



Using the Bologna score to assess normal delivery healthcare*

Utilização do índice de Bologna para avaliação da assistência ao parto normal

Utilización del índice de Bologna para evaluación de la asistencia al parto normal

Isaiane da Silva Carvalho¹, Rosineide Santana de Brito¹

How to cite this article:

Carvalho IS, Brito RS. Using the Bologna Score to assess normal delivery healthcare. Rev Esc Enferm USP. 2016;50(5):741-748. DOI: <http://dx.doi.org/10.1590/S0080-623420160000600005>

*Extracted from the dissertation "Avaliação da qualidade da assistência à mulher e ao filho durante o parto normal", Pós-Graduação em Enfermagem, Universidade Federal do Rio Grande do Norte; 2014.

¹ Universidade Federal do Rio Grande do Norte, Programa de Pós-Graduação em Enfermagem, Natal, RN, Brazil.

ABSTRACT

Objective: Describing the obstetric care provided in public maternity hospitals during normal labour using the Bologna Score in the city of Natal, Northeastern Brazil. **Method:** A quantitative cross-sectional study conducted with 314 puerperal women. Data collection was carried out consecutively during the months of March to July 2014. **Results:** Prenatal care was provided to 95.9% of the mothers, beginning around the 1st trimester of pregnancy (72.3%) and having seven or more consultations (51%). Spontaneous vaginal delivery was planned for 88.2% women. All laboring women were assisted by a health professional, mostly by a physician (80.6%), and none of them obtained 5 points on the Bologna Score due to the small percentage of births in non-supine position (0.3%) and absence of a partogram (2.2%). A higher number of episiotomies were observed among primiparous women (75.5%). **Conclusion:** The score obtained using the Bologna Index was low. Thus, it is necessary to improve and readjust the existing obstetrical model.

DESCRIPTORS

Natural Childbirth; Obstetric Nursing; Prenatal Care; Health Evaluation.

Corresponding author:

Isaiane da Silva Carvalho
Campus Universitário, Departamento
de Enfermagem, Lagoa Nova,
CEP 59078-900 – Natal, RN, Brazil
isaianekarvalho@hotmail.com

Received: 02/25/2016
Approved: 09/29/2016

INTRODUCTION

In the health area, evaluation has constituted an important tool for planning and managing systems and services. This comes from its ability to function as a true feedback mechanism, with the main objective to produce information and knowledge which improves theories and supports activities⁽¹⁾. By selecting practices to be implemented and constructing methods to measure them, the evaluation process promotes changes in the health care area. In this sense, it enables professional improvement and it consequently brings improvements to the workspace where it occurred⁽²⁾. Thus, its implementation is essential to support decision-making, to allocate resources in a rational manner, and should be in accordance with the actual needs of those involved⁽³⁾.

Establishing quality indicators is common within the evaluation process in healthcare, as they enable the description of a particular phenomenon, its evaluation in a specific period of time, and the quality of the implemented actions⁽⁴⁾. Care process indicators, for example, allow for monitoring achieved results through the provided care, appearing as an important management mechanism able to support strategic actions based on the population's characteristics⁽⁵⁾.

The quality of care during pregnancy and the puerperal period is sometimes measured by maternal and infant mortality and morbidity, where evaluations of the care process are carried out on a smaller scale. However, such evaluations are important since they enable checking if the practices performed at the institutional level are consistent with available scientific evidence, as well as their impact on care quality⁽⁶⁾. In the year 2000, a unique initiative in the context of public health in Brazil initiated using process indicators and results to assess the effectiveness of the prenatal care offered in the institution of the Prenatal and Birth Humanization Program (PHPN - *Programa de Humanização do Pré-natal e Nascimento*)⁽⁷⁾.

Regarding the delivery process, some process indicators can be utilized: the percentage of women with induced labor or undergoing elective cesarean section (Indicator A), and the percentage of women attended to by a health professional (Indicator B) associated to the Bologna Score (indicator C), which can translate into the effectiveness of care provided⁽⁸⁾. This index is based on recommendations of the World Health Organization (WHO) for normal delivery assistance⁽⁹⁾, and it has been used by several studies in national and international settings^(6,10-12).

Regarding birth in Brazil, it should be emphasized that the current obstetrical model has not allowed this event to occur naturally, regardless of the economy status of laboring women. In the public healthcare service, vaginal delivery is usually marked by pain and an excess of interventions; on the other hand, the routine cesarean culture in the private healthcare service prevails based on the justification of reducing womens' suffering⁽¹³⁾. This reality leads to questions about care quality.

