

Access to reproductive health medicines in primary health care: a descriptive study in a municipality in Maranhão, Brazil

Acesso a medicamentos para a saúde reprodutiva na atenção primária à saúde: estudo descritivo em um município do Maranhão, Brasil

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RESUMO

A garantia do acesso a medicamentos essenciais constitui um componente central da atenção à saúde reprodutiva na atenção primária à saúde (APS). O objetivo deste estudo foi descrever a disponibilidade e a dispensação de medicamentos relacionados à saúde reprodutiva em uma farmácia da APS de um município do Maranhão, Brasil. Trata-se de um estudo descritivo e documental, baseado na análise de dados secundários provenientes de registros rotineiros de dispensação, referentes ao período de junho a julho de 2021. A disponibilidade dos medicamentos foi analisada em relação à Relação Municipal de Medicamentos Essenciais (REMUME), e as dispensações foram descritas segundo tipo de medicamento e finalidade terapêutica. Foram registradas 290 dispensações de medicamentos relacionados à saúde reprodutiva. Os contraceptivos injetáveis corresponderam à maior proporção das dispensações (n = 180; 62,1%), seguidos pelos contraceptivos orais (n = 50; 17,2%), suplementação utilizada durante a gestação (n = 45; 15,5%) e contracepção de emergência (n = 15; 5,2%). Observou-se disponibilidade inferior a 10% para a maioria dos medicamentos padronizados na REMUME, com exceção do levonorgestrel utilizado para contracepção de emergência, além da ausência de medicamentos destinados ao cuidado do climatério e da menopausa. Os achados evidenciam limitações no acesso a medicamentos relacionados à saúde reprodutiva no contexto da APS, reforçando a necessidade de fortalecimento da assistência farmacêutica em municípios de pequeno porte e socioeconomicamente vulneráveis.

Palavras-chave: Atenção primária à saúde; Assistência farmacêutica; Contracepção hormonal; Saúde da mulher; Acesso a Medicamentos Essenciais e Tecnologias em Saúde.

ABSTRACT

Ensuring access to essential medicines is a central component of reproductive health care within primary health care (PHC). This study aimed to describe the availability and dispensing of reproductive health medicines in a PHC pharmacy in a municipality in the state of Maranhão, Brazil. This descriptive, documentary study was based on secondary data from routine dispensing records, covering the period from June to July 2021. Medicine availability was assessed in relation to the Municipal List of Essential Medicines (REMUME), and dispensations were described according to type of medicine and therapeutic purpose. A

total of 290 dispensing events of medicines related to reproductive health were recorded. Injectable contraceptives accounted for the largest proportion of dispensations (n = 180; 62.1%), followed by oral contraceptives (n = 50; 17.2%), pregnancy-related supplementation (n = 45; 15.5%), and emergency contraception (n = 15; 5.2%). Availability below 10% was observed for most medicines listed in the REMUME, except for levonorgestrel used for emergency contraception, and no medicines for climacteric or menopause care were identified. These findings reveal important limitations in access to reproductive health medicines in PHC, highlighting the need to strengthen pharmaceutical services in small and socioeconomically vulnerable municipalities.

Keywords: Primary health care; Pharmaceutical services; Hormonal contraception; Women's health; Access to Essential Medicines and Health Technologies.

INTRODUCTION

Women's health is a key component of global development and is explicitly addressed in the United Nations Sustainable Development Goals, particularly Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all at all ages. Among its targets are the reduction of maternal and neonatal mortality, the achievement of universal access to sexual and reproductive health services, and the strengthening of disease prevention and treatment strategies (BRASIL, s.d.). Achieving these goals requires a comprehensive approach to women's health care that encompasses gynecological health, sexual and reproductive rights, care during the climacteric and menopause, mental health, and strategies to address gender-based violence, while respecting women's specific needs and diversity.

In Brazil, despite advances observed in recent decades, maternal mortality, high rates of unplanned pregnancy, and the persistence of sexually transmitted infections highlight the ongoing need for public policies and organized actions focused on women's health (Fundação Oswaldo Cruz, 2024; BRASIL, 2025). Initiatives such as the Program for Comprehensive Women's Health Care (*Programa de Assistência Integral à Saúde da Mulher* – PAISM), established in 1983, sought to integrate family planning, disease prevention, and reproductive health promotion, decentralizing responsibilities to states and municipalities and

ensuring access to contraceptives and essential medicines through the Unified Health System (*Sistema Único de Saúde* – SUS) (Rodrigues, 2022).

