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CLINICAL ARTICLE

Postnatal and postabortion care during adolescence in the National Health System in Rio de Janeiro, Brazil

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A B S T R A C T

Objective: To study postnatal and postabortion outpatient care for adolescents in relation to the guidelines of the Brazilian Ministry of Health. *Methods:* The present cross-sectional study was conducted between 2011 and 2012 via interviews with coordinators from 147 of 148 (99.3%) National Health System facilities providing sexual and reproductive healthcare for adolescents in the city of Rio de Janeiro, Brazil. The χ^2 test or Fisher exact test was used to compare ratios, and *t* test to compare means, with a significance level of 5% ($P < 0.05$). *Results:* Postnatal care was provided by 141 (95.9%) facilities; however, only 95 (67.4%) facilities complied with the guidelines of the Ministry of Health by providing two consultations: one in the first week and one between the 30th and 42nd day postpartum. In 32 (22.7%) facilities, a consultation was not scheduled in the first week; and in 25 (17.7%), a consultation between the 30th and 42nd day postpartum was not scheduled. Furthermore, only 11 (7.8%) facilities provided care in the age bracket recommended by WHO and the Brazilian Ministry of Health. *Conclusion:* The provision of puerperal care in the Brazilian National Health System is currently far from the recommendations in government guidelines.
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1. Introduction

Quality prenatal care is a unique opportunity to strengthen the health of the mother–child pair. Moreover, postnatal care and postabortion care constitute important strategies to avoid the recurrence of unintended pregnancy during adolescence. In high-resource countries, it is estimated that 30%–60% of teenage pregnancies end in induced abortion [1].

The Brazilian Ministry of Health recommends a minimum of six prenatal consultations and two puerperal ones. Federal, state, and municipal public networks must ensure that a puerperal consultation is carried out in the first week after birth, and between the 30th and 42nd day postpartum [2].

With the objective of either easing premature entry into the world of motherhood or mitigating the negative effects of spontaneous or induced abortions, postnatal care during adolescence must provide the following: contraception guidelines; breastfeeding promotion and maintenance; prevention and diagnosis of mammary changes and puerperal infections; guidance on caring for the newborn; promotion of preventive measures, such as vaccination during puerperium; and guidance and follow-up in cases of high-risk pregnancy [3].

International studies corroborate the need to emphasize the importance of postnatal care, highlighting the lack and improper care of assistance during this period of the pregnancy–puerperal cycle [4–7]. For example, a single-center study in Sweden found that only half of puerperal women completed postnatal consultations [4]. Similarly, a study in Bangladesh demonstrated that only one-third of puerperal adolescents received postnatal assistance [5]. Research conducted in Canada showed that lower-income women were more likely to receive inadequate postnatal care [6]. In addition, a transversal study among 15 553 women in 26 Indonesian provinces revealed that a lack of postnatal care was associated with maternal factors such as lack of knowledge regarding gestational complications, low education, low income, and residence distant from postnatal care services [7].

A lack of postpartum or postabortion care leads to negative repercussions for adolescent mothers and their children. The fact that the least economically favored population receives the least postnatal care

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[6,7] is likely to establish a vicious cycle because these individuals are most likely to experience recurring unplanned pregnancy and the risks associated with it.

The aim of the present study was to survey postnatal and postabortion outpatient care in adolescence at National Health System (SUS) facilities in the city of Rio de Janeiro, Brazil, in order to identify those facilities that provide postnatal and postabortion care to adolescents in the age bracket recommended by the Ministry of Health (10–19 years) [8] and to determine whether Ministry of Health guidelines are being followed.

2. Materials and methods

The present questionnaire-based cross-sectional study was conducted between January 10, 2011, and January 27, 2012, among coordinators of SUS facilities providing sexual and reproductive health care to the whole population, including adolescents, in the city of Rio de Janeiro, Brazil. The study was approved by the ethics committees of the Municipal Health Department of Rio de Janeiro and the State University of Rio de Janeiro. Informed consent was not needed for the study.

The structured questionnaire was administered to the SUS facility coordinators in a face-to-face interview by 14 selected interviewers who had completed a theoretical and practical training course on "research ethics," "questionnaire application techniques," and "adolescent sexual and reproductive health."