Thus, the assessment of quality and results obtained through continuous monitoring may be able to contribute to producing improvements in the institutional indicators

and consequently to the current obstetrical model. However, one should remember that this is not an easy task, especially when the evaluation culture is not integrated into the health care routine; nevertheless, the benefits associated with these activities justify the pursuit to overcome the challenges faced today. The aim of this study was to describe the obstetric care provided in public maternity hospitals during normal delivery in the city of Natal, Northeastern Brazil, using the Bologna Score.

METHOD

A cross-sectional quantitative study developed based on the *Strengthening the Reporting of Observational Studies in Epidemiology* protocol⁽¹⁴⁾ during the months of March to July, 2014, in two public maternity hospitals located in the city of Natal.

The city of Natal is located on the coast of Rio Grande do Norte state, in northeastern Brazil, and is also the state capital, with a territorial area corresponding to 168.53km²⁽¹⁵⁾. In 2010, it had a population of 803,739 inhabitants and a population density of 4,805.24 inhabitants/km², with an estimated population of 862,044 inhabitants for 2014⁽¹⁶⁾. The city is divided into four areas: North, South, East and West.

The initial intention was to develop our research in three public maternity hospitals; two maternity hospitals located in the city's West Zone (maternities A and B), and one located in the North Zone (Maternity C). However, the latter was closed in 2013 for the purpose of structural renovations and had not yet reestablished its activities up to the date which data collection occurred. Thus, the two maternity hospitals in the West Zone were considered as study sites. The choice for these study sites was justified by the fact that these institutions represent public obstetric care offered to women with normal risk births.

Maternity A is responsible for providing care to laboring women with usual risk in the West Zone of Natal. In addition, it meets the demand of other regions and municipalities, with a monthly average of 500 consultations. Its staff consists of approximately 150 employees, among which are doctors, nurses, technicians and nursing assistants, psychologists, dieticians, speech therapists, pharmacists and social workers. It has two antepartum beds, a normal delivery room and 20 beds for joint accommodation. Maternity B also provides care to usual risk births, and performs caesarean surgeries. Human resources of this institution comprises about 160 employees, among which are doctors, nurses, technicians and nursing assistants, dieticians, pharmacists, social workers and speech therapists. It has four wards for joint accommodations (28 beds), three wards for pre-delivery (nine beds), two delivery rooms and a surgical center⁽¹⁷⁾. A female companion is permitted to be present in both institutions. During delivery, the companion may witness the birth if they wish.

Study participants were mothers who had a child born alive by transpelvic delivery, with spontaneous or induced (initial) labor, and who had physical and emotional conditions to answer the proposed study questions. Adolescent mothers without legal guardians at the time of interview

and those whose births occurred at home were excluded from the study. The sample size was calculated based on the quantity of normal births in each Maternity in 2012, and the amounts were allocated proportionately to each Maternity resulting in a total of 314 mothers (Maternity A: 112; Maternity B: 202), considering a $\alpha=5\%$ and 0.05 margin of error.

Bologna score was used to assess care delivery, being comprised of three indicators: Indicator A verifies the percentage of women with induced labor or undergoing elective cesarean section; Indicator B verifies the percentage of women attended to by a health professional; Indicator C features five issues, being: the presence of a companion during childbirth; use of partograph; lack of labor stimulation (use of pitocin, forceps, Kristeller maneuver) or emergency cesarean section; delivery in non-supine position; and skin to skin contact between mother and child for at least 30 minutes in the first hour. A score of "1" is assigned to each variable if present and "0" if absent, and the index value is obtained by summarizing the results. A value of "0" indicates the lowest quality, and "5" the highest quality⁽⁸⁾.

In addition, specific questions were added about social and demographic characteristics and characteristics related to the delivery of postpartum women, including the following variables: age group; education level; marital status; profession; family income; parity; realization of prenatal care; start of prenatal care; prenatal consultations; prematurity; low birth weight; Apgar at 1 minute; Apgar at 5 minutes; and performance of episiotomy.

Data collection was carried out consecutively at intervals of 24 hours, starting on the first day of collection through structured interviews with the mothers in the joint accommodations. This period of time is justified by the fact that the puerperal women usually only stay at the institution for 48 hours. Thus, the chances of being able to meet the mothers from the previous day on a subsequent visit are minimal. Data were collected by the lead researcher and two previously trained academic nurses.

Data collection was initiated at Maternity A. As cesarean sections are not carried out at the institution, all mothers who met the established inclusion criteria for the study were selected. Upon completed data collection, additional

information was collected from the subjects' medical records. In the case of Maternity B, in addition to the steps followed in Maternity A, information was also collected regarding whether the cesarean section was elective or an emergency according to indicator B (because this institution performs caesarean sections).

