10.18605/2175-7275/cereus.v16n4p374-388

ORIGINAL ARTICLE

<< Recebido em: 25/12/2024 Aceito em: 19/03/2025. >>

REVISTA CEREUS ISSN: 2175-7275

Strategies for the implementation of clinical services in a university pharmacy in the Brazilian Northeast: a situational strategic planning-based approach

Estratégias para a implementação de serviços clínicos em uma farmácia universitária no Nordeste brasileiro: uma abordagem baseada no planejamento estratégico situacional

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ABSTRACT

The study aimed to implement pharmaceutical clinical services at the Farmácia Escola Manoel Casado de Almeida, linked to the Federal University of Campina Grande (UFCG), Cuité-PB campus. The epidemiological profile of the population attending the Basic Health Units (UBS) in Cuité/PB was evaluated, and a socioeconomic, demographic, and medication use questionnaire was applied to the university community. A situational strategic planning was developed to guide the implementation of strategies for the inclusion of Clinical Pharmacy services to assist the population, and Pearson's Chi-Square test was used, with $p<0.05$ considered significant. There was a predominance of females in both analyses; at the UBS, individuals aged 60 or older (67%), farmers (23.5%), and hypertensive patients (73.7%) were more prevalent. On campus, the majority were individuals aged 20 to 29 (67.2%), with an income of up to half a minimum wage (24.5%), residents of the urban area (85.5%), and with incomplete/completed higher education (83.5%). Based on the profile found, the following services were offered: health education and screening, pharmacotherapy review, pharmaceutical follow-up, and medication organization procedures, blood pressure measurement, blood glucose testing, and anthropometric measurement determination. Conclusions: It was concluded that it was possible to structure the pharmaceutical clinical services to be provided at the Farmácia Escola.

Keywords: Epidemiological profile. Clinical pharmacy. Pharmaceutical care.

RESUMO

O estudo objetivou implantar os serviços clínicos farmacêuticos na Farmácia Escola Manoel Casado de Almeida, vinculada a Universidade Federal de Campina Grande (UFCG), campus Cuité-PB. Avaliou-se o perfil epidemiológico da população frequentadora das Unidades Básicas de Saúde (UBS), município de Cuité/PB, e aplicou-se, na comunidade universitária, um questionário socioeconômico, demográfico e sobre o uso de medicamentos. Elaborou-se o planejamento estratégico situacional para nortear a implantação das estratégias de inclusão da Farmácia Clínica para assistir à população e utilizou-se o teste Qui-Quadrado de Pearson, em que $p<0,05$ foi considerado significativo. Houve predominância do sexo feminino em ambas as análises; nas UBS prevaleceram indivíduos com 60 anos ou mais (67%), agricultores (23,5%) e hipertensos (73,7%). No campus, majoritariamente evidenciou-se indivíduos de 20 a 29 anos (67,2%), com renda de até meio salário mínimo (24,5%), residentes da zona urbana (85,5%), com ensino superior incompleto/completo (83,5%). A partir do perfil encontrado, ofertou-se os serviços: educação e rastreamento em saúde, revisão da farmacoterapia, acompanhamento farmacoterapêutico e os procedimentos de organização de medicamentos, aferição de pressão arterial, de glicemia e determinação de medidas antropométricas. Conclusões: conclui-se que foi possível estruturar os serviços clínicos farmacêuticos a serem disponibilizados na Farmácia Escola.

Palavras-chave: Perfil epidemiológico. Farmácia clínica. Cuidado farmacêutico.

1. INTRODUCTION

The pharmacist's role closer to the population began in the so-called "boticas," places where these professionals welcomed individuals and their families, discussed their illnesses, compounded medications, and monitored patients. This practice provided a rudimentary form of service delivery compared to today but was appropriate for its time (SOARES; COSTA; TEIXEIRA, 2016).

With technological advancements and increasing industrialization, pharmacists primarily shifted their focus to pharmaceutical processes and medication quality, leading to a detachment from care centered on individuals and the community. During this transitional phase, preventable adverse events occurred, revealing the need for pharmacists to return to closer engagement with the community to improve clinical outcomes (SOARES; COSTA; TEIXEIRA, 2016).

In this context, the concept of Clinical Pharmacy emerged in the United States in the 1960s as a response to professional dissatisfaction and unrest. Initially practiced in hospitals, its main objective was to promote the rational use of medicines (RUM) to prevent adverse events (RODRIGUES; PEREIRA, 2016; VASCONCELOS et al., 2016).

