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Assessment of Pharmaceutical Services in a Southern Brazilian City

Avaliação da Assistência Farmacêutica em um município no Sul do Brasil

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ABSTRACT: *Introduction:* Well-planned and executed pharmaceutical services (PS) are important for proper treatment of the population's health needs, thus enabling the access to essential drugs and promoting their rational use. *Objective:* To assess the situation of PS in the city of Uruguaiana (State of Rio Grande do Sul), Brazil. *Methods:* This cross-sectional study was applied to 650 interviews between June and September of 2013 in 11 Basic Health Units (UBS) and in the Main Pharmacy of the city. The indicators of prescription, of patient's care, and of service, were assessed according to the recommendations of the World Health Organization (WHO). The Instrument of Self-Assessment for Pharmaceutical Services Planning (IAPAF) from the Brazilian Department of Health was used to assess the management and planning capacity of the PS, which was then applied in the Main Pharmacy and in the medicine stockroom. *Results:* The number of drugs per prescription varied from 1 to 10 (mean = 1.7). The percentages of prescribed drugs by generic name, and included in the City List of Essential Drugs (REMUME) were, respectively, 75.5 and 67.7%; antibiotics were prescribed in 9.7% of the medical appointments. The average time of medical appointment was 6 minutes; 51.4% of the users obtained their prescription; only 18.9% of the patients completely understood their prescriptions. Of the 24 items analyzed in the IAPAF, 12 were found in stage 1 (worst rating), 12 in stage 2, and none in stage 3 (ideal situation). *Conclusion:* Results seem to show the lack of PS in Uruguaiana with regard to planning, management, and patient's care. The absence of effective management may result in waste and incorrect use of drugs.

Keywords: Pharmaceutical services. Drug prescriptions. Indicators of health services. Health services. Health management. Delivery of health care

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RESUMO: *Introdução:* A Assistência Farmacêutica (AF) bem planejada e conduzida é importante para o adequado atendimento às necessidades de saúde da população, facilitando o acesso aos medicamentos essenciais e promovendo seu uso racional. *Objetivo:* Avaliar a situação da AF no município de Uruguaiana (RS). *Métodos:* Estudo transversal, com realização de 650 entrevistas, entre junho e setembro de 2013, em 11 Unidades Básicas de Saúde (UBS) e na Farmácia Central. Os indicadores de prescrição, de assistência ao paciente e de serviço foram avaliados de acordo com as recomendações da Organização Mundial da Saúde (OMS). Para avaliar a capacidade gerencial e de planejamento da AF, foi utilizado o Instrumento de Autoavaliação para o Planejamento da Assistência Farmacêutica (IAPAF) do Ministério da Saúde, o qual foi aplicado na Farmácia Central e no almoxarifado de medicamentos. *Resultados:* O número de medicamentos por prescrição variou de 1 a 10 (média = 1,7). Os percentuais de medicamentos prescritos pelo nome genérico e que constam na Relação Municipal de Medicamentos Essenciais (REMUME) foram de 75,5 e 67,7%, respectivamente; em 9,7% das consultas médicas foram prescritos antibióticos. O tempo médio de consulta médica foi de 6 minutos; 51,4% dos usuários tiveram sua prescrição atendida; apenas 18,9% dos pacientes compreenderam totalmente a prescrição. Dos 24 itens analisados no IAPAF, 12 encontravam-se no estágio 1 (pior avaliação), 12 no estágio 2 e nenhum no estágio 3 (situação considerada ideal). *Conclusão:* Os resultados encontrados parecem demonstrar a deficiência da AF em Uruguaiana quanto ao planejamento, à gerência e à assistência ao paciente. A ausência de gestão efetiva pode resultar em desperdícios e no uso incorreto de medicamentos.

Palavras-chave: Assistência farmacêutica. Prescrições de medicamentos. Indicadores de serviços. Serviços de saúde. Gestão em saúde. Assistência à saúde.

INTRODUCTION

The Brazilian Unified Health System (SUS, acronym in Portuguese) is responsible for the elaboration and performance of actions regarding integral therapeutic care, including pharmaceutical services (PS)[1]. They are characterized as a group of actions focused on the promotion, protection and recovery of health[2], in which drugs are their essential input[3], and their good functioning is a determining factor for healthcare solubility and good results of full care indicators[2].