Data were analyzed using the SPSS Statistics® program version 20.0. Pearson chi-square and Fisher's exact test compared the differences between mothers by parity, the latter being used in cases where the expected frequency was less than 5. In addition, the percentage of women with induced labor or undergoing elective cesarean section (Indicator A) and the percentage of women attended to by a health professional (Indicator B) were calculated. Care quality was evaluated using the results obtained from the Bologna Score (Indicator C) as follows: closer to 5 indicates the best quality, and closer to 0 is poor/bad quality. Mann-Whitney U test was used to compare the mean values of the two groups of mothers. All statistical tests considered a significance level of 5%.

The project was approved by the Ethics Committee of the Federal University of Rio Grande do Norte under Opinion No. 562 313 in February 28, 2014, and was presented a Certificate for Ethics Appraisal: 25958513.0.0000.5537.

RESULTS

500 postpartum women were interviewed during the data collection period. Of these, 348 had normal births and 34 (9.77%) of these were excluded according to the established criteria, resulting in a sample of 314 women (Figure 1). Table 1 shows characteristics and some aspects of the newborns. 51.9% of the interviewed women were multiparous, aged between 14 and 44 years, with a mean of 24.8 (± 6.1) and a predominant age group between 20 and 29 years (53.8%). The average education level was 8.6 (± 2.8) years, ranging from no education to 16 years, with the category of 9 or more years being the most relevant (56.4%). Regarding marital status, most women reported being single (78.7%) and the most described profession was "stay-at-home mother/housewife" (56.1%). Income was between 1 and 2 minimum wages (79.6%).

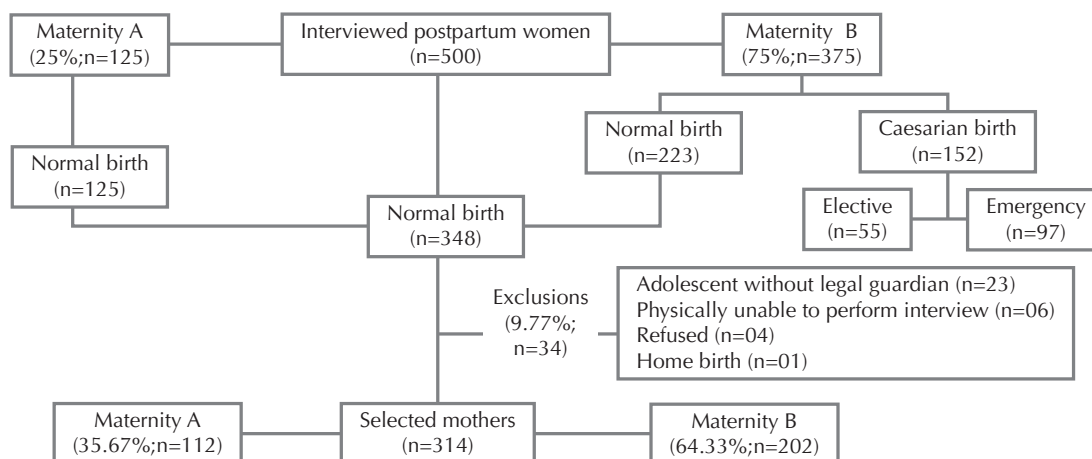


Figure 1 – Selection process of the mothers (postpartum women) - Natal, RN, Brazil, 2014.

Table 1 – Characteristics of mothers (postpartum women) and newborns - Natal, RN, Brazil, 2014

Variables	General (n = 314)		Primiparous (n = 151)		Multiparous (n = 163)		p-value
	n	%	n	%	N	%	
Age group (years)							
< 20	70	22.3	60	85.7	10	14.3	< 0.001
20-29	169	53.8	78	46.2	91	53.8	
≥ 30	75	23.9	13	17.3	62	82.7	
Education level (years)							
< 9	137	43.6	37	27.0	100	73.0	< 0.001
≥ 9	177	56.4	114	64.4	63	35.6	
Marital status							
Single	247	78.7	120	48.6	127	51.4	0.784
Other	67	21.3	31	46.3	36	53.7	
Profession							
Housewife/Stay-at-home mother	176	56.1	80	45.5	96	54.5	0.291
Other	138	43.9	71	51.4	67	48.6	
Income (wages)^{†x}							
< 1	40	12.9	8	20.0	32	80.0	< 0.001
1 to 2	246	79.6	124	50.4	122	49.6	
3 and +	23	7.4	15	65.2	8	34.8	
Prenatal care							
Yes	301	95.9	148	49.2	153	50.8	0.089*
No	13	4.1	3	23.1	10	76.9	
Beginning of prenatal care (months)[§]							
≤ 3	217	72.3	115	53.0	102	47.0	0.040
> 3	83	27.7	33	39.8	50	60.2	
Prenatal consultations[¶]							
1-3	28	9.3	14	50.0	14	50.0	0.018
4-6	119	39.7	47	39.5	72	60.5	
≥ 7	153	51.0	87	56.9	66	43.1	
Prematurity[‡]							
< 37	2	0.7	2	100.0	0	0.0	0.230*
≥ 37	301	99.3	147	47.7	161	52.3	
Low weight[‡]							
<2.500	5	1.6	3	60.0	2	40.0	0.672*
≥2.500	304	98.4	144	47.4	160	52.6	
Apgar at 1 minute							
≤ 7	33	10.5	22	66.7	11	33.3	0.024
> 7	281	89.5	129	45.9	152	54.1	
Apgar at 5 minutes							
≤ 7	4	1.27	2	50.0	2	50.0	1.000
> 7	310	98.73	149	48.1	161	51.9	
Episiotomy							
Yes	159	50.6	120	75.5	39	24.5	< 0.001
No	155	49.4	31	20.0	124	80.0	

