Childbirth care for adolescents and advanced maternal age in maternities linked to *Rede Cegonha*

Elaine Fernandes Viellas (https://orcid.org/0000-0001-5259-8102) ¹
Thereza de Lamare Franco Netto (https://orcid.org/0000-0001-6186-8311) ²
Silvana Granado Nogueira da Gama (https://orcid.org/0000-0002-9200-0387) ¹
Márcia Leonardi Baldisserotto (https://orcid.org/0000-0001-6907-2510) ¹
Priscila Fernandes do Prado Neto (https://orcid.org/0000-0001-9809-7186) ³
Mariana Ramos Rodrigues (https://orcid.org/0000-0001-8493-1379) ⁴
Katrini Guidolini Martinelli (https://orcid.org/0000-0003-0894-3241) ⁵
Rosa Maria Soares Madeira Domingues (https://orcid.org/0000-0001-5722-8127) ⁶

Abstract Based on the Rede Cegonha guidelines that propose the strengthening of women's sexual and reproductive rights, we sought to present a brief overview of issues related to reproductive planning and to analyze obstetric practices in childbirth care for adolescents and women of advanced age in maternity hospitals linked to Rede Cegonha. Data were extracted from an assessment conducted in 2017, based on information from the interview with puerperal women and from the hospital record. For age extremes, the high proportion of unplanned pregnancies and low use of contraception means problems in accessing family planning programs. Adolescents are more exposed to the presence of a companion and less to the use of analgesia in labor. Advanced maternal age were more likely to use analgesia in labor and to give birth in the lithotomy position, being less exposed to amniotomy. Although Rede Cegonha is an excellent strategy for improving assistance to childbirth, attention is still needed to the use of potentially unnecessary or not recommended interventions, with greater incentive to good obstetric practices.

Key words Maternal age, Pregnancy, Maternal and child health services, Labor, Childbirth

¹Escola Nacional de Saúde Pública, Fiocruz. R. Leopoldo Bulhões 1480, Manguinhos. 21041-210 Rio de Janeiro RJ Brasil. elaine.viellas@gmail.com ² Secretaria de Estado da Justiça e Cidadania do Distrito Federal, Governo do Distrito Federal. Brasília DF Brasil.

³ Desenvolvimento de Políticas Sociais, Ministério da Saúde. Brasília DF Brasil.

brasil.

4 Secretaria de Estado da
Saúde do Distrito Federal,
Governo do Distrito
Federal. Brasília DF Brasil.

5 Programa de PósGraduação em Saúde
Coletiva, Universidade
Federal do Espírito Santo.
Vitória ES Brasil.

6 Instituto Nacional de
Infectologia Evandro
Chagas, Fiocruz. Rio de
Janeiro RJ Brasil.

Introduction

The Brazilian National Guidelines for Comprehensive Health Care for Adolescents and Youth (Diretrizes Nacionais para Atenção Integral à Saúde de Adolescentes e Jovens)1 follow the definition of the adolescent age group established by the World Health Organization (WHO)2, which delimits it to the second decade of life, i.e., from 10 to 19 years old. These Guidelines bring the legal instruments to protect adolescents' fundamental right to health. Universal and equal access to actions and services for the promotion, protection and recovery of this population's health is guaranteed, for instance, by the Statute of Children and Adolescents (ECA - Estatuto da Criança e do Adolescente)³, which seeks to ensure, even, pre and perinatal care, adding two priorities for public policies: adolescence and pregnancy. It is the legal and legal framework that creates mechanisms for the implementation of fundamental rights established by the Federal Constitution, under the conception of children and adolescents as subjects of rights and as people in development.

Literature on adolescent pregnancy is wide, but not consensual. Studies indicate a higher frequency of low birth weight and prematurity in children of adolescents, generally, justifying its occurrence due to the low socioeconomic conditions of most of them⁴, conditions that intensify with successive pregnancies even in this phase of life⁵.

Childbearing in a woman aged 35 years or more is considered advanced maternal age (AMA) and generally have specificities in reproductive health, being more likely to develop complications during pregnancy and childbirth, especially high-risk pregnancies, such as placenta previa, placental abruption and intrauterine growth restriction⁶. However, unlike the movement observed for the youngest, there are no public policies aimed specifically at the group of women over 34 years of age. Specialized care is configured within general guidelines and manuals issued by the Brazilian Ministry of Health (MS - Ministério da Saúde), such as those aimed at managing high-risk pregnancies, abortion, prenatal and puerperium^{6,7}, without public policies specifically targeting the group. With the growing number of women postponing motherhood8, careful obstetric care is of utmost importance to minimize possible damage to the health of women and babies.

Aiming at structuring and organizing maternal and child health care in the country, Brazilian

Ministry of Health instituted, in 2011, *Rede Cegonha* (RC), seeking to assure all women, whether adolescents or old age, the right to reproductive planning and humanized care pregnancy, child-birth and the puerperium, as well as children the right to safe birth and healthy growth and development⁹. To this end, the RC strategy has prioritized actions related to adopting good practices in assisting parturient women in maternity wards, practices recommended by WHO¹⁰.