Clinical Pharmacy has since spread worldwide, especially in hospital settings, where the inclusion of clinical pharmacists in multidisciplinary teams has reduced hospitalization times, significantly impacted post-discharge mortality rates, and improved overall health outcomes. Clinical pharmacists enhance the Rational Use of Medicines (RUM) and optimize pharmacotherapy, thereby reducing medication-related expenses (RODRIGUES; PEREIRA, 2016; SANTOS; SILVA; TAVARES, 2018).

As life expectancy increases, certain conditions, such as noncommunicable chronic diseases (NCDs), tend to manifest. In Brazil, in 2015, cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes mellitus were responsible for 75% of all deaths due to NCDs. These conditions result in high individual and public healthcare costs (SUS) and negatively impact the quality of life and well-being of affected patients when poorly managed. Clinical pharmacists work to reduce medication-related morbidity and mortality, promote health, and prevent diseases by providing greater guidance to the population (CFF, 2016; OLIVEIRA; SOUZA; MORAIS NETO, 2020; MALAT et al., 2020).

To achieve these objectives, university pharmacies can contribute to the training of new professionals by providing a space for skill development and preparing future

pharmacists to deliver services that make a difference to the community. University pharmacies serve as practice sites for services related to pharmaceutical care (VIEIRA et al., 2018).

Through theoretical and practical activities, such experiences bring social realities into the academic institution, encouraging universities to seek solutions to meet societal demands and providing integration between education, service, and community (COUTO; MENDONÇA; SEBASTIÃO, 2019).

The Situational Strategic Planning (SSP) method emerges as a valuable tool for managing services, identifying improvement points, and implementing new services. It allows for the organization of ideas, operations, and actions in a democratic, collective, and disciplined manner. Moreover, SSP facilitates the creation of monitoring indicators for the plan (MANETTI; LEITE, 2016).

In light of the above, this article presents the process of planning, defining, and structuring pharmaceutical clinical services at the Manoel Casado de Almeida School Pharmacy, Center for Education and Health, on the Cuité-PB campus of the Federal University of Campina Grande.

2. MATERIALS AND METHODS

The research took place in the municipality of Cuité, which is located in the mesoregion of Agreste Paraibano and in the micrometropolitan region of Curimataú Ocidental, with a population of 20,312 inhabitants in 2014, according to the Brazilian Institute of Geography and Statistics (IBGE, 2016).

The first phase of the study began with visits to the Basic Health Units (UBS) in the urban area of the region. The municipality has five UBS in the urban zone, namely: Abílio Chacon Filho, Diomedes Lucas de Carvalho, Ezequias Venâncio da Fonseca, Luísa Dantas de Medeiros, and Raimunda Domingos de Moura.

The UFCG, Cuité campus, was also part of the research, being the location used for the application of questionnaires to obtain the epidemiological profile and information on medication use among the academic population. The Farmácia Escola Manoel Casado de Almeida, which is part of the institution, was used to implement the pharmaceutical clinical services.

Data for the epidemiological profile were collected from patient records and/or lists containing updated information. The lists were filled out by Community Health Agents and

included the most up-to-date data on hypertensive and diabetic patients attended by each UBS. The variables included: sex, age, locality, profession, marital status, and disease. Data collection took place over two months.

To collect data for mapping the epidemiological profile and medication use by the academic population, as well as possible needs, a questionnaire was applied over a period of three weeks, covering students and staff of the academic community.

The inclusion criteria were: willingness to participate and presentation of a signed Informed Consent Form (ICF) by a responsible party.

The exclusion criteria included individuals under 18 years of age, those with cognitive deficits, those not accompanied by a legal guardian or caregiver, those who did not understand the objectives, benefits, and risks of the project, and incomplete questionnaires.

The objective was to identify areas for improvement once identified in the Pharmacy School (FE) and to organize strategic solutions, which consisted of four stages.

Initially, existing problems were identified, selected, and prioritized to assign descriptors, addressing the explanatory moment. Next, the normative moment took place, in which specific objectives, operations, and actions were defined, along with establishing deadlines.

In the strategic moment, feasibility and viability were analyzed, identifying planning vulnerabilities and developing strategies. Finally, the operational tactical moment was the development of the strategies previously outlined.

The obtained results were entered into the Statistical Package for Social Sciences (SPSS) v. 13.0 for statistical analysis, applying the Pearson's Chi-Square test, with a significance level of $p<0.05$.

