

Care practices in normal-risk births assisted by obstetric nurses

Práticas assistenciais em partos de risco habitual assistidos por enfermeiras obstétricas

Prácticas asistenciales en partos de riesgo normal asistidos por enfermeras obstétricas

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How to cite:

Ritter SK, Gonçalves AC, Gouveia HG. Care practices in normal-risk births assisted by obstetric nurses. *Acta Paul Enferm.* 2020; eAPE20180284.

DOI

<http://dx.doi.org/10.37689/acta-ape/2020A00284>



Keywords

Obstetric nursing; Nurse midwives; Humanizing delivery; Labor, obstetric

Descritores

Enfermagem obstétrica; Enfermeiras obstétricas; Parto humanizado; Trabalho de parto

Descriptores

Enfermería obstétrica; Enfermeras obstétricas; Parto humanizado; Trabajo de parto

Submitted

December 3, 2018

Accepted

September 30, 2019

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Abstract

Objective: To compare the care practices in normal-risk births assisted by obstetric nurses in a public hospital in Porto Alegre, Brazil in 2013, when the collaborative model was first implemented in that institute, with care practices employed in 2016.

Methods: A cross-sectional, retrospective, analytical study conducted in the obstetric center of a public hospital in Porto Alegre, Brazil with 186 women at normal-risk labor assisted by obstetric nurses in 2013–2016. Inclusion criteria were pregnant women at normal risk during prenatal care and hospital admission, with a single fetus born alive at full term (gestational age, 37–41 weeks) with a well-flexed cephalic presentation. Parturients admitted to the institute during the expulsion phase and those with incomplete information in their medical records were excluded. Data from the study were grouped into a database and analyzed using Statistical Package for the Social Sciences software, version 25.0. Pearson's chi-square test and Fisher's exact test were used to compare proportions.

Results: The comparison of care practices revealed a reduction in interventions such as trichotomy (–100.0%), rectal suppository use (–85.8%), lithotomic position (–85.0%), use of pain-relief medication (–79.0%), epidural analgesia (–79.0%), oxytocin use (–73.3%), venous catheterization (–60.5%), cardiotocography (–51.1%), pubic-hair trimming (–38.5%), birth ball (–31.0%), semi-sitting position (–5.4%), and an increase in practices such as change in position (+828.6%), rebozo (+167.3%), squatting position (+100.0%), all-fours position (+100.0%), right lateral position (+100.0%), left lateral position (+100.0%), use of partograms (+43.3%), therapeutic massage (+33.4%), late umbilical-cord clamping (+37.3%), skin-to-skin contact (+33.2%), amniotomy (+16.7%), and liquid diet (+11.5%).

Conclusion: In the context of the predominant model of obstetric care in Brazil, centered on the obstetric physician and interventionist practices, the collaborative model of childbirth care with the active participation of obstetric nurses is a good way to take care of women giving birth, respecting the physiology of childbirth, and the woman's protagonism.

Resumo

Objetivo: Comparar as práticas assistenciais em partos de risco habitual assistidos por enfermeiras obstétricas em um hospital público de Porto Alegre/RS no ano de 2013 – início do modelo colaborativo na instituição – com as práticas assistenciais realizadas no ano de 2016.

Métodos: Estudo transversal, retrospectivo, analítico, realizado no centro obstétrico de um hospital público de Porto Alegre/RS, com 186 parturientes de risco habitual com parto assistido por enfermeiras obstétricas no período de 2013 e 2016. Constituíram critérios de inclusão gestantes de risco habitual, durante o pré-natal e

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Conflicts of interest: nothing to declare.

admissão hospitalar, com feto único, recém-nascido vivo, a termo (idade gestacional de 37 a 41 semanas) e em apresentação cefálica fletida. Foram excluídas parturientes que ingressaram na instituição em período expulsivo e as com informações incompletas em prontuário. Os dados provenientes do estudo foram agrupados sob a forma de banco de dados e analisados no *Statistical Package for the Social Sciences* (SPSS) versão 25.0. Para análise estatística foi utilizado o Teste Qui-quadrado de Pearson e o Teste Exato de Fischer, para comparar proporções.