It is in this context of strengthening women's sexual and reproductive rights that the present study sought to present a brief overview of issues related to reproductive planning and to analyze obstetric practices in childbirth care for adolescents and elderly women in maternities linked to RC, to subsidize the provision of health care appropriate to the specificities of each of these age groups.

Method

This study is part of a study called *Avaliação da Atenção ao Parto e Nascimento em Maternidades da Rede Cegonha*. The Participatory Rapid Appraisal (PPR) technique^{11,12} recommended by the Pan American Health Organization (PAHO), was used. PPR consists of a simple and quick approach to obtain information that reflects local conditions, from the perspective of the different social actors involved with the problems.

All 606 public and mixed hospitals (private SUS-affiliated) that, in 2015, had a RC action plan participated in the assessment. The number of childbirths in these hospitals accounted for almost 50% of childbirths that year in the country, according to the Brazilian Information System on Live Births (SINASC - Sistema de Informações sobre Nascidos Vivos).

All women who gave birth in a hospital during the study period were considered eligible, being excluded only those with severe mental disorder, who did not understand Brazilian Portuguese, deaf or hospitalized in an Intermediate or Intensive Care Unit in the postpartum period. All eligible puerperal women admitted to each hospital during the fieldwork period were invited to participate in the study. More detailed information on the study's methodology is available in Bittencourt et al.¹³.

Data collection was carried out between December 2016 and October 2017, using five specific electronic forms for each data source. The following data collection methods were used:

personal interview with key informants (managers, health professionals and puerperal women); data extraction from medical records, document analysis and on-site observation. Further details are described in Vilella et al.¹⁴ For the present analysis, information obtained through face-to-face interviews of women after childbirth and data from hospital records were used.

Three comparison groups were created to characterize the puerperal women: adolescents (\leq 19 years), women aged 20 to 34 years, and AMA women (\geq 35 years old).

The following covariables were assessed: women's region of residence (north, northeast, south, southeast and center-west); self-rated skin color/race based on the five categories used by the Brazilian Institute of Geography and Statistics (IBGE: white, black, brown, yellow, indigenous); educational level (< elementary or high school and more); marital status (with or without a partner); baby's father's age (10-19 years or \geq 20 years); number of previous childbirths (0, 1, 2, \geq 3); use of contraceptive method (yes or no); planned pregnancy (yes or no); early start of prenatal care (1st trimester yes or no); number of prenatal consultations $(0, 1-3, 4-6, \ge 7)$; type of childbirth (vaginal or cesarean section). All information about women's sociodemographic and reproductive characteristics was extracted from the interview questionnaire with puerperal women

In the analysis of obstetric practices during childbirth, good practices were assessed: supply of fluids and food during labor (free diet yes or no); use of non-pharmacological methods for pain relief (yes or no for use of a hot shower/ bathtub, swiss ball, massage, birthing stool or stool, later categorized as yes and no); mobility during the first stage of labor (walking yes or no); presence of a companion during the hospitalization period (full or part time, later categorized as yes and no). The following harmful practices or those that are used excessively were also assessed: use of venous catheter; use of oxytocin to accelerate labor; receiving spinal/epidural analgesia performing amniotomy (artificial rupture of membranes); lithotomy position; Kristeller maneuver and episiotomy (perineal cut) - all with an option to answer "yes and no" the categories.

Information about feeding during labor, use of non-pharmacological methods for pain relief, walking, presence of a companion, use of venous catheter, analgesia and Kristeller maneuver were reported by mothers in the interview. Information on the use of oxytocin, amniotomy, lithoto-

my and episiotomy were collected from hospital records.

For the analysis of obstetric practices during childbirth, women who did not go into labor and had no vaginal childbirth were excluded. Women's sociodemographic and reproductive characteristics, stratified by maternal age group, were tested using the ² test. The level of significance was set at 20%. The same procedure was used to compare the proportions related to assessment of obstetric practices in childbirth.

Multiple logistic regression models have been developed to relate obstetric practices in child-birth with the women's age range. The level of significance established in this analysis was 5%, and Odds Ratio (OR) estimates were used considering the effect of the sample design. ORs were adjusted for geographic region, skin color, education and parity, chosen through statistical and theoretical criteria, selected because they represent different sociodemographic dimensions with the potential to interfere with the incidence of obstetric practices. The software used in the analyzes were SPSS 20.0 and Microsoft Excel, version 2007.

The evaluation study was approved by the Ethics Committee of *Universidade Federal do Maranhão*. All women were read an Informed Consent Form (ICF), and a copy was given to those who agreed to participate in the assessment. Care has been taken to ensure data secrecy and confidentiality.

Results

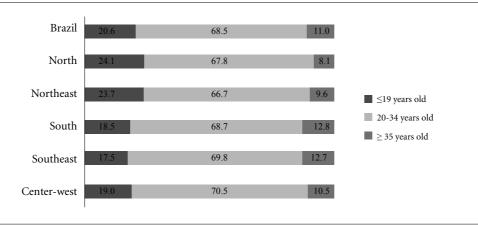
Thus, 606 maternities linked to RC were assessed, and 10,665 mothers were interviewed in the immediate postpartum period. Of the total childbirths that took place, about 20.5% were adolescents and 11% were advanced age women. Among adolescents, less than 1% were between 12 and 14 years of age.