Legend: *Fisher's exact test; †Excluded: unable to inform (1.59%; n=5); ‡Minimum wage = R\$724,00; †Values for mothers who received prenatal care (95.86%; n=301); §Excluded: unable to inform (0.33%; n=1); ¶Excluded: not identified (0.33%; n=1); ‡Excluded: not identified (1.27%; n=4); ‡Excluded: not identified (1.59%; n=5).

Prenatal care was provided to 95.9% of mothers with an average of 6.57 (\pm 2.44) consultations, being a minimum of one and a maximum of 15, and more than half had seven or more consultations (51%). The start of prenatal care generally occurred around the 1st trimester of pregnancy (72.3%). Regarding information on newborns, it was observed that prematurity (0.7%) and low birth weight (1.6%) had small percentages. Apgar at 1 minute $>$ 7 occurred in 89.5% of cases, ranging from 1 to 9, with an average of 8.30 (\pm 1.1), and at 5 minutes in 98.7%, average of 8.9 (\pm 0.5) and ranging from 3 to 10. The differences between the mothers were statistically significant for the variables of age group ($p < 0.001$), education level ($p < 0.001$), income ($p = 0.001$), start of prenatal care ($p = 0.040$), prenatal consultations ($p = 0.018$), Apgar at 1 minute ($p = 0.016$) and execution of episiotomy ($p < 0.001$).

Indicator A (percentage of women with induced labor or undergoing elective cesarean section) showed evidence of labor induction occurring in eight (1.7%) women and 53 (11.8%) cesarean deliveries occurred in an elective manner, representing a total of 13.1%. Spontaneous vaginal delivery was planned for 88.2% of the pregnant women, however, it occurred for 67.1%.

All laboring women were attended to a health professional (Indicator B), especially with the role of physicians (80.6%) and nurses (65.9%) being described. It is noteworthy that 101 (32.2%) postpartum women were unable to exactly inform who offered the provided assistance due to lack of identification by the person who assisted them.

Regarding Indicator C, the Bologna Score ranged from 0 to 4 points; 4 (0.6%), 3 (27.1%), 2 (52.6%), 1 (17.8%), 0 (1.9%). The overall average corresponded to 2.1 (\pm 0.7). There was no statistically significant difference between the mean of postpartum women by parity ($p < 0.507$). Among the five variables that integrate the Bologna Score, the lowest percentages were related to delivery in non-supine position (0.3%) and use of a partogram (2.2%) (Table 2). The main type of stimulation during labor was the use of oxytocin (52.9%).

Table 2 - Items of the Bologna Score (n = 314) - Natal, RN, Brazil, 2014.

Item	n	%
Presence of a companion	269	85.7
Use of a partogram	7	2.2
Lack of stimulation	124	39.5
Delivery in non-supine position	1	0.3
Skin to skin contact	248	79.0

DISCUSSION

The aim of the study was to describe how obstetric care is provided to women and their child during normal delivery in two municipal Maternity Clinics in Natal, using the practices recommended by the WHO as reference. The main results showed that most had prenatal care, low percentages of prematurity and low birth weight of newborns, as well as an Apgar score less than 7. A higher number of

episiotomies was observed among primiparous women, the primary care providers were doctors and none of the assessed postpartum women obtained a Bologna Score of 5.

In the context of prenatal care, the Ministry of Health in Brazil recommends performing at least six consultations, preferably starting in the first trimester of pregnancy⁽¹⁸⁾. That said, despite the existence of postpartum women reporting not performing prenatal care, the fact that most had received this type of assistance is an important breakthrough in terms of coverage. However, almost universal coverage is not synonymous with appropriate care, which can be proven by verifying that just over half of the postpartum women had seven consultations or more, and only about 72% had started prenatal care, with the worst results among multiparous women.