Resultados: A comparação das práticas assistenciais nos anos estudados revelou redução de intervenções como tricotomia (-100,0%), uso de supositório retal (-85,8%), posição litotômica (-85,0%), uso de medicamentos para alívio da dor (-79,0%), analgesia epidural (-79,0%), uso de ocitocina (-73,3%), cateterização venosa (-60,5%), cardiocografia (-51,1%), tonsura (-38,5%), bola obstétrica (-31,0%) e posição semissentada (-5,4%); e aumento percentual de práticas como a mudança de posição (+828,6%), rebozo (+167,3%), posição de cócoras (+100,0%), posição quatro apoios (+100,0%), posição lateral direita (+100,0%), posição lateral esquerda (+100,0%), uso de partograma (+43,3%), massagem terapêutica (+33,4%), clampeamento tardio do cordão umbilical (+37,3%), contato pele a pele (+33,2%), amniotomia (+16,7%) e dieta líquida (+11,5%).

Conclusão: Frente ao modelo predominante de assistência obstétrica no Brasil, centrado no médico obstetra e em práticas intervencionistas, o modelo colaborativo de assistência ao parto, com atuação das enfermeiras obstétricas, mostra-se como um caminho para a atenção às mulheres, com respeito à fisiologia do parto e ao protagonismo da mulher.

Resumen

Objetivo: Comparar las prácticas asistenciales en partos de riesgo normal asistidos por enfermeras obstétricas en un hospital público de Porto Alegre/RS en el año 2013 —inicio del modelo colaborativo en la institución— con las prácticas asistenciales realizadas en el año 2016.

Métodos: Estudio transversal, retrospectivo, analítico, realizado en el centro obstétrico de un hospital público de Porto Alegre/RS, con 186 parturientas de riesgo normal con parto asistido por enfermeras obstétricas en el período de 2013 y 2016. Los criterios de inclusión fueron embarazadas de riesgo normal, durante la atención prenatal y admisión hospitalaria, con feto único, recién nacido vivo, a término (edad gestacional entre 37 y 41 semanas) y presentación cefálica flexionada. Se excluyeron parturientas que ingresaron a la institución en período expulsivo y las que tenían información incompleta en la historia clínica. Los datos provenientes del estudio se agruparon bajo la forma de banco de datos y se analizaron en el *Statistical Package for the Social Sciences* (SPSS) versión 25.0. Para el análisis estadístico se utilizó la prueba χ^2 de Pearson y la Prueba exacta de Fisher para comparar proporciones.

Resultados: La comparación de las prácticas asistenciales durante los años estudiados reveló una reducción de intervenciones como tricotomía (-100,0%), uso de supositório rectal (-85,8%), posición de litotomía (-85,0%), uso de medicamentos para aliviar el dolor (-79,0%), analgesia epidural (-79,0%), uso de oxitocina (-73,3%), cateterización venosa (-60,5%), cardiocografía (-51,1%), tonsura (-38,5%), pelota obstétrica (-31,0%) y posición semisentada (-5,4%); y un aumento en el porcentaje de prácticas como el cambio de posición (+828,6%), rebozo (+167,3%), posición de cuclillas (+100,0%), posición cuatro apoyos (+100,0%), posición de lado derecho (+100,0%), posición de lado izquierdo (+100,0%), uso de partograma (+43,3%), masajes terapéuticos (+33,4%), pinzamiento tardío del cordón umbilical (+37,3%), contacto piel con piel (+33,2%), amniotomía (+16,7%) y dieta líquida (+11,5%).

Conclusión: Frente al modelo predominante de atención obstétrica en Brasil, centrado en el médico obstetra y en prácticas intervencionistas, el modelo colaborativo de atención al parto, con actuación de enfermeras obstétricas, demuestra ser un camino para la atención a las mujeres, respecto a la fisiología del parto y al protagonismo de la mujer.

Introduction

The predominant and traditional model of obstetric care in Brazil is centered on the obstetric physician and on hospital care. The Brazilian Ministry of Health encourages the incorporation of obstetric nurses to hospital teams and expects that their contribution will reduce unnecessary interventions and cesarean sections.⁽¹⁾

In Brazil, obstetric nurses have limited participation in vaginal delivery. In a study conducted in Brazilian maternity hospitals, only 16.2% vaginal deliveries were assisted by obstetric nurses, and good practices were significantly more often used in such cases.⁽²⁾

Care for childbirth and low-risk birth can be performed by obstetricians, obstetric nurses, and midwives.⁽³⁾ It is recommended that administrators provide appropriate conditions for the implemen-

tation of the collaborative model of care because has advantages, i.e., reduction in interventions and greater satisfaction of women.⁽³⁾

Obstetric care in the collaborative model refers to the integration of the doctor and the obstetric nurse in the team. The obstetric nurse assists the women at usual risk, but the possibility of immediate referral to the obstetrician in cases of complications is granted.⁽⁴⁾

In this study, we aim to compare the care practices in normal-risk births assisted by obstetric nurses in a public hospital in Porto Alegre, Brazil, in 2013, when the collaborative model was first implemented in that institute, with care practices employed in 2016.

