen as an ally without other interests. Next, these women came from the same community as the laboring women and may have been able to communicate easily and to relate in terms of shared values. Finally, the lay women were told repeatedly to concentrate on comfort, reassurance, and praise. In situations such as this, it is possible that some of the effects of "labor support" result from the hospital's allocation of a person to stay one-to-one with a woman throughout labor, which may convey a message of concern for and value of the woman as an individual.² In addition, the mere presence of an observer may influence a provider's behavior and decrease early interventions; likewise, staff may have focused more on the control group, increasing the number of interventions to compensate for their not having a companion.⁵

After publication of the dramatic findings in the first labor support studies in Guatemala, investigators undertook assessment of the effect of labor support in the current labor and birth environment of the United States and on populations of privately insured, middle-class women giving birth in private hospitals. The randomized trial by Kennell et al.⁴ affirmed that young, disadvantaged, nulliparous women in crowded units with limited privacy and opportunities for support benefit from the presence of a doula. However, in this study, women were confined to bed as soon as possible after admission and labored in 12-bed wards, where they were allowed no visitors and were surrounded by unfamiliar staff who often did not speak their language. Furthermore, "if, in the judgment of nursing and/or medical staff, the patient was unable to deal with her pain, as evidenced by vocalization, restlessness, or lack of cooperation,"4 pain medication was used as chemical restraint. As Richards¹⁹ has noted, given these conditions, it is not surprising that a doula could act as "a buffer against the worst excesses of institutionalized obstetrics."

Studies of women from higher socioeconomic backgrounds have not demonstrated such dramatic effects. Privately insured women tend to be better educated, to have taken childbirth education classes, and to be more aware of their childbirth options than the young, less advantaged women in earlier studies.²⁰ Langer et al.¹⁴ found higher rates of exclusive breastfeeding at 1 month in the supported group, but the intervention included a postpartum visit during which the doula told the mother about the benefits of breastfeeding and how to solve problems she might encounter.

Continuous labor support may have greater benefits for certain groups of women. Women with a higher level of self-esteem and/or a greater internal locus of control may tend to seek out information and support (e.g., taking childbirth education classes or hiring a doula); however, women who are young, unmarried, and of low socioeconomic status, who are less likely to attend childbirth education classes and who have poor social support, may have more anxiety and, therefore, may benefit the most from labor support.²¹

Appropriate care for high-risk women may spill over to the care offered low-risk women in tertiary care centers, leading to less than optimal outcomes for the latter.²² Thus, the effect of the doulas in the trial by Langer et al.¹⁴ may have been diminished by the strict routine hospital procedures (80% epidural rate and almost universal use of oxytocin). In both RCTs, doulas were hired and trained by the project, and in one trial¹⁴ the doulas were retired nurses. These women may have been restricted by a primary allegiance to the medical establishment or to the study, rather than to the laboring woman. In the case of the retired nurses, they also may have been desensitized to laboring women, making them less effective in their role as a support person. Finally, it is unclear how the timing and duration of support may affect outcomes: almost 80% of participants in the trial by Langer et al.¹⁴ were admitted after 4 cm of dilatation. Hodnett and Osborn¹⁷ suggested that additional support during early labor may enable women to labor longer or more effectively at home; thus, women admitted to this study later in labor may not have had time to benefit from the presence of a labor support person.

Only one RCT has examined the effectiveness of a female relative labor companion on childbirth outcomes.⁵ On the basis of the results of this trial, it appears that female relatives may represent an excellent option for women desiring continuous support during labor. Participants were mainly black, young, single students in an unfamiliar, overcrowded hospital environment with limited privacy, restriction of visitors and companions, and multiple caregivers. In addition, the ratio of staff to women was 1:4. Significantly more mothers in the support group had spontaneous vaginal births, less intrapartum analgesia, less oxytocin, and fewer amniotomies to augment labor.5 The investigators note that findings cannot be generalized due to the small sample size and the setting in Botswana. However, the findings in this study are consistent with those of studies of untrained lay women in Guatemala.11,12