The questionnaire consisted of a set of questions on postnatal and postabortion care for adolescents in the city of Rio de Janeiro. The coordinators of the facilities answered questions on the level of care at healthcare facilities; available postnatal service; medical professionals and/or nurses who perform postnatal consultation; availability of specific postnatal clinics; scheduling of puerperal consultations in the first week postpartum, and between the 30th and 42nd day postpartum; age bracket of the adolescents treated at the facility; use of puerperal care routines and/or protocols; monitoring prenatal and postnatal consultations through the SIS *Pré-natal* Health Information System; verification and application of vaccines in the immunization schedule; and availability of the adolescent's vaccination booklet. The internal consistency of the questionnaire was evaluated by the Cronbach α coefficient, which was 0.692.

After the interviews, the completed questionnaires were first reviewed by the research coordinator to check that all fields had been completed properly and then sent for data entry and posterior analysis. Any questionnaire deemed inadequate for entry was returned to the interviewer for modification.

The data were stored in a database built by Epi Info (Center for Disease Control and Prevention, Atlanta, GA, USA). Statistical analysis of variables was carried out via χ^2 test or Fisher exact test to compare ratios and the t test for means. The level of significance was set at 5% ($P < 0.05$).

3. Results

Among 229 SUS healthcare facilities located in the city of Rio de Janeiro during the study period, 148 (64.6%) provided sexual and reproductive healthcare on an outpatient basis to the whole population including adolescents. Of these facilities, 147 (99.3%) were visited and included in the survey. One facility did not agree to participate in the research and was therefore excluded.

The 147 facilities were under municipal management; 90.5% (133/147) provided primary care, and the rest provided secondary and/or tertiary care. Puerperal care was reported in 95.9% (141/147) of facilities, but only 11.3% (16/141) had a specific postnatal clinic (Table 1).

Primary care facilities reported significantly higher rates of postnatal care ($P = 0.006$) as compared with secondary and/or tertiary care facilities (Table 2). In terms of the location of care provision, among the 125 (88.7%) health units that did not have a specific postnatal clinic, 84.0% (105/125) provided postnatal consultation and/or gynecology in prenatal clinics with gynecologists, general practitioners, and nurses, the rest 16.0% (20/125) provided consultation in general practice consultation rooms with general practitioners or nurses.

With respect to the professionals that provided care for puerperal adolescents among the 141 health facilities providing postnatal care, the consultation was performed exclusively by gynecologist–obstetricians in 24 facilities (17.0%); by nurses only in 17 facilities (12.1%); and by various professionals such as doctors, nurses, and nursing technicians in 100 facilities (70.9%).Of note, in only one facility was the consultation conducted by a nursing technician. In this last group of 100 healthcare facilities, 47.0% (66/141) did not have an obstetrician or gynecologist. In those facilities where postnatal care was not performed by doctors, contraceptive guidance was not given, and only 23.0% (27/117) made referrals for medical consultation for such purposes. In 10.3% (12/117) of the facilities, referrals were not made for any reason, whereas 66.7% (78/117) of facilities made referrals for various reasons except contraception. Condoms, oral and injectable contraceptives, and intrauterine devices were available in the health facilities.

In relation to the adolescent's vaccination booklet—a source of useful information and location of records on development and immunization —89.1% (131/147) of healthcare facilities stated that they used it. During postnatal consultation—an opportune time to check and apply vaccines—a review of the immunization schedule took place in 98.0% (138/141) of facilities; in addition, in 89.0% (125/141) of the facilities, the necessary vaccines were given (Table 1).

Only 27.0% (38/141) of healthcare facilities reported having a routine or protocol when caring for puerperal women so that postnatal treatment is systematized. For the purposes of monitoring prenatal and puerperal care, the Ministry of Health recommends that healthcare facilities register these consultations via the SIS *Pré-natal* system. In 78.8% (112/141) of facilities, these records were being entered in SIS *Pré-natal* (Table 1).

