

## Pharmaceutical assistance within the SUS: the experience of students in *Rural Internship* from a Pharmacy Course

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The 2002 Brazilian Curricular Lines established a new curriculum for Pharmacy Programs, including amplified information about the *Unified Health System* (SUS). Following this, some Colleges have implemented a *Rural Internship (RI) discipline*, as a way to promote: a) adequate information on the SUS, and b) students' interaction with pharmaceutical assistance. In this study we analyzed the perceptions of students enrolled in the Rural Internship program of the undergraduate Pharmacy Program at the Federal University of Minas Gerais. Eight students participated in this study and their perceptions and ideas were obtained by focus groups, both before and after the RI. This information was analyzed by content analysis. The students had a fragmented, distorted view on assistance, before as well as after taking the RI. Nevertheless, the RI provided students with a view of the professional realities and difficulties routinely faced by pharmacists in the public health system. The RI course of the Pharmacy Programs was viewed as an opportunity to improve the professional work within the SUS.

**Uniterms:** Pharmaceutical assistance. Pharmacy/education. Unified Health System. Rural Internship.

As Diretrizes Curriculares de 2002 implantaram um novo currículo para o Curso de Farmácia, trazendo como propósito a aprendizagem para o Sistema Único de Saúde (SUS). Para atender a esta demanda, algumas Faculdades têm implantado a disciplina de Internato Rural (IR) como forma de viabilizar o ensino para o SUS e a interação do aluno com a assistência farmacêutica. Este trabalho analisa a concepção de alunos do IR do Curso de Farmácia da Universidade Federal de Minas Gerais sobre a assistência farmacêutica e sobre a atividade do profissional farmacêutico no SUS. A coleta das informações foi realizada por meio da técnica do grupo focal antes e após o IR. Para a análise dos discursos foi utilizada a técnica da análise de conteúdo. Participaram do estudo oito estudantes. Observou-se que os alunos apresentavam uma visão fragmentada sobre a assistência, tanto antes como após o internato. O IR proporcionou aos estudantes uma visão da realidade e o reconhecimento das dificuldades que o profissional ainda enfrenta nos serviços. Além disso, notou-se que a disciplina de internato no curso de farmácia pode ser uma alternativa que contribui para a atuação e a formação do farmacêutico para o SUS.

**Unitermos:** Assistência farmacêutica. Farmácia/ensino. Sistema Único de Saúde. Internato Rural.

### INTRODUCTION

Despite the countless challenges that the Unified Health System (*Sistema Único de Saúde* - SUS) has faced since its institution in 1988, its creation has enabled a number of advances in the Brazilian public health domain (Marin, 2003). One improvement was the National Policy

of Medications, 1998, which redefined pharmaceutical assistance and considers it as a cycle of activities dedicated to individual and collective health promotion, prevention and recuperation, centered on medication and destined to support community health (Brasil, 1998). At this time, some authors enlarged the concept of assistance, including within it the activities of pharmaceutical care as related to the pharmacist-patient relationship (Dupim, 1999; Santos, 2001).

The concept of pharmaceutical assistance has continued to be the object of discussions and proposals as to

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how to implement this idea within the principles which underlie the SUS, while not limiting the concept to the production and distribution of medications (Oliveira, 2004). In 2004, the National Policy of Pharmaceutical Assistance expanded the directives of pharmaceutical assistance, including direct interaction between the pharmacist and the user, a rational pharmacotherapy and the improvement of quality of life.

However, in Brazil, the concept of pharmaceutical assistance is still very under developed and there are many challenges to be faced in its implementation as a part of routine practice (Araújo, 2008). The lack of funds, rarity of trained pharmacists in pharmacies, the difficulty to break out of the hospital-centric model, and the need for professionals trained and willing to work in this new setting (Borges, Nascimento Jr., 2005; Vieira, 2007).