The data collected were used exclusively for this research, and patient identities were kept confidential. The researchers are aware of all the regulations imposed by Resolution No. 466/2012 and 510/2016 of the National Health Council regarding research involving human subjects and committed to complying with them. Therefore, the research was approved by the Research Ethics Committee of the Federal University of Campina Grande (CEP/UFCG) with certificate number 3.021.191.

3. RESULTS

The data collected from the 1534 medical records and lists of users identified in the records of each of the five Basic Health Units (UBS) in the urban area of the municipality of Cuité-PB are organized in Table 1.

Table 1. General Data on the Population of Cuité-PB.

Sex	**N**	**%**
Female	1030	67.1
Male	504	32.9
Total	1534	100
Age Range		
Up to 29 years	14	0.9
30 to 39 years	49	3.3
40 to 49 years	134	8.7
50 to 59 years	309	20.1
≥ 60 years	1028	67.0
Total	1534	100
Area of Residence		
Urban	1429	93.2
Rural	105	6.8
Total	1534	100
Marital status		
Single	137	8.9
Married	363	23.7
Widowed	47	3.1
Divorced	7	0.5
Unknown	980	63.8
Total	1534	100
Profission		
Farmer	361	23.5
Housewife	18	1.2
Seamstress	2	0.1
Teacher	11	0.7
Public servant	16	1.0
Merchant	8	0.5
Retired	245	16.0
Artisan	1	0.1
Self-employed	4	0.3
Nurse’s assistant	4	0.3
General services assistant	3	0.2
Student	11	0.7

Mason	4	0.3
Domestic worker	5	0.3
Painter	1	0.1
Community health agente	5	0.3
Cook	1	0.1
Supervisor	2	0.1
Driver	5	0.3
Library assistant	1	0.1
Fisherman	1	0.1
Mason's assistant	1	0.1
Sanitation worker	1	0.1
Secretary	1	0.1
Unknown	822	53.6
Total	1534	100
Diseases		
Hypertension	1131	73.7
Diabetes	243	15.8
Hypertension and diabetes	153	9.9
Asthma	3	0.2
Alzheimer's and Diabetes	1	0.1
Hyperthyroidism	1	0.1
Dyslipidemia	1	0.1
Parkinson's disease	1	0.1
Total	1534	100
Chronic disease		
One chronic disease	1380	90.3
Two chronic diseases	154	9.7
Total	1534	100
Number of attendances		
Luísa	373	24.3
Abílio	123	8.0
Diomedes	211	13.8
Raimunda	486	31.7
Ezequias	341	22.2
Total	1534	100

Fonte: Dados da pesquisa, 2024.

Table 2 presents the findings for systemic arterial hypertension and diabetes mellitus, which predominantly affect females, accounting for 67.5% and 65.7%, respectively. These conditions are also prevalent among individuals aged 60 years or older, corresponding to 68.1% and 68.3%, respectively. Regarding age groups, a statistical association was found with arterial hypertension (p=0.041). Furthermore, approximately 93.3% of individuals with

hypertension reside in urban areas, with a similar percentage (92.4%) observed for those with diabetes.

Table 2. Relationship between systemic arterial hypertension and diabetes mellitus with sociodemographic data in the population of Cuité-PB.

Category	**Hypertensive**		**Non-hypertensive**		**p**
	N	**%**	**N**	**%**	
Sociodemographic Data					
Sex					
Female	867	67.5	163	65.5	
Male	418	32.5	86	34.5	0.537
Total	1285	100	249	100	
Age Group					
Up to 59 years	410	31.9	96	38.6	
60 years or older	875	68.1	153	61.4	0.041
Total	1285	100	249	100	
Residence Area					
Urban	1199	93.3	230	92.4	0.592
Rural	86	6.7	19	7.6	
Total	1285	100	249	100	
Marital Status					
Single	121	9.4	16	6,4	
Married	324	25.2	39	15.7	*
Widowed	42	3.3	5	2.0	
Divorced	07	0.5	0	0	
Unknown	791	61.6	189	75.9	
Total	1285	100	249	100	
Category	**Diabetic**		**Non-Diabetic**		***P***
Sociodemographic Data	**N**	**%**	**N**	**%**	
Sex					
Female	261	65.7	769	67.6	
Male	136	34.3	368	32.4	0.490
Total	397	100	1137	100	
Age Group					
Up to 59 years	126	31.7	380	33,4	0.539
60 years or older	271	68.3	757	66,6	
Total	397	100	1137	100	
Residence Area					
Urban	367	92.4	1062	93.4	0.514
Rural	30	7.6	75	6.6	
Total	397	100	1137	100	
Marital Status					
Single	31	7.8	106	9.3	
Married	74	18.6	289	25.4	

Widowed	12	3.0	35	3.1	
Divorced	0	0	07	0.6	
Unknown	280	70.6	700	61.6	*
Total	397	100	1137	100	

Source: Research data, 2024.

