ABSTRACT

Objective: To describe obstetric practices in planned home births, assisted by qualified professionals in Brazil. Method: This is a descriptive study, with data collected in an online bank maintained by 49 professionals from December 2014 to November 2015, in which the target population was women and newborns assisted in home births. Data were analyzed through descriptive statistics. Results: A total of 667 women and 665 newborns were included. Most of the women gave birth at home (84.4%), in a nonlithotomy position (99.1%); none underwent episiotomy; 32.3% had intact perineum; and 37.8% had first-degree lacerations, some underwent amniotomy (5.4%), oxytocin administration (0.4%), and Kristeller’s maneuver (0.2%); 80.8% of the women with a previous cesarean section had home birth. The rate of transfer of parturients was 15.6%, of puerperal women was 1.9%, and of neonates 1.6%. The rate of cesarean section in the parturients that started labor at home was 9.0%. Conclusion: The obstetric practices taken are consistent with the scientific evidence; however, unnecessary interventions are still performed. The rates of cesarean sections and maternal and neonatal transfers are low. Home can be a place of birth option for women seeking a physiological delivery.

DESCRIPTORS

Home Childbirth; Humanizing Delivery; Obstetric Nursing; Observational Study.
INTRODUCTION

Brazil does not have data regarding the care provided to planned home births (PHB), because the Live Birth Information System (SINASC – Sistema de Informação sobre Nascido Vivo) encompasses all births taking place out of the hospital environment, regardless of whether they were planned to occur at home, and of which professional provided care.

In developed countries, the prevalence of planned home births assisted by a qualified professional varies: 11.3% in New Zealand(10), 2.8% in England(5), and less than 1% in Australia(9). However, in the Netherlands, 62.7% of women plan childbirth at home(4).

According to the World Health Organization (WHO) and the Brazilian Ministry of Health, obstetric nurses, midwives, and physicians are qualified professionals to assist vaginal delivery(5-6).

In Brazil, obstetric care practices in health institutions are not always scientific evidence-based, as shown in the survey Birth in Brazil(7). Differently from the Brazilian hospital context, several international studies indicate that PHB care is not interventionistic(1,3-4).

Care practices developed in the home environment are described in some quantitative studies that analyzed small samples (from 70 to 212 women)(8-10). These studies revealed lower rates of interventions, such as amniotomy and episiotomy, when compared to hospital rates, and there is a greater adoption of good practices, such as freedom of deambulation, movement and eating, participation of partners, skin-to-skin contact, breastfeeding stimulation, freedom of choice on the type of position at delivery, and high rates of vaginal delivery after cesarean sections.

In the Brazilian reality, several professionals have been assisting childbirth at home. However, due to the scarcity of data on this type of care, and the need to know the procedures performed and the behaviors followed in this context, the following research question arises: Which are the obstetric practices performed at home, since the number of women who opt for home birth is increasing? The indicators from this study will provide data to deepen the discussion about delivery and birth care in a non-institutional environment assisted by qualified professionals.

Therefore, the objective of this study was to describe obstetric practices in planned home births, assisted by qualified professionals, in Brazil.

METHOD

This is a descriptive study, with prospective data collection, in which the target population was women and newborns (NB) assisted at planned home births by qualified professionals, in the Northeast, Center-west, Southeast and South regions of Brazil, regardless of the place of birth (home or hospital) outcome. The professionals were identified and contacted in at least two states in each region. Thus, professionals who assisted births in the following states participated in the study: Alagoas, Bahia, Ceará, Pernambuco, Goiás, Mato Grosso, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Rio Grande do Sul, and Santa Catarina, totaling 12 states, plus the Federal District. The North region was excluded, because a qualified professional who assisted deliveries at home was found in only one state.

The professionals were identified through personal contact in scientific events of the obstetric area, Internet social networks, and the virtual snowball sampling technique. This technique facilitates the selection of participants; however, with its use, the people indicated are those most visible in the population, which generates a limitation and a possible bias.

Professionals’ inclusion criteria were: to have a college degree, and to be registered in the professional council and legally qualified to assist vaginal childbirth, according to the legislation of the professional practice. Thus, obstetric nurses, midwives and physicians were invited to participate.