With the aim of promoting and improving the use of drugs, the World Health Organization (WHO) proposed in 1993, a selection of indicators to analyze health services in a quantitative and standardized manner with regard to the use of drugs in basic care, thus creating a group of indicators of prescription, of patient's care and of health services[4].

By means of these indicators, studies carried out in the cities of Esperança (PB)[5] and Ribeirão Preto (SP)[6] have concluded that the PS provided to the patient are not adequate in all the assessed indicators.

Some Brazilian studies assessed PS by means of other methodologies[5-9]. This is the case of a study carried out in Fortaleza (CE), Brazil, which used its own instrument by making questions related to the practice of prescription and dispensation, and it found low quality in medical and pharmaceutical services[7]. An assessment of PS was carried out

in Rio Grande do Sul using as instrument the assessment indicators of basic PS, which were developed by the State Bureau of Health. The study approached indicators of structure, process, and results, and found problems regarding human, material, and financial resources in most cities. On the other hand, most of them presented proper organization of drug supplies[9].

In 2006, the Department of Pharmaceutical Services and Strategic Supplies (DAF) from the Brazilian Department of Health (MS) developed the Instrument of Self-Assessment for Pharmaceutical Services Planning (IAPAF)[10], which is composed of 24 items that cover the entire cycle of PS, from selection to pharmacosurveillance, in order to assess the managerial and planning capacity of the PS. The advantage of its use is the support to elaborate a work plan through the identification of the current stage of development, and definition of goals to develop technical and managerial capacity of PS[10].

A study using an instrument developed by the researchers, based on the IAPAF, was carried out in a city of Sergipe State, where, in the main stockroom, the capacity of management, selection, scheduling, acquisition, storage/distribution, and transportation of drugs and pharmaceutical supplies was verified. On the other hand, the indicators of prescription and dispensation were assessed in Basic Health Units (UBS), and Psychosocial Care Centers (CAPS), and the stages of storage, distribution, and transportation presented the best results, while prescription was the most critical stage of the process[8].

Owing to the small amount of studies that assessed PS in Brazil and in order to stimulate managers from other cities to perform the assessment in their cities and to improve their local PS, acknowledging the existence of these instruments and their results, this study aimed at assessing PS in the city of Uruguaiana (RS) using the indicators recommended by the WHO and the instrument proposed by the MS (IAPAF).

METHODS

This is a cross-sectional study carried out from June to September 2013 in Uruguaiana (RS, Brazil) – a city with approximately 126 thousand residents. The city had full management of health actions, but it did not have PS in its organizational chart.

The basic care network of the city was composed of 19 UBS, 5 of them were located in the rural area; 2 CAPS; 1 polyclinic of medical and dentistry specialties, and 1 polyclinic for children. Five UBS from the rural area and three from the urban area were not included because they did not have medical services. When users from the rural area needed medical care, the City Hall provided transportation from there to the urban area.

All units with medical services were included in the study, i.e. 11 UBS and 1 polyclinic of specialties. All the places had drug dispensation services, but a pharmacist only did it in the polyclinic of specialties, where the Main Pharmacy was located.

Indicators of prescription, of patient's care and of health services proposed by the WHO[4] were assessed, and the IAPAF proposed by the MS[10] was used.

The PS assessments with the indicators proposed by the WHO must have a minimum sample of 600 observations[4]. Six hundred and fifty interviews were conducted. This sample enabled the estimation of the indicators with acceptable error margin of 3.5 percentage points, and a 95% level of confidence.

The interviewers approached the first 5 patients older than 18 years, who were standing on the waiting line for service, and they included only those who accepted taking part in the study after signature of the Free Informed Consent. In cases of refusal, the next user in the waiting line was approached.

Each user provided the following information:

- home place (urban or rural areas), sex, age, educational level, family income, and skin color (self-reported);
- timing of appointment period;
- knowledge of prescription (name of prescribed drug; posology; treatment duration, and reason for use);
- number of dispensed drugs.

