

Mobile Public Pharmacies: an alternative to the challenges of pharmaceutical care in rural areas in Brazil.

Farmácias Públicas Móveis: uma alternativa frente aos desafios da assistência farmacêutica em áreas rurais no Brasil.

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ABSTRACT

Background: Access to medicines and pharmaceutical services in rural areas of Brazil is a challenge due to the country's territorial and structural inequalities. In an effort to reduce these disparities, Mobile Public Pharmacies (MPPs) have emerged as an important strategy. Based on experiences already implemented in several Brazilian municipalities, these mobile units overcome geographic and socioeconomic barriers, ensuring pharmaceutical presence, continuity of care, and strengthening the relationship between public health services and historically marginalized communities. **Objective:** This study aims to analyze the challenges and benefits of MPPs. **Methods:** This is a perspective article that takes a reflective approach. **Results:** The article outlines the main challenges and benefits of implementing and maintaining these services. **Conclusions:** In this context, despite requiring considerable financial investment, MPPs can expand access to medicines and pharmaceutical care while improving the integration of health services in rural areas. **Key words:** Mobile Public Pharmacy; Equity; Public Health; Rural Population.

RESUMO

Introdução: O acesso a medicamentos e aos serviços farmacêuticos em áreas rurais do Brasil é um desafio diante das desigualdades territoriais e estruturais do país. Na tentativa de reduzir essas desigualdades, as Farmácia Públicas Móveis (FPMs) se apresentam como importante estratégia. Com base em experiências já implementadas em diversos municípios brasileiros, as unidades itinerantes transpõem barreiras geográficas e socioeconômicas, assegurando presença farmacêutica, continuidade do cuidado e fortalecimento do vínculo entre os serviços públicos de saúde e comunidades historicamente marginalizadas. **Objetivo:** O presente trabalho tem o objetivo de analisar os desafios e benefícios das FPMs. **Método:** Trata-se de um artigo de perspectiva, com abordagem reflexiva. **Resultado:** Discute-se os principais desafios e benefícios para implementação e manutenção dos serviços. **Conclusão:** Apesar da demanda por investimentos consideráveis, as FPMs são capazes de ampliar o acesso a medicamentos e à assistência farmacêutica e de melhorar a integração entre serviços de saúde em áreas rurais. **Palavras-chave:** Farmácia Pública Móvel; Equidade, Saúde Pública; População Rural.

Introduction

Public policies in Brazil provide for the guarantee of access and equity in health actions¹, as well as access to medicines, strategic supplies, and Pharmaceutical Services (PS).^{2,3,4} However, access to these services in rural areas remains a challenge.

Considering the context of smaller and more dispersed populations across territories, ensuring equity in these services depends on distinct logistical strategies when compared with urban areas.^{5,6} For this reason, Mobile Public Pharmacies (MPPs) emerge as an alternative to minimize these inequalities.⁷

MPPs are defined as those with occasional or exceptional activities, whose services are performed in a specific motor vehicle that complies with sanitary standards for the stocking, storage, and dispensing of medicines and related products within the mobile unit itself, to serve urban or rural locations.^{8,9} In this pharmacy, the responsible technical pharmacist has the duty to ensure the technical-scientific quality, sanitary safety, and traceability of the activities.¹⁰

In this regard, this article aims to discuss the operational challenges and benefits brought by MPPs. It seeks to understand the role of these pharmacies in reducing inequalities in access to medicines and pharmaceutical services, and to propose strategies for the expansion and improvement of MPPs within the context of Brazilian public health.

Methods

This study is characterized as a perspective article. The design adopted does not constitute a systematic or narrative review, but rather a reflective approach based on available evidence, suitable for innovative topics that are still undergoing scientific consolidation.

The methodological strategy was defined based on the recognition that the controlled vocabularies MeSH and DeCS do not include descriptors with direct conceptual correspondence to the object of study, which limits the retrieval of relevant publications when used in isolation. Thus, an exploratory

search based on free-text keywords was chosen, with the aim of increasing the sensitivity of the search.

The searches were conducted between September 2024 and February 2026. Relevant legislation in the study area was surveyed on the official website of the Conselho Federal de Farmácia (CFF), yielding a total of four (4) references.

The search of databases on official platforms was conducted according to their relevance to the field of Pharmaceutical Services and health services over the last ten years. No specific language selection was applied. The terms “mobile pharmacy” and the combination “rural area” AND “pharmacy” were used. In the PubMed database, the search for “mobile pharmacy” resulted in eleven (11) studies, of which two (2) were selected because they presented greater thematic proximity to the object of the article. For the combination “rural area” AND “pharmacy”, 218 studies were identified. After analysis of result similarity and conceptual contribution, nine studies were selected. Thus, 13 articles obtained through this platform were used.