The study poses the research question “Was there an increase in the performance of good care practices in births assisted by obstetric nurses?” This is aimed at contributing to the scientific evidence

regarding childbirth and birth care using the collaborative model in Brazil.

Methods

This is a cross-sectional, retrospective, analytical study conducted at the Obstetric Center of Hospital Nossa Senhora da Conceição, located in the city of Porto Alegre, State of Rio Grande do Sul, Brazil.

The sample comprised 186 women at normal-risk labor assisted by obstetric nurses in 2013–2016. During this period, the obstetric nurses assisted 621 deliveries, with the percentage increasing from 4.9% (138 deliveries) in 2013 to 22.2% (483 deliveries) in 2016. The sample included 30% parturients with delivery assisted by obstetric nurses per year because this was the percentage achieved in 2017, when the study was conducted, thus representing 41 and 145 women in 2013 and 2016, respectively. The sample was calculated using 95% level of confidence and a margin of error of five percentage points that was selected by simple random sampling.

Inclusion criteria were pregnant women at normal risk during prenatal care and hospital admission, with a single fetus born alive at full term (gestational age, 37–41 weeks) with a well-flexed cephalic presentation. Parturients who visited the institute during the expulsion phase and those with incomplete information in their medical records were excluded.

Data were collection from the women's medical records from March to August 2017 and then grouped into a database and analyzed using Statistical Package for the Social Sciences software, version 25.0.

Pearson's chi-square test and Fisher's exact test were used to compare proportions. A p-value of 0.05% was considered statistically significant. The percent variation in all care practices was calculated for the purpose of comparison between the years 2013 and 2016 using the following formula:

$$\text{Percent variation} = \frac{\text{Final value} - \text{Initial value}}{\text{Initial value}} \times 100$$

The study was approved by the Research Ethics Committee of the Conceição Hospital Group (Approval No. 16278). The recommendations of the Brazilian legislation for research in humans were followed.

Results

The mean age of 186 mothers was 25.1 ± 6.1 (14–41) years. Most women were white (68.8%), had completed elementary school (59.7%), and were housewives (49.5%).

Regarding obstetric history, 58.6% were multiparous and 13.4% had a previous cesarean section. The mean gestational age was 39 ± 1.2 (37–41) weeks, and the patients had an average of 7.6 ± 2.5 (2–14) prenatal visits, conducted in the public healthcare system in 92.5% of pregnancies.

Regarding the reason for hospitalization, 66.1% visited the institute during labor with an unruptured amniotic sac, 17.7% with a ruptured sac, 9.7% with a ruptured sac, and 6.5% for postdate induction of labor.

Regarding the characterization of newborns, 99.5% had an Apgar score of ≥ 7 in the 5th min of life. The mean birth weight was 3233.2 ± 407.3 (2060–4250) grams and 5.4% newborns were admitted to a neonatal intensive care unit because of poor neonatal adaptation or the presence of infections such as neonatal sepsis and congenital syphilis.

Table 1 shows the comparison of care practices during labor and childbirth in 2013 and 2016.

Table 1. Comparison of care practices during labor and childbirth in births assisted by obstetric nurses

Variable	2013 (%)	2016 (%)	PV (%)	p-value
Change in position during labor	4.9	45.5	+828.6	0.00 [†]
Rebozo	9.8	26.2	+167.3	0.04 [†]
Squatting position	0.0	10.3	+100.0	0.00 [‡]
All-fours position	0.0	6.2	+100.0	0.00 [‡]
Right lateral position	0.0	3.4	+100.0	0.00 [‡]
Left lateral position	0.0	14.5	+100.0	0.00 [‡]
Use of a partogram	68.3	97.9	+43.3	0.00 [†]
Late umbilical-cord clamping	68.3	93.8	+37.3	0.00 [†]
Therapeutic massage	61.0	81.4	+33.4	0.01 [†]
Skin-to-skin contact**	70.4	93.8	+33.2	0.00 [†]
Amniotomy	2.4	2.8	+16.7	0.03 [†]
Oral liquid-diet	87.8	97.9	+11.5	0.01 [‡]

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Continuation.

