

PHARMACEUTICAL ASSISTANCE IN A REGIONAL HEALTH COORDINATION OF THE STATE OF RIO GRANDE DO SUL, BRAZIL, 2018

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ABSTRACT

Introduction: The Brazilian public health system was created in 1988, based on the principles of universality of access, completeness and fairness of results, being free to the end user at all times. The national drug policy was introduced in 2004 and includes free drug dispensation at all levels of care. **Aim:** To describe how pharmaceutical care is structured in municipalities belonging to the 8th Regional Health Coordination of the state of Rio Grande do Sul, Brazil, in 2018. **Methods:** Electronic form was filled in by pharmacists responsible for pharmaceutical care of 12 municipalities belonging to the 8th Regional Health Coordination in December 2018. The form consisted of questions covering the following axes: formal structure of pharmaceutical care, financing, management tools, human resources and performance of pharmacists. **Findings:** In a minority of the 12 municipalities there is a Pharmacy and Therapeutic Commission established in Ordinance (just one), a Bidding Commission for the purchase of drugs (3 cases) and a Municipal List of Drugs (4 cases). Seven of the 12 municipalities have pharmaceutical assistance in the organization chart of municipal health secretaries. **Conclusion:** Management of pharmaceutical care still fails without programming of activities, lack of Pharmacy and Therapeutic Commission and a Municipal Drug List (not counting subsequent disclosure).

KEY WORDS: Unique Health System. National Drug Policy. Pharmaceutical Care, Evaluation Indicators. Health Management.

INTRODUCTION

The Brazilian public healthcare system (SUS, in Portuguese) was created in 1988, based on the principles of universality of access, completeness and fairness of results, being free to the end user at all times. The health system is operationalized through a decentralized and hierarchical network according to levels of care, free of charge and with complementarity from the private healthcare sector. SUS administration, provision, and financing are decentralized, with shared responsibility between the Federation, the 26 states and the Federal District, and more than 5,570 municipalities.^[1]

Covering over 200 million people, SUS can be considered the largest universal health system in the world. With sales estimated at \$ 33.1 billion in 2017 (based on factory prices), Brazil is the sixth largest pharmaceutical market in the world, behind the United

States, China, Japan, Germany and France. Drug sales in the country are expected to continue to grow at a compound annual rate of between 5% and 8% over the period 2018-2022, which could make it the 5th largest market in 2022.^[2]

Established in 1998, the National Drug Policy has as its main purposes to ensure the necessary safety, efficacy and quality of medicines, the promotion of the rational use of medicines and the population's access to those medicines considered essential. It presents a set of guidelines to achieve the proposed objectives, such as the adoption of the National List of Essential Medicines, the reorientation of pharmaceutical care, the promotion of rational use of medicines, the scientific and technological development aimed at the production of medicines, among others.^[3] The National Pharmaceutical Care Policy was introduced in 2004 to provide a broader

approach, with actions such as intensifying research, expanding production, reorganizing pharmaceutical prescribing and dispensing, and ensuring the quality of products and services.^[4] Thus, the National Pharmaceutical Care Policy should be understood as a guiding public policy for the formulation of sectoral policies, among which are the policies of medicines, science and technology, industrial development and human resources training.^[5]

The financing of pharmaceutical care is the responsibility of the three SUS management spheres, the Federation, the Federal District and the States, and the municipalities. Federal resources are transferred through the “Pharmaceutical Care Financing Block”, which consists of three components: basic, strategic and specialized.^[6] The basic component is for the purchase of medicines and supplies in primary health care, including health problems and health programs specific to this level of care. It involves an annually defined per capita transfer, with greater participation of the Federation in funding.^[7]

Drugs of the strategic component are intended for the treatment of pathologies that, by their very nature, have an established therapeutic approach (eg, tuberculosis, leprosy, malaria and other national or regional endemic diseases, antiretrovirals from the STD / AIDS Programs, blood products and immunobiologicals), being fully funded by the Ministry of Health, which purchases and distributes them.^[6] The Ministry of Health is responsible for the elaboration of treatment protocols, planning, centralized acquisition and distribution to the States of medicines, products and supplies for the other levels of care. It is the responsibility of the State Health Departments to store the products and distribute them to regional or municipal governments.^[6]

The specialized component is divided into three groups with distinct characteristics, responsibilities and forms of organization.^[8] In Group 1 are the drugs with high financial impact, indicated for complex diseases, cases of refractoriness to the first or second line of treatment, and which are included in productive development actions in the health industrial complex. This group is fully funded by the Federation. Groups 2 and 3 are under the responsibility of states and municipalities, and supplement the National List of Essential Medicines.