Google Scholar was used as a complementary source because of its broader coverage and capacity to retrieve literature not indexed in traditional databases. On this platform, searches were directed to publications from the last ten years, using the terms “mobile pharmacy”, “farmácia móvel”, and “farmácia itinerante”, with the selection of studies based on thematic relevance and publication in indexed journals. In the search for “mobile pharmacy”, 329 results were found. After excluding duplicates and selecting by thematic relevance, eleven (11) studies were selected. In the search for “farmácia móvel”, 12 studies were found and only 1 was selected. In the search for “farmácia itinerante”, 9 results were found, all duplicates of previous searches.

For the survey of existing MPPs in Brazil, the website of the Cadastro Nacional de Estabelecimentos de Saúde (CNES) was consulted. Additionally, a Google search was conducted using the keyword “farmácia móvel”, through which journalistic materials and pages from municipal government websites were found.

Results and Discussion

Pharmaceutical Services in rural areas in Brazil

According to the Demographic Census, in 2022, Brazil had 203.1 million inhabitants, of whom 25.6 million (12.6%) lived in rural areas.¹¹ These areas have higher unidimensional poverty indicators (UPI) and multidimensional poverty indicators (MPI) when compared with urban areas. In rural areas, the poverty rate is 20% and the extreme poverty rate is 13%. In urban areas, both rates are close to 6%. Regarding the MPI, which considers educational level, housing conditions, and other parameters, the values are 0.6% in urban areas and 12% in rural areas, with greater disadvantage in the health and basic services dimension.¹²

Inequalities are also observed regarding access to medicines. The rural population has a higher demand for public pharmacies (36.8%) compared with the urban population (29.6%)¹³; however, only 6.6% of health units in adjacent rural municipalities and 5.5% in isolated areas have adequate pharmaceutical infrastructure.¹⁴

Therefore, in the context of public health, it is essential to balance efficiency with equitable access and quality. This shortage forces users to travel frequently to urban areas, generating direct and indirect costs, such as transportation, loss of productive time, and weakening of the bond with the local health care team.¹⁵

Mobile Pharmacies

Pharmacies in their itinerant model have their earliest records in Babylon, in 2600 BC, and had an occasional and emergency-oriented character in situations of war and, later, in post-climate disaster contexts.¹⁶ Currently, it is still possible to find some mobile pharmacies with these characteristics, as well as others used in continuous services for the management of specific conditions.^{16–20} In Brazil, however, this model, through MPPs, provides continuous services linked to Primary Health Care within the UHS, with universal and equitable care.⁷

According to data from the Cadastro Nacional de Estabelecimentos de Saúde (CNES),²² there are currently 15 registered Mobile Public Pharmacies (MPPs) linked to 14 Brazilian municipalities. In the state of Minas Gerais, records are found in four municipalities (Carmo do Cajuru, Divinópolis, Itatiaiuçu, and Unaí). In Paraná, two municipalities have registered MPPs (Ortigueira and Rio Azul). In Rio Grande do Sul, seven units are distributed across six municipalities: Nova Santa Rita, Passo Fundo, Santa Cruz do Sul, São Gabriel, São Leopoldo, and Vacaria; São Leopoldo has two units. In the state of São Paulo, there are two records, in the municipalities of Cajati and Capão Bonito. All registered MPPs have a pharmacist as the technical manager and offer dispensing services for medicines and supplies from the Basic Component of Pharmaceutical Services (BCPS), in addition to Health Education actions, serving populations living in rural areas and peripheral urban zones.

Complementarily, an exploratory survey of MPP initiatives was conducted using journalistic sources, including reports in local newspapers and information made available on institutional websites of municipal governments, through a Google search carried out in February 2026. This survey identified the existence of MPPs in 46 different municipalities, of which 32 had no record in the CNES. All identified initiatives dispensed medicines and supplies managed within the scope of the BCPS.

It should be emphasized that, in this study, the bibliographic references and the nominal identification of municipalities without registration in the CNES are not explicitly presented. This methodological and ethical decision is based on the fact that the objective of the study is not to expose or evaluate municipal administrations, nor to assign value judgments to local management, but rather to demonstrate, in aggregate form, the existence of a significant number of MPPs operating outside official registration systems. The registration of MPPs in the CNES is an essential instrument to ensure transparency, traceability, and monitoring of Pharmaceutical Services actions, as well as to support planning, evaluation, and financing processes within the Unified Health System.