Building on this framework, the National Policy for Comprehensive Women's Health Care (*Política Nacional de Atenção Integral à Saúde da Mulher* – PNAISM) was implemented in 2004, expanding the focus to care across the life course and reinforcing health promotion, prevention, and care actions (Rodrigues, 2022; Sorpreso; Figueiredo; Ramos, 2021). Although PNAISM establishes broad guidelines for organizing women's health care in Brazil, its implementation occurs in a decentralized manner, with municipalities responsible for organizing actions and services, including those delivered within the scope of primary health care (PHC).

Within the PHC context, pharmaceutical services represent a strategic component for ensuring access to essential medicines and promoting comprehensive care. The Municipal List of Essential Medicines (*Relação Municipal de Medicamentos Essenciais* – REMUME) is defined by each municipality to guide the acquisition and dispensing of medicines in local health services. It is based on the National List of Essential Medicines and adapted to population needs, available financial resources, and municipal logistical capacity (BRASIL, 2024). Analyzing the availability and dispensing of medicines in relation to REMUME allows for a description of how pharmaceutical services are

operationalized in PHC settings and contributes to identifying limitations in the supply of medicines considered essential.

In Brazil's Northeast region, social inequalities and structural limitations of PHC services remain persistent challenges, including restricted service coverage and difficulties in the continuous provision of essential supplies. The state of Maranhão, characterized by low socioeconomic indicators, includes small municipalities with limited health infrastructure, making it particularly relevant to describe local conditions of service provision and medicine availability (OPAS, 2016). In this context, municipality-based studies can contribute to understanding the concrete functioning of PHC, especially regarding pharmaceutical services related to reproductive health.

Given this context, the present study aimed to describe the availability and dispensing of reproductive health medicines in a PHC pharmacy in a municipality in the state of Maranhão, Brazil, based on dispensing records and the local REMUME.

METHODS

Study design

This was a descriptive, documentary study based on the analysis of secondary data obtained from routine medicine dispensing records. The study was conducted in a PHC pharmacy located in the state of Maranhão, Northeast Brazil, using data corresponding to the period from June to July 2021.

Study setting

The study was carried out in a municipal PHC pharmacy located in a municipality in the state of Maranhão, Brazil, with an estimated population of approximately 13,071 inhabitants and limited PHC infrastructure. The pharmacy is responsible for dispensing medicines standardized for the population

covered by the service, in accordance with the REMUME. The service performs approximately 500 to 600 dispensing procedures per month and accepts prescriptions issued both within the SUS and by other public and private health services.

Study population and unit of analysis

The unit of analysis consisted of each record of dispensing of medicines related to reproductive health performed at the PHC pharmacy during the study period. All dispensing records of medicines and products intended for women's reproductive health recorded between June and July 2021 were included, regardless of the users' age, provided that they were linked to prescriptions filled at the service during the defined time interval. Records with incomplete information regarding the medicine dispensed were not identified; therefore, no exclusion criteria were applied.

Data sources

Data were obtained from the PHC pharmacy's dispensing record system, including individual medicine dispensing cards and an electronic database used for dispensing control. Only secondary data generated as part of the routine work processes of the service were analyzed. No identifiable personal information of users was accessed. The period from June to July 2021 was selected because it corresponded to the period for which dispensing records were available and accessible during the internship in the service.

Study variables

The variables collected and analyzed were defined a priori, based on the information available in the dispensing records, and included: (i) medicine name; (ii) active pharmaceutical ingredient; (iii) pharmaceutical form; (iv) dose; (v) quantity dispensed; (vi) recorded therapeutic indication.

Medicines were subsequently categorized according

to therapeutic purpose, including hormonal contraception, emergency contraception, and supplementation used during pregnancy. This categorization was based on the therapeutic indications adopted in the municipality's REMUME and the intended use of each medicine in reproductive health care.

Data analysis

Data were organized in electronic spreadsheets and subjected to descriptive statistical analysis. Absolute and relative frequencies of dispensing events were calculated according to type of medicine, pharmaceutical form, and therapeutic purpose. Medicine availability was assessed descriptively by comparing the medicines effectively available for dispensing with those standardized in the REMUME in force in the municipality during the study period. No coverage or stock adequacy indicators were calculated. The analysis was limited to identifying whether the medicines standardized in the REMUME were available for dispensing during the study period. Results were presented in tables to facilitate visualization of observed dispensing patterns.

Ethical considerations

This study used exclusively public-domain databases and/or anonymized institutional records, with no direct or indirect identification of users. Data were

analyzed in aggregated form, ensuring confidentiality of information. In accordance with Resolution No. 510/2016 of the Brazilian National Health Council, which exempts from ethical review studies using publicly accessible information and anonymized secondary data that do not allow identification of participants, submission to a Research Ethics Committee involving human subjects was not required.

