Maternal and perinatal outcomes of an alongside hospital birth center in the city of São Paulo, Brazil*

RESULTADOS MATERNOS E NEONATAIS EM CENTRO DE PARTO NORMAL PERI-HOSPITALAR NA CIDADE DE SÃO PAULO, BRASIL

RESULTADOS MATERNOS Y NEONATALES EN UN CENTRO DE PARTO NORMAL PERIHOSPITALARIO EN LA CIUDAD DE SÃO PAULO, BRASIL

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ABSTRACT

The aim of this study was to describe the maternal and perinatal results of care in the alongside hospital birth center Casa de Maria (CPN-CM), located in the city of São Paulo. The random sample included 991 women and their newborns, attended between 2003 and 2006. The results showed that 92.2% of women had a companion of her choice during childbirth and the practices commonly used were shower or immersion bath (92.9%), amniotomy (62.6%), walking (47.6%), massage comfort (29.8%) and episiotomy (25.7%). Regarding newborns, 99.9% of them had Apgar scores =7 in the fifth minute, 9.3% received aspiration of the upper airway, no one needed to be intubated and 1.4% were removed to the hospital. The model of care in the CPN-CM provides maternal and perinatal outcomes expected for low obstetric risk women, and means a safe option and less interventionist model in normal childbirth.

KEY WORDS

Parturition.
Birthing Centers.
Obstetrical nursing.

RESUMO

O objetivo foi descrever os resultados maternos e perinatais da assistência no Centro de Parto Normal Casa de Maria (CPN-CM), na cidade de São Paulo. A amostra probabilística foi de 991 parturientes e seus recém-nascidos, assistidos entre 2003 e 2006. Os resultados mostraram que 92,2% das parturientes tiveram um acompanhante de sua escolha e as práticas mais utilizadas no parto foram banho de aspersão ou imersão (92,9%), amniotomia (62,6%), deambulação (47,6%), massagem de conforto (29,8%) e episiotomia (25,7%). Com relação aos recém-nascidos, 99,9% apresentaram índice de Apgar = 7 no quinto minuto; 9,3% receberam aspiração das vias aéreas superiores; nenhum necessitou ser entubado; e 1,4% foram removidos para o hospital. O modelo de assistência praticado no CPN-CM apresenta resultados maternos e perinatais esperados para mulheres com baixo risco obstétrico, sendo alternativa segura e menos intervencionista no parto normal.

DESCRITORES

Parto.
Centros Independentes de Assistência a Gravidez ao Parto.
Enfermagem obstétrica.

RESUMEN

El objetivo fue describir los resultados de la atención materna y perinatal en el Centro de Parto Normal Casa de María (CPN-CM), en la ciudad de São Paulo, Brasil. La muestra probabilística se constituyó de 991 madres y sus recién nacidos, atendidos entre 2003 y 2006. Los resultados mostraron que 92,2% de las madres tenía un acompañante de su elección y las prácticas más utilizadas en el parto fueron el baño de aspersión o inmersión (92,9%), la amniotomía (62,6%), ambulación (47,6%), masaje de confortación (29,8%) y episiotomía (25,7%). Con respecto a los recién nacidos, el 99,9% presentaba índice de Apgar = 7 en el minuto cinco, el 9,3% recibió aspiración de las vías aéreas superiores, ninguno necesitó ser entubado y el 1,4% fue trasladado a un hospital. El modelo de atención practicado en el CPN-CN presenta resultados maternos y perinatales esperados para mujeres con bajo riesgo obstétrico, demostrando ser una alternativa segura y menos invasiva en el parto normal.

DESCRIPTORES

Parto.
Centros Independientes de Asistencia al Embarazo y al Parto.
Enfermería obstétrica.

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INTRODUCTION

The contemporaneous obstetric care has arisen several questions about the effects of the excessive medicalization in the care during labor and childbirth, mainly for low risk pregnant women and their babies[1]. The inappropriate use of technology in the birth care has presented unfavorable maternal and perinatal outcomes and the over medicalized care has been a source of dissatisfaction for women. Besides, the unnecessary interventions add more costs to the care with potentially adverse effects. There are no scientific evidences that support the routine use of episiotomy, electronic fetal monitoring, epidural analgesia and oxytocin in low risk women[2].