Faced with these changes in government directives, and the need to implement pharmaceutical assistance, the Curricular Directives of the Pharmacy Course now include SUS principles as a main learning objective. The future pharmacist professional should have inter-subjective, critical, and objective training; including the process of pharmaceutical assistance and, be able to interact with individuals in all aspects of practice (Brasil, 2002).

In order to cater for the demands of the new profile of health professionals, Institutions of Higher Education have searched for programs and/or methodologies based on real experiences so the students have more interactive participation with their own training instead of remaining passive recipients (Brasil, 2002; 2005). These active methodologies presume that the student is able to self-manage or self-govern his/her process of training, has political and technical competence, critical knowledge, and responsibility in the contexts of uncertainties and complexities (Mitre *et al.*, 2008). The former institutions are undergoing a process of change or consultation in terms of teaching methodologies oriented to a better understanding of the unified health system and the general public (Ceccim, 2004).

In order to develop pharmacists who are better qualified to act as health professionals in the SUS, some Pharmacy Faculties in the country initiated a Rural Internship (RI) as a mandatory or extension activity, reflecting the experiences from other courses, especially those of Medicine and Odontology, to break with the excessive theorization of content. According to Cury *et al.* (2004), the RI offers an unparalleled opportunity for personal and professional growth of the student, in addition to promoting partnerships with institutions and organizations in the cities involved.

This study analyzed the conceptions about pharma-

ceutical assistance and the professional activities developed in the SUS by the RI students of the Pharmacy Course at the Federal University of Minas Gerais, before and after the defined field activities.

## MATERIAL AND METHODS

In 2007, the Pharmacy course curriculum was still principally oriented towards industrial pharmacy, pharmaceutical and biochemical analysis and the pharmaceutical industry related to food, although there was much discussion about a new type of “generalist” pharmacy training.

The course duration at UFMG is five years, with a minimum load of 3635 hours. Beyond the mandatory disciplines, the students have to conclude six additional credits of electives, until the ninth period. The curriculum framework is quite specific, and focused on the technical part of the profession (UFMG, 2007).

The internships offered by the Faculty of Pharmacy during graduation are chiefly those of scientific initiation; due to the full time nature of course periods, and the consequent unavailability of training outside the campus. The remaining internships are those offered at the end in the ninth period, which are mandatory with the student choosing between the different areas: clinical analysis, food or industry (UFMG, 2007).

### Rural Internship

The RI in the Course of Pharmacy at UFMG was created in 1995, as an elective discipline according to the syllabus: “... to prepare students for the full profession of exercising and organizing the pharmaceutical assistance of the SUS in the cities” (Pereira, 2004).

When established as an elective discipline and with the purpose of pharmaceutical assistance in the SUS, a subject hitherto not dealt with in any other discipline, Rural Internship became secluded within the Pharmacy course.

Currently the RI remains with this same outlook; students enrolled in this course must be reading between the sixth and the eighth periods. According to the curriculum of 2007, pharmaceutical assistance and the public health system were discussed in— ‘Introduction to Pharmacy’ in the second period, ‘Pharmaceutical Dispensation, Seminars in Collective Health, and Social Hygiene’ in the seventh period. However, none of them except the Rural Internship, explores the activities of pharmaceutical assistance in great depth.

The RI consists of a course load of 210 hours, with 50 hours of theoretical class and 160 hours of practical

activities. In the theoretical classes, the National Policy of Medications and the cycle of activities of pharmaceutical assistance are presented. The practical component occurs during the month of vacation, and consists of the following: organization of medications stock; training of pharmacy attendants in basic activities of pharmaceutical assistance, dispensation and attendance to patients; educational lectures on radio stations and in municipal schools regarding medications and/or prevalent diseases (Pereira, 2004).