Variable	2013 (%)	2016 (%)	PV (%)	p-value
Presence of a companion at the hospital	95.1	99.3	+4.4	0.12 ^e
Shower aspersion	100.0	100.0	0.0	1.00 ^f
Trichotomy	7.3	0.0	-100.0	0.01 ^e
Rectal suppository	53.7	7.6	-85.8	0.00 ^e
Lithotomic position	36.6	5.5	-85.0	0.00 ^e
Pain-relief medication	29.3	6.2	-79.0	0.00 ^e
Epidural pain-relief analgesia	19.5	4.1	-79.0	0.00 ^e
Use of oxytocin	43.9	11.7	-73.3	0.00 ^f
Vesical catheterization	4.9	1.4	-71.4	0.21 ^e
Episiotomy	4.9	1.4	-71.4	0.21 ^e
Venous catheterization	61.0	24.1	-60.5	0.00 ^f
Intermittent cardiotocography	36.6	17.9	-51.1	0.02 ^f
Labor induction	12.2	6.2	-48.4	0.35 ^e
Trimming of pubic hairs	41.5	25.5	-38.6	0.04 ^f
Birth ball	65.9	45.5	-31.0	0.03 ^f
Hot foot bath	14.6	13.1	-10.3	1.00 ^f
Aromatherapy	61.0	55.9	-8.4	0.68 ^f
Semi-sitting position	63.4	60.0	-5.4	0.00 ^e
Walking around	97.6	93.8	-3.9	0.69 ^e

*Performed 1-3 min after birth or until umbilical-cord pulsation is ceased.⁽⁵⁾ **Performed immediately after birth, lasting for ≥1 hour; PV = Percent variation; Fisher's exact test; ^fPearson's chi-square test

Discussion

We have discussed the care practices that presented statistically significant changes with a percentage increase or decrease when comparing 2016 with 2013 values.

There was an increase in the percentage of care practices as recommended by the WHO⁽⁵⁾ such as the use of a partogram (43.3% increase), oral liquid-diet (11.5% increase), change in position (828.6% increase), rebozo (167.3% increase), the squatting, all-fours, left and right lateral positions (100% increase each), and therapeutic massage (33.4% increase). However, there was also a 16.7% increase in amniotomy, whose routine use is not recommended by the WHO.⁽⁵⁾

Late umbilical-cord clamping and skin-to-skin contact (SSC), practices that are beneficial to the newborn^(6,7) and recommended by the WHO,⁽⁵⁾ also showed a significant increase in percentage (37.3% and 33.2%, respectively).

Partogram allows the monitoring of the progress of labor. There is a large variation in the frequency of its use in Brazilian maternity hospitals, reaching rates of 77.4%,⁽⁸⁾ 48.3%,⁽⁹⁾ and 39.4%.⁽¹⁰⁾ Partogram can contribute in reducing the duration of labor, vaginal examinations, and cesarean sections, and in improving maternal and neonatal

outcomes.⁽¹¹⁾ Thus, it is believed that its use should be increased.

An oral liquid-diet was offered to most parturients, which is a breakthrough in childbirth care, considering that healthy women have an extremely low risk of aspiration during childbirth, including surgical delivery, and considering the benefits of diet during labor, such as the replacement of energy needs and the prevention of ketosis, hyponatremia, and maternal stress.⁽¹²⁾ In Brazilian maternity hospitals, the frequency of oral diet was lower than the findings of the present study, with rates of 54.6%,⁽⁸⁾ 32.7%,⁽¹³⁾ 26.7%⁽⁹⁾ and 25.6%.⁽¹⁴⁾

The practice of changing the position during labor showed a significant increase in percentage and is related to a better progression of labor and greater maternal and fetal well-being, with less pain and increased maternal satisfaction, especially when vertical and lateral positions are adopted.^(15,16)

The vertical positions during the expulsion phase were predominant in births assisted by obstetric nurses. These positions result in a reduction in the duration of the second stage of labor, episiotomy rates, and instrumental delivery. However, they may increase the risk of blood loss of >500 mL as well as spontaneous 2nd-degree perineal lacerations.⁽¹⁷⁾ Traditionally, the instituted birth positions are nonvertical, because of professional practice and sociocultural issues, because many women believe that this is the best or only possibility of position during childbirth. Studies have indicated advances in the use of vertical positions,^(15,16) which reflects the beneficial nature of this practice, leading to its frequent use.