After the conclusion of interviews, all prescriptions were analyzed using the City List of Essential Drugs (REMUME) and the Dictionary of Pharmaceutical Specialties, with the aim of verifying if the drugs were prescribed according to the Brazilian Common Denomination (DCB) and if antibiotics and injectable drugs were also prescribed.

The analyzed indicators of prescription were:

- average number of drugs per medical appointment (seen in the medical prescription after leaving the appointment);
- percentage of prescribed drugs by their generic name;
- percentage of medical receipts with antibiotic prescription;
- percentage of medical appointments with injectable drug prescription;
- percentage of prescribed drugs included in the REMUME[11], 2011 edition (current in the study period).

The analyzed indicators of service were:

- average time of medical appointment (assessed for all survey subjects, from the moment of entering the clinic, to the exit, by using a chronometer);
- amount of dispensed drugs among the prescribed ones (observed after appointment, during the act of dispensation);
- proportion of patients who understood the prescription – assessed by means of questioning regarding:
  1. name of the prescribed drug;
  2. dosage;
  3. number of times a day that the person has to take the drug;
  4. treatment duration;
  5. reason for use.

The patient's answer was compared with the prescription. When the patient answered the five questions mentioned above correctly, it was considered as comprehension of the prescription (total knowledge of the prescription). When the prescription was not complete and the patient did not know how to answer due to lack of such item on it, we considered it as a lack of comprehension of the prescription.

The indicators of health services were assessed in the Main Pharmacy and UBS, where interviews and observations were performed. In addition, the availability of REMUME and the main drugs chosen based on the epidemiological profile of the city (captopril 25 mg; enalapril 10 mg and 20 mg; hydrochlorothiazide 25 mg; furosemide 40 mg; metformin 850 mg; glibenclamide 5 mg; ibuprofen 600 mg and 50 mg/mL; paracetamol 750 mg and 200 mg/mL; levothyroxine 25 mg and 50 mg; neomycin + bacitracin cream; and oral rehydration salts) were also verified.

IAPAF was applied to pharmacists in charge of the Main Pharmacy and of the drug stockroom. IAPAF classifies the items comprising the PS cycle in three stages, in which the first stage corresponds to the one with the lowest capacity, and the third approaches what the MS and WHO proposes as ideal regarding capacity of planning and management of PS[10].

Data were typed twice in EpiDATA 3.1, and data consistency analyses and statistics were performed in the statistical program STATA 12.0 (*Stata Corp, College Station*, USA). Student's *t* test and analysis of variance (ANOVA) were used to compare the average time of medical appointment to each category of the studied variables, considering a 5% level of significance.

The Research Ethics Committee of *Universidade Federal de Pelotas* (No.314.838) and the City Bureau of Health of Uruguaiana (RS) approved the project.

RESULTS

Five interviews were done per day in each place; therefore, there were 50 interviews in each one of the 11 UBS (550) and 100 in the polyclinic of specialties in alternate shifts, according to the service provided in each health unit. Among the 650 interviewed patients, 413 (63.5%) received drug prescriptions and the others received requests for exams or were submitted to specialized doctors. The sample characteristics are described in Table 1; however, the most prevalent subjects were urban area residents, women, subjects aged 41–70 years, with 5–8 years of schooling, white skinned, and family income between 1 and 2 minimum wages.

Among patients who received a drug prescription (n = 413), the number of prescription varied between 1 and 10, in which 1,132 was the total amount of prescribed drugs. The WHO indicators of prescription and of service presented in Table 2 were calculated based on the number of patients that had a prescription, and on the number of prescribed drugs.

Table 1. Profile of users of medical and pharmaceutical services from Basic Health Units and Polyclinic of Specialties. Uruguaiana (Rio Grande do Sul, Brazil), from June to September of 2013.

Variables	n	%
Area		
Urban	609	93.7
Rural	41	6.3
Sex		
Male	152	23.4
Female	498	76.6
Age (years)		
18 – 59	442	68.0
60 – 79	192	29.5
80 or more	16	2.5
Educational level (years of schooling)		
0 – 4	141	21.7
5 – 8	298	45.9
9 or more	211	32.4
Family income (minimum wage)*		
> 1 MW	147	22.6
1 MW	109	16.8
1 to 2 MW	349	53.7
2 or more MW	45	6.9
Skin color**		
White	352	54.2
Black/Mulatto	298	45.8
Total	650	100.0

*Minimum wage at the time, BRL 678.00; **self-referred skin color.