Per semester, about 40 students register in the RI, and every city participating in the program receives at least two students; but this number may be augmented as a function of the local population. Although the RI program gives priority to specific regions such as Jequitinhonha Valley, Mucuri Valley and the Northern Area, other cities in MG can also be included, provided they give accommodation to students and reproduce the material necessary for the implementation of pharmaceutical assistance. The city does not need to have a preceptor pharmacist, as supervision of the student's activities is done by the discipline coordinator of the Faculty of Pharmacy in Belo Horizonte. However, if the service has a professional pharmacist he/she can participate as an active collaborator, in direct contact with the discipline coordinator.

## Study Design

This study used a qualitative approach, understood as an interpretative practice producing contextual explanations, with emphasis on the meaning, rather than the frequency of phenomenon (Minayo, 2000).

Inclusion criteria for the study require the student to be registered in the RI program, to have attended the research project presentation given by one of the authors, and to have agreed to participate.

Information collection was carried out by the Focal Group (FG) (Debus, 1988), and used on two occasions, immediately before and after the RI in the cities. We opted for the FG technique, because it consists of focalized discussions in a small group of between 8 and 12 persons. A large amount of information on beliefs, ideas and feelings of the participants, can be collected from the discussion of ideas thus deepening the content analysis (Debus, 1988).

The discussion format on both occasions was the same, and related to the students' perceptions of pharmaceutical assistance and pharmaceutical activities in the public health system. The FG was led by a coordinator, and two external independent observers unrelated to the Pharmacy course also participated. The meetings were recorded, transcribed in full and analyzed.

Content analysis was done using Minayo's method (Minayo, 2000). Transcription of recordings was followed by data ordination based on pre-established categories; comprehensive reading of the interviews, with analysis of conjunct and of particularities in the discussions considered in the classification of information into the following categories: conception of pharmaceutical assistance, pharmaceutical care and management. Finally, a comparison was made between the results obtained from this study against those of the literature.

A scheme of activities of pharmaceutical assistance, shown in Figure 1, based on Araújo *et al.* (2008) was constructed to analyze the concept of pharmaceutical assistance and direct students' discussions. Araújo *et al.* (2008) consider pharmaceutical assistance as a subject area composed of two distinct complementary, multi-professional and interdisciplinary sub areas. One area is related to medication management technology – “access assurance” – and the other is related to medication use technology – “correct use of medication” Pharmaceutical care is a tool for the technology of rational use of medication, and dispensation is an element of intersection between these two areas.

The study was approved by the Ethics Committee of the René Rachou Research Centre of the Oswaldo Cruz Foundation, protocol number 17/2006. Each student was identified by letter “A” followed by code numbers.

## RESULTS AND DISCUSSION

There were 32 students eligible for inclusion and of these, five women and three men were accepted. All were in the sixth period and mean age was 23 years (range 21–30). None of the students had previous internship experience, none had worked in the SUS, and none personally used the SUS services. All thought that the SUS was a disorganized, dysfunctional public health system for the poor.

Saturnino *et al.* (2007), in a similar study with students on concepts relating to the SUS, showed that both before and after the Rural Internship, the students remained ignorant of the system principles and structure. However, after the internship, they began to use terms such as access, universal right, health promotion, posing questions about obstacles impeding the effective implantation of pharmaceutical assistance in the SUS. Some problems mentioned were: the reality of the service structure, the lack of opportunity for the pharmacist in the public system, and the lack of aid and incentive from the academic institutions for this activity.

Estefan (1986), in his article on the teaching of pharmacy that, since the curricular reform of 1969, and

