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Article

Outpatient pharmaceutical office: access to medicines in public health

Belmiro Morgado Junior[1]*, César Augusto Abreu-Pereira[2], Maria Amelia Zanon Ponce[3], Rosana De Gasperi Pagliuso[3], Adriana Melo Jorge Santos[4], Adriane Lopes Medeiros Simone[5]

[1]Hospital Escola Emílio Carlos, São Paulo, Brazil, [2] Universidade Estadual Paulista – UNESP, São Paulo, Brazil, [3] Faculdade de Medicina de São josé do Rio Preto, São Paulo, Brazil, [4]Universidade Central de Oklahoma, Oklahoma, USA, [5]Secretaria de Estado da Saúde de São Paulo, São Paulo, Brazil

We evaluated the implementation of the outpatient pharmaceutical office in a teaching hospital regarding the access to medicines available in the Unified Health System – SUS. This is a descriptive-analytical study, based on secondary data analysis of 735 appointments performed by the pharmacist from 2015 to 2017. Of the drugs prescribed to patients attended at the outpatient pharmacist office, 86.39% were listed in the National List of Essential Medicines - RENAME, of which 95.43% belonged to the Specialized Component of Pharmaceutical Assistance. Evaluating the patient's diagnosis against the inclusion criteria of the Clinical Protocols and Therapeutic Guidelines (PCDT), that the most frequent pharmaceutical interventions were: adequacy of the medication request documents (56.4%) and examination requests for pharmacotherapeutic follow up (28.5%). When the prescribed drugs were not included in RENAME/PCDT, the intervention was accepted in 90.3% of the proposals for exchange with available drug in SUS. Still, it was possible to refer the patient to primary care for renewal of continuity of treatment in 95.1% of cases. In conclusion, the role of the clinical pharmacist contributes to the resolution of untreated health problems by promoting access to medicines within the scope of SUS and their rational use in accordance with the PCDT.

Keywords: Access to essential medicines. Pharmaceutical care. Ambulatory care. Health policy. Unified health system.

INTRODUCTION

With the increase in quality of life and the advent of new health treatments, we have experienced a change in the demographic scenario, characterized by the accelerated increase in life expectancy around the world and in Brazil (World Health Organization, 2015), reflecting significantly in the health area due to increased burden of diseases, especially non-communicable chronic diseases, which require continuous treatments to maintain health (Prohaska, Anderson, Brinstock, 2012; Nasri, 2008).

Treatment of chronic diseases usually includes long term use of medications. Although these are effective in controlling disease, their benefits are often not reached because patients lack access to or adherence to treatment (Ponce *et al.*, 2019). Factors that contribute to poor adherence are numerous, the main reasons are intolerance to adverse reactions, the cost and access to medicines through public health (Brown, Bussell, 2011; McKeown, 2009). Regarding to access to medicines, the National Medicine Policy (Ministério da Saúde, Brasil, 1998), laid down in Ordinance 3.916 of 1998, guarantees the use of safe, effective and quality medicines at the lowest possible cost, and their acquisition and maintenance is the responsibility of the three spheres managers of the Unified Health System (SUS), working in close partnership.

From 2011, new normative acts regulated the principle of comprehensiveness, establishing criteria for the selection of health technologies in the SUS. Law No.

***Correspondence:** Morgado-Junior, Belmiro. Rua Miguel Chaim, 242, São Sebastião, Catiguá, São Paulo, 15870-000, Brasil. E-mail: belmiro.mjr@gmail.com. Orcid: https://orcid.org/0000-0002-9013-0655

12,401, of April 28, 2011 (Ministério da Saúde, Basil, 2011), establishes that access to medicines is "based on the drug lists established by the federal SUS manager, observing the competences established in this law", and the responsibility for the supply of medicines is agreed upon by the a commission formed by managers from the federal, municipal and state levels (Comissão Intergestores Tripartite). Thus, the National List of Essential Medicines (RENAME) plays a strategic role in health policies, presenting the a list of medicines used within the scope of SUS (Ministério da Saúde, 2018), aiming to meet the fundamental principles of universality, equity and integrality.