With respect to the scheduling of the postnatal consultations recommended by the Ministry of Health [2], the consultation in the first week after delivery was not scheduled in 32 (22.7%) facilities, and the consultation between the 30th and 42nd day postpartum was not scheduled in 25 (17.7%) facilities. Overall, 7.8% (11/141) of facilities did not schedule

Table 1
Operating characteristics of healthcare facilities in the city of Rio de Janeiro, Brazil.

Characteristic	No. of facilities assessed	No. (%) of facilities with characteristic
Primary care level	147	133 (90.5)
Use adolescent's booklet	147	131 (89.1)
Puerperal care	147	141 (95.9)
Specific puerperal care consultation room	141	16 (11.3)
Puerperal care protocol	141	38 (27,0)
SIS *Pré-natal* monitoring	141	112 (78.8)
Scheduling in first week postpartum	141	109 (77.3)
Scheduling between 30th and 42nd day postpartum	141	116 (82.3)
Verification of vaccines	141	138 (98,0)
Administration of vaccines	141	125 (89,0)

Table 2
Distribution of postnatal care according to the care level of the facility in the city of Rio de Janeiro, Brazil.

	No. of facilities		
Postnatal care	Care level 1	Care level 2 and/or 3	Total
Yes	130[a]	11	141
No	3	3	6
Total	133	14	147

[a] $P = 0.006$.

the consultation in the first week after delivery or that between the 30th and 42nd day postpartum. In total, 67.4% (95/141) of facilities scheduled both consultations (Table 3). Healthcare facilities that scheduled puerperal consultation in the first week also tended to schedule a consultation between the 30th and 42nd day postpartum ($P = 0.007$).

In terms of the age bracket of treatment for puerperal adolescents, there was no uniformity between healthcare facilities. Only 11 (7.8%) facilities reported providing treatment to individuals aged between 10 and 19 years, the age bracket recommended by the World Health Organization [9] and the Brazilian Ministry of Health [8]. In 14 (9.9%) of facilities, consultation for the age group 12–18 years was available; this age bracket has been established by the Children's and Adolescent's Statute [10]. Across 116 (82.3%) healthcare facilities, consultation was provided in 20 different age groups (Table 4).

4. Discussion

Although most of the public health facilities provided postnatal care, some services scheduled only one consultation, either during the first week after delivery or between the 30th and 42nd day postpartum, contrary to the guidelines recommended by the Ministry of Health and compromising the health of adolescents.

The SIS *Pré-natal* information program developed by the Ministry of Health with the aim of monitoring prenatal and puerperal care indicates that, in 2002, only 9.43% of pregnant women underwent six prenatal consultations and one puerperal consultation [11]. This is worrisome because adolescent fertility rates remain high despite a decrease in the general population, as verified in the 2006 National Demography and Health Survey [12]. The present study demonstrated that 21.2% (29/141) of healthcare facilities in the city of Rio de Janeiro currently do not record prenatal and postnatal care in the SIS *Pré-natal* program, complicating the monitoring of care in the pregnancy–puerperal cycle.

A broad survey conducted in Brazil through interviews with 5056 mothers of newborns with the aim of characterizing prenatal, delivery, and puerperal care reported a percentage of 80.9% of prenatal visits with at least six consultations; however, less than 40% of puerperal women had at least one postnatal visit [12]. These data show that puerperal care is not consolidated in the health services.

Postpartum care seems to be a neglected practice in both high- and low-resource countries. For example, research conducted in a university hospital in Sweden among 150 puerperal women showed that only half of these women underwent postnatal care [4]. In Bangladesh, only one-third of puerperal adolescent mothers were found to receive proper postnatal care [5]. Furthermore, the importance of postnatal care for both the health of mothers and their children was demonstrated in a Canadian study that examined two economically distinct groups of puerperal women (1000 participants) 4 weeks after discharge from hospital. The study showed that economically disadvantaged puerperal mothers were less likely to receive adequate postnatal care [6]. A study conducted in Tanzania on the perception of women regarding prenatal and postnatal care was positive overall but, with regard to postnatal care, more benefits were perceived for the newborns than for the women themselves [13].