Neither RCT conducted on nursing labor support^{15,16} found significant differences in maternal or infant out-

comes. In fact, the only differences between outcomes for women in the supported and non-supported groups were modest decreases in the use of oxytocin and continuous EFM. Several possible explanations exist for this lack of effect. The authors of the larger, multicenter RCT¹⁶ defined neither "usual care" nor "support," making it difficult to distinguish between treatment in the experimental and control groups. The study did not control for the presence of another support person, such as a partner or friend. Furthermore, unlike most other RCTs of labor support, this study included multiparous women, women delivering before term, and women with twin pregnancies, all of whom may respond differently to labor support compared with low-risk primigravidas at term. Moreover, the trial randomized women as long as second stage was "not imminent."¹⁶ As mentioned previously, additional support during early labor may enable women to labor longer or more effectively at home¹⁷ and thereby avoid interventions. Finally, hospitals eligible for the larger RCT of nurse support had a cesarean birth rate of at least 15% and a 24-hour epidural service.¹⁶ Settings that use highly technological and medically interventionist approaches show muted effects of labor support.

The other RCT¹⁵ of nurse support had methodological flaws as well, including possible contamination (partners were present in 98.6% of the experimental group and 97% of control group) and baseline differences in the two groups (compared with the experimental group, 10% more women in the control group attended prenatal classes).¹⁵ The authors suggest that suboptimum support by the one-to-one nurses may explain the lack of results, even though these nurses were specifically trained in labor support, whereas many intrapartum nurses are not. Perhaps the simplest explanation for the lack of results in this study is that it had insufficient statistical power to answer even the primary question about cesarean rate.²³

These RCTs^{24,25} suggest the possibility that health professionals may not be the best persons to provide labor support. In general, nurses may be hindered not only by lack of time and ineffective staffing models but also by limited educational preparation and by organizational culture.⁶ In a medicolegal environment that rewards technical proficiency,²⁶ many nurses have not been socialized into a supportive labor and birth role.27 Furthermore, nurses are part of the hospital hierarchy and may be constrained by policies of the organization or norms of the subculture. The use of technology, intervention, and adherence to institutional policies and procedures encourages intermittent presence and does not allow the woman the opportunity to cope with her pain instinctually or independently.²⁸ Thus, the control that nurses (and other caregivers) assume throughout the childbirth process may be a barrier to providing supportive care.28

Few studies have considered the effect on childbirth outcomes of labor support by a midwife or nurse-midwife. Where providers use active management of labor, favorable outcomes, particularly a low cesarean birth rate, have been related to the beneficial effects of continuous one-to-one labor support by a midwife.^{29,30} However, no RCT has investigated childbirth outcomes when the midwife is both managing labor and giving continuous support.

The majority of randomized trials included in this review suffer from multiple methodological problems, including bias due to the inability to blind health professionals, the lasting effects of care before randomization, the challenge of ensuring the intervention is applied appropriately (e.g., continuous versus intermittent support, randomization in early versus late stages of labor, and level of support in the early postpartum period), variations in the definitions of training and support, and the possibility of contamination (e.g., presence of additional support persons or increased support of women in the control group). Furthermore, some studies are small^{5,31} or have limited statistical power.^{14,15} In all studies, obstetric care seems to have been provided by physicians in hospital settings, so results cannot be generalized to out-of-hospital births or births attended by midwives. In addition, no research has been conducted in the US with untrained lay women or female relatives as support persons.