Thus, in addition to the minimum standards recommended for each component, one must take into account the quality of care that is provided. When prenatal care is performed early on and considering the interventions necessary for this period, the possibility of safe outcomes is higher. Thus, it is for basic health network professionals to excel by good practices in prenatal care and ensure compliance with the highest level of quality⁽¹⁹⁾.

In terms of characteristics of newborns, the percentages of prematurity and low birth weight were lower compared to other studies conducted in Brazil, which generally showed higher values at 7% for the two analyzed aspects⁽²⁰⁻²²⁾. However, these studies also included cesarean deliveries, which may have contributed to higher percentages. The significance of these percentages refers to the fact that prematurity and low birthweight correspond to factors associated with neonatal mortality⁽²³⁾. Moreover, the low percentage of newborns with Apgar below 7, especially in the fifth minute, reflects good adaptation to extra-uterine life in the first minutes of life. Thus, the observed results can be an implication of the care provided during the prenatal care.

In terms of episiotomy, especially among primiparous women who presented higher rates, this was similar to what was found in a study conducted with Indian women, where nulliparous were 8.8 times more likely to suffer this type of intervention when compared to multiparous women⁽²⁴⁾. It is important to consider that the evidence presents benefits associated to establishing a restrictive policy in performing this procedure when compared to its routine indication; among them are less severe perineal trauma, sutures and complications in the healing process⁽²⁵⁾. Thus, this intervention needs to be reviewed as to its frequency due to all the consequences it may cause to women, regarding both physical and/or psychological aspects.

Concerning the percentage of women with induced labor or undergoing elective cesarean section, higher percentages were found in studies using the same valuation methodology in Cambodia (18.6%), Sweden (16.5%) and in Goiania, Brazil (31.7%)^(6,10-11).

However, it is clear that although spontaneous vaginal delivery was planned for 88.2% laboring women, it actually only occurred in 67.1% of cases. These results raise questions about labor management and the issue of caesareans.

The WHO emphasizes that there is no justification for caesarean percentages greater than 15%⁽²⁶⁾. However, values above the recommended are observed in many parts of the world. A study on the inequalities in the use of caesarean section in 137 countries has shown that 69 had rates above 15%, including Brazil with 45.9% of caesareans⁽²⁷⁾. Private healthcare in Brazil displays even more alarming results, as almost 90% of deliveries take place by caesarean⁽²⁸⁾. Furthermore, it should be remembered that caesarean section is a risky surgical procedure for mother and child, and thus it should not be considered as an alternative to normal delivery without clear indications for it⁽²⁹⁾. Thus, the need for specific investigations regarding the factors contributing to emergency caesareans performed in Brazil is essential.

Care provided by a health professional in all deliveries was also found in a study conducted in Cambodia and in Goiânia. Sweden presented a percentage of 99.9%. Differences were observed in terms of the primary service provider when considering the Brazilian reality and other investigated locations/countries with such indicators as: in Cambodia (63%) and in Sweden (72.4%), the role of a midwife is highlighted; in Goiânia (95.8%), as well as in this study, the predominant role was a physician/doctor^(6,10-11). These percentages evidence the existence of a delivery assistance model which is predominantly medicalized in the investigated realities, and which have serious implications for obstetrical area, particularly due to the excess of practiced interventions.

A systematic review of delivery care models with midwives found that these cases were less likely to administer regional analgesia, perform episiotomy or instrumental delivery. Similarly, the laboring women were more likely to not have intrapartum analgesia/anesthesia, to have spontaneous vaginal delivery and to have the care provided by a familiar midwife⁽³⁰⁾. It is worth noting that high-risk women should have medical and hospital care provided as a way of identifying and treating possible complications⁽³¹⁾.

The average obtained in the Bologna Score (2.07; \pm 0.74) was higher than that found in another Brazilian study (1.04, 95% CI: 0.9-1.1) and lower to that in Sweden (3.81; \pm 0.8), which clearly reflects the differences in health care models adopted by developed and developing countries. In Cambodia, the main item that led to the loss of points in the Bologna score was delivery in the absence of non-supine position; similar to what was found in the studied Maternity Clinics. Likewise, the same was found in Sweden and in a study developed in a southern capital of Brazil^(6,10-12).

Birth in the supine position is a common and accepted practice in Brazil. A study that evaluated the different regions of the country found that this position was adopted for 91.7% of normal risk births⁽³²⁾. A systematic review on this matter suggested the presence of benefits associated with the vertical position, although there is an increased risk of blood loss⁽³³⁾. However, hospitals that instruct laboring women to keep resting in the bed at admission or during labor ultimately deprive these women of any benefits associated with other positions during the birthing process⁽³⁴⁾.