Therapeutic massage during labor provides comfort, relaxation, and pain relief. In Brazilian maternity hospitals, the frequency of massage utilization was 34.8%⁽¹⁶⁾ and 19.5%,⁽¹⁸⁾ described to be a beneficial, low-cost practice that can reduce the use of anesthetic and analgesic drugs.⁽¹⁸⁾

Another noninvasive obstetric technology used was the rebozo technique, which consists of a traditional Mexican pelvic massage technique to correct the positioning of the fetus.⁽¹⁹⁾ It is effective in re-

ducing pain and providing women with a positive clinical and psychological experience.⁽²⁰⁾

Regarding amniotomy, despite the percentage increase in its occurrence, this practice was not routinely used among parturients (2.4% in 2013 and 2.8% in 2016). Amniotomy is associated with potential complications, such as fetal bradycardia, umbilical-cord prolapse, and infection.⁽³⁾ In Brazilian maternity hospitals, amniotomy has high rates of 67.1%,⁽⁸⁾ 51.2%,⁽¹³⁾ 40.7%,⁽¹⁴⁾ and 27.3%.⁽²¹⁾ A systematic Cochrane review of amniotomy showed a lower probability of this intervention being required in women with childbirth assisted by obstetric nurses and obstetricians than the probability observed in other assistance models.⁽²²⁾ This finding is compatible with the indicators found in the present study, when compared to the amniotomy rates found in the usual Brazilian reality, i.e., in births assisted with the usual biomedical model.^(13,14) The Cochrane review also suggests a low probability of interventions in women assisted with an obstetric care model led by obstetric nurses and obstetricians, in addition to a high probability of women's satisfaction and a similar probability in the occurrence of adverse maternal or perinatal outcomes.

Thus, the maximum possible reduction in interventions can be expected in births assisted by obstetric nurses, which indicates the need for advances in the performance of amniotomy in the institute studied although the percentages are low and it is not a routine practice when compared with the Brazilian reality.

Regarding the newborn, late clamping of the umbilical cord was performed in most of the patients. This practice allows placental transfusion to the newborn, thereby preventing anemia and postpartum hemorrhage.^(5,6) There are few publications with indicators on this practice. In a Brazilian publication, the rate of late clamping of the umbilical cord was 76%.⁽¹⁸⁾

SSC immediately after birth was performed in all newborns, and most of these interactions lasted for ≥ 1 hour. Women who had SSC with their newborns are more likely to exclusively breastfeed after hospital discharge until 6 months after birth, have

a high probability of breastfeeding during the first hour of life, high cardiorespiratory system stability scores, and high blood glucose levels in the newborn.⁽⁷⁾ In Brazilian maternity hospitals, the SSC rate was 73.1%⁽¹⁸⁾ and 43.3%.⁽¹³⁾

Some of the practices recommended by the WHO⁽⁵⁾ showed a significant reduction in percentage such as the use of pain-relief medications and epidural analgesia, both with a reduction of 79.0%.

Epidural analgesia was not routinely used among parturients. In Brazilian maternity hospitals, epidural analgesia was used in 31.5%,⁽¹⁴⁾ 14%,⁽⁸⁾ and 9.1%⁽¹³⁾ of parturients. It increases the duration of the expulsive phase and might increase the rates of cesarean section and instrumental delivery. However, it is not associated with adverse maternal or perinatal outcomes; therefore, its use is justified during labor.⁽²³⁾ In a systematic review, women assisted in the model led by obstetric nurses and obstetricians were less likely to receive regional analgesia, which agrees with the findings of the present study.⁽²²⁾ There was a considerable percentage decrease in this practice between the years compared, which is a positive fact that may be related to the increased use of noninvasive methods, avoiding the use of interventions with greater potential for complications.

Few mothers used pain-relief medications. The most commonly used were dipyrone, hyoscine, and meperidine. The use of hyoscine is related to pain relief during labor as well as to a reduction in the first stage of labor, with increased cervical dilatation,⁽²⁴⁾ whereas meperidine is associated with less pain during labor, but also with the occurrence of nausea, vomiting, and maternal drowsiness, and with a greater need to use oxytocin.⁽²⁵⁾ Pain-relief medication is prescribed by an obstetrician, when necessary, after evaluating the parturient, when noninvasive obstetric technologies are insufficient for pain relief. There was a reduction in the use of medication, which allowed parturients to use noninvasive obstetric technologies more often.