Adolescents were in a higher proportion brown and less educated. A smaller proportion of them reported having a partner and about 3/4 reported that the babies' parents were 20 years old and older (Table 1). Proportionally, they are more present in northern and northeastern Brazil (Graph 1).

Regarding reproductive health, it is noteworthy that more than 80% of adolescents were nulliparous and 31% of advanced maternal age had 3 or more children. Less than half of women used contraception to prevent current pregnancies. Pregnancy was planned by 27% of adolescents and 39% of AMA women. Prenatal care was started early by 60% of adolescents and 72% of advanced maternal age. Most had more than six prenatal consultations, with a higher proportion in the group of women \geq 35 years (Table 1). In RC maternity hospitals, more than half of all women were vaginal births; however, caesare-

Table 1. Sociodemographic and reproductive characteristics of puerperal women according to maternal age group. Rede Cegonha - Brazil, 2017.

	Age group					
Characteristics	≤ 19 years old	20-34 years old	≥ 35 years old	Total		
	(n = 2,192)	(n = 7,302)	(n = 1,169)	(n = 10,665)		
	%	%	%	%	p value	
All women	20.5	68.5	11.0	_	-	
Skin color						
White	23.5	26.1	29.5	26.0	0.092	
Black	13.4	13.3	13.6	13.3		
Brown	60.7	58.3	55.0	58.4		
Yellow/Asian	1.8	1.6	1.4	1.6		
Indigenous	0.6	0.7	0.5	0.7		
Educational level						
Elementary school	82.0	47.4	46.8	54.4	< 0.001	
High school and more	18.0	52.6	53.2	45.6		
Marital status						
Without a partner	31.4	19.2	17.5	21.5	< 0.001	
With a partner	68.6	80.8	82.5	78.5		
Baby's father age						
10 to 19 years old	27.4	4.3	2.7	8.9	< 0.001	
20 years and older	72.6	95.7	97.3	91.1		
Number of previous childbirths						
0	81.6	41.2	22.9	47.5	< 0.001	
1	15.5	30.6	24.5	26.8		
2	2.6	16.7	21.4	14.3		
≥ 3	0.3	11.5	31.2	11.4		
Use of contraceptive method						
No	63.8	52.3	53.2	54.8	< 0.001	
Yes	36.2	47.7	46.8	45.2		
Planned pregnancy						
No	72.6	62.0	60.7	64.0	< 0.001	
Yes	27.4	38.0	39.3	36.0		
Early start of prenatal care						
No	40.0	30.1	28.4	31.9	< 0.001	
Yes	60.0	69.9	71.6	68.1		
Number of prenatal consultations						
Did not undergo prenatal care	9.2	8.4	8.6	8.6	< 0.001	
1 to 3 consultation	7.6	5.0	2.9	5.3		
4 to 6 consultations	27.3	23.1	21.3	23.8		
> 6 consultations	55.9	63.5	67.2	62.3		
Type of childbirth						
Normal/forceps	65.7	55.8	43.5	56.5	< 0.001	
Caesarian section	34.3	44.2	56.5	43.5		



Graph 1. Distribution of women by macro-region of the country according to extremes of maternal age. *Rede Cegonha* - Brazil, 2017

an section reached almost 60% in the group of women \geq 35 years (Table 1).

As for obstetric practices in the care of childbirth, among the non-pharmacological methods for pain relief during labor, the use of a shower or bathtub with hot water as the most frequent technique stands out (47.4%). Adolescents were the ones who most used non-pharmacological methods. Other practices favorable to labor such as free movement and the presence of a companion were also more frequent in the group of adolescents (Table 2).

In Table 2, it is possible to observe that amniotomy and use of the Kristeller maneuver were less frequent in women \geq 35 years, with the use of analgesia and the lithotomy position to give birth more frequent among women of this age group.

After controlling for confounding variables, and compared to women aged 20 to 34, there was a greater chance of amniotomy and the presence of a companion among adolescents, with less exposure of the group to analgesia in labor. For advanced maternal age, the chance of using analgesia in labor was greater and the chance of having an amniotomy was less. A difference was also observed in relation to the position for childbirth, with advanced maternal age more exposed to the use of the lithotomy position to give birth (Table 3).

Discussion

Launched in 2011 with the proposal to qualify the services offered by SUS⁹, the results of this study show the progress of some actions proposed by RC, but also the difficulties in achieving the basic rights to women's sexual and reproductive life. Important sociodemographic disparities still persist, differentiating the profile of advanced maternal age from those in adolescence.

The distribution of women by macro-region showed a higher proportion of adolescent mothers in the north and northeast, and women ≥ 35 years in the south and southeast. According to an analysis carried out by the Institute of Applied Economic Research (IPEA - Instituto de Pesquisa Econômica Aplicada)15, the five metropolitan regions of Brazil with the highest Social Vulnerability Index (CVI) are concentrated in the north and northeast. This index considers 16 indicators, organized in three dimensions. The urban infrastructure dimension includes inadequate garbage, water and sewage collection indicators and travel time from home to work. The human capital dimension includes the indicators of infant mortality, young mothers (10 to 17 years old), mothers without elementary school and with children up to 15 years of age, illiteracy, children in households where no one has completed elementary school, children of 0 to 5 years out of school, children 6 to 14 years out of school and population that does not study,

Table 2. Obstetric practices in childbirth care according to maternal age group. Rede Cegonha - Brazil, 2017.

