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INEQUALITY IN POSTPARTUM PERIOD HEALTH CARE IN BRAZIL

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ABSTRACT

The aim of this paper is to compare the care provided to women in the postpartum period among the regions of the country, using data from the National Program to Improve Access and Quality of Primary Care (Programa para Melhoria do Acesso e da Qualidade da Atenção Básica - PMAQ). This cross-sectional study assessed secondary data from the Primary Health Care Department, collected by external and nationwide evaluation of the first and second stages of PMAQ. The results showed a significantly decreased amount of postpartum consultations (PPCs) and an increased delay between delivery and the first PPC in the Midwest and Southeast regions. House calls performed by community health care agents (Agentes Comunitários de Saúde - ACSs) were remarkably reduced in the Northeast, North and Midwest regions. The Northeast was the region where ACSs performed the most house calls, in both PMAQ stages. During this period, the indicators analyzed in this study presented an important deterioration in Brazil as a whole, with a decrease in the number of PPCs and house calls and an increase in the number of days before the first PPC.

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INTRODUCTION

Childbirth is a critical moment in the reproductive cycle of a woman, initiating the period in which the previously pregnant organism returns to its normal state (Santos *et al*., 2013; Souza and Fernandes, 2014). Several studies (Santos *et al*., 2013; Souza and Fernandes, 2014; Cardoso and Pereira, 2010). Show that a positive outcome in the postpartum period depends directly on the quality of health care provided. Those studies identified factors that may lead to increased mortality, usually due to preventable causes. Nevertheless, health services fail to provide proper postpartum care. Delivery is often considered the end of assistance to pregnancy and childbirth, leaving women unassisted during a time when comprehensive and qualified care is needed (Cardoso and Pereira, 2010). Brazil's Ministry of Health recommends that primary health care (PHC) teams perform house calls in the first week after delivery, in order to provide general orientations and schedule at least two postpartum consultations (PPCs), one in the first seven to ten days and other in up to 42 days into the postpartum period (http://dab.saude.gov.br/portaldab/biblioteca.php?conteudopublicacoes/cab32). However, postpartum care does not occur correspondingly throughout the whole country. The many regions of Brazil present individual economic, social, environmental and genetic features and differently organized health services, resulting in inequalities regarding convenience and quality of health care (Lago and Lima, 2009).

Therefore, this study aims to compare the availability of postpartum care, the average time until the first PPC and the amount of house calls performed in the five regions of the country, assessing data from external evaluation of the first and second stages of the National Program to Improve Access and Quality of Primary Care (Programa para Melhoria do Acesso e da Qualidade da Atenção Básica - PMAQ).

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Table 1. Distribution of participants by region and by response for questions 1, 2 and 3 in the first and second PMAQ stages. Brazil, 2012 – 2014

Q	OS	MW N (%)	NE N (%)	N N (%)	SE N (%)	S N (%)	Total N (%)
1	1	808 (18,6)	2483 (11,5)	484 (13,0)	4077 (16,0)	822 (7,9)	8674 (13,3)
	2	1188 (13,2)	4415 (11,0)	1098 (12,9)	4540 (11,5)	1333 (7,7)	12574 (11,0)
2	1	404 (9,3)	1040 (4,8)	181 (4,9)	2415 (9,5)	555 (5,4)	4595 (7,0)
	2	502 (5,6)	1993 (4,9)	413 (4,9)	2536 (6,4)	898 (5,2)	6342 (5,5)
3	1	317 (7,3)	690 (3,2)	175 (4,7)	1311 (5,2)	453 (4,4)	2946 (4,5)
	2	1189 (13,3)	4453 (11,1)	1096 (12,9)	4551 (11,5)	1337 (7,7)	12626 (11,0)

Source: Elaborated by the authors with data from PMAQ database. Numbers are presented as absolute frequency (relative frequency). Those who did not respond, did not apply or did not know were excluded from the numbers. Q = question, PS = PMAQ stage, MW = Midwest, NE = Northeast, N = North, SE = Southeast, S = South and N (%) = total of women who responded and its corresponding percentage.

Table 2. Difference in the responses for questions about postpartum care between the first and second PMAQ stages, by each region. Brazil, 2012 - 2012

Question	PMAQ stage	Region of Brazil					p value	Total
		MW	NE	N	SE	S		
How many women attended a postpartum consultation?	1	53,1 (429)Ac	46,8 (1161)Ad	41,3 (200)Ad	64,5 (2631)Ab	71,5 (588)Aa	<0,001	57,7 (5009)A
	2	45,3 (538)Bcd	48,9 (2159)Ac	41,0 (450a)Ad	60,4 (2743)Bb	71,7 (956)Aa	<0,001	54,4 (6846)B
p value		0,001	0,087	0,900	<0,001	0,961		<0,001
How many days after delivery did the consultation occur?	1	13,92±0,52Bbc	13,57±0,32Bc	14,64±0,80Abc	18,26±0,25Ba	15,46±0,47Bb	<0,001	16,32±0,17B
	2	17,09±0,62Abc	15,53±0,33Ac	16,47±0,75Abc	19,39±0,29Aa	17,14±0,43Ab	<0,001	17,49±0,18A
p value		<0,001	<0,001	0,096	0,003	0,008		<0,001
How many women received a house call from a community health care agent in the first week after delivery?	1	55,2 (175)Ab	77,1 (532)Aa	57,1 (100)Ab	60,4 (792)Ab	55,6 (252)Ab	<0,001	62,8 (1851)A
	2	40,2 (478)Bd	65,6 (2923)Ba	44,3 (486)Bd	61,0 (2774)Ab	55,0 (736)Ac	<0,001	58,6 (7397)B
p value		<0,001	<0,001	0,002	0,723	0,830		<0,001