A total of 123 professionals were contacted; however, some were not eligible or did not wish to participate. Thus, initially, 94 professionals (obstetric nurses, midwives and physicians) agreed to participate in the research. To ensure ethical procedures, an informed consent form was sent to the professionals and also to the women who would be assisted by them, along with a letter of instructions and previously stamped envelopes for returning the forms. It should be highlighted that the professionals were oriented to include all the women assisted during the period of data collection in the database. After this stage, some gave up with 49 professionals staying in the study (37 obstetric nurses, seven obstetric physicians, three midwives, and two general practitioners) representing 36 PHB care teams in the Northeast, Center-west, Southeast and Southern regions of Brazil. Each team elected one professional responsible for completing the information in the database.

The mean age of the professionals who assisted the women was 39.1 years (SD = 8.7), most of them being female (94.2%), with a mean time of service in PHB of 6.7 years (SD = 4.9); 58.9% did not assist childbirth in public or private health institutions. The average time since graduation of obstetric nurses and physicians was 12.7 years (SD = 8.0), and of the midwives and general practitioners, 7.1 years (SD = 8.3). Most deliveries were assisted by an obstetric nurse (74.8%), followed by an obstetric physician (20.2%), midwife (3.8%) and general practitioner (1.2%), and the professionals assisted births in a team with two or three people (82.1%). The composition of these teams was diverse, being generally formed by obstetric nurses, some also had the participation of a midwife and an obstetric physician and, occasionally, other professionals (general nurse, nursing technician, general practitioner and neonatologist, and psychologist) and doulas. The teams that had the obstetric physician as the reference of care usually had an obstetric nurse, an obstetric physician, and possibly other professionals (neonatologist, nursing technician and another general practitioner) and a doula. When the team consisted of midwives, occasionally there was the participation of an obstetric nurse, an obstetric physician and a doula.

The professionals were guided about the inclusion and exclusion criteria, because they were responsible for the selection of eligible women and their NB. The criteria for inclusion
of the women were: having been assisted at home during labor, during delivery or in both clinical periods, in a planned manner, by a qualified and legally certified professional to assist vaginal delivery. The criteria for inclusion of the newborns were: being born at home or in a health institution, after transfer of the parturient, with those born with congenital malformation, regardless of the place of birth being excluded.

Thus, the sample consisted of women assisted at home during labor or delivery, in a planned manner, and of their NB, during the data collection period, that is, from December 2014 to November 2015, totaling 667 women and 665 newborns (two were excluded due to congenital malformation).

Data collection was possible due to the creation of an online database in the Google Docs system, which was made available to the 49 professionals, with the use of a password and a personal identification number. At the end of the assistance, the professionals registered their personal data, as well as the data of the woman and the NB. The entry of the data in the database was monitored weekly by the main researcher, in order to identify errors of registration or typing, absence of assistance and withdrawal from participation, and also to be available to clarify questions.

The data were transferred to the Excel software version 2008 and grouped by professional. Data were then sent to each professional for verification of duplicity, or lack of record of any assistance.

Sociodemographic and obstetric conditions were collected through the variables: age; level of education; region of residence; number of prenatal visits; previous deliveries; and gestational age at the time of delivery, through ultrasonography. Obstetric practices related to labor and delivery were measured using the following variables: amniotomy; use of oxytocin in labor and delivery; instrumental delivery; transfer of parturient or puerperal women to a healthcare institution; position at delivery (out of the water: sitting/semi-sitting, squatting, all fours, kneeling, upright, Sims, gynecological, McRoberts, and in the hammock; in the pool: sitting/semi-sitting, squatting, all fours, kneeling, upright, and Sims; in the shower: in any position); Kristeller’s maneuver; episiotomy; degree of perineal laceration (1st degree – mucosal lesion, 2nd degree – lesion of the perineal muscles without reaching the anal sphincter; 3rd degree – perineal lesion involving the anal sphincter complex; 4th degree – lesion of the perineum surrounding the anal internal and external sphincter complex, and anal epithelium); need for laceration suture; transfer of the NB to a health institution.