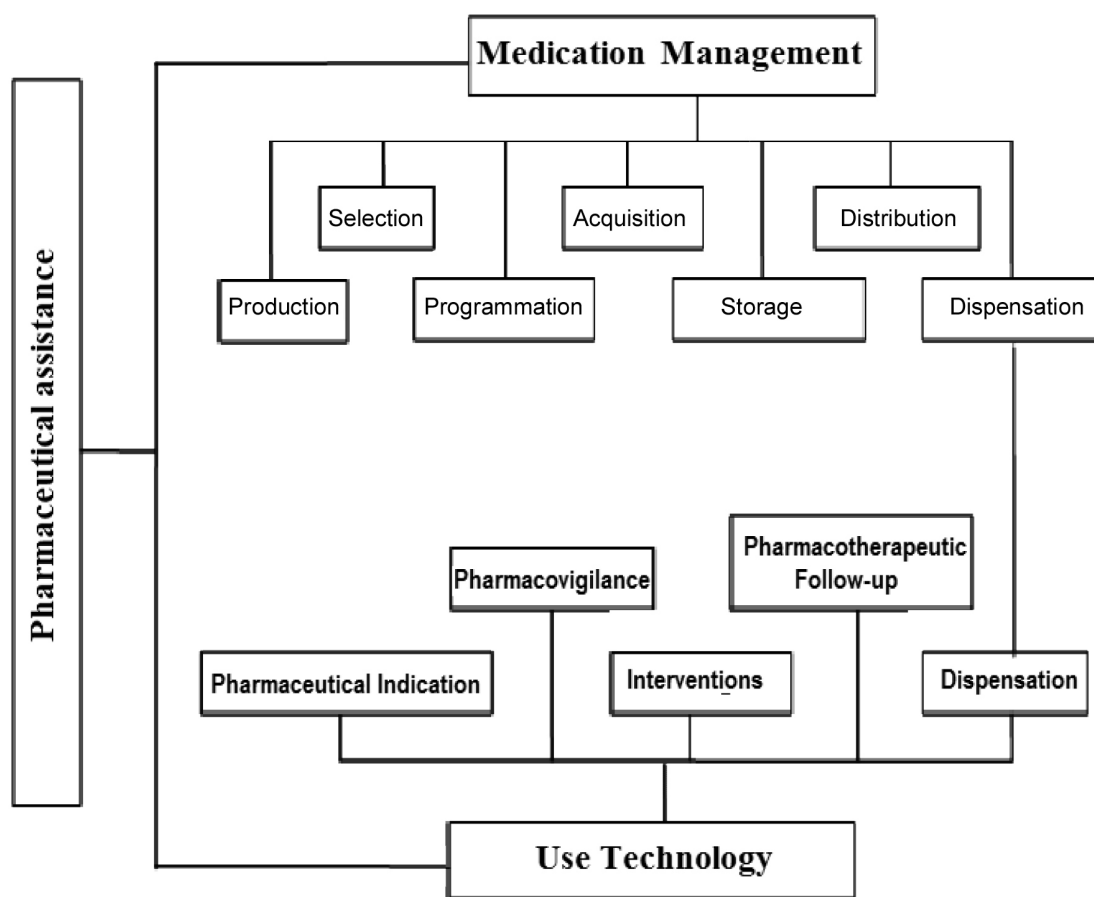


FIGURE 1 – Schematic design of pharmaceutical assistance activities based on Araújo *et al.* (2008).

institution of the minimum curriculum, Pharmacy Faculties, generally speaking, refused to be concerned with the public health system, and decided to train pharmacists for the private labour sector. Belaciano (1996) and Neves and Spinelli (2008) showed that disciplines related to collective health are marginalized in the health courses of the universities. They hypothesized that this could be due to the lack of knowledge, and confusion about the reality of health services on the part of universities, and owing to the weak relationships between the educational sector and the SUS, and the disinterest on the part of the universities in developing a welfare model.

Neves and Spinelli (2008), consider that the teaching institutions should articulate programs, such as the RI already in existence, in consultation with municipal secretariats of health, which should serve not only academic purposes, but also public service functions.

### Conception of Pharmaceutical Assistance

The FG analysis prior to the RI internship showed that the eight participant students were uninformed as to

the significance of pharmaceutical assistance. Principally they were worried about what difficulties they would personally encounter in the cities, where this became the centre of discussion.