The impact of labor support on rates of interventions is difficult to assess. As noted above, in settings where technological and interventionist approaches are common, the effects of labor support may be muted. The authors of one metanalysis argued that, in settings with high rates of interventions and extensive use of technology, the effect of labor support may be less significant; therefore, to avoid caregiver-related biases, explicit criteria on the indications for major obstetric interventions must be included in design of trials.²¹ The authors of another metanalysis¹ concluded the opposite: the presence of a female labor companion may be particularly useful in situations where the intervention rates are high. Clearly, the relationship between support and intervention rates requires further examination.¹⁰

Today, partners/husbands attend the majority of births in the United States³² and, along with nurses, provide the majority of labor support.³³ Although in the past, women have rated their intimate partners' presence during labor and birth as important and helpful,³⁴ the first national US survey of women's childbearing experiences³³ reported that women rank partners or husbands after doulas, midwives, and other family members in terms of the quality of supportive care. The partner's effect on the course of labor and obstetric outcomes has not been assessed adequately^{18,35} and requires further investigation.

Ideally, future research into the effectiveness of various types of labor support persons would include both in- and out-of-hospital settings and obstetric care by both physicians and midwives. Support should begin early in labor and should extend at least 1 hour into the postpartum period, because that is a critical time for the initiation of maternal-infant bonding and breastfeeding. The independent variable should be continuous support by: a partner, friend, or relative of the woman's choosing; an untrained lay woman; a lay woman with standardized training; or a person of the woman's choosing *and* either an untrained lay woman or a trained lay woman. There should be strict criteria about the type and amount of support offered, and none of the support persons should be affiliated with the birth site. Comparisons between support and no-support groups would include outcomes of labor and birth, breastfeeding, and financial cost. In addition, maternal perceptions of and satisfaction with the birth experience, maternal and paternal self-esteem, role adjustment, and infant attachment could be examined between groups.

CONCLUSIONS AND RECOMMENDATIONS

Although continuous support initiated early in labor appears to improve childbirth outcomes, it remains unclear who should provide this support. The trials conducted to date suggest that female support persons hired by a woman and unaffiliated with the hospital may be better able to assist a couple in making informed decisions and amending their birth plan as needed.³ And although the presence of friends or relatives may place pressure on women to perform "well" and thereby result in increased anxiety,¹⁸ labor support by a female relative seems to represent a low-cost, preventative measure consistent with traditional cultural practices in Botswana⁵; further research may demonstrate that it is also consistent with Western cultural practices.

Potential barriers exist with each type of support person. For example, a nurse, midwife, or physician may not have the time or interest to provide continuous support during labor. In addition, whether the caregiver is an employee of the institution and has additional responsibilities or loyal-ties³⁵ may influence the quality of his/her labor support. A husband or partner, on the other hand, may lack the knowledge, skills, or personal detachment to provide all the support a woman needs. And another outsider, such as a monitrice, lay woman, female relative, or friend, may be seen as a threat to the institution and have a negative influence on the care given.³⁵

Kayne et al.³ suggest that a combination of support people may work best. Partners, family members, or doulas may be all equally capable of providing adequate labor support. Or their abilities may complement one another's. Furthermore, women may expect different kinds of support depending on the stage of labor.³⁶ For example, during early labor, a woman may need information about what to expect and reassurance of the normalcy of her condition. During active labor, she may require physical care in addition to information and reassurance.⁶ In second stage, she may need primarily praise and encouragement. If a woman panics at any time, the "take-charge routine" may best be assumed by someone in a position of authority, such as the nurse or midwife. Most studies have not measured the perceived helpfulness of particular support actions, or the relative importance, quality, or frequency of each type of support at different points in labor. Notably, the study of labor support involves only a short period of time during a woman's pregnancy and childbirth experience; further research of social support in the prenatal and postpartum periods may provide valuable insight.

Labor support should be evaluated on the basis of its effectiveness to meet women's objectives as well as those of obstetric providers. Although social support may help protect women from the potentially harmful effects of stress during childbirth by enhancing adaptive coping behaviors, this buffering effect may occur only when the woman sees the support person as valuable, desirable, and useful.³⁷ Prenatally, every woman should be encouraged to choose her source of labor support³⁵ based on knowledge of herself, her coping style, and her relationship with potential support people. Women also should decide what labor support will entail, because certain types of support (such as touch or massage) may be acceptable and appealing to some and not to others.^{3,18} Throughout pregnancy and childbirth, clear communication must exist between clients, support persons, and hospital staff.