Table 3
Healthcare facilities scheduling postnatal consultation in the first week and between the 30th and 42nd day postpartum.[a]

Schedules care in first week postpartum	Schedules care between 30 and 42 days postpartum		
	Yes	No	Total
Yes	95 (67.4)[b]	14 (9.9)	109 (77.3)
No	21 (14.9)	11 (7.8)	32 (22.7)
Total	116 (82.3)	25 (17.7)	141 (100)

[a] Values are given as number (percentage).
[b] $\chi^2 = 7.8$, $P = 0.007$.

Table 4
Distribution of the adolescent age group treated in postnatal clinics at healthcare facilities in the city of Rio de Janeiro, Brazil.

Age group treated, y	Number (%) of facilities (n = 141)
10–18	2 (1.4)
10–19	11 (7.8)
10–21	1 (0.7)
11–17	1 (0.7)
11–19	4 (2.8)
12–17	2 (1.4)
12–18	14 (9.9)
12–19	41 (29.0)
12–20	1 (0.7)
12–21	1 (0.7)
13–17	2 (1.4)
13–18	3 (2.1)
13–19	10 (7.1)
14–17	2 (1.4)
14–18	5 (3.5)
14–19	10 (7.1)
14–20	1 (0.7)
15–18	3 (2.1)
15–19	17 (12.1)
16–19	7 (5.0)
17–19	1 (0.7)
18–19	2 (1.4)
Total	141 (100)

Considering that postnatal and postabortion consultation with adolescents is an opportune time, especially for contraceptive guidance, we emphasize the importance of the medical consultation during this period. At present, some puerperal mothers do not have the opportunity to receive medical care during the postnatal period because they receive care from only nurses in some facilities and nursing technicians in another. In addition, only 23.0% of facilities currently make referrals for medical consultation for contraceptive advice.

All contraceptive methods must be offered postpartum or postabortion in order to prevent unplanned and unwanted pregnancy in accordance with the technical standards of the Ministry of Health [14]. Studies have emphasized that quality postabortion care with increased access to contraception reduces the rates of unplanned pregnancy and illegal abortions and their complications [15,16]. Inadequate puerperal care can adversely affect the health of adolescents.

Considering that the future prospects and peculiarities of puerperal adolescents require different approaches for three age groups, under 13 years, 14–15 years, and 16–19 years [17], the present findings indicate the possibility that certain age groups are excluded from postnatal care at some healthcare facilities. The Ministry of Health recommends that only adolescents under 15 years should be referred to high-risk prenatal care [2]. Older adolescents should be referred to basic healthcare facilities, where they might have their prenatal care performed by nursing or medical professionals. Regarding the age of postnatal adolescents, there are no restrictions to be followed at basic healthcare facilities.

Another aspect to be valued in postnatal care is the risk associated with maternal mortality. Studies show that the greatest risk is for individuals at the extremes of childbearing age—that is, between 10 and 14 years and over 40 years—and the main causes are high blood pressure, hemorrhaging, and puerperal complications [18]. Considering that postnatal consultation for individuals in the adolescent age bracket may contribute to the diagnosis and early treatment of puerperal complications, the lack of postnatal care and exclusion of a certain age group, as found in some institutions in the present study, may aggravate maternal mortality rates in adolescence in Brazil.

The study has some limitations. First, the questionnaire was completed by coordinators of the healthcare facilities, which might have influenced responses in the sense of enhancing the healthcare facility that they manage or their conception of the manager. However, anonymity

and confidentiality of responses were ensured, and the coordinators were encouraged to answer all questions truthfully. Second, the results cannot be generalized to all young people living in communities with limited resources because the demographic and socio-economic conditions of young puerperal women residing outside the study area might be different. Third, the study did not investigate the ease of access to postnatal services for puerperal adolescents; therefore, the fact that such services exist in most facilities does not mean that the young woman is being treated satisfactorily.

Although there are many healthcare facilities that provide puerperal care, the guidelines recommended by the Ministry of Health to ensure both puerperal consultations—which are designed to approach various topics including contraception—are not being followed for adolescents aged between 10 and 19 years. Inadequacy of postnatal and postabortion care can represent the loss of a critical opportunity in the healthcare of adolescents. Thus, the expansion and upgrading of postnatal care to reduce puerperal complications and decrease unexpected and unwanted pregnancy among individuals in the adolescent age bracket constitutes a major challenge.

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Conflict of interest

The authors have no conflicts of interest.

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