RESULTS

During the study period, dispensing records of medicines and products related to reproductive health were identified at the municipality's PHC pharmacy. According to the information available in the pharmacy records, part of the dispensing occurred without the presentation of a medical prescription at the time of service.

The comparison between the medicines standardized in the REMUME and the stock available at the PHC pharmacy revealed marked differences in availability among the analyzed items. While levonorgestrel used for emergency contraception showed full availability in relation to the REMUME, most hormonal contraceptives and supplements used during pregnancy presented availability below 10% of the expected monthly quantity. These data are presented in Table 1.

Table 1. Availability of reproductive health medicines according to the REMUME and stock available at the PHC pharmacy. Maranhão, Brazil, 2021

Medicine	REMUME (monthly forecast)	Available stock	Coverage (%)
Folic acid 5 mg	1,800 tablets	50 tablets	2.8
Ferrous sulfate 25 mg/mL	130 bottles	18 bottles	13.8
Ferrous sulfate 40 mg	1,800 tablets	100 tablets	5.6
Norethisterone enanthate + estradiol valerate	2,900 injectables	200 injectables	6.9
Medroxyprogesterone acetate	2,600 injectables	70 injectables	2.7
Norethisterone 0.35 mg	2,900 tablets	200 tablets	6.9
Levonorgestrel + ethinylestradiol	2,400 tablets	1,050 tablets	43.8
Levonorgestrel 0.75 mg	120 tablets	120 tablets	100.0

Between June and July 2021, a total of 290 dispensing events of medicines and products related to reproductive health were recorded. Injectable contraceptives accounted for the largest proportion of dispensations, followed by oral contraceptives and emergency contraception. Supplements used during pregnancy represented a smaller share of total dispensations, and no records of dispensing medicines intended for climacteric or menopause care were identified during the study period. The distribution of dispensations according to type of medicine and pharmaceutical form is shown in Table 2.

Table 2. Dispensing of reproductive health medicines and products at the PHC pharmacy, according to type and pharmaceutical form. Maranhão, Brazil, 2021 (n = 290)

Type of medicine/ product	Medicine	Pharmaceutical form	Number of dispensations (n)	%
Monthly injectable contraceptives	Norethisterone enanthate + estradiol valerate	Injectable	120	41.4
Quarterly injectable contraceptives	Medroxyprogesterone acetate	Injectable	60	20.7
Oral contraceptives	Levonorgestrel + ethinylestradiol	Tablet	30	10.3
Oral contraceptives	Norethisterone 0.35 mg	Tablet	20	6.9
Emergency contraception	Levonorgestrel 0.75 mg	Tablet	15	5.2
Pregnancy supplementation	Folic acid	Tablet	25	8.6
Pregnancy supplementation	Ferrous sulfate	Tablet	20	6.9
Total	–	–	290	100.0

DISCUSSION

This study identified important limitations in the availability and dispensing of reproductive health medicines within PHC pharmaceutical services in the analyzed municipality. The approximately 290 monthly dispensing events covered less than 8% of women of reproductive age, reflecting a marked shortage of essential medicines in relation to the REMUME. This limitation is likely associated with municipal responsibility for medicine procurement, budgetary constraints, irregular supply, and structural barriers to access. Together, these findings highlight persistent inequalities in access to reproductive health services in resource-limited settings.

In Brazil, programs such as the PAISM and its successor, the PNAISM, were established to ensure women's access to contraceptive methods, prenatal supplementation, and preventive care throughout the life course (Rodrigues, 2022; Sorpreso; Figueiredo; Ramos, 2021). Despite these advances, previous studies have reported persistent challenges, particularly in small municipalities, including shortages of essential medicines and limitations in the organization of pharmaceutical services within PHC (Mendes et al., 2025; Rosa; Reis; Perini, 2016). In the present study, medicine availability was largely concentrated on women of reproductive age, with persistent shortages of several items listed in the REMUME and the absence of medicines intended for climacteric and menopause care, despite these components being included in PNAISM guidelines (Sorpreso; Figueiredo; Ramos, 2021; BRASIL, 2024). These findings suggest gaps between national policy recommendations and their local implementation.