It was found that there is a relationship between greater longevity and the onset of non-communicable chronic diseases, with a higher prevalence of hypertension and diabetes. These conditions are associated with the continuous use of medications, creating opportunities for pharmacists to expand their role by offering clinical services that guide and improve patients' quality of life.

Regarding the academic population, the 290 questionnaires included in this study reveal that the female gender was predominant, representing 180 respondents (62.1%), with ages between 20 and 29 (67.2%). Of the participants, 24.5% reported an income of up to half a minimum wage, 85.5% lived in urban areas, and 83.5% had incomplete or completed higher education, justified by the fact that the majority of the academic population consisted of students.

Table 3. Socioeconomic and demographic profile of the academic population.

Sex	**N**	**%**
Female	180	62.1
Male	110	37.9
Total	290	100
Age Range		
15 to 19 years	55	19.0
20 to 29 years	195	67.2
30 to 39 years	25	8.6
40 to 49 years	12	4.1
50 to 59 years	03	1.0
Total	290	100
Income		
Up to ½ minimum wage	71	24.5
More than ½ to 1 minimum wage	54	18.6
More than 1 to 2 minimum wages	65	22.4
More than 2 to 3 minimum wages	32	11.1
More than 3 to 5 minimum wages	33	11.4
More than 5 to 10 minimum wages	12	4.1
More than 10 to 20 minimum wages	09	3.1
More than 20 minimum wages	01	0.3
Without income	06	2.1
Without declarations	07	2.4
Total	290	100
Residence Area		
Urban	247	85.2
Rural	43	14.8
Total	290	100
Education Level		
Incomplete/Complete Elementary School	03	1.0
Incomplete/Complete High School	20	6.9
Incomplete/Complete Higher Education	241	83.1
Specialization	02	0.7

Master's Degree	07	2.4
Doctorate	17	5.9
Total	290	100

Source: Research data, 2024.

Regarding the health care profile and medication use data, 13.4% reported having some Chronic Non-Communicable Disease (CNCD), with asthma being the most common among the academic population (22.5%). A percentage of 39.7% mentioned not using any medication. However, from the group that reports taking some medication, 29.3% said that they sometimes forget to take the medication at the correct time. A percentage of 31.7% reported having doubts about whether the medications they take are producing the expected results. When asked about the safety of the medications they take, 37.2% mentioned having doubts. It is worth noting that respondents who do not use continuous medications may still have doubts about the safety and effectiveness of medications when undergoing specific treatments.

A very valuable piece of information is that 92.1% answered that they do not use medications without knowing their purpose. Regarding health care when needed, 43.4% go to the hospital, followed by 24.1% who go to a Basic Health Unit (UBS). The last question in the questionnaire was about clinical pharmacy services at the School Pharmacy; 82.8% would find it excellent if such services existed (Table 4).

Table 4. Health Care Profile and Medication Use by the Academic Population.

Health Care Profile and Medication Use	**N**	**%**
Do you have any chronic disease?		
Yes	40	13.4
No	250	86.6
Total	290	100
Which chronic disease do you have?		
Hypertension	04	10.0
Sinusitis	07	17.5
Rhinitis	03	7.5
Rheumatoide arthritis	02	5.0
Asthma	09	22.5
Cystic fibrosis	01	2.5
Sinusitis and rhinitis	01	2.5
Arrhythmia	01	2.5
Hypothyroidism	01	2.5
Bronchitis	01	2.5
Nephrocal	01	2.5
Chronic spontaneous urticaria	01	2.5
Migraine	01	2.5
Kidney stones	01	2.5
Endometriosis	01	2.5
Irritable bowel syndrome	01	2.5
Dyslipidemia and hypertension	01	2.5
Diabetes	02	5.0
Diabetes and hypertension	01	2.5