For data quality control, 10% of the women were contacted by telephone, and all of them confirmed their participation in the research and some information about delivery and birth.

The data were analyzed using descriptive statistics, with absolute and relative frequency values for the categorical variables and with mean and standard deviation (SD) for the continuous variables.

All ethical aspects involving the research are in accordance with Resolution no. 466 of December 12, 2012. The research protocol was approved in November 2014 under report no. 865.451 and CAAE no. 33727314.2.0000.0121.

RESULTS

The results on the characteristics of the women assisted at home, as well as the obstetric practices in labor and delivery, were extracted from the information provided by the 49 professionals who participated in the study, that is, data were collected from their perspective and the records made by them.

Of the 667 women analyzed, most of them had a high level of education, resided in the Southeast and South regions of the country, had more than six prenatal consultations, and were primiparous, with full term gestation. The mean age reached 30 years (Table 1).

Table 1 – Sociodemographic and obstetric characteristics of women assisted at home – Northeast, Center-west, Southeast and South regions, Brazil, 2015

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean, in years)</td>
<td>30.9 (SD = 4.5)</td>
<td></td>
</tr>
<tr>
<td>Level of education (n = 660)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary school</td>
<td>8</td>
<td>1.2</td>
</tr>
<tr>
<td>High school</td>
<td>103</td>
<td>15.6</td>
</tr>
<tr>
<td>Graduate studies</td>
<td>433</td>
<td>65.6</td>
</tr>
<tr>
<td>Postgraduate studies</td>
<td>116</td>
<td>17.6</td>
</tr>
<tr>
<td>Region of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>271</td>
<td>40.7</td>
</tr>
<tr>
<td>South</td>
<td>169</td>
<td>25.3</td>
</tr>
<tr>
<td>Northeast</td>
<td>122</td>
<td>18.3</td>
</tr>
<tr>
<td>Center-west</td>
<td>105</td>
<td>15.7</td>
</tr>
<tr>
<td>Prenatal consultations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 6</td>
<td>73</td>
<td>10.9</td>
</tr>
<tr>
<td>&gt; 6</td>
<td>594</td>
<td>89.1</td>
</tr>
<tr>
<td>Previous births</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>372</td>
<td>55.8</td>
</tr>
<tr>
<td>≥ 1 vaginal delivery†</td>
<td>191</td>
<td>28.6</td>
</tr>
<tr>
<td>≥ 1 C-section</td>
<td>79</td>
<td>11.9</td>
</tr>
<tr>
<td>≥ 1 vaginal delivery† and C-section</td>
<td>25</td>
<td>3.7</td>
</tr>
<tr>
<td>Gestational age (mean, in weeks) (n = 633)</td>
<td>39* (SD = 1.2)</td>
<td></td>
</tr>
<tr>
<td>≤ 37‡</td>
<td>4</td>
<td>0.6</td>
</tr>
<tr>
<td>37 – 39</td>
<td>297</td>
<td>45.5</td>
</tr>
<tr>
<td>40 – 41</td>
<td>324</td>
<td>49.6</td>
</tr>
<tr>
<td>≥ 42</td>
<td>28</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Eight forceps deliveries and one vacuum extraction. †Three forceps deliveries. ‡All with gestational age of 36 weeks and 6 days.
Note: (n = 667).

Of the women whose labor started at home (N = 667), 563 (84.4%) gave birth at home, of which eight (1.4%) gave birth before the professional arrived. Some underwent amniotomy (5.4%) and vaginal delivery using a vacuum extractor (0.5%), only three received oxytocin during labor or delivery, and one underwent Kristeller’s maneuver due to fetal heart rate deceleration in the expulsive period. About one-sixth of the parturients needed to be transferred to a health institution, and the transfer rate of puerperal women and newborns was below 2% (Table 2).
Most transferred women were referred to a cesarean section (57.7%), with 42.3% having a vaginal delivery (6.8% with forceps or vacuum, 34% with analgesia, and 15.9% with analgesia and forceps or vacuum) (data not shown in the Table).

Regarding the perineal trauma, no woman underwent episiotomy, 37.8% had 1st degree laceration; 28.5%, 2nd degree laceration; 0.7%, 3rd degree laceration; and one had 4th degree laceration (0.2%). Only 57.8% of the lacerations were sutured (data not shown in Table).