From a positive perspective, this diversity of initiatives across the country demonstrates how MPPs

have been adapted to local realities. There are variations in the services offered, frequency of care, and team composition, revealing their potential to expand access to Pharmaceutical Services in different geographic and social contexts throughout the country.

Some Regional Councils in the country already establish operational standards for this pharmacy model. Among the main requirements for the operation of these mobile units are compliance with current sanitary standards at each municipal level, the presence of a pharmacist throughout the entire operating period, not being implemented as a replacement for another existing pharmacy, and having a reference pharmacy for registration and stock management purposes. In addition, the route of the vehicle must be disclosed in advance to the corresponding Regional Council for inspection purposes by the authority. The deadline for disclosing the itinerary varies according to the state, with Minas Gerais requiring 15 days and Paraná requiring 10 days.^{6,9}

Implementation and maintenance of MPPs in Brazil

For the implementation and maintenance of MPP services, coordination with the Pharmaceutical Services sectors and the transportation sector of municipal health departments is necessary. The costs related to Pharmaceutical Services are the same as those used by the Municipal Administration for the maintenance of the Basic Component. However, funding related to the transportation sector, such as vehicle purchase and fuel, depends mostly on the own resources of the Municipal Health Departments. Thus, the main means of providing these services depends on revenue capable of sustaining them. For small municipalities with limited financial capacity, which paradoxically are those that most need this service, financing is a limiting factor for the provision of MPPs. In this sense, incorporating MPPs into Pharmaceutical Services strategies, with financing policies involving all spheres of government and provision for the regular transfer of resources, would improve the prospects for the expansion and sustainability of MPPs in municipalities.

MPPs as an Alternative to the Challenges of Pharmaceutical Services in Rural Areas in Brazil

In most more specialized or costly health services, the “hub-and-spoke” economic model is adopted, concentrating these services in populous areas and requiring residents of neighboring regions to travel in order to access them.²² This strategy may pose risks when applied to the dispensing of medicines to patients living in rural areas. During the journey home, there are risks to product conservation, especially for temperature-sensitive products.²³ MPPs, in turn, ensure the proper transportation of medicines under pharmaceutical supervision and in accordance with sanitary standards, in addition to reducing the need for long-distance travel, particularly benefiting older adults and people with financial and/or mobility difficulties.^{8,15}

Another challenge found in rural areas is related to the mobility and retention of professionals.^{15,24} International experiences in different countries have shown that the presence of pharmaceutical care in rural areas improves adherence and has positive clinical implications, providing accurate guidance on appropriate dosage, the influence of food on drug absorption, drug interactions, recognition of adverse reactions, and medicine storage.²⁶ In Brazil, in addition to these contributions, this professional is able to coordinate with Primary Health Care through health education projects,^{10,15} follow-up of smoking cessation groups²⁷ and the HIPERDIA group (Hypertension and Diabetes Program).²⁶

In order to facilitate access to health professionals, telemedicine initiatives in rural regions of Northern Brazil have emerged as a proficient information and communication technology (ICT) mechanism, particularly during the pandemic.¹⁶ However, these initiatives face limitations related to poor digital infrastructure and users’ difficulty interacting in digital environments, especially among older adults.²⁸ In this case, MPPs can address these gaps by providing in-person access to medicines and pharmaceutical services.

The presence of Pharmaceutical Services close to households in rural areas reinforces the perception of the health system’s commitment to these popu-

lations, which often face socioeconomic and cultural marginalization. This proximity contributes to strengthening residents' self-esteem and sense of social belonging.^{29,30}

Conclusion

MPPs are an innovative strategy to expand the population's access to medicines and pharmaceutical services. Itinerant models can overcome geographic and structural barriers, ensuring qualified care and contributing to the reduction of inequalities in Primary Health Care.

For the consolidation of this service, the engagement of all levels of government and the establishment of policies for regular and sustainable financing are essential. MPPs should not be viewed as palliative solutions, but rather as legitimate instruments of health justice and the strengthening of Primary Health Care in rural areas.

Contribuição dos autores

SMS: Study conception, data curation, formal analysis, investigation, methodology, writing, project administration, and planning. AFMO: Formal analysis, investigation, and manuscript review. RP, MLS: Review. CMR: Data curation, formal analysis, methodology, project administration and planning, supervision, validation, writing, and review.

Conflict of interest

The authors declare no conflicts of interest.

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Data availability

The contents underlying the research text are included in the manuscript.

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