Studies that analyzed the situation of pharmaceutical care in Brazil pointed to the lack of infrastructure, human resources and financial or budgetary resources^[9]; problems related to the development and quality of pharmaceutical services, in the sphere of science and technology policies^[10]; a gap between legislation and management practices in the organization of services in primary care and the reality faced by Brazilian municipalities^[11, 12, 13]; besides management problems throughout the pharmaceutical management cycle.^[14,15]

Recognizing weaknesses in the area of pharmaceutical care planning, the Brazilian Ministry of Health has proposed an instrument aimed at assessing the stage it is in, identifying changes to be made and a set of actions to implement them.^[16] Specifically regarding the evaluation of the quality of pharmaceutical care developed in the municipalities, the use of a series of indicators makes it possible to compare the performance of programs, activities and services between regions over time.^[17, 18]

In this context, the purpose of this study is to describe how pharmaceutical care is structured in 12 municipalities belonging to the 8th Regional Health Coordination of the state of Rio Grande do Sul, Brazil, in 2018.

MATERIALS AND METHODS

Brazil is divided into 26 states and the Federal District, with an estimated 2019 population of 210,147,125 people, HDI of 0.699 (2010) and average life expectancy at birth of 75.5 years. The state of Rio Grande do Sul (RS) is located in the extreme south of Brazil, has 497 municipalities, administratively allocated to 20 Regional Health Coordinators (RHC) and 30 Health Regions. It has an estimated population for 2019 of 11,377,239 people (5th most populous in Brazil), with a population density of 37.96 inhab / km², Human Development Index of 0.746 and life expectancy at birth of 77.8 years.

The Health Regions are responsible for integrating the organization, planning and implementation of health actions and services. The 8th RHC has a total of 187,616 inhabitants (1.6% of the total state population) distributed in the municipalities of Arroio do Tigre, Caçapava do Sul, Cachoeira do Sul, Cerro Branco, Encruzilhada do Sul, Estrela Velha, Ibarama, Lagoa Bonita do Sul, Novo Cabrais, Passa Sete, Segredo and Sobradinho.

In these municipalities there is since 2016 a Conducting Pharmaceutical Assistance Group, formed by pharmacists working in RHC and at the Municipal Health Departments. This group has a permanent and consultative character, with the purpose of qualifying the services to promote the rational use of medicines in the regional health network through sharing experiences related to the selection, programming, acquisition, distribution, dispensing, prescription and rational use of medicines. Pharmaceutical assistance indicators were elaborated to evaluate the pharmaceutical assistance of these 12 municipalities.

Pharmacists responsible for pharmaceutical care of the 12 municipalities filled in electronic form in December 2018. The form consisted of objective questions (yes, no, half) covering the following axes: formal structure of pharmaceutical care, financing, management tools, human resources and performance of pharmacists.

The answers were entered in a spreadsheet and descriptive statistics were used in the data management.

RESULTS AND DISCUSSION

Table 1 shows the questions and answers provided regarding the “Formal Structures” axis of pharmaceutical

care. It can be observed that in a minority of the 12 municipalities there is a Pharmacy and Therapeutic Commission established in Ordinance (just one), a Bidding Commission for the purchase of medicines (3 cases) and a Municipal List of Medicines (4 cases).

Table 1 - Frequency of answers regarding the “Formal Structures of Pharmaceutical Care” axis in the 12 municipalities of the 8th Regional Health Coordinator, 2018.