Overall, satisfaction with the birth experience is highly associated with continuous,⁸ individualized,^{38,39} and emotional⁴⁰ support. The most important element of labor support may be the woman's knowledge that she will not be left alone.^{35,41} Female support persons who attend a woman early in labor and who include breastfeeding awareness and promotion in a postpartum visit may have a positive influence on childbirth outcomes. All persons planning to provide labor support must be capable of being fully present to the woman, accepting her attitudes and behaviors, and offering her ongoing praise and encouragement as she strives to have a safe and satisfying birth experience.

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REFERENCES

1. Scott KD, Klaus PH, Klaus MH. The obstetrical and postpartum benefits of continuous support during childbirth. J Womens Health Gend Based Med 1999;8:1257–64.

2. Hofmeyr GJ, Nikodem VC, Wolman WL, Chalmers BE, Kramer T. Companionship to modify the clinical birth environment: Effects on progress and perceptions of labour, and breastfeeding. Br J Obstet Gynaecol 1991;98:756–64.

3. Kayne MA, Greulich MB, Albers LL. Doulas: An alternative yet complementary addition to care during childbirth. Clin Obstet Gynecol 2001;44:692–703.

4. Kennell J, Klaus M, McGrath S, Robertson S, Hinkley C. Continuous emotional support during labor in a US hospital. A randomized controlled trial. JAMA 1991;265:2197–2201.

5. Madi BC, Sandall J, Bennett R, MacLeod C. Effects of female

relative support in labor: A randomized controlled trial. Birth 1999; 26:4-8.

6. Hodnett E. Nursing support of the laboring woman. J Obstet Gynecol Neonatal Nurs 1996;25:257–64.

7. Walker R, Turnbull D, Wilkinson C. Strategies to address global cesarean rates: A review of the evidence. Birth 2002;29:28–39.

8. Hodnett ED. Caregiver support for women during childbirth. Cochrane Database Syst Rev 2002;1:CD000199.

9. Hodnett ED. Pain and women's satisfaction with the experience of childbirth: A systematic review. Am J Obstet Gynecol 2002;186(5 Suppl Nature):S160–72.

10. Scott KD, Berkowitz G, Klaus M. A comparison of intermittent and continuous support during labor: A meta-analysis. Am J Obstet Gynecol 1999;180:1054–9.

11. Sosa R, Kennell J, Klaus M, Robertson S, Urrutia J. The effect of a supportive companion on perinatal problems, length of labor, and mother-infant interaction. N Engl J Med 1980;303:597–600.

12. Klaus MH, Kennell JH, Robertson SS, Sosa R. Effects of social support during parturition on maternal and infant morbidity. Br Med J (Clin Res Ed) 1986;293:585–7.

13. Simkin P, O'Hara M. Nonpharmacologic relief of pain during labor: Systematic reviews of five methods. Am J Obstet Gynecol 2002;186:S127–S59.

14. Langer A, Campero L, Garcia C, Reynoso S. Effects of psychosocial support during labour and childbirth on breastfeeding, medical interventions, and mothers' wellbeing in a Mexican public hospital: A randomised clinical trial. Br J Obstet Gynaecol 1998;105: 1056–63.

15. Gagnon AJ, Waghorn K, Covell C. A randomized trial of one-to-one nurse support of women in labor. Birth 1997;24:71–7.

16. Hodnett ED, Lowe NK, Hannah ME, Willan AR, Stevens B, Weston JA. Effectiveness of nurses as providers of birth labor support in North American hospitals: A randomized controlled trial. JAMA 2002;288:1373–81.

17. Hodnett ED, Osborn RW. Effects of continuous intrapartum professional support on childbirth outcomes. Res Nurs Health 1989; 12:289–97.