The high incidence of adolescent pregnancy in Brazil further underscores the importance of timely access to contraceptive methods. Data from the International Center for Equity in Health indicate that approximately one in every 23 girls aged 15 to 19 years becomes a mother each year, a rate nearly four times higher

than that observed in high-income countries (ICEH, 2025). In the Northeast region, this rate reaches 77.1 per 1,000 adolescents, reflecting substantial regional inequalities. Adolescent pregnancy is strongly associated with social deprivation, low educational attainment, poverty, and limited access to health services, factors that also influence the use of PHC services (ICEH, 2025; Monteiro; Soares, 2025). Restricted availability of contraceptives in PHC may therefore exacerbate vulnerabilities among adolescents and young women, increasing the risk of adverse maternal outcomes and disrupting educational and life trajectories.

At the regional level, Maranhão faces significant socioeconomic and structural challenges that affect the organization of health services (OPAS, 2016). Small municipalities often struggle to ensure the continuous supply of medicines, particularly within PHC pharmaceutical services. Rural populations tend to experience lower utilization of pharmaceutical services, greater geographical barriers, and lower levels of health literacy, further limiting access. National studies have consistently reported lower medicine availability in the North and Northeast regions, a situation associated with logistical challenges and weaknesses in stock monitoring and supply chain management (Boing et al., 2022; Nascimento et al., 2017).

The National Survey on Access, Use, and Promotion of Rational Use of Medicines (PNAUM) reported an average availability of 63.1% for levonorgestrel plus ethinylestradiol in the Northeast, a value higher than that observed in this study (43.8%) but lower than the national average (74.5%) (Boing et al., 2022). For norethisterone enanthate plus estradiol valerate, although this medicine accounted for a substantial proportion of dispensing events, coverage relative to the REMUME remained low. These discrepancies may be partially explained by the study design, which was based on a convenience sample and a short

observation period. Nevertheless, the observed values remain below both regional and national averages, reinforcing local limitations in medicine supply.

Despite restricted availability, injectable contraceptives were the most frequently dispensed medicines during the study period, followed by oral contraceptives. The use of levonorgestrel alone occurred exclusively in the context of emergency contraception, in accordance with current clinical recommendations (WHO, 2010). Preference for injectable methods has been associated with dosing convenience and higher adherence to contraception (BRASIL, s.d.; Andrade et al., 2025). However, the predominance of specific methods combined with limited diversity of available options may restrict informed choice among women attending PHC services.

A municipal initiative involving the implementation of hormonal implant insertion protocols and professional training demonstrated the potential to expand access to long-acting reversible contraceptive methods and strengthen reproductive planning. Municipal initiatives involving the implementation of protocols for hormonal implant insertion, combined with training of health professionals, have demonstrated the potential to increase access, improve women's autonomy, and optimize health system costs (Boschi et al., 2022). These experiences highlight the importance of aligning medicine availability with population needs and the operational capacity of PHC services.

This study has limitations that should be considered when interpreting the findings. The observation period was short, the analysis was restricted to a single municipal pharmacy, and the data were obtained exclusively from secondary records, limiting causal inferences and generalizability. In addition, it was not possible to assess whether the selection of medicines included in the REMUME adequately reflected local population needs, nor to evaluate the relationship between prescribing practices and medicine

availability.

Despite these limitations, the results provide relevant insights into the organization of pharmaceutical services within PHC in small municipalities, particularly in socioeconomically vulnerable contexts. Systematic monitoring of medicine availability, combined with the use of management tools such as stock monitoring dashboards, may support local health managers in identifying weaknesses and planning corrective actions (CONASEMS, 2022 e 2025).

Overall, the findings indicate that the availability and dispensing of reproductive health medicines in the analyzed municipality were limited and concentrated in a small number of therapeutic groups. These results contribute to understanding the concrete functioning of pharmaceutical services at the local level and reinforce the need for strategies aimed at strengthening access to essential medicines in PHC, in line with national policies and regional specificities.

CONCLUSION

This study described the availability and dispensing of reproductive health medicines within PHC pharmaceutical services in a small municipality in the state of Maranhão, Brazil. The findings confirmed limited availability of medicines in relation to the REMUME, mainly concentrated on hormonal contraceptive methods, with low therapeutic diversity and the absence of medicines intended for other stages of the female life course.

These results highlight important gaps in access to essential medicines in socioeconomically vulnerable settings and contribute to a better understanding of how pharmaceutical services operate in PHC at the local level. From a practical perspective, the findings underscore the relevance of systematic monitoring of medicine availability and the use of management tools to support planning, procurement, and organization of services. Strengthening pharmaceutical services

within primary health care, particularly in small municipalities, is essential to improve equitable access to reproductive health medicines and to advance the effective implementation of national women's health policies.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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