Thus, it is necessary that women be counseled about the risks and benefits of other positions and are able to choose the position that suits them best.

In this study, the partogram also contributed to the loss of points on the Bologna Score. This tool was only found in some medical records because of the presence of medical students in the maternity clinic who had been instructed by their teacher to use it to monitor labor progress. In contrast, a study conducted in maternity schools located in the Northeast of Brazil identified a frequency of 42% for the use of partograms⁽³⁵⁾ and of 98.5% in Maternity Clinics located in a southern capital of the country⁽¹²⁾. The current available evidence does not allow for routinely recommending a partogram; its use should be decided locally, until the emergence of stronger evidence⁽³⁶⁾. However, considering its acceptance and influence in reducing caesarean surgery rates in the Brazilian context, it is understood that it should be encouraged in the evaluated institutions. For this to happen effectively, use of the partogram being considered as a routine policy is not enough unless the staff is properly trained, with adequate working conditions, and under continuous supervision⁽³⁷⁾.

Regarding the frequent use of oxytocin, a systematic review showed that its early administration has led to uterine hyperstimulation with changes in FHR, and it also can reduce the mean duration of labor. On the other hand, there were no differences in caesarean rates or instrumental vaginal delivery when comparing its use to no treatment or delayed treatment for slow progress in the first stage of labor⁽³⁸⁾. Thus, the use of this intervention should be carefully assessed in relation to its purpose.

From the abovementioned results and although the Brazilian scenario has a number of initiatives focused on maternal and child health (PHPN National Pact to Reduce Maternal and Neonatal Mortality - *Pacto Nacional pela Redução da Mortalidade Materna e Neonatal*, National Women's Comprehensive Healthcare Policy - *Política Nacional de Atenção Integral à Saúde da Mulher*, Companion Law - *Lei do Acompanhante*, Maternity Qualification Plan - *Plano de Qualificação de Maternidades* and Perinatal Network of the Amazon and Northeast - *Redes Perinatais da Amazônia Legal e Nordeste*, and more recently the introduction of the Stork Network - a instituição da Rede Cegonha), a long road still needs to be traveled to ensure that theoretical achievements become a reality in health-care services, thus producing significant improvements in care quality.

This study had some limitations. First, it is not possible to generalize the results to the entire city of Natal, as the research only focused on municipal public Maternity Clinics. Secondly, the assistance was described only considering the component of the practice, when other factors are also associated with quality, such as the issue of institutional physical infrastructure and available human resources, which should be a further research study objective. A strong point of the study is considering the reports were collected while the postpartum women were still in the Maternity Clinic, and the data were collected through interviews and associated

to collecting information from the medical records, which lends greater credibility to the results.

CONCLUSION

The results showed that there were more episiotomies in primiparous women and the score obtained on the Bologna Index was low. Thus, it is necessary to improve and readjust

the existing obstetrical model. It must be considered that better obstetrical practices should be instituted, especially in terms of the possibility of adopting non-supine positions for delivery and utilizing partograms. Furthermore, other practices should be reviewed, such as the episiotomy. Thus, it is expected that changes in the obstetrical care area are conducted by the best available scientific evidence.

RESUMO

Objetivo: Descrever a assistência obstétrica prestada em maternidades públicas municipais durante o parto normal na cidade de Natal, Nordeste do Brasil, com uso do Índice de Bologna. **Método:** Estudo transversal com abordagem quantitativa, desenvolvido com 314 puérperas. A coleta de dados processou-se de forma consecutiva durante os meses de março a julho de 2014. **Resultados:** A assistência pré-natal foi prestada a 95,9% das puérperas, com início em torno do 1º trimestre de gestação (72,3%) e realização de sete ou mais consultas (51%). O parto vaginal espontâneo foi planejado para 88,2% mulheres. Todas as parturientes foram assistidas por um profissional de saúde, especialmente pelo médico (80,6%) e nenhuma obteve 5 pontos no Índice de Bologna em virtude dos baixos percentuais de partos em posição não supina (0,3%) e ausência do partograma (2,2%). Houve maior número de episiotomias em primíparas (75,5%) **Conclusão:** A pontuação obtida por meio do Índice de Bologna foi baixa. Desse modo, é preciso melhorar e readequar o modelo obstétrico vigente.

DESCRITORES

Parto Normal; Enfermagem Obstétrica; Cuidado Pré-Natal; Avaliação em Saúde.