However, given the dynamics of health and its possible comorbidities, considering the innovative pharmacological arsenal available to fight and control diseases, the existence of refractory and non-responsive to available drugs, or diseases orphans of treatment in RENAME, in the State of Sao o Paulo, medicines that are not available in RENAME may be requested, by public or private health institutions, on an exceptional basis, exhausted all available therapeutic alternatives, and with strong level of evidence for their use (Governo do Estado de São Paulo, 2018).

When prescribing a drug not available in RENAME, based on the State's refusal to offer the requested medication on an exceptional basis, there is a risk of fomenting judicialization in health, that may be perverse: on one hand, it meets an unmet individual need not covered by the health system; on the other hand, it may indicate an imbalance in pharmaceutical care policy (Biehl, 2016). In this context, the pharmacist acts in direct patient care, promoting the rational use of medicines and other health technologies, redefining their practice based on the needs of patients, family, caregivers and society, can promote access and adherence to treatments, impacting on cost reduction, tangible and intangible cost reduction for the entire health system (Melo, Castro, 2017; Ministério da Saúde, Brasil, 2013).

In pharmaceutical care, even if distinct, the technical - administrative cycle is inseparable from the clinical management of the drug, to promote the rational use of drugs, with an impact on better clinical and economic results for the health system (Correr, Otuki, Soler, 2011).

Incorporating pharmacists as members of the healthcare team in direct patient care is a viable solution to help improve health care (Chisholm-Burns *et al.*, 2010) as well as contributing to patient safety.

Therefore, this study aimed to analyze the impact of an outpatient pharmaceutical office in a medium-sized teaching hospital, on the resolution of untreated health problems, focusing on access to medicines available in public health.

MATERIAL AND METHODS

This is a descriptive-analytical cross-sectional study, carried out at the outpatient pharmaceutical office of the Emílio Carlos Hospital School - Padre Albino Foundation (FPA), in Catanduva - SP.

Emílio Carlos Hospital School - HEEC assists patients from Catanduva and microregion (19 municipalities) with the promotion of low and medium complexity health care. It attends about 6,000 hospitalizations per year, being the largest concentration in the age group of 65 to 79 years. The Multi-Specialty Teaching Outpatient Clinic annually serves about 60,000 patients and has 39 offices for outpatient care in multiple specialties, including the pharmaceutical office.

In August 2015, a pharmacy outpatient office was established to treat patients with difficulty in adhering to treatment due to the difficulty of access to medicines, especially those from the Specialized Component of Pharmaceutical Assistance (CEAF), popularly known as "high cost". The outpatient pharmaceutical care is performed twice a week, without scheduling, in order of arrival of the patient, and the demands related to access and rational use of medicines are accepted.

Data were obtained from secondary sources in the outpatient pharmaceutical office using a Microsoft Excel® spreadsheet. We analyzed the data of all patients who attended the outpatient pharmacist office and that received intervention, from August 2015 (period of start of care records) until December 2017.

Demand for care at this outpatient office was classified using the Third Consensus of Grenada on Drug Related Problems (DRP) which defined the term "Negative Outcomes associated with Medication" (NOM) to refer to patient health problems attributable to the

use (or disuse) of drugs that do not meet the therapeutic goals (Hernández, Castro, Dáder, 2014). In this study, we included only the patients whose search for the outpatient pharmacist office focused on the need for medication due to untreated health problem.

From August 2015 to December 2017, 753 visits were registered in the outpatient pharmaceutical office of Emílio Carlos Hospital School. Three inclusion criteria were used: 1 - prescription of medicines; 2 - Industrialized-allopathic; and 3 - The need for medication for untreated health problems. Considering the first criterion, "prescription of medicines", seven cases referring to the prescription of nutritional formula and one case regarding inputs such as diapers were excluded. When applying the second criterion of "industrialized - allopathic medicines", two cases referring to manipulated formulas were excluded; and in the third criterion "need", seven cases referring to safety and one case concerning effectiveness were excluded. The final study sample consisted of visits.

Variables related to the patient (gender, age, demands' nature and prescription drugs) and the institutional process (clinic of origin; outpatient follow-up or hospital discharge and resolution) were collected.