Total	40	100
Do you take medications?		
Yes	72	24.8
No	115	39.7
I do not use continuous medication	103	35.5
Total	290	100
Do you sometimes forget to take any medication?		
Yes	85	29.3
No	102	34.8
I do not use continuous medication	103	35.9
Total	290	100
Do you take any medication that you do not know the purpose for?		
Yes	23	7.9
No	267	92.1
Total	290	100
Do you have doubts if you need to take all the medications you use?		
Yes	50	17.2
No	240	82.8
Total	290	100
Do you have doubts if the medications you take are having the expected results?		
Yes	92	31.7
No	198	68.3
Total	290	100
Do you have doubts if the medications you take are safe?		
Yes	108	37.2
No	182	62.8
Total	290	100
Generally, when you have a health problem, where do you go?		
Hospital	126	43.4
UBS (Basic Health Unit)	70	24.1
Pharmacy	24	8.3
Self-medicate	44	15.2
Nowhere	05	1.7
Hospital, UBS, and self-medication	05	1.7
Hospital and UBS	07	2.4
Hospital, pharmacy, and self-medication	02	0.7
Hospital and pharmacy	01	0.3
Hospital and self-medication	03	1.0
Hospital, UBS, pharmacy, and self-medication	01	0.3
UBS and pharmacy	01	0.3
Self-medicate and UBS	01	0.3
Total	290	100
If there were a clinical service at the pharmacy school to evaluate the use of medications and monitor your health, how would you rate it?		
Excellent	240	82.8
Good	41	14.1
Fair	05	1.4
Useless	01	0.3
I don't know	03	1.0
Total	290	100

Source: Research data, 2024.

The health needs presented by the population and collected as detailed earlier were decisive for defining the following services to be offered at the Manoel Casado de Almeida

School Pharmacy: health education and screening; pharmacotherapy review; management of self-limited health problems; pharmacotherapeutic follow-up; medication organization procedures; blood pressure measurement; capillary blood glucose measurement; and determination of anthropometric measures. To this end, it was essential to develop a Situational Strategic Planning (SSP), with four (4) phases to achieve the set objectives, namely: the survey of the socio-economic, demographic, and epidemiological profile, and the definition of clinical services.

4. DISCUSSION

The Unified Health System (SUS) faces a major challenge with the high demand from the population, especially due to the increase in non-communicable chronic diseases (NCDs), which result from the global aging population. This epidemiological shift requires adjustments in public policies and professional practices to address new health needs, minimizing economic impacts and improving individuals' quality of life (RESTREPO et al., 2020).

Regarding the epidemiological profile, there was great difficulty in obtaining patient data from medical records. A study by Neves et al. (2018) on 388 medical records of patients with leprosy revealed that only 155 were analyzed due to incomplete entries. Another study on the validity and agreement of health service records for the elderly found issues such as illegibility and poor preservation of medical records, hindering data collection (ROCHA et al., 2020). These issues are similar to those encountered in this study.

According to Moraes et al. (2020), Brazil is the fourth country with the highest number of cases of diabetes mellitus in adults (14.3 million people). The 2013 survey pointed to a higher prevalence among women and residents of urban areas, which is confirmed by the data in Table 2. For hypertension, Soeiro et al. (2019) observed that between 2002 and 2012, 74.2% of patients registered with hypertension in the Brazilian northeastern state had only this NCD, with predominance in the 60 to 79 age group, similar to the information in Table 2.

Lobo et al. (2017) analyzed hypertension data from the PNAD of 1998, 2003, and 2008, noting an increase in the hypertensive population, with higher prevalence among women. In a study conducted by Abreu and Portela (2016) in Caxias-MA, 63.5% of the 200

hypertensive patients were women, similar to the data in Table 2, except for the predominant age group (70 to 79 years). This study also found incomplete entries in the medical records, particularly regarding marital status and occupation.

In the socioeconomic profile of the academic population, women, the 20 to 29 age group, and those with an income of up to half a minimum wage predominated. A study on university students in northern Paraná showed similar data, but with a predominantly income range between one and two minimum wages (TOMASINI; FERRAES; SANTOS, 2015), which differs from the current study. Furthermore, self-medication was mentioned by 89% of students at the State University of Amazonas (IURAS et al., 2016), similar to the data in Table 4, where the hospital is the most frequently sought place for care.