RESUMEN

Objetivo: Describir la asistencia obstétrica prestada en maternidades públicas municipales durante el parto normal en la ciudad de Natal, Nordeste de Brasil, con empleo del Índice de Bologna. **Método:** Estudio transversal, con abordaje cuantitativo, desarrollado con 314 puérperas. La recolección de datos se dio de manera consecutiva durante los meses de marzo a julio de 2014. **Resultados:** La asistencia pre natal fue prestada al 95,9% de las puérperas, con inicio en torno al 1º trimestre de gestación (72,3%) y realización de siete o más consultas (51%). El parto vaginal espontáneo fue planificado para el 88,2% de las mujeres. Todas las parturientes fueron asistidas por un profesional sanitario, especialmente por el médico (80,6%) y ninguna obtuvo 5 puntos en el Índice de Bologna en virtud de los bajos porcentuales de partos en posición no supina (0,3%) y ausencia del partograma (2,2%). Hubo mayor número de episiotomías en primíparas (75,5%) **Conclusión:** El puntaje obtenido por medio del Índice de Bologna fue bajo. De ese modo, es necesario mejorar y readequar el modelo obstétrico vigente.

DESCRIPTORES

Parto Normal; Enfermería Obstétrica; Atención Prenatal; Evaluación en Salud.

REFERENCES

1. Sancho LG, Dain S. Avaliação em saúde e avaliação econômica em saúde: introdução ao debate sobre seus pontos de interseção. *Ciênc Saúde Coletiva*. 2012;17(3):765-74.
2. Fonseca EF, Machado FRS, Bornstein VJ, Pinheiro R. Health evaluation and its consequences for the community health workers. *Texto Contexto Enferm*. 2012;21(3):519-27.
3. Hartz Z. Do monitoramento do desempenho ao desempenho do monitoramento: novas oportunidades para a avaliação na gestão da vigilância em saúde. *Ciênc Saúde Coletiva*. 2013;18(5):1217-24.
4. Vieira APM, Kurcgant P. Indicadores de qualidade no gerenciamento de recursos humanos em enfermagem: elementos constitutivos segundo percepção de enfermeiros. *Acta Paul Enferm*. 2010;23(1):11-5.
5. Andreucci CB, Cecatti JG. Desempenho de indicadores de processo do Programa de Humanização do Pré-natal e Nascimento no Brasil: uma revisão sistemática. *Cad Saúde Pública*. 2011;27(6):1053-64.
6. Sandin-Bojő AK, Hashimoto M, Kanal K, Sugiura Y. Intrapartum care at a tertiary hospital in Cambodia: a survey using the Bologna Score. *Midwifery*. 2012;28(6):e880-5.
7. Brasil. Ministério da Saúde do Brasil. Programa Humanização do Parto: humanização no pré-natal e nascimento. Brasília: MS; 2002.
8. Chalmers B, Porter R. Assessing effective care in normal labor: the Bologna Score. *Birth*. 2001;28(2):79-83.
9. World Health Organization. Care in normal birth: a practical guide. Geneva: WHO; 1996.
10. Sandin-Bojő RNM, Kvist LJ. Care in labor: a Swedish survey using the Bologna Score. *Birth*. 2008;35(4):321-8.
11. Giglio MRP, França E, Lamounier JA. Avaliação da qualidade da assistência ao parto normal. *Rev Bras Ginecol Obstet*. 2011;33(10):297-304.
12. Oliveira FAM, Leal GCG, Wolff LDG, Gonçalves LS. O uso do Escore de Bologna na avaliação da assistência a partos normais em maternidades. *Rev Gaúcha Enferm*. 2015;36(n.esp):177-84.
13. Leal MC, Gama SGN. Nascer no Brasil. *Cad. Saúde Pública*. 2014;30(Sup.):S5-S7.