The variable "nature of demand" was stratified between:

1. Adequacy to the Clinical Protocols and Therapeutic Guidelines (PCDT): for drugs listed in RENAME, the Municipal List of Essential Medicines (REMUME) and State List of Essential Medicines (RESME), considering nonconformities in the prescriptions, report and consent form and the need for laboratory tests;
2. Non-compliance: for incorrect prescriptions, for medicines not available in RENAME, without inclusion criteria in the protocols, prescribed by trade name or unavailable presentation and administrative requests denied;
3. Administrative request: for non-responsive cases, refractory to drugs or treatment orphans in RENAME, in which the documents were requested to proceed access on an exceptional basis via São Paulo State Department of Health;
4. Demand for Primary Care: refers to cases of revaluation of the Specialized Component of Pharmaceutical Assistance requests, which are performed by general practitioners from basic health units, according to the municipalities' work process.

The prescribed drugs were stratified into RENAME (Basic Component of Pharmaceutical Assistance, Strategic Component of Pharmaceutical Assistance, Specialized Component of Pharmaceutical Assistance, National List of Inputs, and National List of Medicines for Hospital Use), Non RENAME (Non Standardization Medicines), and other drugs (Chemotherapy protocol drugs and supplies available in a national program called "Farmácia Popular do Brasil").

In addition, the drugs were classified according to the WHO-recommended Anatomical Therapeutic Chemical classification system – ATC (World Heatlh Organization, 2001), in which the active substances are classified in a hierarchy with five different levels. The first level comprises the main anatomical/ pharmacological groups. Each ATC main group or 1st levels is divided into 2nd levels which could be either pharmacological or therapeutic groups. The 3rd and 4th levels are chemical, pharmacological or therapeutic subgroups and the 5th level is the chemical substance.

In this study, the drugs were classified at level 1, as follows: A - Alimentary tract and metabolism; B - Blood and blood forming organs; C - Cardiovascular system; D - Dermatologicals G - Genito urinary system and sex hormones; H - Systemic hormonal preparations, excl. sex hormones and insulins; J - Antiinfective for systemic use; L - Antineoplastic and immunomodulating agents; M - Musculo-skeletal System; N - Nervous system; P - Antiparasitic products, insecticides and repellents; R - Respiratory System; S - sensory organs; V - Various.

Regarding the variable "resolutivity", it was classified into two demands and four subcategories:

Clinical Intervention

- Clinical Pharmacy, when there was demand from the professional and his qualifications;

- Exchange, with analysis and proposals for drug exchange, considering RENAME

Administrative Intervention

- Correction/filling of documentation for unfounded cases;
- Renewal of continuing treatment with CEAF drugs, quarterly required.

For data analysis, the descriptive analysis was initially used to identify the profile of the sample studied, including the variables analyzed and their consequences. Data were analyzed absolutely, relative, measures of central tendency and variability. In the inferential scope, the Mann Whitney non-parametric test was used to verify the association between the variable's demands' nature with resolution, class of drugs and medical specialty. The significance level of 0.05 was adopted. Statistical analyzes were performed using the SPSS Statistics Software (Version 23), linked to the features of the Excel tool (version 2.016).

The present study was submitted to the Research Ethics Committee - CEP, through the Brazil Platform, CAAE 88828318.9.0000.5430, approved with the opinion number 2,658,260. In accordance with Resolution 466 of 2012, this research project exempts the Informed Consent Form (ICF), for using the database, formally requested and approved by the proposing institution.

RESULTS AND DISCUSSION

During the study period, 735 outpatient consultations were performed, corresponding to 486 patients attended, corresponding and on average to 1.5 medicines per patient. Regarding the population served, 50.1% were female, with a mean age 57.72 years (± 18.49 years). Also 91.0% of the patients assisted were in outpatient follow-up and 9.0% were after hospital discharge.

This study found a higher frequency of patients aged 41 to 80 years, meeting the aging process of the Brazilian population, which has a growing life expectancy (World Health Organization, 2015). In this process, senility favors a transition of health conditions, with a decrease in the occurrence of acute conditions and an increase in chronic diseases, being the drug the technology most used by the population (Oliveira, Bastos Jr, Caldana, 2015).

In this scenario, access to medicines becomes fundamental to guarantee a longer life expectancy, with better quality, besides being an entitlement guarantee indicator, as pointed out by WHO (Hunt, Khosla, 2008). Although studies in Brazil show high prevalence of access to medicines (over 90%), such access still occurs unevenly, coexisting with large social inequities, and these data are not as high when considering free access to medicines.