The childbirth care in settings outside of over medicalized environments is an option to the interventionist model, traditionally employed in the last two decades. These places may be located at extra or intra-hospital facilities and offer a care model that emphasizes birth physiology.

A study developed in Sweden between 1989 and 2000, which compared the results of 3,256 births at an alongside hospital birth center with 126,818 hospital births, pointed out that the care at the birth center was associated to lower rates of obstetric analgesia, electronic fetal monitoring, induction and conduction of labor, without any differences in the rates of operative birth or perinatal mortality[3].

The inappropriate use of technology in the birth care has presented unfavorable maternal and perinatal outcomes and the over medicalized care has been a source of dissatisfaction for women.

An updated systematic review of the Cochrane library[4], which analyzed six clinical trials involving 8,677 women and compared care outcomes in conventional hospitals and in home-like setting (birth centers), found less use of interventions such as analgesia and episiotomy; less perineal lacerations; higher rates of spontaneous vaginal childbirth, maternal breastfeeding and satisfaction with the care. The review did not show any difference between the perinatal mortality in the two care models.

In the late 90's, public policies were adopted in Brazil as strategy to decrease the c-section rates and improve maternal and perinatal outcomes. One of these strategies was the creation of birth centers, defined as maternity facilities that may be located at intra or extra-hospital settings, with the appropriate use of interventions and the presence of a companion chosen by the woman. Besides, these units must have a reference hospital setting, located at a distance that allows removals in the maximum period of one hour[5].

This model has, as the care guiding principle, the focus on the childbirth as an emotional, family and physiologic event, valuing the choices and needs of the woman in the care planning, besides providing a favorable environment for the continuity of the care given by the obstetric nurse or midwife[6].

After a decade on which these birth centers located in extra-hospital or alongside facilities have been acting in Brazil, few researches were developed about the maternal and neonatal outcomes of this care model[7-9]. In this context, the knowledge about these outcomes is still limited and more studies and discussions are needed about the national outcomes.

OBJECTIVE

The objective of this study was to describe the maternal and neonatal outcomes of the care provided by an alongside hospital birth center in the city of São Paulo.

METHOD

This is a descriptive study, with retrospective data collection, carried out at the Birth Center Casa de Maria (BC-CM). The BC-CM is associated to the Brazilian National Health System (BNHS), located in Itaim Paulista district, in the east zone of the city of São Paulo, which is administrated by the Social Organization Santa Marcelina. It is considered an alongside hospital birth center because is in the same place of the General Hospital of Itaim Paulista (GHIP) but in a separate building.

Operating since March 2002, the BC-CM assists women with low risk pregnancies referred by the Primary Care Health Units (PCHU) from that region and from the surrounding cities. As admission criteria, women must have a single pregnancy, with the fetus in vertex presentation, without previous or current clinical or obstetric intercurrences. As of the 37th week, the pregnant woman starts the follow up at the BC-CM, which aims her introduction to the service characteristics and general information, starting of the birth plan and establishment of the link with the team. The risk assessment is performed at each appointment and, if changes are found, the woman is sent to assessment at the hospital. This monitoring does not substitute the prenatal care at the PCHU.

The BC-CM has the GHIP as reference for maternal and neonatal transfers. It is equipped for maternal and neonatal emergency care, to which the team receives periodical training. The labor and childbirth care is provided exclusively by obstetric nurses and midwives. As of 2007, newborns have been usually assessed by a neonatologist before the discharge.

This study integrates the project "Maternal and perinatal outcomes at an alongside hospital birth center" (Project MPO), which compares the outcomes of care to low risk women assisted by the BC-CM and the GHIP.