After the RI, the students still did not identify pharmaceutical assistance as the main function of the pharmacy professional, and they did not relate it to a cycle of interdependent activities pertaining to medication and user. However, some terms relating to pharmaceutical assistance activities appeared in the interviews in a fragmented way, as shown in the following phrases:

*“Assistance is not restricted to dispensation; the pharmacist has to take care of acquisition, storage, as well as reception of the patient.” (A6)*

*“[Assistance] would include distribution, control and guidance to patient.” (A4)*

The frequency of students using keywords from the assistance cycle after the RI is shown in Table I. The use of the first phrases related to ‘production’, ‘selection’ and ‘programming’ did not persist among students, probably



because these concepts are discussed sporadically in routine pharmacy service. On the other hand, the routine activities of services, such as ‘acquisition’, ‘storage’, and ‘distribution’ were terms that appeared more frequently. The activities of ‘orientation’ and ‘dispensation to patients’ were self-evident.

**TABLE I** – Frequency of students using keywords from pharmaceutical assistance cycle after Rural Internship, as a proportion of total subjects interviewed

Activities performed in pharmaceutical assistance	Frequency (n/total students)
Production	0/8
Selection	0/8
Programming	0/8
Acquisition	3/8
Storage	3/8
Distribution to Health Posts	3/8
Dispensation	6/8
Orientation to patient	7/8
Pharmaceutical Care	0/8

The student’s comprehension and the conceptual clarity of the listed activities could provide a framework for the acquisition of a more global and critical vision of the pharmaceutical assistance process. As students begin to differentiate developed tasks from non-developed ones, they also acquire a notion about the need of overcoming the current model of professional practice.

However, when trying to define the pharmaceutical assistance, the majority of students restricted the cycle to activities of orientation to patient and dispensation, frequently considering orientation of the patient to be the same as dispensation.

*“Pharmaceutical assistance would really be the contact with patient, (...) guidance that you give to the patient (...)” (A3)*

According to Dupim (1999), dispensation is an act that is inherent to the pharmacist, which is characterized by a direct, face to face relationship, between the pharmacist and the user of the medication. The professional listens, clarifies doubts, complements information, analyzes the prescription, and provides information and orientation regarding the use and storage of medication. Its main purpose is to avoid compromising the treatment. However, despite orientation to patient being an activity inherent to dispensation, it is not exclusively this. On the contrary,

orientation constitutes a practice that should be a part of the health professional’s routine, to improve the user’s quality of life.

Along these lines, Bastos (2007) showed a higher level of job satisfaction among pharmacists of the municipal, state and private networks of the state of Rio de Janeiro when their professional practice was linked with the patient, and with the provision of orientation regarding the illness itself.

With respect to patient orientation, students had difficulties, finding this a complex activity made more difficult by the low level of schooling of many of the patients. They also experienced difficulties with pharmacy employees; who had been doing things in the same way for many years and did not see any need for change in their routine.

*“It is difficult to explain using the popular language. There were things that we saw, which nobody explained; and others that they [users] pretended they did (...). I don’t think that we have been oriented to do this social work in the necessary way (A7)*

*“I think they could include courses(...) teaching us to cope with people, (...) respecting the users themselves.” (A2)*

*“... they rely on us because they think : ah, I’m an idiot on this subject, if they come from the Federal university and are in training, they must really know what they are talking about.” (A8)*

This position from students could be related to limitations of pharmacy teaching, but also to their lack of professional experience; their social status (mostly middle class); or even because they believe that health professionals having a higher level of education regarding cures, and are also knowledge holders.

This kind of attitude, frequent in the everyday routine of health professionals, is the opposite to the attitude contained in the conception of integrality developed by Mattos (2004). This author states that health practices in the SUS should be inter-subjective, in which the professional interrelates with the subject as in a dialogue; with health actions having the character of a conversation, the purpose being to broadly recognize the conjunct of actions, in which the professional could act (Mattos, 2004).