A study based on the National Survey on Access, Use and Promotion of Rational Use of Medicines (PNAUM) (Tavares *et al.*, 2016) found that only half of Brazilians (47.5%) had access to all their medicines for the treatment of chronic diseases free of charge. In another longitudinal study conducted with 9,412 elderly Brazilian patients, the prevalence of underuse of drugs was 10.6% (Loyola-Filho *et al.*, 2018) due to financial constraint. These data indicate the need to review the feasibility of effective access to medicines through public health, to ensure adequate drug treatment and control of chronic diseases, including avoiding burdening secondary and tertiary care through the return of patients to health services.

In the sample of this study, the patient has a diagnosed health problem, but is without the treatment he needs. At the outpatient pharmaceutical office, RENAME and REMUME are initially consulted for the analysis of the availability of prescribed drugs in public health. Subsequently, the demands are accepted and the data are recorded for later analysis with the patient's medical record. Thus, it is possible to use the indicators proposed by WHO to assess the conditions of pharmaceutical services (World Health Organization, 2006), which aim to equate the drugs available in public health with those requested.

Medicines under the CEAF are evaluated for the need for the prescribed drug, according to the diagnosis and adequacy to PCDT, according to inclusion criteria, such as the International International Classification of Diseases - ICD and laboratory tests and images, within validity period. These inclusion criteria of CEAF are consulted on the website (Governo do Estado de São Paulo, 2019) of the São Paulo State Health Department.

For all CEAF protocols, at the study site, the initial process is performed by the specialist, in accordance

with the good practices set out in Standard Operating Procedure. Quarterly revaluation of continuity of treatment, when not required by PCDT specialist doctors, may be performed at primary care units.

If exams have not been requested or are due for treatment follow-up under the PCDT, the clinical pharmacist is entitled to issue the exam request in accordance with Resolution 585 of 2013 (Ministério da Saúde, Brasil, 2013), Chapter I, paragraph XI: "Request laboratory tests, within the scope of their professional competence, in order to monitor the results of pharmacotherapy".

In situations where the prescribed drug is not available by SUS, based on the medical diagnosis, the alternative technologies available in public health are studied for possible exchange, which are discussed and validated with the patient's doctor, who performs the prescription adequacy. In the absence of alternatives among the pharmaceutical technologies available from RENAME, or limitations to the inclusion criteria for the PCDT, in the state of São Paulo, in exceptional cases, it is possible to fill out an administrative request of the drug, to be evaluated by the State Department of Health.

Thus, when reflecting on access to medicines, it is necessary to emphasize the importance of the role of the pharmacist inserted in the services that, through the pharmaceutical consultation, contributes to the identification and management of drug-related problems, for better results in clinical outcomes, reduced exam expenses and shorter hospital stay (Morgado-Jr *et al.*, 2015).

The pharmacist is the professional with competence to enable the integrality of patient care, regarding the pharmacological regimen, not limited to the dispensation of the medication (Storpirtis *et al.*, 2018). It is foreseen in the National Curriculum Directive of the Undergraduate Pharmacy Course (Ministério da Saúde, Brasil, 2017), the need for professional training beyond the technical profile, and that they have competencies that integrate knowledge, in which skills and attitudes (Limberger, 2013), having 50% of the course time structured in the Health Care axis, for assertive communication, relationship management and conflict management are recommended. However, in a study on the teaching of communication skills in Brazil, gaps were identified in pharmacy undergraduate courses, with that content missing in 25.7% curriculum matrices (Araújo *et al.*, 2019).

With the direct interaction with other health professionals, especially the prescribing physician, the pharmacist opens the dialogue about the case, to contribute to the prescription of drugs that meet the pharmacotherapeutic needs with the rational use of the medicines, which confers the efficacy, safety and the lower cost of treatment, as well as impact on clinical, economic and humanistic health outcomes.

Regarding the demands attended at the outpatient pharmaceutical office, 86.4% were present at RENAME, and of these, 95.4% were arranged in the CEAF. The drugs do not present in RENAME comprised 13.3% of the study population.