The sample size was calculated through the formula for proportions in finite populations, considering two standard deviations and the prevalence estimate of episiotomy at 25%. This prevalence was obtained through a pilot study developed with 60 women assisted by the BC-CM. The episiotomy was chosen as a parameter because it is a signifi-

cant procedure of the used practices. Therefore, admitting an error rate at 2%, the sample size was estimated at 1,153.

The present study was developed with a probabilistic sample of women and their newborns assisted at the BC-CM, considering the total number of 2,997 births that occurred between 2003 and 2006. The medical records were used as data source and were randomly selected, based on the list of women assisted, according to the service's records of births. The random selection was stratified, according to the number of births in each year. Since not all the medical records of the selected women were found, through the Service of Medical Records and Patients of the institution, the final size of the sample comprised **991** women, which corresponds to 33% of the total number of births that occurred in the period.

The mainly outcomes were: socio-demographic characteristics (age, education degree, marital status, employment, origin, birth companion, tobacco use, illicit drugs in pregnancy); obstetric conditions (number of previous births, cervical dilatation and condition of the ovular membranes at admission, post-partum bleeding); obstetric practices [amniotomy, electronic fetal monitoring (EFM), use of oxytocin in labor, Buscopan® (hyoscine butylbromide), associated to Plasil® (metoclopramide) and glucose at 25%, ergometrine, post-partum analgesic, episiotomy, manual removing of placentae; comfort practices (sitting in a bench, walking, massage, birth ball, immersion and shower bath); practices used in the care to the newborn (aspiration of the upper airways, gastric aspiration, gastric lavage, use of oxygen) and conditions of the newborn (Apgar score, clavicle's fracture, respiratory discomfort, admission in neonatal care unit).

The use of comfort practices was analyzed between 2003 and 2004, because after this period the practices were no longer included in the medical record as an item of systematic registration. Still, as of November 2005, the administration of oxytocin in labor and the medications Buscopan® and Plasil® associated to glucose, post-partum analgesic and ergometrine were excluded from the protocol, whereas the use of oxytocin to post partum hemorrhage prevention after birth, became a routine. The women who needed oxytocin in labor, or any other medication, would be transferred to the GHIP.

A descriptive analysis of the data was performed. Measures of central tendency and dispersion were calculated for the continuous variables, whereas absolute and relative frequencies were calculated for the qualitative variables.

This study was approved by the Committee of Ethics in Research from the GHIP (protocol no. 50).

RESULTS

Among the 991 pregnant women who participated in this study, 62% were under 25 years old, with 27.3% of adolescents and a mean of 23.6 ± 5.6 years. Regarding their education, 75.4% had eight years of education or more and 0.8% did not receive any formal education. Most of the women had a partner (58.4%), did not have a job (74.6%) and lived outside the coverage area of Itaim Paulista (52.3%), 11.5% smoked and 0.8% used illicit drugs.

An expressive proportion of parturients had a companion of their choice during the entire period of labor (92.2%), mainly the partner (51.7). Regarding their parity, 46.3% of the women were nulliparous. Among the multipara women, 12 (1.2%) had had a previous C-section. At the moment of admission, 53% of the parturients presented cervical dilatation between 5 and 9 cm, 4.3% were in the second stage of birth and 22% were admitted with no intact ovular membranes

Among the practices used at birth, it is important to highlight immersion or shower bath (92.9%), amniotomy (62.6%), walking (47.6%) and comfort massage (29.8%). Afterbirth occurred spontaneously in 99.5% of the cases (Table 1) and 5.1% of the women presented increased post-partum bleeding.