14. Vandembroucke JP, von Elm E, Altman DG, Gøtzsche PC, Mulrow CD, Pocock SJ, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. *Int J Surg*. 2014;12(12):1500-24.
15. Natal. Secretaria Municipal de Meio Ambiente. Anuário Natal 2013 [Internet]. Natal: SMMA; 2013 [citado 2014 dez. 10]. Disponível em: http://www.natal.rn.gov.br/bvn/publicacoes/Anuario_2013.pdf
16. Instituto Brasileiro de Geografia e Estatística. Cidades@. Rio Grande do Norte – Natal [Internet]. Rio de Janeiro: IBGE; 2014 [citado 2014 dez. 10]. Disponível em: <http://www.cidades.ibge.gov.br/xtras/perfil.php?lang=&codmun=240810&search=rio-grande-do-norte|natal>
17. Brasil. Ministério da Saúde. DATASUS. Cadastro Nacional de Estabelecimentos de Saúde [Internet]. Brasília; 2014 [citado 2014 dez. 10]. Disponível em: <http://datasus.saude.gov.br/sistemas-e-aplicativos/cadastros-nacionais/cnes>
18. Brasil. Ministério da Saúde; Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Atenção ao pré-natal de baixo risco. Brasília: MS; 2012.
19. Figueiredo FSF, Borges PK, Paris GF, Alvarez GRS, Zarpellon LD, Pelloso SM. Gestational attention during early prenatal care: an epidemiological study. *Online Braz J Nurs* [Internet]. 2013 [cited 2014 Dec 10];12(4):794-804. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/4259>
20. Noronha GA, Torres TG, Kale PL. Análise da sobrevivência infantil segundo características maternas, da gestação, do parto e do recém-nascido na coorte de nascimento de 2005 no Município do Rio de Janeiro-RJ, Brasil. *Epidemiol Serv Saúde*. 2012;21(3):419-30.
21. Rozario S, Brito AS, Kale PL, Fonseca SC. Série temporal de características maternas e de nascidos vivos em Niterói, RJ. *Rev Bras Saude Mater Infant*. 2013;13(2):137-46.
22. Carvalho IS, Costa Júnior PB, Macedo JBPO, Brito RS. Epidemiologic characterization of parturitions and births: an ecological study based on an information system. *J Nurs UFPE On Line* [Internet]. 2014 [cited 2014 Dec 10];8(3):616-23. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/5596/pdf_4708
23. Lansky S, Friche AAL, Silva AAM, Campos D, Bittencourt SDA, Carvalho ML, et al. Birth in Brazil survey: neonatal mortality, pregnancy and childbirth quality of care. *Cad Saúde Pública*. 2014;30 Supl 1:S192-207.
24. Singh S, Thakur T, Chandhiok N, Dhillon BS. Pattern of episiotomy use & its immediate complications among vaginal deliveries in 18 tertiary care hospitals in India. *Indian J Med Res*. 2016;143(4):474-80.
25. Carroli G, Mignini L. Episiotomy for vaginal birth. *Cochrane Database Syst Rev*. 2009;(1):CD000081.
26. World Health Organization. Appropriate technology for birth. *Lancet*. 1985;326(8452):436-7.
27. Gibbons L, Belizan JM, Lauer JA, Betran AP, Meriáldi M, Althabe F. Inequities in the use of cesarean section deliveries in the world. *Am J Obstet Gynecol*. 2012;206(4):331.e1-19.
28. Domingues RMSM, Dias MAB, Nakamura-Pereira M, Torres JA, D'Orsi E, Pereira APE, et al. Process of decision-making regarding the mode of birth in Brazil: from the initial preference of women to the final mode of birth. *Cad Saúde Pública*. 2014;30 Supl 1:S101-16.
29. Mylonas I, Friese K. Indications for and risks of cesarean section. *Dtsch Arztebl Int*. 2015;112(2930):489-95.
30. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database Syst Rev*. 2013;(8):CD004667.
31. Porto AMF, Amorim MMR, Souza ASR. Assistência ao primeiro período do trabalho parto baseada em evidências. *Femina*. 2010;38(10):527-37.
32. Leal MC, Pereira APE, Domingues RMSM, Theme Filha MM, Dias MAB, Nakamura-Pereira M, et al. Obstetric interventions during labor and childbirth in Brazilian low-risk women. *Cad Saúde Pública*. 2014;30 Supl 1:S1-31.
33. Gupta JK, Hofmeyr GJ, Shehmar M. Position in the second stage of labour for women without epidural anaesthesia. *Cochrane Database Syst Rev*. 2012;(5):CD002006.
34. Valiani M, Rezaie M, Shahshahan Z. Comparative study on the influence of three delivery positions on pain intensity during the second stage of labor. *Iran J Nurs Midwifery Res*. 2016;21(4):372-8.
35. Barros LA, Veríssimo RCSS. Uso do partograma em Maternidades Escola de Alagoas. *Rev RENE*. 2011;12(3):555-60.
36. Lavender T, Hart A, Smyth RMD. Effect of partogram use on outcomes for women in spontaneous labour at term. *Cochrane Database Syst Rev*. 2013;(15):CD005461.
37. Chaturvedi S, Upadhyay S, De Costa A, Joanna Raven. Implementation of the partograph in India's JSY cash transfer programme for facility births: a mixed methods study in Madhya Pradesh province. *BMJ Open*. 2015;5(4):e006211.
38. Bugg GJ, Siddiqui F, Thornton JG. Oxytocin versus no treatment or delayed treatment for slow progress in the first stage of spontaneous labour. *Cochrane Database Syst Rev*. 2013;(6):CD007123.