MATERIALS AND METHODS

This paper presents a cross-sectional study with secondary data from the Primary Health Care Department (Departamento de Atenção Básica - DAB) of Brazil's Ministry of Health, collected by external and nationwide evaluation of the first and second PMAQ stages, regarding the years of 2012 and 2014 respectively. The questions used in this study were selected from Module III of PMAQ external evaluation instrument (Ministério da Saúde, 2013). These questions assess perception and satisfaction of health care users regarding availability and quality of health services. Inclusion criteria defined by PMAQ were only women who had already been pregnant and who had a child up to two years of age at the time of the interview (Ministério da Saúde, 2013). Association of the variables analyzed in this study with PMAQ stages and regions of Brazil was determined using the chi-square test. The same test was used for comparing statistics of the regions two by two, considering Bonferroni correction in those comparisons. The comparison between the first and second PMAQ stages, in relation to the number of days until the first PPC in each region of Brazil, was analyzed using Student's t-test, whereas the comparison of the regions, in relation to this same variable, was performed using one-way ANOVA, followed by Tukey's test. Other results of this study were presented as descriptive statistics or in the form of tables. Statistical analysis was performed using SPSS software, version 22.0, considering a significance level of 5% (Shott, 1990). This study was approved by the Research Ethics Committee of Federal University of Mato Grosso do Sul.

RESULTS

Table 1 shows the number of women responding to each of the questions in the first and second PMAQ stages. It is worth mentioning that, in the first stage, only 50% of PHC teams had joined PMAQ, while in stage 2 all teams that wished to take part were let into the program. This fact explains the difference in the number of women who responded in each stage. Table 2 shows the difference between the responses in the first and second stages and in the country regions regarding the PPC. There was a significant decrease in the amount of PPCs from the first to the second stage, mostly in the Midwest ($p = 0.001$) and Southeast ($p < 0.001$) regions, with no difference between the stages in the other regions (p value ranging from 0.087 to 0.961). It is important to highlight the low number of PPCs performed in the North and Northeast regions. In the first stage, the South was the region where the most PPCs were performed, followed by the Southeast, Midwest, North and Northeast regions (chi-square test, $p < 0.001$ and other comparisons with Bonferroni correction). In the second stage, PPCs were also mostly performed in the South, followed by Southeast, Northeast, Midwest and North (chi-square test, $p < 0.001$ and other comparisons with Bonferroni correction). There was a significant increase in the number of days until the first PPC, from the first to the second PMAQ stage in all regions of the country, but the Midwest and Southeast regions had the worst rates ($p < 0.001$). In the North region, there was no difference between the stages ($p = 0.961$). In both stages, delay before the first PPC was mostly observed in the Southeast region, followed by South, North,

Midwest and Northeast. A remarkable decrease in the amount of house calls in the first week after delivery from the first to the second PMAQ stage was observed in the Northeast ($p < 0.001$), North ($p < 0.001$) and Midwest ($p = 0.002$) regions. In both stages, the ACSs performed more house calls in the Northeast region.

DISCUSSION

Our results indicate that PPCs occur less than recommended by Brazil's Ministry of Health, since nationwide data of the first and second PMAQ stages show that approximately half of the women in the postpartum period attended a PPC. Although prenatal care in Brazil presents high coverage of its services (Viellas *et al*., 2014), it seems that it fails to develop a woman's co-responsibility for the continuity of her care. Developing this feature could avoid the loss of trust in the health system, leading to an improvement in the occurrence of PPCs (Cardoso and Pereira, 2010; Viellas *et al*., 2014; Leal *et al*., 2015). A study carried out in Australia (Brodribb *et al*., 2013). Observed that the lack of attendance to the PPCs was often due to unsatisfactory guidance. This study also noticed that health practitioners failed to verify whether the patient understood the importance of postpartum care, and therefore she would seek assistance only if she detected some abnormality. When comparing the amount of PPCs performed in the first and second stages, it is noted that this indicator aggravated significantly, since it decreased in the Midwest and Southeast regions. The decrease in the percentage of PPCs in the Midwest may have occurred because it is one of the regions with the largest portion of women with scarce access to social assets, reducing their opportunity to benefit from the health services (Ministério da Saúde and Secretaria de Atenção à Saúde, 2014). In the Southeast, this decrease can be explained by the high number of women who use private health services, accounting for 34.1% of prenatal care and 29.6% of deliveries in this region (Lago and Lima, 2009).