Table 1 - Comfort and obstetric practices performed during labor and birth to the women assisted at the BC-CM - São Paulo - 2003/2006

Outcome	N	%
Obstetric Practices		
Amniotomy (cervical dilatation $\bar{x}$=8.2 cm) (n=765)	479	62.6
Endovenous infusion of oxytocin in labor (n=668)	169	23.5
Post-partum analgesic use (n=990)	194	19.6
[1]EFM (cervical dilatation $\bar{x}$=6.6 cm) (n=988)	45	4.6
[2]Administration of BGP (n=990)	27	2.7
Administration of ergometrine (n=989)	26	2.6
Manual removing of placentae (n=988)	5	0.5
Comfort Practices		
Shower bath (n=649)	461	71.0
Walking (n=643)	306	47.6
Massage (n=638)	190	29.8
Immersion bath (n=643)	141	21.9
Birth ball (n=634)	115	18.1
Sitting in a bench (n=639)	87	13.6

[1] EFM: electronic fetal monitoring; [2] BGP: Buscopan® + Glucose + Plasil®

The perineal conditions at birth are presented in Table 2, highlighting the prevalence of 66.8% women with intact perineum or first-degree lacerations, which in general does not present a negative impact in the post-partum morbidity.

Table 2 - Perineal condition of the women assisted at the BC-CM - São Paulo - 2003/2006

Perineal Conditions	N	%
Intact	418	43.6
[1]Episiotomy	246	25.7
First-degree lacerations	222	23.2
Second-degree lacerations	72	7.5
Total	**958***	**100**

[1] Including median and right medium-side episiotomy; * 33 ignored cases were excluded

As for the birth conditions, 99.6% and 99.9% of the newborns presented Apgar scores =7 in the first and fifth minutes after delivery, respectively. The mean of the newborns' weight was 3,221 ± 392 grams, with the minimum weight of 1,940 and the maximum weight of 4,775 grams. No baby needed oro-tracheal intubation and 14 (1.4%) were transferred to the neonatal unit of the GHIP. Table 3 shows the conditions and interventions used in the immediate care of the newborn.

Table 3 - Conditions and practices performed in the care to newborns assisted at the BC-CM - São Paulo - 2003/2006

Conditions and interventions with the newborn	N	%
Aspiration of the upper airways (n=987)	92	9.3
Use of nasal oxygen (n=987)	34	3.4
Gastric lavage (n=987)	30	3.0
Gastric aspiration (n=987)	18	1.8
Respiratory discomfort (n=989)	15	1.5
Use of oxygen under positive pressure ventilation (n=984)	1	0.1
Clavicle's fracture (n=990)	1	0.1

DISCUSSION

The discussion of the results focuses the scientific evidence based practice, as an important element in the characterization of the care provided in labor and childbirth. In the context of the obstetric care, this practice stimulates the critical reflection and questioning of the over medicalized model. The experience in labor in home-like settings has shown the satisfaction of the users and the reduction of obstetric interventions, without any unfavorable outcomes regarding the perinatal mortality[4]. In this context, to describe the care outcomes in these services, in Brazil, may support the discussion about care safety and quality in out-of-hospital settings

In outcomes analysis, it is necessary to consider that these may have been influenced by the fact that the study included data regarding the period right after the implementation of the service. This was a new experience, both for the professionals from the hospital and from BC-CM staff. The BC-CM was the second institution in Brazil to implement the alongside hospital model in the BNHS scope, aimed at providing care to low risk parturients with nurses and midwives in charge.

It is worth mentioning that this model of care was not available until then. It is possible to assume this may have attracted clients from other areas in the city of São Paulo, since most of them were not from the coverage area of Itaim Paulista and this neighborhood is located in the extreme east zone of São Paulo, which is a region of difficult access.

The low education degree, associated to the young age, favors the unemployment and the economical and social dependence of these women. A little more than half of the women in this study had a partner and, even though the proportion of women with eight or more years of formal education in the present study was higher than that found in other studies developed in BC, in our context[6-8], only 25.4% had a job.

In a general way, the age of the women indicates a young population, with a proportion of adolescents and nulliparous women that was similar to those found in other studies[6,8,10]. The National Research of Demography and Health of the Child and the Woman, from 2006, indicated that the number of newborns alive for women up to 19 years old, in urban homes, was 0.2, whereas the percentage among the total of primiparas in the urban areas of the southeast region was 7.7%[11].