In this study, the most prescribed RENAME medicines, classified according to the WHO-recommended ATC, were: 20.0% Nervous System, 19.8% Antineoplastic and Immunomodulating Agents, and 17.3% Blood and Blood Forming Organs, as shown in Table I. Regarding the nervous system, the main drugs prescribed were for the treatment of Alzheimer's disease (donepezil, rivastigmine and galantamine) and for chronic pain (morphine and gabapentin). The most prescribed antineoplastic drugs and immunomodulating agents were immunobiological drugs (adalimumab, infliximab, tocilizumab and golimumab) and azathioprine and methotrexate, Al lest, related to blood and blood forming organs the most frequent drugs were clopidogrel and alfaepoetin.

When analyzing prescriptions not available from RENAME, the most common drug classes were Blood and blood-forming organs (29.6%), Musculo-skeletal System (17.6%), and Nervous System (16.3%) - Table I. Among the blood and blood-forming organs drugs, those most prescribed were enoxaparin, ticagrelor and rivaroxaban; of the Musculo-skeletal System were diacerein, chondroitin and glucosamine, and within the Nervous System class the most prescribed drugs were antidepressants (venlafaxine and duloxetine), for attention deficit disorder (methylphenidate) and for pain (pregabalin).

Analyzing the amount of prescription drugs in line with RENAME, a high number of medications contemplated by SUS was observed in this study when compared to other studies (Lima *et al.*, 2017).

We infer that it's because of a health education work performed at the service with medical staff, and through the organization of an internal network (Intranet) in the outpatient clinics that allows the use and saving of the reports for requesting, evaluating, and authorizing CEAF drugs for future care, as well as the preparation of video tutorials and periodic meetings for presentation of regulatory instruments such as RENAME and PCDT, to the professionals. In accordance with the mission of the service, since it is a teaching hospital, from 2016, students in the fifth year of medical internship, receive preceptorship in the pharmaceutical office, and monitor the attendance, to understand the dynamics and structure of Pharmaceutical Services, the PCDT and the importance of correctly completing the documentation (Morgado-Jr *et al*., 2017).

However, there is still a long way to go to reach the goal of 100% of prescriptions with medicines available in SUS (Lima *et al*., 2017), as recommended by WHO (World Health Organization, 2006), considering the organization of the regional ambulatory service, since HEEC serves 19 municipalities, where it becomes a challenge for the prescriber to know each of the REMUME.

Regarding to medical specialties, the clinics that originated the highest demands for medicines provided by RENAME were Cardiology (24.4%), Rheumatology (20.3%) and Geriatrics (12.0%). The clinics that most originated demands for medicines not disposed in RENAME were Cardiology (26.5%), Rheumatology (18.4%) and Endocrinology (12,2%).

In cardiology, in addition to the blood and blood-forming organs drugs previously mentioned, there was also a higher frequency of prescription of drugs related to the cardiovascular system (trimetzidine and ivabradine). In rheumatology, therapies for the treatment of skeletal muscle (chondroitin and glucosamine) were found more frequently, and in endocrinology, treatments for metabolism (thiazolidinediones and similar insulins).

Considering the WHO recommendations for the elaboration of the list of essential drugs (those that meet the epidemiological profile of a given population), a study correlated the global burden of diseases in Brazil with the drugs available from RENAME and calculated the Disability Adjusted Life of Years (DALY), which is the sum of years of life lost due to premature death. The results showed that the RENAME of 2002, 2006 and 2008 obtained a DALY of 91%; 86% in 2010 and 87% in 2012, as some treatments were not fully covered by the drugs on the list, suggesting the need for updating the list of drugs available in the SUS, as well as the inclusion criteria in PCDT, correlating them to the nosological profile of the population. Brazilian (Figueiredo, Schramm, Pepe, 2014).

Based on the global burden of disease, cardiovascular diseases are the main cause of morbidity and mortality in Brazil and worldwide (OPAS, 2017), and, therefore, it is necessary to discuss about blood and cardiovascular system drugs, especially those not available in SUS. However, when analyzing the medicines available at RENAME, it should be considered that the incorporation, exclusion or alteration of health technologies by SUS, as well as the elaboration and updating of PCDT are performed by CONITEC (National Commission for Incorporation of Technologies in SUS), with defined criteria and deadlines, based on scientific evidence, economic evaluation and the impact of incorporating technology on public health (Ferreira-da-Silva *et al*., 2012).