Formal Structures of Pharmaceutical Care	Yes	No	Half
Is there a Pharmacy and Therapeutic Commission established in Ordinance?	1	11	-
Is there a publicly available Municipal List of Drugs?	4	8	-
Is there a specific Bidding Commission for the purchase of drugs?	3	8	1
Does the pharmacist participate in the drug purchasing process?	9	3	-
Is there a Waste Management Plan that includes the disposal of drugs and supplies for diabetics?	7	4	1
Is there a Good Practice Manual at the Municipal Pharmacy?	7	4	1
Is pharmaceutical care on the organization chart of the municipal health department?	7	5	-

The selection of medicines that will make up the Municipal List of Drugs must be made dynamically according to the health needs and the effective gains of the new therapeutic options. A multidisciplinary committee, the Pharmacy and Therapeutic Commission (FTC), bases the process on epidemiological data and scientific evidence. The lack of FTC and the Municipal List of Drugs can lead to drug withdrawal, loss of treatment effectiveness and, in the extreme, increased health spending to resolve a particular problem.^[19]

The purchase of drugs is one of the most complex functions of pharmaceutical care management. A good drug purchase should first consider what to buy (check), when and how much to buy (schedule), and how to buy. The definition of an operational flow to the purchasing process, with duties and responsibilities, shall ensure agility and sequence at all stages, and ensure the involvement of all sectors involved to harmonize procedures. The lack of harmony between inventory, consumption and purchase of materials, resulting in

unnecessary or emergency purchases, can generate additional costs to the local health system.^[16, 20]

Seven of the 12 municipalities have pharmaceutical assistance in the organization chart of municipal health secretaries. Which is of great relevance, because without a formal position in the health structure, it cannot be recognized as a management unit, without budget, human resources and legal support. Another positive factor is that most pharmacists participate in the preparation of the municipal plan, an important act, since it is a way to ensure, qualify and set goals for pharmaceutical assistance in the municipality.^[19]

Table 2 shows the questions and answers provided regarding the “Pharmaceutical Care Financing” axis. Specifically, the percentage spent by the municipalities on the health sector was requested and, from this amount, how much is invested in medicines intended for primary care.

Table 2 - Frequency of answers regarding the “Pharmaceutical Care Financing” axis in the 12 municipalities of the 8th Regional Health Coordinator, 2018.

Pharmaceutical Care Financing	Municipality					
	1	2	3	4	5	6
What percentage of municipal budget is spent on health?	19,4	28,7	17,5	18,0	19,5	24,4
What percentage of the health budget is spent on medicines?	2,0	3,4	1,8	5,4	N/R	N/R

Note: 6 municipalities with no response for both questions (N/R).

Regarding the percentage of the municipal budget, all 6 municipalities that responded to the form have values above 15% determined by law, reaching 28.7% of spending in the area. Drug spending ranged from 2.0 to 5.4%. In addition, information was requested on the use of own municipal resources for the purchase of

medicines and nine of the twelve municipalities stated that they need to carry out this supplementation.

Table 3 - Frequency of answers regarding the “Management Tools in Pharmaceutical Care” axis in the 12 municipalities of the 8th Regional Health Coordinator, 2018.

Management Tools in Pharmaceutical Care	Yes	No	Half
Is there a computerized system for pharmaceutical care management?	12	-	-
Is the computer system used for dispensing medicines?	12	-	-
If the answer is yes to the previous question, is the system used in all dispensing units?	9	2	1
Is there a standard operating procedure for drug delivery?	5		
Is there medication entry and exit control from the warehouse?	5	1	

For axis “Management Tools in Pharmaceutical Care” (Table 3), 12 municipalities have computerized system for this purpose and the use of medication dispensing processes, $\frac{3}{4}$ of them in all their dispensing units. In turn, the existence of Standard Operating Procedure (SOP) in pharmacies for drug dispensing and control of drug entry and exit from the warehouse did not present half of the municipalities with positive response.

All municipalities have a computerized pharmaceutical care system, but not all have integration into the municipal health care network system. About the “Drug Dispensation” axis, seven municipalities have centralized dispensing in the central pharmacy, four decentralized in some health units and one decentralized in district pharmacies. An efficient computerized system provides inventory control that minimizes losses and waste and improves user safety, to avoid duplicate prescriptions, drug interactions and support interventions.^[21]

Regarding the “Human Resources” axis, all 12 municipalities have pharmacists, most of them working full time (9 cases), informing the lack of this health professional to perform the work effectively (8 cases) and a larger number of pharmacy assistant (5 cases). In two municipalities there is no pharmacy assistant. That is, the results point to the workload of the pharmacist in the municipalities studied.

In the area of “action of pharmacists”, the professionals stated: perform drug validity control (11 cases), participate in the elaboration of the Municipal Health Plan (9 cases), participate in the medication purchase schedule (8 cases), drug dispensation (8 cases), act actively in inventory control in the Basic Health Units (6 cases).