Table 2. Indicators of prescription and of patient's care. Uruguaiana (Rio Grande do Sul, Brazil), from June to September of 2013.

Indicators	Calculation	Results
Prescription		
Average number of drugs per medical appointment	1,132/650	1.7
Percentage of prescribed drugs by their generic name	(855/1,132)100	75.5%
Percentage of medical appointments with antibiotic prescription	(63/650)100	9.7%
Percentage of prescribed drugs listed in REMUME	(766/1,132)100	67.7%
Percentage of medical appointments with injectable drug prescription	(24/650)100	3.7%
Care		
Average time of medical appointment (n = 650)	3,883.45/650	6,0 minutes
Percentage of dispensed drugs	(582/1,132)100	51.4%
Percentage of patients that understood the prescription	(78/413)100	18.9%

The analysis of average time of medical appointment duration was stratified based on socioeconomic and demographic characteristics of the sample, and a statistically significant difference was found only for the residence area. The mean time of medical appointment was higher for patients from the urban area than for those from the rural area (p = 0.003) (Table 3).

With regard to knowledge of prescribed drugs, only 78 (18.9%) patients completely knew about the prescription, 267 (64.7%) were completely unaware, and 68 (16.5%) knew something about the questioned items. Figure 1 presents reasons for unawareness reported for each drug. The pieces of information that patients showed to have more difficulty in understanding were the number of doses taken per day (for 80.1% of the drugs) and reason for using the drug (78.1%).

Table 3. Average time of medical appointment in services provided at Basic Health Units and in the Polyclinic of Specialties. Uruguaiana (Rio Grande do Sul, Brazil), from June to September of 2013 (n = 650).

Variables	Mean (SD)*	p-value
Area		
Urban	6.1 (3.5)	0.004**
Rural	4.6 (2.3)	
Sex		
Male	5.9 (3.2)	0.630**
Female	6.0 (3.5)	
Age (years)		
18 – 59	5.86	0.202***
60 – 79	6.17	
80 or more	6.72	
Educational level (years of study)		
0 – 4	5.9 (3.6)	0.413***
5 – 8	5.9 (2.9)	
9 or more	6.0 (4.0)	
Family income (minimum wage)****		
> 1	5.3 (3.2)	0.062***
1	6.3 (3.1)	
1 to 2	6.1 (3.6)	
2 or more	6.4 (3.4)	
Skin color		
White	5.8 (3.1)	0.504**
Black/brown	6.2 (3.9)	
Total	6.0 (3.4)	

*Standard deviation; **Student's *t* test; ***analysis of variance; ****minimum wage at the time, BRL 678.00.

The average time of medical appointment was higher for users who completely knew about the prescription if compared with those that were unaware of some item in it (7.6 minutes, 95%CI 6.7 – 8.5 versus 6.1 minutes, 95%CI 5.8 – 6.5, p = 0.001) (data are not shown in the tables).

The percentages of medical appointments with drug prescription (one or more), based on age, were 59.1% for 18–59 years old, 72.4% for 60–79 years old, and 81.3% for the elderly aged 80 years or more. Thus, it shows a tendency of growth with age increase (p < 0.001) (data are not shown in the tables).

With regard to indicators of health services, REMUME was available in all UBS and in the polyclinic of specialties, and none of the health services had the 15 main studied drugs available.