It should be noted that, of the 79 women with a previous cesarean section that started labor at home, 75.9% had a vaginal birth at home. Of the women who had a previous cesarean section, but also a previous vaginal delivery, almost all had a PHB (96.0%) (Table 4). Among those who gave birth in the hospital, 28.6% had forceps delivery, and 85.7% received analgesia (data not shown in Table).

Table 4 – Home follow-up of women with a previous C-section according to the delivery place and current type – Northeast, Center-west, Southeast and South regions, Brazil, 2015

<table>
<thead>
<tr>
<th>Previous delivery</th>
<th>Current delivery at home</th>
<th>Current delivery in the hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vaginal</td>
<td>C-section</td>
</tr>
<tr>
<td>C-section (n = 79)</td>
<td>60 (75.9)</td>
<td>7 (8.9)</td>
</tr>
<tr>
<td>C-section and vaginal birth (n = 25)</td>
<td>24 (96.0)</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: (n = 104).

DISCUSSION

The results indicate that, at home, the obstetric practice is consistent with the scientific evidence. However, some professionals still performed non-recommended interventions. It should be noted that the study population has a specific profile, different from that of the public Unified Health System (Sistema Único de Saúde – SUS) and, in general, the professionals who assisted home births sought to implement good practices during labor, delivery and birth. The environment favored the freedom to choose the delivery position and the opportunity to undergo vaginal delivery, even after a previous cesarean section, results that differ from the Brazilian hospital care.

Given the lack of publications of national data on home care, the findings of this study are also discussed with those performed in Brazilian vaginal birth centers (VBC), and with studies conducted in countries where, in most of them, home births are part of the health system, a reality that is different from Brazil.

The women who chose a PHB had a high level of education, a result similar to other Brazilian studies. Women's high level of education shows that this is a people with unique characteristics, with access to information, who questions the current hegemonic model and seeks a place for the delivery that meets their expectations, in the same way as the women assisted in VBC, because care is less interventional than in the hospital. However, most patients of VBC have low levels of education. Women assisted at home showed high compliance with prenatal care, which was also observed in a study carried out in a VBC and at home.

The fact that women are younger can be explained by the study population, made up mainly of primiparous women, similar to other studies conducted in Brazil. It is emphasized that this is virtually the only data that differs from most international studies, since multiparous women are the ones that opt more for the PHB. The choice of PHB by
Brazilian women, already in the first gestation, may be due to the desire for freedom and autonomy to participate in the process of delivery and birth of their child and the search for a less interventionist assistance in a welcoming environment, besides avoiding to undergo an unnecessary cesarean section[12,13,19,20]. It is noteworthy that women with a previous cesarean section also opted for PHB, as has already been pointed out in other studies conducted in Brazil[8-9], which may demonstrate the dissatisfaction with this procedure. This finding is similar to that reported in other countries[11,21], and these percentages may be due to protocols that discourage these women from being assisted at home[11,4,14].

Regarding the practices adopted during labor, most women had spontaneous rupture of the membranes or remained with an intact sac until the expulsive period, unlike the high percentages of amniotomy performed in hospitals (40.7%)[7] and in some VBC (ranging from 53.3% to 71.3%) [15-17] to accelerate the evolution of labor[7].

The use of oxytocin prior to birth should occur only in a hospital environment, since the effects of this drug cannot be controlled, which may even lead to the need for an emergency cesarean section[22]. Even so, some home-assisted women were given oxytocin during labor and delivery. Although inappropriate, its use is still in contrast with the high rate of oxytocin in women with habitual obstetric risk in hospitals (38.2%)[7] and VBC (ranging from 23.6% to 31%) [15-17]. Although contraindicated, including in WHO recommendations[23] since 1996, the Kristeller’s maneuver was performed on a woman assisted at home. In Brazil, this maneuver is performed in more than one third of the women assisted in the hospitals (37.3%) [7]. Most of the studies performed in VBC do not provide data about this maneuver; thus, it is not clear whether this practice has been abolished or whether it has been performed[16-17].