Only two pharmacists reported participating in health actions with the multiprofessional team, a particularly negative situation. The involvement of the pharmacist as well as being provided in the National Pharmaceutical Care Policy, contributes to the success of networking, and the ability to implement strategies to promote rational drug use. Not to mention the financial repercussion that the drug represents for health services and the community, with direct implications on the efficiency of health systems.^[22] Regarding the “structure of pharmacies”, nine pharmacists stated that they are in accordance with health standards. Temperature and

humidity control is carried out in eleven municipalities and in cold rooms / refrigerators, while eight municipalities do not have a generator in the storage room for thermolabile medicines. Fact that can negatively impact the state of conservation of these drugs in the absence of electricity.

CONCLUSION

The pharmaceutical care management process is complex because it involves a multi-step cycle and has multiple responsibilities between management levels. Thus, planning in all spheres is necessary for the citizen's right to quality pharmaceutical care to be guaranteed. Therefore, managers and pharmacists must be trained to make effective decisions.

The results are similar to other studies; one explicit management of pharmaceutical care still fails without programming of activities, lack of Pharmacy and Therapeutic Commission (FTC) and a Municipal Drug List (not counting subsequent disclosure). In addition, in some municipalities the pharmacy is not on the organization chart of the municipal health department.

The data also point to the lack of pharmacists and pharmacy assistants, which may contribute to the non-existence of planning, since the lack of human resources makes the work concentrated on drug dispensation.

REFERENCES

1. Cordilha AC, Lavinias L. The reshaping of healthcare systems in the age of financialization. *Lessons from France and Brazil. Cienc Saude Coletiva*, 2018; 7(23): 2147-2158.
2. EMIS Insights. Brazil Pharma and Healthcare Sector 2017/2021. Available at: <https://guiadafarmacia.com.br/materia/brasil-e-o-sexto-maior-mercado-farmaceutico-do-mundo/>.
3. Brasil. Ministério da Saúde. Secretaria de Políticas de Saúde. Portaria nº 3.916, de 30 de outubro de 1998. Aprova a Política Nacional de Medicamentos. *Diário Oficial da União* 1998; 10 nov. Seção 1, p. 18-22. Available at: http://bvsms.saude.gov.br/bvs/saudelegis/gm/1998/p_r3916_30_10_1998.html. Acesso em: 28 de novembro de 2018.
4. Kornis GEM, Braga M, Zaire C. Os marcos legais das políticas de medicamentos no Brasil