According to Valla *et al.* (2000), the difficulty of health professionals and investigators to understand the users’ points of view is much more related with cultural aspects of these social groups, rather than with technical issues. This author also suggest that there is difficulty in accepting the fact that people with lower spending

power and educational level, living in poorer areas, are well informed and can systematically think and organize their ideas about their health. However, it is important to regard the user as a subject capable of doing this. Often, this fact is forgotten during the professional's training, yet is extremely important to the pharmacist in everyday practice (Lorandi, 2003).

Similarly, Freire (2005) points out that there is no dialog between those who deny others the right of speak, and those who suppose they are denied the right to speak.

### Organization of pharmaceutical assistance within the SUS

When the students were questioned about the pharmacist activities in the SUS, they frequently mentioned fragmentation of the public health system. They pointed out that the pharmaceutical services were irregular, and disorganized, with few vacancies and few pharmacists. They reported that pharmacists were in charge of so many administrative and bureaucratic activities, that they were unable to undertake dispensation, or forge closer ties with users. The act of dispensing was characterized by students as a mere delivery of medication, usually done by pharmacy employees who often had inadequate educational training for this activity.

*“Generally, in these health post pharmacies, there is only one person, I mean, a single employee who has nothing to do with the health area, performing the dispensation.” (A7)*

*“The person delivering medications was someone who was not a pharmacist, but a mere pharmacy attendant.” (A1)*

Oliveira *et al.* (2002), Araújo (2006) and Vieira (2007) observed in their studies about the pharmacist activity in the public system, this same reality found by our students. According to these authors, in the majority of pharmacies in the basic health units, it is the administrative employees, taken from their true functions and given no specific training, who dispense medications. Thus, the situation reported by our students at municipal pharmacies, conforms to the national reality, a fact that, unfortunately, still reflects poor pharmaceutical assistance in the Brazilian public health system.

The paucity of professionals in the public health system is a result, among other factors, of the lack of exclusive funding for pharmaceutical services under the SUS. Ordinance # 204 of 2007 January, from the Ministry of Health, revoked Ordinance # 698/06, removing the component on

paying for the organization of pharmaceutical services, which assured the financial resources for the payment of costs. The result of this transference gave financial autonomy to every municipal manager to define priorities in the creation of vacancies and in the provision of pharmaceutical activities in the SUS (Oliveira, 2004 and Brasil, 2007).

Some authors consider that a significant proportion of health managers are unaware of the importance of a pharmacist professional in terms of medication and services which could increase patient compliance, decrease costs and avoid irrational use of the service (Borges, Nascimento, 2005; Vieira, 2007). Orientation of the patient, along with the act of dispensation, is an extremely important opportunity in which to complement the information provided by the physician, and it becomes one of the last opportunities to identify, correct or decrease possible risks associated to therapeutics (Arrais *et al.*, 2007; Oliveira *et al.*, 2004). In this sense, the search for alternatives allowing this contact of the pharmacist with the user, enabling, inclusively, the offer of pharmaceutical care service and pharmacotherapeutic follow-up to patient, passed from being a responsibility of the pharmacist to being an emerging necessity for governmental action (Hepler and Strand, 1990; Espanha, 2001; Machuca *et al.*, 2003).

### Pharmaceutical care

The students had difficulty in understanding the complexity of ‘pharmaceutical assistance’, especially when related to its complementary relationship with ‘pharmaceutical care’. Before the RI practice, during the discussion with students, the term ‘pharmaceutical care’ was used in an ambiguous manner, and the respective discussions were centered on the multi-professional nature, probably due to the broad array of activities that both terms encompass. However, after the experience of the RI, besides ‘pharmaceutical care’ having not been mentioned by any one of them, the students continued to contextualize it as a practice involved in the policy of pharmaceutical assistance.

*“[Pharmaceutical] Care is multi-professional and [pharmaceutical] assistance is not.” (A6)*

*“No, [pharmaceutical] assistance is the multi-professional [activity] and [pharmaceutical] care is not.” (A7)*

*“I think that [pharmaceutical] care is multi-professional, it is not the role of the pharmacist only, but also the medical team, and the nurses.” (A8)*

This confusion could result from the fact that pharmaceutical care is still a very new practice in the country,

unknown by professionals acting in the system (Ivama *et al.*, 2002), and a concept still very new to pharmacists in training (Pereira, 2005; Angonesi, 2008). Currently at UFMG, the Pharmaceutical Care Course is elective for students in the fourth period (UFMG, 2007).