	Age group							
Obstetric practice	≤ 19 years old (%)	20-34 years old (%)	≥35 years old(%)	Total (%)	p value			
Shower/bathtub								
Used	52.1	46.7	40.1	47.4	< 0.001			
Swiss ball								
Used	33.7	27.1	22.1	28.2	< 0.001			
Massage								
Used	33.9	27.8	24.1	28.9	< 0.001			
Birthing stool								
Used	12.2	10.2	7.8	10.5	0.029			
Stool								
Used	13.5	12.6	7.9	12.4	0.015			
Free diet								
Yes	44.5	44.0	39.1	43.7	0.110			
Walking								
Yes	74.3	74.4	66.5	73.7	0.002			
Inpatient companion								
Yes, but not all the time	16.0	14.6	11.4	14.6	< 0.001			
Yes, all the time	76.5	73.6	70.6	74.0				
Venous catheter ²								
Yes	65.7	62.7	62.9	63.4	0.159			
Oxytocin ¹ , ²								
Yes	35.4	36.1	34.1	35.8	0.614			
Analgesia ²								
Yes	18.3	19.9	23.2	19.8	0.031			
Amniotomy ¹ , ²								
Yes	45.9	41.7	36.0	42.2	< 0.001			
Lithotomy ¹ , ³								
Yes	86.2	87.0	91.7	87.2	0.034			
Kristeller³ Maneuver								
Yes	21.3	14.8	12.9	16.2	< 0.001			
Episiotomy ¹ , ³								
Yes	38.4	31.6	28.6	33.0	< 0.001			

¹ medical information + interview. ² women who did not go into labor were excluded. ³ women who underwent cesarean section were excluded.

does not work and has low income. The income and work dimension considers the indicators of child labor, unemployment, informal occupation without elementary school, low income and dependent on the elderly and income less than or equal to R\$255 (about 46 US dollars). The higher proportion of adolescent mothers in locations with higher IVS reinforces the understanding that adolescent pregnancy is often related to the situation of social vulnerability, as already highlighted by Brazilian Ministry of Health¹.

A national study based on data from the Birth in Brazil¹6, found that even among women ≥ 35 years are differences in socioeconomic characteristics, with nulliparous and multiparous women coexisting. Nulliparous women, with higher socioeconomic status, have a similar profile to women from developed countries, with the postponement of pregnancy occurring due to the prioritization of these women by completing a higher education course and a professional career, before planning maternity. Multiparous women,

Table 3. Association of obstetric practices during childbirth and maternal age group. Multivariate models with raw and adjusted OR*. *Rede Cegonha* - Brazil, 2017.

Obstetric practice	Age group						
	≤ 19 years old			≥ 35 years old			
	(rw)OR	(adj)*OR	CI	(rw)OR	(adj)*OR	CI	
Obstetric practices in labor							
Use of NPM for pain relief	1.22	1.20	0.97 - 1.50	0.77	1.01	0.78 - 1.31	
Free diet	1.02	1.00	0.81 - 1.22	0.82	0.86	0.66 - 1.11	
Walking	1.00	0.86	0.68 - 1.08	0.68	0.84	0.65 - 1.10	
Companion presence	1.67	1.30	1.01 - 1.73	0.61	0.88	0.64 - 1.20	
Venous catheter	1.14	1.00	0.84 - 1.22	1.01	0.97	0.76 - 1.25	
Analgesia	0.90	0.76	0.60 - 0.94	1.22	1.25	1.02 - 1.67	
Amniotomy	1.19	1.22	1.01 - 1.46	0.79	0.69	0.54 - 0.88	
Obstetric practices in childbirth							
Lithotomy	0.93	0.92	0.70 - 1.20	1.64	1.61	1.05 - 2.46	
Kristeller Maneuver	1.56	1.18	0.93 - 1.49	0.85	0.88	0.61 - 1.30	
Episiotomy	1.35	0.90	0.73 - 1.10	0.86	1.33	0.99 - 1.80	

^{*}Logistic models adjusted for the following variables: region, skin color, educational level, and parity. NPM: non-pharmacological method. CI: 95% confidence interval. OR: Odds Ratio; rw = raw; adj = adjusted.

on the other hand, belong to lower-income families and numerous offspring, who still reproduce at this age due to lack of family planning.

With only 27% of adolescents and 39% of advanced maternal age planning their current pregnancy and the use of contraception being low, problems in accessing family planning programs were evident in this context. Reproductive planning involves educational activities to bring information, offering necessary knowledge for the choice and use of adequate contraceptive measures, providing questions and reflections on topics related to the practice of contraception. On the one hand, opportunities are being missed for counseling adolescents on sexual and reproductive health, with guaranteed access and guidance for regular use of contraceptive methods and prevention of sexually transmitted diseases¹⁷. On the other other, little attention is paid to the differentiated reality of late pregnancies, in which women choose to postpone motherhood in order to invest first in training, career and insertion in the labor market18,19, giving less attention, even if unintentional, to the increase in comorbidities and obstetric risks that are associated with advanced age20.