From these data, the implementation of pharmaceutical clinical services was relevant through the use of Situational Strategic Planning (PES), an efficient methodology for managing projects. PES allows for the analysis of real situations, planning solutions, and monitoring their execution (SCALERCIO; CZEPULA, 2017). In the study, the four stages of PES were applied, starting with the definition of problems and their causes, followed by the analysis of equipment and organization of services necessary for the Pharmacy School, as well as determining the feasibility of actions and obtaining materials for the pharmaceutical clinical services.

The services implemented include health education, screening, pharmacotherapy review, pharmaceutical care, and management of self-limiting health problems. Pharmacotherapy review aims to resolve issues related to the inappropriate use of medications, while pharmaceutical care involves multiple meetings to identify problems in treatments and propose solutions. The management of self-limiting problems is done by the pharmacist, who applies clinical knowledge to resolve signs and symptoms without the need for a medical prescription (CFF, 2016).

Health screening aims to identify undiagnosed diseases, and health education promotes individuals' autonomy in self-care. These services have shown significant benefits, such as a reduction in medication-related issues and improvement in patients' quality of life (PEREIRA, 2018; ARAÚJO et al., 2017; BARROS; SILVA; LEITE, 2020).

5. FINAL CONSIDERATIONS

It is concluded that the clinical pharmacy services, defined, structured, and organized through situational strategic planning, have made the Manoel Casado de Almeida School Pharmacy at UFCG fully capable of promoting, recovering, protecting, and maintaining individuals' health. The implementation of pharmaceutical care, aligned with the population's needs, not only enabled the provision of these services but also brought students closer to their future professional reality, strengthening the integration of education, service, and community.

REFERENCES

ABREU, W. A.; PORTELA, N. L. C. Prevalência de doenças concomitantes e complicações em hipertensos de uma área da estratégia “saúde da família” de Caxias-MA. São José dos Campos-SP-Brasil. **Revista Univap**, v. 22, n. 39, 2016.

ARAÚJO, E. O. et al. Intervenções Farmacêuticas em uma Unidade de Terapia Intensiva de um Hospital Universitário. Hospital Universitário. **Revista Brasileira de Farmácia Hospitalar e Serviços de Saúde**, v. 8, n. 3, p. 25-30, 2017.

BARROS, D. S. L.; SILVA, D. L. M.; LEITE, S. N. Serviços Farmacêuticos Clínicos na Atenção Primária à Saúde do Brasil. Rio de Janeiro. **Trabalho, Educação e Saúde**, v. 18, n. 1, 2020.

CFF. CONSELHO FEDERAL DE FARMÁCIA. **Serviços farmacêuticos diretamente destinados ao paciente, à família e à comunidade: contextualização e arcabouço conceitual**/ Conselho Federal de Farmácia- Brasília. Brasília, 2016.

COUTO, L. M.; MENDONÇA, A. E.; SEBASTIÃO, E. C. O. A Farmácia Escola da Universidade Federal de Ouro Preto: da origem aos dias atuais. **Brazilian Journal of Health and Pharmacy**, v. 1, n. 2, 2019.

IBGE. Instituto Brasileiro de Geografia e Estatística. **Cidades – Cuité**. 2016. Disponível em: <https://cidades.ibge.gov.br/xtras/perfil.php?lang=&codmun=250510&search=paraibacuite>. Acesso em: 25 de dezembro de 2019.

IURAS, A. et al. Prevalência da automedicação entre estudantes da Universidade do Estado do Amazonas (Brasil). **Revista Portuguesa de Estomatologia, Medicina Dentária e Cirurgia Maxilofacial**, v. 57, n. 2, p. 104-111, 2016.

LOBO, L. A. C. et al. Tendência temporal da prevalência de hipertensão arterial sistêmica no Brasil. Rio de Janeiro. **Caderno de Saúde Pública**, v. 33, n. 6, 2017.

MALAT, D. C. et al. Mulheres e avaliação das desigualdades na distribuição de fatores de risco de doenças crônicas, Vigitel 2016-1017. **Revista Brasileira Epidemiologia**, v. 23, 2020.

MANETTI, C.; LEITE, M. A. L. Planejamento Estratégico Situacional: Relato de uma Experiência em uma Farmácia Municipal do Sul do Brasil. Ijuí. **Revista Contexto & Saúde**, v. 16, n. 30, 2016.

MARTINS, A. C. T. et al. O Projeto AcolheSUS na Atenção Primária à Saúde do Distrito Federal, Brasil. **Ciência & Saúde Coletiva**, v. 24, n. 6, p. 2095-2103, 2019.