Among noninvasive obstetric technologies, the use of the birth ball stands out in promoting comfort and pain relief, and facilitating the ver-

tical position and the progression of labor.⁽¹⁸⁾ In a Brazilian study with births assisted by obstetric nurses, a birth ball was used by 54.6% mothers.⁽¹⁸⁾ In the institute under study, there was a reduction in the use of birth ball in 2016, possibly related to the availability of less physical room, due to renovation work in the physical space of the obstetric center that year, which limited the execution of this practice.

Among the practices not recommended by WHO,⁽⁵⁾ there was a significant reduction in percentage of trichotomy (-100%), use of rectal suppositories (-85.8%), lithotomic position (-85%), oxytocin administration (-73.3%), venous catheterization (-60.5%), intermittent cardiotocography (-51.1%), pubic-hair trimming (-38.6%), and the semi-sitting position (-5.4%).

In 2016, trichotomy was eliminated from the list of interventions of the institute under study, whereas the administration of rectal suppositories, used for rectal emptying without scientific evidence in favor of its indication in labor, and pubic-hair trimming, also without evidence to justify the practice during labor, presented significant reductions in percentage. Pubic-hair trimming was reduced because of its invasive nature and the risk of infection. Regarding these practices during labor, no scientific evidence was found in the national and international literature, and this is a limitation of the present study.

Cardiotocography was used in some parturients, and only intermittently, which allowed walking and changing the position during labor. A randomized clinical trial showed that, when compared with the intermittent auscultation of fetal heartbeats, continuous cardiotocography showed no significant improvement in perinatal mortality rate, while being associated with an increase in cesarean sections and instrumental vaginal deliveries.⁽²⁶⁾

Venous catheterization and oxytocin administration were not used in most parturients. Venous catheterization is not recommended because it is an invasive procedure that poses risks to women, in addition to impairing their mobility during labor.⁽⁵⁾ In Brazilian maternity hospitals, venous catheterization

was used in 73.8%⁽¹⁵⁾ and 54%⁽¹⁰⁾ parturients, and oxytocin was administered to 52.2%,⁽¹³⁾ 49.6%,⁽²¹⁾ 41.7%,⁽⁸⁾ 38.2%⁽¹⁴⁾ and 27.6% of them.⁽¹⁸⁾ The use of oxytocin, especially at high doses and without proper monitoring, may cause serious risks to both the mother and the fetus, such as uterine tachysystole and fetal bradycardia due to prolonged uterine contractility, which may lead to decreased blood flow to the fetus, being associated with an Apgar score of lower than seven during the 5th min of life, with uterine hypotonia and postpartum hemorrhage.⁽²⁷⁾

Regarding the position adopted by the parturients during the expulsive phase, there was a decrease in the use of the lithotomic and semi-sitting positions, which is positive because these positions should be discouraged, as they present an increased risk of vulvar edema and uterine bleeding of over 500 mL after placental delivery.⁽¹⁵⁾ In most Brazilian maternity hospitals, the lithotomic position is predominant in the expulsive phase, with frequencies of 92%,⁽¹⁴⁾ 77.1%,⁽²⁸⁾ and 66.8%,⁽⁸⁾ and may be related to increased interventions during labor.

Conclusion

The present study identified high rates of beneficial care practices for women and newborns in births assisted by obstetric nurses. Comparison of care practices revealed a reduction in interventions such as trichotomy, pubic-hair trimming, use of rectal suppositories, lithotomic and semi-sitting positions, pain-relief medications, oxytocin, epidural analgesia, venous catheterization, and cardiotocography. At the same time, there was an increase in percentage of practices such as partogram use, change in position, rebozo, the squatting, all-fours, right and left lateral positions, amniotomy, liquid diet, therapeutic massage, late umbilical-cord clamping, and SSC. It should be noted that some care practices did not show advances, such as amniotomy, although not routinely performed, was an intervention with a significant increase in percentage during the studied period. A reduction was observed in the use of birth ball, but

it should be emphasized that under usual conditions this is one of the most frequently used non-invasive obstetric technologies during labor, and this reduction is attributed to renovation works in the physical space of the obstetric center during the period studied. Based on these findings, the collaborative model of childbirth care with the active participation of obstetric nurses is a good way to take care of women giving birth, respecting the physiology of childbirth, and the role of women. It has also shown to be capable of promoting a reduction in unnecessary interventions by encouraging care practices that result in favorable obstetric and neonatal outcomes.

Collaborations

Ritter SK, Gonçalves AC, and Gouveia HG declare that they contributed to the conception of the study, analysis and interpretation of the data, writing of the article, critical review of the relevant intellectual content, and approval of the final version to be published.

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