Actions aimed at reproductive planning in SUS are not being sufficient for men and women to make safe and adequate contraceptive choices that allow them to decide when to have or not to have children. It should be noted that during the RC implementation there was an important advance in relation to the entry of men in health services, with the "Partner Prenatal". A strategy for conscious exercise of paternity, with inclusion and active participation of parents or partners in care during pregnancy and childbirth²¹.

Primary care should be better used as the most appropriate place to access contraceptive methods, the reproductive planning program, information and care for women's health without judgment or prejudice²², with guaranteed access to emergency contraception, and to promote and encourage the use of female condoms²³. In the study, we observed that no AMA and less than 1% of adolescents who were using any contraceptive method, mentioned the choice of the female condom to avoid current pregnancy (data not shown in table)).

Identified in previous studies^{24,25}, prenatal care, a typical primary care programmatic action, also faces difficulties in providing quality care, with precariousness in providing guidance on beneficial practices to facilitate childbirth, which are of great relevance to the promotion of vaginal childbirth.

However, in the present study, it was possible to observe that the adolescents seem to better appropriate obstetric practices beneficial to childbirth. They represent the group that most used non-pharmacological methods for pain relief, who walked the most and had the presence of a companion, which may represent an advance in vaginal childbirth care of adolescents in maternities linked to RC.

Adolescents were 30% more likely to have a companion on admission for childbirth than women aged 20 to 34 years. Federal Law 11,108 of 2005 regulates the presence of a woman's free choice companion during labor, childbirth and the puerperium²⁶. Perhaps because it is a right also guaranteed by ECA³, the guarantee of a companion for adolescents is reinforced, in the case identified as their legal guardian.

Disregarding the maternal age, but still in relation to compliance with the law that guarantees pregnant and parturient women the right to companions, it should be noted that more than 70% of puerperal women had a full-time companion throughout hospitalization and almost 15% partially. A few years ago, the Birth in Brazil²⁷ identified that less than 20% of women had a companion continuously and 57% partially.

Caring for pregnant women and adolescent mothers means providing comprehensive care sensitive to the specificities of this age group, with actions to promote self-care, reproductive planning (so that pregnancy occurs at the chosen time of life, whether during adolescence or not), with attention to the ethical and legal aspects of care and sexual rights of adolescents. Adolescent mothers need to be better informed and need to be heard and attended to in their rights, with adolescent fathers having the right to be their companions.

RC is an extraordinary opportunity to advance these issues, particularly regarding the use of contraceptive methods and the planning of educational actions that promote the bond of adolescents to health units and the right to humanized childbirth²⁸. It is necessary to better understand the rules to avoid misinterpretations or subjective interpretations that may restrict the right to health of this population just because they are adolescents²⁹.

In particular for women \geq 35 y, family planning is essential to improve care as the risks of complications increase with age and contraception is a way to prevent them and reduce maternal mortality^{6,30}. It is necessary to recognize the different profile of these women, providing adequate advice on safe contraceptive methods, so that women can choose the one that best suits their profile and guarantee the decision on the best time to get pregnant.

The effective approach will also be able to elucidate problems related to late pregnancy and prevent risks, especially for those with lower income and large multiparous women. The process should be continued during prenatal care, encouraging women aged 35 years or more to adopt good practices, demonstrating its benefits for promoting vaginal birth. It is possible that non-pharmacological methods for pain relief are being underappreciated and underused by women aged 35 years or more in RC maternity hospitals, since the greater adoption of methods by adolescents also shows a relationship between age and the lower demand for analgesia.

The offer of drug analgesia is made available to women during labor to ensure pain-free childbirth³¹. In the present study, AMA had a 25% greater chance of receiving analgesia in labor than women aged 20 to 34 years, supporting other studies that found greater receipt of epidural or spinal anesthesia in vaginal birth of women ≥ 35 years^{32,33}. One possible explanation may be that the greater proportion of these women have experienced previous births; therefore, they already understand how to behave and what to request. Another explanation may be due to the greater use of the lithotomy position and less movement during labor observed in this group of women, which may increase pain and, consequently, pharmacological resource request.

Another technique used in obstetrics is amniotomy, which has been used routinely in maternity hospitals to enhance the acceleration of labor, increasing uterine contractions^{34,35}. According to Santos et al.³⁶, the technique has been used even more frequently in adolescents on purpose, occurring due to professionals' intention to "facilitate" the process for adolescents, trying to reduce the duration of their labor. Although widespread, it is necessary to be cautious because, depending on the situation, its use can be harmful, leading to early decelerations of fetal heartbeat and greater risk of ovular and puerperal infection³⁷.