The practice of pharmaceutical care, in spite of being included as a part of pharmaceutical assistance, has an independent cycle that includes rational use of medication, health education, pharmaceutical indication, pharmaceutical attendance, personalized pharmacotherapeutic follow-up, prevention of diseases and pharmacological surveillance (Ivama *et al.*, 2002; Hernández *et al.*, 2007). Its purpose is to increase the effectiveness of treatment with medications, to detect adverse effects from medications (Negative Results from Medications/NRM), such that the pharmacist, as a health professional shares part of the responsibility for the provision of to the patient (Hepler, Strand, 1990; Machuca *et al.*, 2003; Oliveira *et al.*, 2004; Hernández *et al.*, 2007).

Despite the fact that pharmaceutical care embraces all of these patient-oriented activities, methods to evaluate its effectiveness are similar to those used for quantification and classification of NRM. Follow-up is a clinical practice that monitors and evaluates, continuously, the pharmacotherapy of patient with the aim of improving health results (Hernández *et al.*, 2007). Muñoz (2008), discussing the Dader Method of pharmacotherapeutic follow-up in cardiovascular risk in outpatients, has shown how this method contributes statistically toward improvement of results in the control of blood hypertension and hypercholesterolemia.

### Management of Pharmaceutical Assistance

According to the World Health Organization (1997), the capacity to be a manager and a leader are two out of the seven essential roles for the future pharmacist professional in the health system. Called the “seven stars pharmacist”, this new professional should have the ability to effectively and creatively direct the human and physical resources (FIP, 2000). Hence, the management of both assistance processes and pharmacy employees become indispensable activities within the context of a decentralized system. However, the students ignored the meaning and importance of such ‘management’, mixing up this term with the mere ‘administrative work’ that is surely required by the service.

*“The presence of a pharmacist is absolutely paramount because, unfortunately, the staff over there doesn’t know the importance of the correct functioning of a warehouse and medication storage, so*

*these tasks take up a lot of the pharmacist’s available time.” (A15)*

Generally, pharmacists have great difficulty in the management demanded by pharmaceutical assistance and care, due to the inherent complexity of such activities (Nagasaki, 2002; Netto *et al.*, 2002). These authors showed inadequate training for this management activity was the major obstacle faced by the majority of interviewed subjects. They also emphasized that all pharmacists, upon leaving their formal training programs, must understand their future enterprising and managerial activities, and respect the importance of redistribution of functions and activities between the pharmacy assistants.

### FINAL CONSIDERATIONS

There is no single model of pharmaceutical assistance in the public health system. The concept of pharmaceutical assistance is still an emerging one and is continually changing, as is the SUS itself, driven by attitudes of the professionals already within the system, academic institutions, teachers, and the students themselves.

The Faculty of Pharmacy’s Rural Internship Program provided an opportunity to students to apply their theoretical experience in a genuine practice setting. They learned to take responsibility for decisions, and also experienced the practical difficulties of the pharmaceutical activity in the public system.

However, there is a need to improve the RI Program and integrate it more completely with Pharmacy Course at UFMG. A mandatory internship on this subject in the ninth course period, taking place in the larger cities, is one interesting possibility. However, given the complexity of the SUS, teaching on the system should not be limited to a single discipline within the faculty but shared by other departments in the health care field.

The conclusions drawn from this study were those based on the experiences of a small group of students, who were very interested in the operations of the SUS. However, our results are similar to those from other authors – Nagasaki, 2002; Oliveira, 2004 and Araújo, 2006 – and thus we suggest that new methodologies and pedagogic tools are required for professional training in relation to the SUS.

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