MELO, D. O.; CASTRO, L. L. C. A contribuição do farmacêutico para a promoção do acesso e uso racional de medicamentos essenciais no SUS. **Ciência & Saúde Coletiva**, v. 22, n. 1, p. 235-244, 2017.

MORAES, H. A. B. et al. Fatores associados ao controle glicêmico em amostra de indivíduos com diabetes mellitus do Estudo Longitudinal de Saúde do Adulto, Brasil, 2008 a 2010. **Epidemiologia e Serviços de Saúde**, v. 29, n. 2, 2020.

NEVES, T. V.; SOARES, K. R.; CASTRO, J. G. D. **Qualidade dos registros nos prontuários de pacientes de hanseníase no município de Palmas, Tocantins**. Dissertação (Mestrado em Ciências da Saúde) – Universidade Federal do Tocantins, Programa de Pós-Graduação em Ciências da Saúde, Palmas, 2018.

OLIVEIRA, J. H.; SOUZA, M. R.; MORAIS NETO, O. L. Enfrentamento das doenças crônicas não transmissíveis na atenção primária à saúde em Goiás: estudo descritivo, 2012 e 2014. **Epidemiologia e Serviços de Saúde**, v. 29, n. 5, 2020.

PEREIRA, M. M. D. G. **Implantação de Serviços Farmacêuticos Clínicos em uma Universidade Federal do Estado da Paraíba**. Trabalho de Conclusão de Curso-Universidade Federal da Paraíba. João Pessoa, Paraíba, p. 42, 2018.

RESTREPO, S. F. et al. Gasto privado com medicamentos entre idosos e o comprometimento da renda familiar em um município de médio porte no estado de São Paulo. **Revista Brasileira de Epidemiologia**, v. 23, 2020.

ROCHA, V. C. L. G. et al. Validade e Concordância do registro em prontuário do uso de serviços da Rede de Atenção à Saúde por idosos. **Ciência & Saúde Coletiva**, v. 25, n. 6, p. 2103-2112, 2020.

RODRIGUES, J. P. V.; PEREIRA, L. R. L. Farmácia Clínica em Ambiente Hospitalar: Perspectivas e Estratégias para Implementação. **Journal of Applied Pharmaceutical Sciences – JAPHAC**, v. 3, S. 1, p. 7-10, 2016.

SANTOS, F. T. C.; SILVA, D. L. M.; TAVARES, N. U. L. Pharmaceutical clinical services in basic care in a region of the municipality of São Paulo. **Brazilian Journal of Pharmaceutical Sciences**, v. 54, n. 3, 2018.

SCALERCIO, P. L. A.; CZEPULA, A. I. S. Planejamento Estratégico Situacional: Estudo de Caso em uma Farmácia Básica Municipal. Curitiba-PR. **Visão Acadêmica**, v. 18, 2017.

SIMÃO, L. T. S. S. et al. Perfil dos idosos com doenças crônicas não transmissíveis internados em Unidade de Terapia Intensiva. **Enfermagem em Foco**, v. 10, n. 1, p. 76-80, 2019.

SOARES, A. L. P. P. P.; COSTA, M. A.; TEIXEIRA, J. J. V. Nível de entendimento sobre prescrição farmacêutica no Brasil. Estamos preparados para essa nova realidade? Paraná. **Infarma**, v. 28, p. 149-156, 2016.

SOEIRO, V. M. S. et al. Perfil dos pacientes acompanhados pelo SIS-HiperDia em um estado do nordeste brasileiro. **Archives of Health Sciences**, v. 26, n. 1, p. 28-30, 2019.

TOMASINI, A. A.; FERRAES, A. M. B.; SANTOS, J. S. Prevalência e fatores da automedicação entre estudantes universitários no norte do Paraná. **Biosaúde**, v. 17, n. 1, 2015.

VASCONCELOS, T. Y. L.; CANGUSSÚ, I. M.; MESQUITA, R. J. M.; MARQUES, F. V. B. S.; NASCIMENTO, A. A. A Farmácia Clínica no âmbito da Farmácia Magistral. **Journal of Applied Pharmaceutical Sciences – JAPHAC**, 2016.

VIEIRA, B. S, et al. A importância da Farmácia Universitária frente aos serviços clínicos prestados à comunidade. Rio de Janeiro. **Revista SUSTINERE**, v. 6, n. 2, p. 321-336, 2018.