Regarding freedom of position and movement, the recommendation issued by Brazilian Ministry of Health is that health professionals encourage parturient women to adopt non-supine positions in childbirth, in order to reduce the painful sensation in the expulsive phase³³. However, even with scientific evidence demonstrating these and other benefits³⁸, almost 90% of the women in this study used this position at the time of childbirth and women aged 35 years or more and over were the ones who gave birth to the most in this classic lithotomy position. Stud-

ies in the area show that using the lithotomy position can be closely related to traditionalist practices, which do not use other possible positions to help women with childbirth³³.

Episiotomy, in turn, is a technique that has been used with the justification of expanding the birth canal in order to reduce a possible natural laceration of the perineum^{36,39}. What the current evidence shows is not true. Routine use is not associated with fewer injuries than restricted use³⁶. Its indication has not been careful, and disregards the likely outcomes that can cause hemorrhage, pain in the postpartum period, edema, infections, healing problems, hematoma and rectovaginal fistulas, for instance^{40,41}. The WHO recommendation, in its most recent manual, is not to prohibit episiotomy, but to restrict its use⁴².

The study found no statistically significant association between advanced maternal age and episiotomy as verified by other studies in the field^{43,44}. In general, the association is justified by the higher proportion of high-risk pregnancies in the group, either by decreasing tissue elasticity with increasing maternal age, requiring cutting to facilitate childbirth⁴⁴, or to avoid complications during childbirth⁴⁵ or even by professionals' reluctance to abandon their old habit, as stated by Wu et al.⁴⁶.

Whether in adolescence or old age, it is still possible to observe the use of some painful procedures, with low incentive to practices that would facilitate childbirth. For Sousa et al.⁴⁷, all of these practices used to accelerate childbirth should be abolished from routine practices in obstetrics as they are harmful to the spontaneous process, causing serious damage to women's and child health.

The continued use of some interventionist practices reinforces the need to encourage the improvement of the assistance provided to women in childbirth in maternities linked to RC. Professionals still need to be properly qualified, working more with protocols and guidelines. According to Canto et al.⁴⁸, maternity in old age is not a contraindication, but it is necessary to monitor the group's clinical-obstetric vulnerabilities, seeking to comply with the principles of

the Brazilian National Policy of Humanization of Care, ensuring reception and risk classification in a timely manner by health services.

Considering the increase in the number of women who have been postponing motherhood, it is important to create a care protocol aimed at advanced maternal age. It would be a guide for health professionals working at SUS on actions aimed at women who become pregnant late, highlighting the greater risk of negative outcomes and care that needs to be taken to reduce the risks associated with increasing maternal age.

Considering the specificities of adolescents, it is concluded that it is important to encourage more and more the adoption of the use of evidence-based practices to reinforce and guarantee continuity of care, without forgetting the actions to promote self-care, reproductive planning and attention to adolescents' sexual and reproductive rights, described above. When pregnant, whether planned or not, adolescents' life projects are generally altered, most often contributing to school dropout, increased inequality and social exclusion².

Management can and should also play its role on the model of obstetric care adopted in maternity hospitals since it is the guideline for care practices developed in health services. By ensuring the follow-up of useful obstetric practices, with the reduction or elimination of those frequently used in an inappropriate or harmful way, management can contribute to improving care for all women, in any age group.

It is clear that one must consider the potential of the service to serve customers in a resolutive way. RC has a large part of its actions aimed at the care system functioning, which include the availability of equipment, surgical instruments, Intensive Care Units, financial resources and training of human resources, for instance^{9,10}.

As RC is a useful strategy for managing, monitoring and assessing the care of pregnant women, mothers and their babies, and even if it still needs improvement, it clearly represents an excellent opportunity to improve comprehensive health care for adolescent and advanced maternal age.

Collaborations

EF Villelas, TDL Franco Netto and SGN Gama worked on the design and methodology of the article, on the analysis and interpretation of the data, and writing the text. PF Prado Neto, MR Rodrigues, ML Baldisserotto, KG Martinelli, RMSM Domingues contributed to the writing and carried out a critical review of the text. All authors approved the final version of the article.