Among the multiparas of the BC-CM, 1.2% had a previous cesarean, a proportion that is ten times lower than that among the women assisted at the intra-hospital BC[6,10]. The BC protocol states not to admit women who have had a cesarean in a previous pregnancy, except when there was a vaginal birth in the following pregnancy. This precaution is justified due to the risk of intrapartum uterine rupture.

It was evidenced that 11.5% of the women smoked, whereas 0.8% used illicit drugs in pregnancy; therefore, these habits were not a reason for antenatal removal of the pregnant women in the BC-CM. A study developed at an extra-hospital BC identified that the habit of smoking in pregnancy was a risk factor for neonatal removal. From the care point of view, the authors point out the need for a careful observation towards pregnant women in this situation; since tobacco use may be considered a marker of other unfavorable conditions that compromise the care safety, for instance, the use of alcohol and illicit drugs[9].

The early admission of the pregnant woman may lead to the maternal fatigue and bring risks to the mother and her baby, since it results in unnecessary and potentially harmful interventions, such as the early artificial rupture of ovular membranes and the intravenous infusion of oxytocin. This series of interventions, as an attempt to fix an iatrogenic dystocia, may increase the cesarean rates[10].

A systematic review, which assessed the moment the parturients were admitted, concluded that those who were hospitalized in the active stage of labor remained in the birth room for less time and received less oxytocin and intrapartum analgesia, compared to those who were admitted in the latent stage. The conclusion of the authors is that the admission of the parturients in the active stage of labor may bring benefits, when it is a term pregnancy[12].

The search for the service at an early stage of labor may reflect the woman's self-confidence to recognize the signs and symptoms of this stage, due to the instructions received in the monitoring appointments at the BC-CM. After the birth plan is opened, the pregnant women may contact the service by telephone to clarify their doubts.

This contact with the BC-CM favors the pregnant women to search for the service at an opportune occasion, which is in the active stage, even though some women may benefit with an earlier admission, still in the latent stage, such as those who have difficulty to access the birth location. On the other hand, there are women who cannot count on the family support to remain at home during this stage of labor and who, also, do not want to stay alone in this period, since a little more than half of the women were admitted with cervical dilatation between 5 and 9 cm.

The amniotomy is a procedure used in the modern obstetrical practice aimed at speeding the uterine contractions and reducing the duration of the dilatation period. Some medical schools recommend it as part of the approach in the active manage of labor, which consists in performing routine the artificial rupture of membranes and the infusion of oxytocin. However, there are doubts regarding its effects over women and newborns[13]. In this study, the outcomes indicated that the amniotomy was performed in 62.6% of the parturients admitted with intact ovular membranes and, at the indication of this procedure, the mean cervical dilatation was 8.2 cm. Data from intra and extra-hospital BC indicate rates at 75.1% and 30.6%, respectively[6-7]. It is not possible to conclude that the amniotomy results in an advantage or a disadvantage regarding the expecting management of labor, however, in normal labor there should be a clear reason for justifying this procedure[14].

The indiscriminate use of oxytocin in labor may produce unfavorable maternal and perinatal outcomes, including tachysystole and changes in the uterus-placenta perfusion, which may end up in an iatrogenic cesarean. Its habitual use, besides interfering in the natural course of labor and in the movement of the parturient, is related to a more painful experience during labor[14].

The results showed that the most frequently administrated medication in labor and birth was intravenous oxytocin, in 23.5% of the women. As referred in the Method, its use in labor was abolished from the BC-CM, as of November of 2005, being commonly used, ever since, after the detachment of the fetus' shoulder to prevent hemorrhage. The dose of 10 UI is administered, via intramuscular, according to the recommendation of the American Academy of Family Physicians for obstetric emergencies, published in Brazil by the ALSO (Advanced Life Support in Obstetrics).

According to the WHO[14], the use of oxytocin in the prevention of postpartum vaginal bleeding seems to be more favorable than the use of ergot derivatives, both oral and parenteral. This practice is classified in the Category B – *clearly harmful or ineffective practice that must be eliminated*.