In the assessment of management and planning capacity of PS, 12 of the 24 items analyzed through IAPAF were in stage 1 (worst assessment) and 12 in stage 2. No items were classified as stage 3 (ideal situation). In the stage of drug selection, it was seen that elaboration, use, and disclosure of REMUME are in level 2 and scheduling and acquisition of drugs are found in level 1. In terms of storage, correct storage of drugs is in level 1. All indicators of drug prescription are in level 1, which is in agreement with the results obtained in previous indicators, especially regarding selection, because both are closely associated. In the UBS, dispensation is carried out without the supervision of a pharmacist, and there are no standardized operational procedures for dispensation. In terms of human resources, training, and capacitation are the worst indicators. Details of this assessment are found in Table 4.
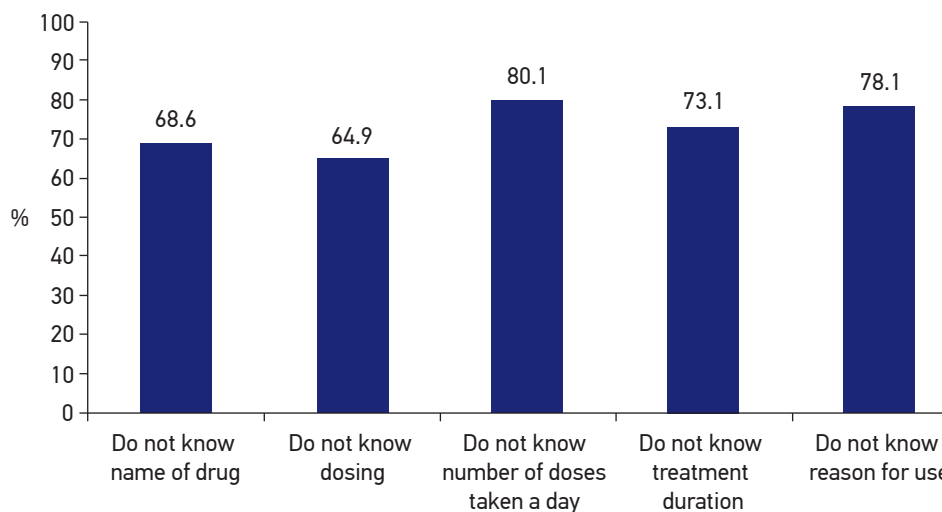

Figure 1. Reported reasons for unawareness of each drug prescribed in Basic Health Units and in the Polyclinic of Specialties. Uruguaiana (Rio Grande do Sul, Brazil), from June to September of 2013 (n = 1,132).

Table 4. Planning assessment of Uruguaiana Pharmaceutical Services using the Instrument of Self-Assessment for Planning Pharmaceutical Services proposed by the Brazilian Department of Health*.

Indicators	Levels		
	1	2	3
Management of Pharmaceutical Services			
Institutionalize the PS		X	
Plan the organization off PS	X		
Structure and organize the PS	X		
Assess the actions of PS	X		
Selection			
Use or elaborate a list of essential drugs		X	
Disclose REMUME for prescribers		X	
Adopt clinical protocols	X		
Schedule/acquisition			
Schedule properly	X		
Show the acquisition process at proper time	X		
Ensure drugs in proper amount and time to satisfy the entire population		X	
Ensure the quality of acquired drugs		X	
Storage/distribution/transportation			
Ensure correct storage of drugs	X		
Ensure proper transportation of drugs		X	
Store in dispensing units and/or health units	X		
Drug prescription			
Promote adhesion of prescribers to the list of essential drugs	X		
Promote the quality of prescriptions	X		
Promote education of the rational use of drugs for prescribers	X		
Dispensation			
Organize the pharmacy in dispensing units and/or health units	X		
Ensure appropriate work process in dispensation	X		
Ensure proper management of drug dispensation		X	
Human resources			
Have a pharmacist to perform and organize the PS		X	
Have assistant staff for a formal course or training that lasts more than 40 hours in PS to perform support tasks to the performance and organization of services, following pharmacist's guidance		X	
Perform trainings and internal capacitation for the department of health or enable the participation of the PS staff (pharmaceutical and support staff) in courses about update, capacitation, and others focused on PS, outside the department of health	X		
Pharmacosurveillance			
Notify and submit forms of Notification of Adverse Events to Drugs for the State and National System of Pharmacosurveillance		X	

*IAPAF: assesses the development stages for each step of the Pharmaceutical Services in three levels, in which level 1 has the lowest development and level 3 has the best development.

DISCUSSION

Results indicate a lack in planning and in organizing the different stages of the PS cycle in the studied city, which varies from failures in the selection to drug prescription. It is worth noting the fact that most of the medical appointments of this study generated drug prescription, and one third of the prescribed drugs were not in the REMUME. About two thirds of the interviewed subjects did not understand any aspect of the prescription, and the average time of medical appointment was of only six minutes.