When discussing medications that could be inserted into RENAME, given the increase observed in its medical prescriptions and considering recently pointed scientific evidence, the influence of the pharmaceutical industry on prescribers should be considered. In Brazil, there are no estimates on investment in pharmaceutical industry relationships to influence prescriptions, public policies and joint actions with the government. In the United States, Public Department records show that among industry spending, pharmaceuticals rank first with public private partnerships. However, the issue is not on the Brazilian public health agenda (Paumgartten, 2016). On the other hand, lobbying associations or groups that fight for minority interests, with inferiority and superiority tests, and cost-effective economic analyzes, can boost the incorporation of technologies, especially for orphan diseases treated in public health.

Regarding the demands' nature, 73.9% comprised adjustments to PCDT/RENAME, 13.9% had nonconformities; 6.7% were administrative request for drugs to refractory, unresponsive or lack of pharmacotherapy options in RENAME and 5.5% were

referred to primary care for CEAF prescription/process renewal of according to Table II.

By associating the demands' nature with case resolution, statistical significance was found (p = 0.000). For resolutions of the 735 cases attended, 543 (73.9%) were related to adjustments to PCDT/RENAME, of these 56.4% to adequate documentation and 28.5% required assistance from the clinical pharmacist. In 102 non-compliant cases, 90.2% required intervention to drug exchange considering the essential medicines lists. There were 49 cases of non-standard drugs administrative request, and 81.6% of these cases the pharmacist intervened offering alternatives available in public health, avoiding extra public expenses. For Primary Care there were 41 cases in which 95.1% of them were referred for process renewal, according to Table III.

When considering the demands' nature separately, and the drugs whose demand were related only to the adequacy of RENAME/PCDT, a statistically significant association was found between the classes of drugs and the resolution (p = 0.009). The main anatomical/ pharmacological groups that had the highest resolution of the clinical pharmacy were those related to the Cardiovascular System (23.2%), Nervous System (21.9%), Blood and Blood Forming Organs (13.5%) and immunomodulating agents (13.5%), according to Table IV.

As shown in Table IV, the drug classes for completing documentation were Blood and Blood Forming Organs (20.9%), Cardiovascular System (18.3%), and Nervous System (18.3%). Regarding resolution that required drug exchange, higher frequency was found in the those drugs related to the Nervous System (50.0%), Blood and blood forming organs (33.3%) and Antineoplastic and immunomodulating agents (16,7%). On the other hand, in the resolution that required renewal of CEAF process, 69.7% of the cases were related to antineoplastic and immunomodulatings agents. No statistically significant association was found between resolutivity and drug classes considering non-compliant demands (p = 0.639) and those originating from Primary Care (p = 0.822).

Analyzing the demands assisted in the pharmaceutical office, it was found that most of them comprised the adequacy of the request with the PCDT/RENAME. The prescription of non-RENAME drugs either by a different indication or by pharmaceutical industry influence may lead to lawsuits.. Currently, 80% of cases of judicialization in health are related to drugs (Secom TCU, 2017). Given this, the judiciary has resorted to the Technical Support Center (NAT) (Conselho Nacional de Justiça, 2018) to assess the need for the prescribed technology, as well as to propose alternatives available in public health, promote fair access and minimize the impact on public budget.

In the study pharmacist's office, there was a significant increase in administrative requests at risk of potential prosecution for refractory, unresponsive, or absent pharmacotherapy for disease treatment in public health. However, in most cases (81.6 %) it was possible to carry out interventions, using scientific technical tools and evidence-based medicine, with the proposal of exchange with essential medicines.

It was also found that most of the cases (90.2%) whose demand origin was non-compliance, there was pharmaceutical intervention through the exchange of drugs not available in public health for those technologies present in RENAME. Among the demands with the need for exchange, quetiapine prescriptions were observed for the management of Alzheimer's neuropsychiatric symptoms (Press, Alexander, 2019), not contemplated in PCDT, and only released for cases of schizophrenia, schizoaffective disorder and bipolar affective disorder. Also required were exchanges with the "dual" antidepressants, serotonin and selective noradrenaline reuptake inhibitors (venlafaxine and duoxetine), an orphan class in RENAME 2018 (Ministério da Saúde, 2018) replaced by Selective Serotonin Reuptake Inhibitors - SSRIs (fluoxetine); and for chronic pain, tramadol was replaced by an equivalent opioid (codeine).

For cases whose demand was related to process adequacy to the PCDT/RENAME processes, in little more than half, the adequacy to the documentation was performed and others required clinical pharmaceutical services, mainly to recommended exams, as requested in the PCDT.