The study found a limited use of ergometrine, related to increased bleeding after birth and to manual extraction of the placenta, which occurred, respectively, in 5.1% and 0.1% of the women in the present study. These situations may configure an emergency, requiring special attention and measures for immediate correction.

The placental retention shows a variation of 0.1%, in less developed countries, with a mortality rate higher than 10%, whereas in developed countries it is observed in around 3% of the vaginal births, but it is rarely associated to the maternal death[15].

The intravenous administration of Buscopan®, associated to Plasil® and glucose, even though it was not part of the care protocol of the BC-CM, was performed in 2.7% of the women, probably, due to the wide dissemination of its use in the hospital birth, aimed to favoring the effacement and dilatation of the uterine cervix, even though there is no evidence about its benefits.

As a routine, the EFM is performed only at the admission of the parturient in the BC-CM, during 20 minutes, to assess the fetal condition. During labor, its use was limited to 4.5% of the women, with mean cervical dilatation of 6.6 cm, because in case of fetal distress is suspect the transfer to hospital setting is indicated.

A systematic review that included 12 trials evidenced that both the cesarean rates and the operative vaginal birth rates were higher in the groups with continuous electronic fetal monitoring. It was also possible to observe a significant decrease of neonatal seizures, associated to the routine of the continuous EFM. However, there were no statistical differences observed in the Apgar scores, in admission rates in neonatal intensive care units, perinatal deaths or brain paralysis[16].

Regarding the conditions of the perineum, the proportion of episiotomy at 25.7% was similar to the results obtained in other studies developed in BC, in our scope[6-7]. The only information available about the global rate of episiotomy, in Brazil, shows that this procedure was performed in 70% of the normal births, with lower proportions only in women who had had more than three children[11].

It is worth highlighting the high percentage of women with intact perineum, mainly, if included first-degree lacerations, since studies usually group this type of laceration to the intact perineum, due to its benign character towards post-partum morbidity.

A systematic review about episiotomy in vaginal birth, which included 5,541 women in eight trials, evidenced that the limited use of episiotomy resulted in less perineal trauma, less repair suture and less complication in the cicatrization. No differences were found regarding the occurrence of severe vaginal trauma, perineal pain, dyspareunia and urinary incontinence. The restriction of its use increased the risk of anterior perineal trauma[17], which are normally superficial lacerations.

The WHO recommends the free access of a companion, according to the parturient's choice, during birth and postpartum period[14]. This recommendation is corroborated by the findings of a systematic review, which evidenced a higher likelihood of spontaneous vaginal birth, shorter labor, lesser use of intrapartum analgesia or less dissatisfac-

tion with the birth experience, among women with continuous support during birth[18].

In Brazil, the Federal Law no. 11108[19] granted all parturients the right to the presence of a companion during labor, birth and immediate post-partum. The National Research of Demography and Health (2006) indicates that the companion was present in less than 10% of the births in the BNHS and in 35% in the private system[11]. At the BC-CM this right is respected and almost all women had a companion during birth.

In labor, there are options to pain relief, such as non-invasive and non-pharmacologic methods, for instance the immersion or shower bath, massages and other care methods[14]. The BC-CM offers comfort practices to the woman in order to ease the pain. It is not a strict protocol to be followed, since the woman can choose if she wants or not to follow them, according to her preferences. The most used practices by the women in this study were the bath (shower or immersion), followed by walking and massage performed by the companion.

A randomized clinical trial concluded that the immersion bath is an option for the comfort of the parturient, offering relief, without interfering in the progression of labor and without any harm to the newborn[20]. A systematic review about the immersion bath during labor, with 3,146 women, suggests that this practice reduces the use of epidural analgesia and shows no reports of adverse effects to the mother and the fetus[21].

Other comfort practices used were the sitting on a bench and the birth ball, which are alternatives for changing the position and the active vertical position of the woman during labor. The birth ball consists on an inflatable rubber ball, used in physiotherapy for exercises of postural correction and in the treatment of neurologic problems. It allows the woman to perform a slight pelvic movement while she is sitting, which may help the fetus progression through the pelvis, besides providing a relaxation sensation. The bench is supported by three legs and a cushioned seat, allowing the parturient to sit down, sustain her feet on the ground and her arms on the bed, whereas the companion or the obstetric nurses massages her back. It also works as a support for the pushing efforts.