In this study, no woman assisted at home was submitted to episiotomy, a finding that was totally discrepant with the rate of this intervention in Brazilian women who are assisted in the hospitals (56.1%), which is even higher among primiparous women (74.7%) [17]. In VBC, this rate ranges from 7.2% to 25.7% of women[15-17].

A few women who underwent vacuum extraction were assisted by obstetric physicians. It should be noted that, in Brazil, this procedure can only be performed by these professionals, who have legal protection.

Women who give birth at home and in VBC choose verticalized positions, and may assume a range of modalities, as pointed out in other Brazilian studies[8,11], as well as the possibility of vertical birth in water[9-10]. This freedom of position differs greatly from the Brazilian hospital reality, in which virtually all women of usual obstetric risk give birth in a lithotomy position[7]. Women’s choice to give birth at home and in VBC may be motivated by having more autonomy.

Many women in the present study had the opportunity to give birth in water, similar to other studies conducted in Brazil[8-10], and higher than in a study conducted in Australia (52%) [16] and Iceland (39.1%) [25]. In Brazil, the prevalence of hospital vaginal deliveries in the water is poorly known, only one study pointed out a prevalence of 13.7% in a maternity of a supplementary sector[24].

Preservation of perineal integrity, 2nd degree laceration rate, and laceration suture were similar to those of national studies[8-10]. Moreover, most lacerations were not sutured, following a tendency to adopt natural healing, which seems to contribute to the reduction of pain[29]. However, more evidence is needed to support this practice[20]. The rate of 3rd and 4th degree lacerations was equivalent to that of other national studies[8-10] and below the rate of other countries[3,10,27].

The transfer rate was similar to that of two Brazilian studies[8-9] and was higher than a recent one[10]; however, it remains within the range indicated in international studies[2-3,13,28]. In countries where there is a reference system, this rate is higher[25], different from Brazil, which does not have a formalized reference flow. The rates of transfer of puerperal women and newborn infants were also reduced, as in other Brazilian[8-9] and international[13,18] studies. In home care, the physiology of the process is respected, and few interventions are used, which may have contributed to the low neonatal transfer rate in this study.

Another finding worth mentioning is the cesarean section rate of the total number of women who had labor started at home (9%), far below the Brazilian reality[6-7], which shows that the chance of having a vaginal birth in this environment is greater. In other countries, the rate of C-section in women who opted for the home environment is even lower than that of the current study[13,11,18].

In addition, 80.8% of women with a previous C-section gave birth at home, a higher percentage than in another Brazilian study[30], but similar to international rates[11,21]. However, this is very different from the Brazilian hospital rate, of 14.8% of vaginal deliveries in women with a previous C-section[31]. In Brazil, there is no protocol for home care; thus, the teams decide whether or not to include women with a previous C-section in their care protocol, and the inter-delivery interval.

The greatest limitation of the present study is the fact that it was not possible to calculate a sample that would make the generalization of the results possible, because, in Brazil, SINASC does not differentiate whether the deliveries occurring in a home environment were planned or not. Thus, the study has no sample power to discuss the maternal and neonatal outcomes of the PHB, but only to describe how obstetric practices occur in this place of birth. In addition, there may be a bias in data collection, since the professionals’ participation was voluntary, with the use of the snowball technique, generating the inclusion of professionals from the same social network.

Finally, it is also not possible to be absolutely certain that all the assistance performed by registered professionals during the study period were included in the database, and that all interventions were recorded, causing an information bias. However, it should be noted that this is the first descriptive study with prospective data collection of childbirth care provided at home in a planned way, in the Northeast, Center-west, Southeast and South regions of Brazil.
CONCLUSION

At home, women experienced high rates of vaginal birth, with freedom of choice of delivery position, including the possibility of delivery in the water; they underwent few interventions during labor and delivery, and there was a low transfer rate before and after the delivery. Nonetheless, some interventions, such as Kristeller’s maneuver and the use of oxytocin, contrast with scientific evidence and may risk maternal and neonatal health. A low rate of cesarean sections in the studied sample stands out, as well as a high number of women with previous cesarean sections who had vaginal delivery.

REFERENCES