References

- Brasil. Ministério da Saúde (MS). Diretrizes Nacionais para Atenção Integral à Saúde de Adolescentes e Jovens na Promoção, Proteção e Recuperação da Saúde. Brasília: MS; 2010. (Série A. Normas e Manuais Técnicos).
- World Health Organization (WHO). Young People's Health - a Challenge for Society. Report of a WHO Study Group on Young People and Health for All. Geneva: WHO; 1986. (Technical Report Series 731).
- Brasil. Lei nº 8.069, de 13 de julho de 1990. Dispõe sobre o Estatuto da Criança e do Adolescente e dá outras providências. Diário Oficial da União 1990; 16 jul.
- Amjad S, MacDonald I, Chambers T, Osornio Vargas A, Chandra S, Voaklander D, Ospina MB. Social determinants of health and adverse maternal and birth outcomes in adolescent pregnancies: A systematic review and meta analysis. *Paediatr Perinat Epidemiol* 2019; 33(1):88-99.
- Silva AAA, Coutinho IC, Katz L, Souza ASR. Fatores associados à recorrência da gravidez na adolescência em uma maternidade escola: estudo caso-controle. Cad Saude Publica 2013; 29(3):496-506.
- Brasil. Ministério da Saúde; Secretaria de Atenção à Saúde, Departamento de Ações Programáticas Estratégicas. Gestação de alto risco: manual técnico. Brasília: MS; 2012. 302 p. – (Série A. Normas e Manuais Técnicos).
- Brasil. Ministério da Saúde (MS). Protocolos da Atenção Básica: Saúde das Mulheres. Brasília: MS, Instituto Sírio-Libanês de Ensino e Pesquisa; 2016.
- Brasil. Ministério da Saúde (MS). Sistema de Informação de Nascidos Vivos. Datasus; 2019. [acessado 2019 Out 5]. Disponível em: http://tabnet.datasus.gov.br/cgi/tabcgi.exe?sinasc/cnv/nvuf.def
- Brasil. Ministério da Saúde (MS). Portaria nº 1.459, de 24 de junho de 2011. Institui, no âmbito do SUS, a Rede Cegonha. Diário Oficial da União 2011; 24 jun.
- World Health Organization (WHO). Care in normal birth: a practical guide. Geneva: WHO; 1996.
- Piovesan MF, Padrão MVV, Dumont MU, Gondim GM, Flores O, Pedrosas JI, Lima LFM. Vigilância Sanitária: uma proposta de análise dos contextos locais. Rev. Bras. Epidemiol 2005; 8(1):83-95.
- 12. Carneiro FF, Hoefel MG, Silva MAM, Nepomuceno AR, Vilela C, Amaral FR, Carvalho GPM, Batista JL, Lopes PA. Mapeamento de vulnerabilidades socioambientais e de contextos de promoção da saúde ambiental na comunidade rural do Lamarão, Distrito Federal, 2011. Rev. bras. Saúde ocup 2012; 37(125):143-148.
- Bittencourt SDA, Vilela MEA, Marques CO. Atenção ao Parto e Nascimento em Maternidades da Rede Cegonha: avaliação do grau de implantação das ações. Cien Saude Coletiva 2020; 26(3):801-822.
- 14. Vilela MEA, Leal MC, Thomaz EBAF, Gomes MASM, Bittencourt SDA, Gama SGN, Silva LBRAA, Lamy ZC. Avaliação da atenção ao parto e nascimento nas maternidades da Rede Cegonha: os caminhos metodológicos. Cien Saude Coletiva 2020; 26(3):789-800.
- Costa MA, Marguti BO. Atlas da vulnerabilidade social nas regiões metropolitanas brasileiras. Brasília: IPEA;
 2015. [acessado 2019 Out 15]. Disponível em: http://ivs.ipea.gov.br/images/publicacoes/Ivs/publicacao_atlas_ivs_rm.pdf

- Martinelli KG. Implicações da idade materna avançada em desfechos maternos e perinatais [tese]. Rio de Janeiro: Fiocruz; 2018.
- Brasil. Ministério da Saúde (MS). Cuidando de Adolescentes: orientações básicas para a saúde sexual e a saúde reprodutiva. Brasília: MS; 2015.
- Baldwin MK, Jensen JT. Contraception during the perimenopause. *Maturitas* 2013; 76(3):235-242.
- Lampinen R, Vehviläinen-Julkunen K, Kankkunen P. A review of pregnancy in women over 35 years of age. Open Nurs J 2009; 3:33-38.
- Guedes MM. Nascimento do primeiro filho em idade materna avançada: percursos conducentes à sua ocorrência e adaptação dos casais nos primeiros seis meses de vida do bebê [tese]. Coimbra: Universidade de Coimbra; 2014.
- Brasil. Ministério da Saúde (MS). Guia do Pré-Natal do Parceiro para Profissionais de Saúde. Brasília: MS; 2016.
- Brasil. Ministério da Saúde (MS). Cadernos HumanizaSUS. Formação e intervenção. Brasília: MS; 2010. (Série B. Textos Básicos de Saúde).
- 23. Figueiredo R, Castro Filho JM, Kalckmann S. Os desafios do trabalho na atenção básica Planejamento Familiar e Reprodutivo na Atenção Básica do Município de São Paulo: direito constitucional respeitado? *Boletim do Instituto de Saúde* 2014; 15(2):81-93.
- Viellas EF, Domingues RMSM, Dias MAB, Gama SGN, Theme Filha MM, Costa JV, Bastos MH, Leal MC. Assistência pré-natal no Brasil. *Cad Saude Publi*ca 2014; 30(Supl.):S85-S100.
- Domingues RMSM, Viellas EF, Dias MAB, Torres JA, Theme-Filha MM, Gama SGN, Leal MC. Adequação da assistência pré-natal segundo as características maternas no Brasil. Rev Panam Salud Publica 2015; 37(3):140-147.
- 26. Brasil. Lei nº 11.108, de 7 de abril de 2005. Altera a Lei nº 8.080, de 19 de setembro de 1990, para garantir às parturientes o direito à presença de acompanhante durante o trabalho de parto, parto e pós-parto imediato, no âmbito do Sistema Único de Saúde - SUS. Diário Oficial da União 2005; 7 abr.
- Diniz CSG, d'Orsi E, Domingues RMSM, Torres JA, Dias MAB, Schneck CA, Lansky S, Teixeira NZF, Rance S, Sandall J. Implementação da presença de acompanhantes durante a internação para o parto: dados da pesquisa Nascer no Brasil. Cad Saude Publica 2014; 30(Supl.):S140-S153.
- Lamare T. Cuidando de adolescentes na Rede Cegonha. Adolesc Saude 2013; 10(Supl. 1):6.
- Brasil. Ministério da Saúde (MS). Marco legal: saúde, um direito de adolescentes. Brasília: MS; 2005. (Série A. Normas e Manuais Técnicos).
- Brasil. Ministério da Saúde (MS). Política nacional de atenção integral à saúde da mulher: princípios e diretrizes. Brasília: MS; 2005. (C. Projetos, Programas e Relatório).
- Gambling D, Berkowitz J, Farrell TR, Pue A, Shay D.
 A randomized controlled comparison of epidural analgesia and combined spinal-epidural analgesia in a private practice setting: pain scores during first and second stages of labor and at delivery. *Anesth Analg* 2013; 116(3):636-643.