The fact that most medical appointments of this study generated a drug prescription makes us believe that, even today, search for these services is still much more curative than preventive. After the analysis of the prescription indicators, the average number of prescribed drugs (1.7) did not correspond to polymedication[12], but it was similar to what was seen in other studies carried out in Brasília (2.3)[13] and Belo Horizonte (2.4)[14]. However, the result of this study concerns the prescription of the medical appointment assessed in the day of its performance and does not consider other drugs that the patient had used.

Users aged 80 or more years received more prescriptions of a drug. This result is found due to the greater number of years of an elderly living with chronic health problems, which results in higher consumption of drugs[15].

It was seen as a high number of prescriptions by generic name (75.5%), which is similar to what was seen in Brasília (73.2%)[13] and higher than in Ribeirão Preto (30.6%)[6] – both studies used the same method and instrument for this study. This result demonstrated good adhesion from the prescribers to generic denomination, even considering the laws determine that 100% of the SUS prescriptions are done using the generic name[16].

The percentage of medical appointments with antibiotic prescription (9.7%) were low if compared with other studies[6,13]. In Brasília, the percentage of prescribed antibiotics was 26.4%[13] and in Ribeirão Preto, 21.3%[6]. This result stand out because of the time of the year when the study was carried out (from June to September) in a city in Southern Brazil, where great temperatures oscillations are registered, usually around 2–20°C, thus increasing the probability of infectious respiratory diseases. In Bagé, a city located in the same area of Uruguaiana with similar climate and populations, the percentage of prescribed antibiotics during the month of July in 2005 was of 30.4%[17]. This result may be associated with the availability of antibiotics in the Main Pharmacy, but not in the UBS, because previous studies were carried out before publication and implementation of the Resolution-RDC No. 20[18], which determines the dispensation control of antimicrobials. The lowest percentage of antibiotics prescription may also be associated with the practice of rational prescription of antimicrobials.

An important criterion in the promotion of rational use of drugs is the existence of REMUME, which aims at guiding the prescription of safe and effective products based on the epidemiological profile of the city and planning of the City Bureau of Health[19].

Low percentage of prescribed drugs based on REMUME (67.7%) was an indication of low adhesion of the prescribers to the list. This result was lower than that found in studies

in Ribeirão Preto (83.4%)[6], and in the state of Santa Catarina (91.5%)[20], which also used the WHO instrument[4]. The low adhesion to REMUME may happen due to, among many factors, inexistence of a Commission of Pharmacy and Therapeutics (CFT) in the studied city; of outdated REMUME; of low disclosure of its importance; and the fact that REMUME may not be known by the prescribers, even though it is available in most of the cases due to the lack of sensitivity for the promotion of its use. If REMUME were more disclosed and built in a collaborative manner with the prescribers, its use would probably be larger.

The percentage of prescription of injectable drugs was low (3.7%) compared with that found in studies carried out in Brasília[13] (7.5%), and Ribeirão Preto[6] (8.3%). This result may be explained due to the prescribers' preference for pharmaceutical forms that are more convenient to the user[20] and because these users come from outpatient services.

With regard to indicators of service, the mean time of medical appointment was only of 6 minutes. Similar to the results found in Esperança (Paraíba) (7.8 minutes)[5], Ribeirão Preto (9.2 minutes)[6] and Brasília (9.4 minutes)[13], this time is below the 15 minutes predicted in Decree 1101 GM/02[21], which was current at the moment of the performance of this study. This result may have had an impact on the level of users' knowledge of prescriptions, since only a small proportion of patients (18.9%) fully understood their content. It is worth noting that all medical appointments were performed in the outpatient manner, and there were no urgency/emergency services. On the other hand, more important than the appointment time is its quality and service coverage. Therefore, since the time of appointment and other parameters of the 2002 decree are considered restrictive, in 2015, after public consultation, a new decree[22] was published that established criteria and parameters for planning and scheduling health actions and services in the range of SUS. This new decree no longer stipulates a minimum time for medical appointment; however, it establishes standards of coverage based on the population's profile.