According to the Method section, some practices used (sitting in a bench, walking, massage, birth ball, immersion and shower bath), besides the position in labor, stopped being systematically noted as of 2005. Under the argument of standardizing the medical records of the BC-CM and the GHIP, there is no longer a specific location for this record. Unfortunately, essential practices in the nursing care, which are part of the profession core and may bring benefits to the woman, are ignored due to bureaucratic decisions. Still, studies must be developed to show their effects on birth and on the satisfaction of the women who receive these care practices.

Regarding the conditions of the newborn, the Apgar score indicated an overall well being of the newborn, with scores equal or higher than seven, in the first and fifth minutes of life, in more than 99% of the babies. These results are similar to those found by other studies developed in BC in Brazil[6,8,10].

In almost all situations, newborn care consists on drying, warming, assessing and handing it over to the mother chest for the early skin-to-skin contact. All habitual procedures, such as performing anthropometric measures, administrating K vitamin, silver nitrate eye drops, among others, must be performed after the contact of the mother to the child[14]. The recommendations to avoid unnecessary interventions in the care to low risk newborns are adopted by the BC-CM, which justifies the low rates of handling babies right after birth.

The low rates of intercurrences with newborns, with respiratory discomfort (1.5%), admission in neonatal unit care (1.4%) and clavicle's fracture (0.1%), may reflect the restricted criteria of women admission at the BC-CM. Higher proportions of respiratory discomfort (36.3%) and admission in neonatal unit care (3.8%) were pointed out by another study developed at the alongside hospital birth center of Belo Horizonte (State of Minas Gerais)[8].

Finally, it is possible to observe that the care model coordinated by midwives and obstetric nurses for low risk women presents satisfactory results, according to the recommendations of the WHO that this professional is the most appropriate provider of primary health care to assist the normal birth. This agrees with the findings of another systematic review that included 11 clinical trials and showed that women assisted by services with a care model coordinated by the obstetric nurse, when compared to those assisted by services with other care models, presented a lower probability of being hospitalized during pregnancy and being submitted to episiotomy, forceps or vacuum extraction, and higher probability of not receiving anesthesia or analgesia, having spontaneous vaginal birth, feeling in control during birth and starting breastfeeding. There were no differences among the groups regarding the frequency of cesarean births. The authors conclude that this care model must be offered to women without medical or obstetrical complications[22].

FINAL CONSIDERATIONS

The BC-CM represents a care model with favorable maternal and neonatal outcomes for the low risk population, according to the recommendation of the WHO, in convergence to other birth centers.

At these units, the midwife or obstetric nurse is in charge for all decisions related to the care to the pregnant woman and her newborn, with the support of care protocols. This is an important condition which favors less interventions in the

labor and the appropriate use of technology, since the setting and the model of birth care in which the obstetric nurse and midwives practice have an impact in her ability to incorporate the changes resulting from studies into her practice.

Finally, this setting provides a physical and technical-administrative structure that includes the care focused on the physiology, needs and decisions of the pregnant woman, with the obstetric nurse acting as the responsible for this care.