In this study we found cases of nonconformities, referring to incorrect prescriptions, prescribed by trade name or unavailable presentation. It should be emphasized that the medical prescription must contain parameters listed by the National Patient Safety Protocol

(Ministério da Saúde, 2013), such as identification of the patient, prescriber, institution and date of prescription, legibility and use of abbreviations, indication, calculation of doses and quantity of drugs, allergies, and the name of the drug should be prescribed using the Brazilian common name, and in its absence, the international common name. This result brings subsidies to discuss the need for greater awareness of prescribers, since the search for correction of prescriptions with incorrect filling generates a rework for the prescriber himself, a work for the pharmacist and implies the non-access to the drug for the patient, and this event is preventable.

Finally, from the results of this study, it is possible to observe the importance of the pharmacist's role in solving the demands arising drug prescriptions, both in the interventions performed and in the adequacy of the drug requests to the PCDT. However, it should be recognized that these pharmacist's activities, performed in the public pharmaceutical office, could be expanded to supplementary health, private practice, pharmacies and drugstores, in promoting access to medicines, and pharmacotherapeutic monitoring for better disease control. In addition, the clinical pharmacist may be even more resolute by prescribing pharmacological and non-pharmacological therapies, according to Federal Pharmacy Council Resolution 585 (Conselho Federal de Farmácia, 2013a).

That rule also brings the possibility of the clinical pharmacist to prescribe "medicines whose dispensation requires medical prescription, if it is conditional on the existence of prior diagnosis and only when provided for in programs, protocols, guidelines, or technical standards approved for use in healthcare institutions, or when formalized collaboration agreements with other prescribers or health institutions", as provided in Article 6 of Resolution 586 (Conselho Federal de Farmácia, 2013b). The logical model of pharmaceutical care can be adapted from the needs and understanding of managers in health services (Simone, Lieber, Tanaka, 2018).

The pharmacist's role in direct patient care, technically trained, with communication skills and conflict management, contributes to the resolution of untreated health problems by promoting access to medicines and their rational use in accordance with SUS guidelines and legislation. Also, the potential to mitigate administrative processes of medicines not available in SUS is identified, as well as to cope with the phenomenon of judicialization of health.

It is recognized as a limitation of this study, not having sought the events of commitment in the money transfer of the institution, to understand the cases that drugs were judicialized.

TABLE I - Frequency of medications included in RENAME, Non-RENAME and Others types of medications, according to the ATC classification in the outpatient pharmacist office of Emílio Carlos Hospital School, August 2015 to December 2017

ATC	RENAME N(%)	NON RENAME N(%)	Others N(%)	TOTAL N(%)
A	51 (8,03)	14 (14,29)	0 (0,00)	65 (8,84)
B	110 (17,32)	29 (29,59)	0 (0,00)	139 (18,91)
C	106 (16,69)	9 (9,18)	0 (0,00)	115 (15,65)
D	0 (0,00)	2 (2,04)	0 (0,00)	2 (0,27)
G	12 (1,89)	4 (4,08)	0 (0,00)	16 (2,18)
J	4 (0,63)	0 (0,00)	0 (0,00)	4 (0,54)
L	126 (19,84)	5 (5,10)	2 (100,00)	133 (18,10)
M	17 (2,68)	17 (17,35)	0 (0,00)	34 (4,63)

TABLE I - Frequency of medications included in RENAME, Non-RENAME and Others types of medications, according to the ATC classification in the outpatient pharmacist office of Emílio Carlos Hospital School, August 2015 to December 2017

ATC	RENAME N(%)	NON RENAME N(%)	Others N(%)	TOTAL N(%)
N	127 (20,00)	16 (16,33)	0 (0,00)	143 (19,46)
P	7 (1,10)	0 (0,00)	0 (0,00)	7 (0,95)
R	63 (9,92)	2 (2,04)	0 (0,00)	65 (8,84)
S	6 (0,94)	0 (0,00)	0 (0,00)	6 (0,82)
V	6 (0,94)	0 (0,00)	0 (0,00)	6 (0,82)
TOTAL	635 (100,00)	98 (100,00)	2 (100,00)	735 (100,00)

Caption: A - Alimentary tract and metabolism; B - Blood and blood forming organs; C - Cardiovascular system; D - Dermatologicals; G - Genito urinary system and sex hormones; H - Systemic hormonal preparations, excl. sex hormones and insulins; J - Antiinfective for systemic use; L - Antineoplastic and immunomodulating agents; M - Musculo skeletal System; N - Nervous system; P - Antiparasitic products, insecticides and repellents; R - Respiratory System; S - sensory organs; V - Various.