In any case, the low percentage of patients who knew the prescription stand out, since it could be associated directly with the appointment time. If, at delivery, the prescription was explained and the repetition of its content was requested to the patient, it would be possible to identify errors of comprehension and therefore their correction.

The percentage of drugs dispensed in health services analyzed in this study was of 51.4%, whereas Santos and Nitrini study, carried out in 2004[6], in the city of Ribeirão Preto, indicated 60.3%. It is worth noting that 67.7% of the prescribed drugs were part of REMUME, which seems to indicate a lack of supplies and of planning the PS in the city.

In the assessment of managerial and planning capacity of PS through the IAPAF, results show the organizational deficiency of PS in the assessed city. Some results were different to those found in a city of Sergipe[8], which used only a part of the IAPAF. Among the 14 analyzed items, seven were considered level three, which is ideal. In Uruguaiana, none of the items satisfies what is considered ideal by the MS. However, factors such as assessment and monitoring of actions, education for rational use of drugs, and physical area were in level 1 in both studies; therefore, they were critical factors in PS. Inappropriate storage, for instance, may compromise conservation and safety of drugs.

Since there was no constituted CFT, no use of epidemiological profile for scheduling drugs and pharmaceutical inputs and no agreement with good storage practices, transportation, distribution, and dispensation, the assessed city is similar to cities of Amazonas state, where the PS analysis was carried out with an instrument similar to IAPAF[23]. CFT is in charge, among other actions, of the REMUME update, of the adoption of clinical protocols, and of the education for promoting rational use of drugs. Therefore, the results are coherent with the reality, since the city does not have a CFT. After checking the indicators regarding prescription, it was found that all of them are in level 1 and depend on the actions of CFT. Thus, the constitution of this interdisciplinary commission could substantially improve the PS quality in the city.

Other indicators found in level 1 depend directly on the management and on financial resources, such as inadequacy of the physical space; insufficient number of pharmacists to ensure capacitation and trainings; physical and financial scheduling to obtain drugs and proper control of stock. Souza et al.[7] assessed the structure and the processes of organization and management in a Northeastern Brazilian city, and from their results, they suggested a series of both governmental and educational strategies to enable actions for improvement of PS in the studied city, thus contributing to low waste of drugs and better distribution of resources. Such study shows the need of performing an early diagnosis and sensitivity of managers for implementing these initiatives effectively.

The study limitations included the period of data collection (four months), which prevented to verify the seasonality in the patterns of drug use, which, in general, is variable based on the seasons of the year. Despite the absence of doctors in some UBS, data collection occurred in all places of health services in the range of the Health City Bureau of Uruguaiana, which counted with adult medical assistance during the research study. Since PS are not fully recognized in the organizational chart of the Health Bureau, it also made the use of IAPAF difficult, because many involved actors were not aware of their functions and attributions. Another study limitation is about the manner in which the interviewed subjects were chosen: the choice of the first patients waiting for medical appointment in the service, may have introduced a selection bias, because these users may present health conditions different of others.

Therefore, based on the study data, and to improve the quality of PS, we suggest the constitution of a CFT in the city; the adequacy of physical areas destined to PS (Basic Pharmacy, Special Pharmacy, UBS Pharmacies, Supply Central); the incorporation of human resources compatible with the developed activities and complexities; and the adequacy of the prescribers' working hours to the number of medical services.

FINAL CONSIDERATIONS

Despite the effort made by the MS to use the IAPAF and PS improvement in Brazil, there is still a lot to be done, because many problems are still compromising the

quality of PS. Results show deficiency in planning different stages of PS cycle in the analyzed city. Failures are seen in all stages of planning, management, and patient care, especially in the assessment and monitoring of actions, in the adoption of clinical protocols and in the constitution of CFT. Storage of drugs should follow good practices; stock control seems ineffective; and the pharmacy's physical area is insufficient according to the current laws. In the UBS, dispensation is carried out without the supervision of a pharmacist, and there are no standardized operational procedures for dispensation.

The average time of medical appointment was much below what the WHO establishes, thus it seems to be directly associated with low comprehension of the medical prescription. A period of medical appointment closer to that standardized by the WHO could bring benefits for the patient's better comprehension of the prescription, resulting in a rational use of drugs.

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