REFERENCES

1. Brasil. Ministério da Saúde. Agência Nacional de Saúde Suplementar. O Modelo de Atenção Obstétrica no Setor de Saúde Suplementar no Brasil: cenários e perspectivas. Brasília; 2008.
2. Albers LL. Overtreatment of normal childbirth in US hospitals. Birth. 2005;32(1):67-8.
3. Waldestrom U, Nilsson C, Winbladh B. The Stockholm birth centre trial: maternal and infant outcome. Br J Obstet Gynaecol. 1997;104(4):410-8.
4. Hodnett ED, Downe S, Edwards N, Walsh D. Home-like versus conventional institutional settings for birth. Cochrane Database Syst Rev. 2005;(1):CD000012.
5. Brasil. Ministério da Saúde. Portaria n. 985/GM, de 5 de agosto de 1999. Cria o Centro de Parto Normal-CPN, no âmbito do Sistema Único de Saúde [legislação na Internet]. Brasília; 1999. [citado 2009 ago. 24]. Disponível em: http://pnass.datasus.gov.br/documentos/normas/45.pdf
6. Schneck CA, Riesco MLG. Intervenções no parto de mulheres atendidas em um Centro de Parto Normal intra-hospitalar. REME Rev Min Enferm. 2006;10(3):240-6.
7. Fernandes BM. A Casa de Parto da Faculdade de Enfermagem da Universidade Federal de Juiz de Fora: diagnóstico do perfil do atendimento e a percepção das usuárias [tese]. Rio de Janeiro: Escola de Enfermagem Anna Nery, Universidade Federal do Rio de Janeiro; 2004.
8. Campos SEV, Lana FCF. Resultados da assistência ao parto no Centro de Parto Normal Dr. David Capistrano da Costa Filho. Cad Saúde Pública. 2007;23(6):1349-59.
9. Koiffman MD, Schneck CA, Riesco MLG, Bonadio IC. Risk factors for neonatal transfers from the Sapopemba free-standing birth centre to a hospital in São Paulo, Brazil. Midwifery. In press 2009.
10. Barbosa da Silva FM, Koiffman MD, Hitomi Osava R, Oliveira SMJV, Riesco MLG. Centro de Parto Normal como estrategia de incentivo del parto normal: estudio descriptivo. Enferm Glob [periódico na Internet]. 2008 [citado 2009 set. 11];14(1):1-11. Disponível em: http://revistas.um.es/eglobal/article/viewFile/35921/34941
11. Berquó E, Garcia S, Lago T, coordenadoras. Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher (PNDS-2006) [texto na Internet]. Brasília: Ministério da Saúde, Secretaria de Ciência, Tecnologia e Insumos Estratégicos; 2006. [citado 2009 ago. 24]. Disponível em: http://bvsms.saude.gov.br/bvs/pnds/img/relatorio_final_pnds2006.pdf
12. Lauzon L, Hodnett ED. Labour assessment programs to delay admission to labour wards. Cochrane Database Syst Rev. 2001;(3):CD000936.
13. Smyth RM, Alldred SK, Markham C. Amniotomy for shortening spontaneous labour. Cochrane Database Syst Rev. 2007;(4): CD006167.
14. Organização Mundial de Saúde (OMS). Maternidade segura: assistência ao parto normal: um guia prático. Genebra; 1996. (Publicação OMS/SRF/MSM/96.24).
15. Weeks AD. The retained placenta. Best Pract Res Clin Obstetr Gynaecol. 2008;22(6):1103-17.
16. Alfirevic Z, Devane D, Gyte GML. Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. Cochrane Database Syst Rev. 2006;(3):CD006066.
17. Carroli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev. 2009;(1):CD000081.
18. Hodnett D, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. Cochrane Database Syst Rev. 2007;(3):CD003766.
19. Brasil. Lei n.11.108, de 7 de abril de 2005. Dispõe sobre o direito da parturiente à presença de acompanhante durante o trabalho de parto, parto e pós-parto imediato, no âmbito do SUS [legislação na Internet]. Brasília; 2005. [citado 2009 set. 20]. Disponível em: http://www3.dataprev.gov.br/sislex/paginas/42/2005/11108.htm
20. Silva FMB, Oliveira SMJV. O efeito do banho de imersão na duração do trabalho de parto. Rev Esc Enferm USP. 2006;40 (1):57-63.
21. Cluett ER, Burns E. Immersion in water in labour and birth. Cochrane Database Syst Rev. 2009;(2):CD000111.
22. Hatem M, Sandall J, Devane D, Soltani H, Gates S. Midwife-led versus other models of care for childbearing women. Cochrane Database Syst Rev. 2008;(4):CD004667.

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