TABLE II - Frequency of the demand's nature of the outpatient pharmaceutical office of Emílio Carlos Hospital School, August 2015 to December 2017

Demand's nature	N (%)
Adequacy to PCDT	**543 (73,9)**
Non-compliance	**102 (13,9)**
Administrative request	**49 (6,7)**
Demand for Primary Care	**41 (5,5)**
TOTAL	**735 (100,0)**

TABLE III - Association between the demands' nature and the resolution in the outpatient pharmaceutical office of Emílio Carlos Hospital School, August 2015 to December 2017

Demand/ RESOLUTION	Adequacy to PCDT N(%)	Non-compliance N(%)	Administrative request N(%)	Demand for Primary Care N(%)	TOTAL	P
Clinical Pharmacy	**155 (28,5)**	**5 (4,9)**	**0 (0,0)**	**1 (2,4)**	**161 (21,9)**	**0,000**
Drug exchange	**6 (1,1)**	**92 (90,2)**	**40 (81,6)**	**1 (2,4)**	**139 (18,9)**	
Document correction	**306 (56,4)**	**5 (4,9)**	**9 (18,4)**	**0 (0,0)**	**320 (43,5)**	
Renewal of continuing treatment with CEAF drugs	**76 (14,0)**	**0 (0,0)**	**0 (0,0)**	**39 (95,1)**	**115 (15,7)**	
TOTAL	**543 (100,0)**	**102 (100,0)**	**49 (100,0)**	**41 (100,0)**	**735 (100,0)**	

TABLE IV - Association between the resolutivity and drugs, according to the ATC classification, of the demands that required RENAME/PCDT adequacy, at the outpatient pharmaceutical office of Emílio Carlos Hospital School, August 2015 to December 2017

ATC	Clinical Pharmacy N (%)	Document correction N (%)	Drug exchange N (%)	Renewal of continuing treatment with CEAF drugs N (%)	TOTAL N (%)	P
A	15 (9,68)	26 (8,50)	0 (0,00)	0 (0,00)	41 (7,55)	0,009
B	21 (13,55)	64 (20,92)	2 (33,33)	6 (7,89)	93 (17,13)	
C	36 (23,23)	56 (18,30)	0 (0,00)	2 (2,63)	94 (17,31)	
D	0 (0,00)	0 (0,00)	0 (0,00)	0 (0,00)	0 (0,00)	
G	5 (3,23)	4 (1,31)	0 (0,00)	1 (1,32)	10 (1,84)	
J	3 (1,94)	0 (0,00)	0 (0,00)	0 (0,00)	3 (0,55)	
L	21 (13,55)	39 (12,75)	1 (16,67)	53 (69,74)	114 (20,99)	
M	4 (2,58)	9 (2,94)	0 (0,00)	0 (0,00)	13 (2,39)	
N	34 (21,94)	56 (18,30)	3 (50,00)	4 (5,26)	97 (17,86)	
P	3 (1,94)	3 (0,98)	0 (0,00)	1 (1,32)	7 (1,29)	
R	10 (6,45)	45 (14,71)	0 (0,00)	5 (6,58)	60 (11,05)	
S	0 (0,00)	2 (0,65)	0 (0,00)	4 (5,26)	6 (1,10)	
V	3 (1,94)	2 (0,65)	0 (0,00)	0 (0,00)	5 (0,92)	
TOTAL	155 (100)	306 (100)	6 (100)	76 (100)	543 (100)	

Caption: A - Alimentary tract and metabolism; B - Blood and blood forming organs; C - Cardiovascular system; D - Dermatologicals; G - Genito urinary system and sex hormones; H - Systemic hormonal preparations, excl. sex hormones and insulins; J - Antiinfective for systemic use; L - Antineoplastic and immunomodulating agents; M - Musculo-skeletal System; N - Nervous system; P - Antiparasitic products, insecticides and repellents; R - Respiratory System; S - sensory organs; V - Various.

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