- contemporâneo (1990-2006). Rev APS, 2008; 11(1):85-99.
5. Brasil, Conselho Nacional de Saúde. Resolução n. 338, de 06 de maio de 2004. Aprova a Política Nacional de Assistência Farmacêutica. Diário Oficial da União, Poder Executivo, Seção 1 n. 96, 20 de maio de 2004. Brasília: Ministério da Saúde, 2004.
 6. Brasil. Ministério da Saúde. Portaria GM/MS n. 837, de 23 de abril de 2009. Altera e acrescenta dispositivos à Portaria n. 204/GM, de 29 de janeiro de 2007, para inserir o Bloco de Investimentos na Rede de Serviços de Saúde na composição dos blocos de financiamento relativos à transferência de recursos federais para as ações e os serviços de saúde no âmbito do Sistema Único de Saúde. Brasília: Ministério da Saúde, 2009.
 7. Brasil. Ministério da Saúde. Portaria Nº 2.001, de 3 de agosto de 2017. Altera a Portaria nº 1.555/GM/MS, de 30 de julho de 2013, que dispõe sobre as normas de financiamento e execução do Componente Básico da Assistência Farmacêutica no âmbito do Sistema Único de Saúde (SUS). Brasília: Ministério da Saúde, 2017.
 8. Oliveira L. Planejamento da assistência farmacêutica no SUS, de um município do sul de Santa Catarina. Monografia, Programa de Residência Multiprofissional em Atenção Básica / Saúde Coletiva. Universidade do Extremo Sul Catarinense – UNESC; 2013.
 9. Barreto JL, Guimarães MCL. Avaliação da gestão descentralizada da assistência farmacêutica básica em municípios baianos, Brasil. Cad Saúde Pública, 2010; 26(6): 1207-1220. DOI: 10.1590/S0102-311X2010000600014
 10. Mayorga P, Fraga F, Brum CK, Castro EF. Assistência farmacêutica no SUS: quando se efetivará? In: Misoczky MC, Bordin R, eds. Gestão local em saúde: práticas e reflexões. Porto Alegre: Dacasa Editora; 2004. pp. 197-215.
 11. Araújo ALA, Ueta JM, Freitas O. Assistência farmacêutica como um modelo tecnológico em atenção primária à saúde. Rev Cienc Farm Basica Apl, 2005; 26(2): 87-92.
 12. Gerlack LF, Karnikowski MGA, Areda CA et al. Gestão da assistência farmacêutica na atenção primária no Brasil. Rev Saúde Publica, 2017; 51(Supl 2): 15s.
 13. Costa KS, Nascimento Jr JM. Hórus: Inovação tecnológica na assistência farmacêutica no Sistema Único de Saúde. Rev Saúde Pública, 2012; 46 (suppl.1): 91-99. DOI: 10.1590/S0034-89102012005000063
 14. Trevisan H. Dificuldades na gestão da política de assistência farmacêutica: uma revisão bibliográfica. Trabalho de Conclusão, Curso de Especialização de Gestão da Organização Pública em Saúde. Universidade Federal de Santa Maria; 2015. Available at: https://repositorio.ufsm.br/bitstream/handle/1/11705/Trevisan_Henrique.pdf?sequence=1&isAllowed=y
 15. Fraga FNR. A utilização de um modelo lógico para a reorientação dos serviços farmacêuticos no âmbito municipal [Dissertação de Mestrado]. Porto Alegre: Faculdade de Farmácia, Universidade Federal do Rio Grande do Sul; 2005. Available at: <https://lume.ufrgs.br/handle/10183/6552>
 16. Brasil. Ministério da Saúde. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. Departamento de Assistência Farmacêutica e Insumos Estratégicos. Planejar é preciso: uma proposta de método para aplicação à assistência farmacêutica. Brasília: Editora do Ministério da Saúde; 2006. (Série B. Textos Básicos de Saúde). Available at: http://bvsms.saude.gov.br/bvs/publicacoes/06_1143_M.pdf
 17. Castro CGSO. Estudos de utilização de medicamentos: noções básicas. Rio de Janeiro: Fiocruz; 2000.
 18. Freitas JMSM, Nobre ACL. Avaliação da assistência farmacêutica do município de Mombaça-CE. R. Bras. Farm. Hosp. Serv. Saúde, 2011; 2(1): 15-20. Available at: <https://www.rbfhss.org.br/sbrafh/article/view/65/65>
 19. Torres RM, Esher A, Caetano R, Pepe VLE, Osorio-de-Castro CGS. Adesão às Listas de Medicamentos Essenciais por Médicos Brasileiros em Atuação no Sistema Único de Saúde. Rev Bras Educ Médica, 2014; 38(3): 323-330. DOI: 10.1590/S0100-55022014000300006
 20. Moreira DDV. A importância do processo de compra na cadeia de abastecimento de uma indústria farmacêutica. Trabalho de Conclusão, Curso de Especialização em Logística Estratégica e Sistema de Transporte. Belo Horizonte: Universidade Federal de Minas Gerais – UFMG; 2015. Available at: https://repositorio.ufmg.br/bitstream/1843/BUBD-A29FG2/1/esplogisticaestrategisisttransportes_daisydutravalladaresmoreira_monografia.pdf
 21. Wopereis AB. Avaliação da assistência farmacêutica de um município catarinense. Trabalho de conclusão, Faculdade de Farmácia. Florianópolis: Universidade Federal de Santa Catarina - UFSC; 2015. Available at: <https://repositorio.ufsc.br/bitstream/handle/123456789/159953/TCC%20ANDRESSA%20BORGERT%20WOPEREIS.pdf?sequence=1&isAllowed=y>
 22. Brasil. Conselho Nacional de Secretários de Saúde. Assistência Farmacêutica no SUS / Conselho Nacional de Secretários de Saúde. – Brasília: CONASS, 2007. Available at: http://bvsms.saude.gov.br/bvs/publicacoes/colec_progestores_livro7.pdf