- 32. Schildberger B, Linzner D, Hehenberger L, Leitner H, Pfeifer C. Influence of Maternal Age on Selected Obstetric Parameters. Geburtshilfe Frauenheilkd 2019; 79(11):1208-1215.
- 33. Bernis C, Varea C. Hour of birth and birth assistance: from a primate to a medicalized pattern? Am J Hum Biol 2012; 24(1):14-21.
- Vogt SE, Diniz SG, Tavares CM, Santos NCP, Schneck CA, Zorzam B, Vieira DA, Silva KS, Dias MAB. Características da assistência ao trabalho de parto e parto em três modelos de atenção no SUS, no Município de Belo Horizonte, Minas Gerais, Brasil. Cad Saude Publica 2011; 27(9):1789-1800.
- 35. Leal MC, Pereira APE, Domingues RMSM, Theme Filha MM, Dias MAB, Nakamura-Pereira M, Bastos MH, Gama SGN. Intervenções obstétricas durante o trabalho de parto e parto em mulheres brasileiras de risco habitual. Cad Saude Publica 2014; 30(Supl.):S-17-S47.
- 36. Santos NCP, Vogt SE, Pimenta AM, Duarte ED, Madeira LM, Abreu MNS, Léon RGP. Resultados maternos e neonatais no trabalho de parto e parto de adolescentes admitidas em um Centro de Parto Normal brasileiro. Adolesc Saude 2014; 11(3):39-50.
- 37. Brasil. Ministério da Saúde (MS). Parto, aborto e puerpério: assistência humanizada à mulher. Brasília: MS;
- Previatti JF, Souza KV. Episiotomia: em foco a visão das mulheres. Rev Bras Enferm 2007; 60(2):197-201.
- Corrêa Junior MD, Passini Júnior R. Selective Episiotomy: Indications, Techinique, and Association with Severe Perineal Lacerations. Rev Bras Ginecol Obstet 2016; 38(6):301-307.
- 40. Diniz SG, Chacham AS. O "corte por cima" e o "corte por baixo": o abuso de cesáreas e episiotomias em São Paulo. Questões de Saúde Reprodutiva 2006; I(1):80-91.
- 41. Santos JO, Shimo AKK. Prática rotineira da episiotomia refletindo a desigualdade de poder entre profissionais de saúde e mulheres. Esc Anna Nery Rev Enferm 2008; 12(4):645-650.
- 42. World Health Organization (WHO). Managing complications in pregnancy and childbirth: a guide for midwives and doctors. 2nd ed. Geneva: WHO; 2017. [acessado 2020 Jul 19]. Disponível em: https://www. who.int/maternal_child_adolescent/documents/managing-complications-pregnancy-childbirth/en/

- Brasil. Ministério da Saúde (MS). Parto, aborto e puerpério: assistência humanizada à mulher. Brasília: MS;
- 44. Kaddoura R, DeJong J, Zurayk H, Kabakian T, Abbvad C, Mirza FG. Episiotomy practice in the Middle East: a Lebanese teaching tertiary care centre experience. Women Birth 2019; 32(2):223-228.
- Carrolli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev 2009; (1):CD000081.
- 46. Wu LC, Malhotra R, Allen Junior JC, Lie D, Tan TC, Ostbye T. Risk factors and midwife-reported reasons for episiotomy in women undergoing normal vaginal delivery. Arch Gynecol Obstet 2013; 288(6):1249-1256.
- Sousa AMM, Souza KV, Resende EM, Martins EF, Campos D, Lansky S. Práticas na assistência ao parto em maternidades com inserção de enfermeiras obstétricas, em Belo Horizonte, Minas Gerais. Esc Anna Nery 2016; 20(2):324-331.
- Canto MJ, Reus A, Cortés S, Ojeda F. Pregnancy outcome in a Spanish population of women beyond age 40 delivered above 32 weeks' gestation. J Matern Fetal Neonatal Med 2012; 25(5):461-466.

Article submitted 30/04/2020 Approved 27/07/2020 Final version submitted 29/07/2020

Chief editors Romeu Gomes, Antônio Augusto Moura da Silva