18. Chalmers B, Wolman W. Social support in labor—A selective review. J Psychosom Obstet Gynaecol 1993;14:1–15.

19. Richards MP. Doulas and the quality of maternity services. Birth 1992;19:40-1.

20. Gordon NP, Walton D, McAdam E, Derman J, Gallitero G, Garrett L. Effects of providing hospital-based doulas in health maintenance organization hospitals. Obstet Gynecol 1999;93:422–6.

21. Zhang J, Bernasko JW, Leybovich E, Fahs M, Hatch MC. Continuous labor support from labor attendant for primiparous women: A meta-analysis. Obstet Gynecol 1996;88(4 Pt 2):739–44.

22. Klein MC. One-to-one nurse support in labor. Birth 1997;24: 270-1.

23. Hodnett E. Commentary: Are nurses effective providers of labor support? Should they be? Can they be? Birth 1997;24:78–80.

24. Hemminki E, Virta AL, Koponen P, Malin M, Kojo-Austin H, Tuimala R. A trial on continuous human support during labor: Fea-

sability, interventions and mother's satisfaction. J Psychosom Obstet Gynaecol 1990;11:239–50.

25. Breart G, Mlika-Cabane N, Kaminski M, Alexander S, Herruzo-Nalda A, Mandruzzato P. Evaluation of different policies for the management of labour. Early Hum Dev 1992;29:309–12.

26. Miltner RS. Identifying labor support actions of intrapartum nurses. J Obstet Gynecol Neonatal Nurs 2000;29:491–9.

27. Kardong-Edgren S. Using evidence-based practice to improve intrapartum care. J Obstet Gynecol Neonatal Nurs 2001;30:371–5.

28. Gale J, Fothergill-Bourbonnais F, Chamberlain M. Measuring nursing support during childbirth. Maternal Child Health J 2001;26: 264–71.

29. O'Driscoll K, Meagher D. Active management of labour. London: Bailliere Tindall, 1986.

30. Thornton JG, Lilford RJ. Active management of labour: Current knowledge and research issues. BMJ 1994;309:366–9.

31. Hodnett ED, Osborn RW. A randomized trial of the effects of monitrice support during labor: Mothers' views two to four weeks postpartum. Birth 1989;16:177–83; discussion 183–4.

32. Keenan P. Benefits of massage therapy and use of a doula during labor and childbirth. Altern Ther Health Med 2000;6:66–74.

33. Declercq E, Sakala C, Corry MP, Applebaum S, Risher P.

Listening to mothers: Report of the first national U.S. survey of women's childbearing experiences. New York: Maternity Center Association, October 2002.

34. Chapman LL. Expectant fathers' roles during labor and birth. J Obstet Gynecol Neonatal Nurs 1992;21:114–20.

35. Enkin M, Keirse M, Neilson J, Crowther C, Duley L, Hodnett E, Hofmeyr J. A guide to effective care in pregnancy and childbirth. 3rd ed. Oxford: Oxford University Press, 2000.

36. Mackey MC, Lock SE. Women's expectations of the labor and delivery nurse. J Obstet Gynecol Neonatal Nurs 1989;18:505–12.

37. Ip WY. Relationships between partner's support during labour and maternal outcomes. J Clin Nurs 2000;9:265–72.

38. Bryanton J, Fraser-Davey H, Sullivan P. Women's perceptions of nursing support during labor. J Obstet Gynecol Neonatal Nurs 1994;23:638–44.

39. Corbett CA, Callister LC. Nursing support during labor. Clin Nurs Res 2000;9:70–83.

40. Simkin P. The experience of maternity in a woman's life. J Obstet Gynecol Neonatal Nurs 1996;25:247–52.

41. Bertsch T, Nagashima-Whalen L, Dykeman S, Kennell JH, McGrath S. Labor support by first-time fathers: Direct observations with a comparison to experienced doulas. J Psychosom Obstet Gynaecol 1990;11:251–60.