The World Health Organization (WHO) recommends that PPCs should be performed for every woman after childbirth[12], as it is a period in which numerous complications may occur. If those complications are not detected and treated early, they result in morbidity and mortality due to preventable causes in 92% of the cases (Santos *et al*., 2013; Ministério da Saúde and Secretaria de Atenção à Saúde, 2006). There is a large variance among the regions of the country, emphasizing vulnerabilities and socioeconomic inequalities that substantially affect the populations' health condition. This situation highlights the importance of monitoring those different populations and adapting the health services to each of them. Some of the factors that influence such inequalities are access to health care, education level, race, monthly income, guidance and orientation received (Morse *et al*., 2011), housing conditions, transportation difficulties, coverage of PHC, quality of prenatal care, delay in the hospitalization of high-risk deliveries, need for displacement to receive obstetric care, age at childbirth, type of service (Lago and Lima, 2009), number of previous pregnancies and presence of partner. The use of these indicators for assessing the current conditions and producing local estimates is relevant, followed by the creation of public policies aimed at particularly vulnerable populations and priority areas (Lago and Lima, 2009). The lowest amount of PPCs and the worst conditions of assistance to women in the postpartum period were found in the North region, exposing the socioeconomic inequality, with various of the risk factors mentioned above, such as precarious sociodemographic and economic conditions, women with low education level, poor housing conditions, unsafe age at childbirth and rural dwellers (Lago and Lima, 2009; Leal *et al*., 2015; Morse *et al*., 2011). A study conducted by Fiocruz researchers shows that, in addition to the inequalities and precariousness found in the North region, one third of its health units present unsatisfactory operating conditions, which makes proper assistance even more difficult (Giovanella *et al*., 2015). When comparing the first and second PMAQ stages, a significant increase in the average time between delivery and the first PPC throughout Brazil is observed, indicating that women have been more vulnerable, since they stay unassisted for longer. This delay might be related to a lack of hosting and integration of these women in the PHC unit (Santos *et al*., 2013; Cardoso and Pereira, 2010; Ministério da Saúde and Secretaria de Atenção à Saúde, 2006), considering data from other studies that show that they attend consultations for the newborn in order to perform exams and immunization (Santos *et al*., 2013; Cardoso and Pereira, 2010).

The importance of performing PPCs in the first week and up to six weeks after delivery in reducing maternal morbidity and mortality is highlighted in the literature (Santos *et al*., 2013; Lago and Lima, 2009). Our results show that the region that presented the greatest delay before the first PPC was the Southeast. A study on maternal mortality in Brazil (Morse *et al*., 2011) identified several deaths from preventable causes in the same region, mainly due to deficiency in prenatal assistance and continuity of health care, which may be related to data from our study. These findings demonstrate a deficient supply of strategies to prevent problems in the postpartum period, reinforcing the hypothesis already discussed in this paper regarding the cultural issue of the team, since there is access to services. Another indicator evaluated in this study was the number of house calls performed by the ACSs, emphasizing the insufficient number of house calls during the first week after delivery throughout the whole country. PHC services are responsible for providing care to the new mother, with immediate follow-up by the PHC team after delivery. WHO recommends that the house call should take place until the third day after a high-risk delivery or until the seventh day in the other cases (Ministério da Saúde and Secretaria de Atenção à Saúde, 2006; Brodribb *et al*., 2013).

In this study, the number of house calls showed a significant decline from the first to the second PMAQ stage in the Northeast, North and Midwest regions. In addition to the organization of the work processes of the PHC teams, there are some factors that may negatively affect the performance of house calls and that are not under their management, such as the woman's commitment to health care, her level of trust and bond with the PHC professionals, particularly with the ACS, and so forth (Baralhas and Pereira, 2013). Data from the National Survey of Household Samples (Pesquisa Nacional de Amostras de Domicílios – PNAD) (Malta *et al*., 2016) show that PHC has expanded its coverage, with different levels of growth over the country. About half of the population (50.9%) was assisted by PHC's Family Health Strategy (Estratégia de Saúde da Família – ESF) in 2008, and in 2013 there was a 10.3% increase in national coverage. Therefore, it is necessary and important to develop strategies in PHC, both for the general population and for women, in order to expand coverage areas, improve availability, provide equal assistance

and accountability for the population and services offered to them, reducing local inequities. Our results concluded that the access to postpartum assistance was diminished, with a decrease in the number of women who attended PPCs, when comparing the first and second PMAQ stages in all regions of the country. There was also an increase in the average time before the first PPC when comparing the first and second PMAQ stages. Regarding the house calls, there was a decrease from the first to the second PMAQ stage. The social inequalities presented in our results suggest that public health policies have not been able to face such situation. There is a need for strategic changes in women's health care, especially in the postpartum period, which is highly critical in a woman's life, yet terribly undervalued as a subject in reproductive health.

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