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Conceptions of healthcare professionals involved outpatient care about the activities developed by the clinical pharmacist at a health facility

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> > Peer review: blind reviewer and Sheila Feitosa Ramos

Abstract

Objetivo: Descrever a compreensão da equipe e do próprio farmacêutico sobre as atividades clínicas desse profissional. **Método:** Foram realizadas 14 entrevistas semiestruturadas com farmacêuticos, estudantes de farmácia, médicos, enfermeiros e técnicos de enfermagem que atuam em um serviço ambulatorial que atende pacientes de atenção terciária. **Resultados:** Alguns profissionais conheciam as atividades clínicas do farmacêutico no ambulatório, mas (i) encaminhavam tardiamente o paciente para o farmacêutico clínico ou (ii) conheciam a função do farmacêutico apenas em drogarias ou para pacientes hospitalizados. O farmacêutico também não se considerava totalmente preparado para realizar todas as atividades clínicas ou não possui local adequado e recursos para tal. **Conclusão:** A amostra de enfermeiros, médicos e farmacêuticos (com experiência profissional ou em formação) atuantes em um ambulatório de clínica médica desconheciam as potencialidades de cuidado do farmacêutico clínico para pacientes com multimorbidades no serviço de saúde investigado.

Palavras-chave: Farmácia Clínica; equipe multiprofissional de saúde; assistência farmacêutica ambulatorial

Concepções dos profissionais de saúde envolvidos no atendimento ambulatorial sobre as atividades desenvolvidas pelo farmacêutico clínico em uma unidade de saúde

Resumo

Objective: To describe the understanding of the team and the pharmacist himself about the clinical activities of this professional. **Method:** Fourteen semi-structured interviews were carried out with pharmacists, pharmacy students, doctors, nurses, and nursing technicians who work in an outpatient service that cares for tertiary care patients. **Results:** Some professionals were aware of the clinical activities of the pharmacist in the outpatient clinic but (i) referred the patient to the clinical pharmacist late or (ii) knew the role of the pharmacist only in drugstores or for hospitalized patients. Pharmacists also did not consider themselves thoroughly prepared to carry out all clinical activities or did not have adequate facilities and resources. **Conclusion:** The sample of nurses, doctors, and pharmacists (with professional experience or training) working in an outpatient medical clinic were unaware of the potential of clinical pharmacist care for patients with multimorbidities in the health facility investigated.

Keywords: Clinical Pharmacy; patient care team; pharmaceutical outpatient care

Introduction

For the Federal Pharmacy Council (*Conselho Federal de Farmácia*, CFF), Clinical Pharmacy is the science and practice of rational medication use. Pharmacists provide patient care in order to optimize pharmacotherapy and promote health, guiding the profession through practice models. Pharmaceutical care is directly aimed at patients, families and



communities¹.The clinical pharmacist (CPh) seeks to satisfy the social need that the population on medications has to "receive appropriate, effective, safe and comfortable treatment"¹. The pharmacists' duties result from a process built along with the clinical practice, from the nomenclatures that define them to the very definition of the roles and outline of the professionals' identity in multiprofessional health teams (MHTs) with which they work.



Costa and Pereira² describe that lack of knowledge of health MTs about pharmacists' clinical activities can be extended to pharmaceutical professionals and undergraduate Pharmacy students, as the traditional duty of pharmacists as medication managers occurs in a more isolated way and little incorporated into the multiprofessional health team^{2,3}.

In the outpatient setting, the pharmacists' role shows positive results in improving adherence to drug therapies and in the behavioral measures to control comorbidities. Health education interventions carried out with the patients to optimize pharmacotherapy, together with the prescribing professional, shows better control of clinical parameters and maintenance of such results in the long term ⁴.

A literature review pointed out the need to identify the actions developed by pharmacists in the clinical practice scope, as well as about understanding the professional choices, of pharmacists themselves, about inclusions that confer pharmacists' performance and visibility within the SUS scope. These proposals were indicated as a path to strengthening the integration of CPhs in MHTs⁵.

A crucial feature of pharmacotherapy monitoring is individuality, as the follow-up time and the interventions performed will vary according to the case addressed⁴. However, a study revealed the low acceptance of pharmacist interventions by other health professionals, possibly because they did not effectively identify them as MHT members in that context. Dentists, nurses and physicians perceived pharmacists as professionals who worked with medications without their regular presence deemed as necessary⁵.

Pharmaceutical care can be carried out through clinical pharmaceutical services, divided into dispensing, pharmacotherapy follow-up/monitoring, health education, medication reconciliation and pharmacotherapy review, among others⁶, Pharmacotherapy can present problems in terms of need, effectiveness and safety of the drug, detecting what is interfering with the therapeutic results and the user's quality of life⁷.

An integrated health team, where all members know their peers' duties and with effective communication, presents better clinical outcomes, provides greater patient safety and manages to develop activities in a more organized and objective way¹². This study sought to understand and compare the view of pharmacists (clinical and in training) to that of other health professionals on the performance of the former in outpatient services, seeking to describe expectations and activities developed by CPhs in teamwork at a tertiary university hospital.



Study design and locus

This is an exploratory, cross-sectional and prospective research study conducted with health professionals involved in outpatient care, in the form of conclusion assignment of the Uniprofessional Residency Program in Health. The study was carried out in a large tertiary-level teaching hospital, in which CPhs work in inpatient units integrating the MT, and in the institution's outpatient service, monitoring patients.

The service environment was organized into a waiting area and three offices for pharmacotherapy follow-up. The trained team consisted of two team pharmacists, five resident pharmacists and



one intern (undergraduate Pharmacy student). The pharmacy team carried out campaigns on proper medication use in the service itself and in other sectors. The patients were referred to pharmaceutical consultations by the hospital's MHT.

Data collection

A semi-structured interview was carried out with the following health professionals: pharmacists, physicians, nurses, pharmacy trainees and nursing technicians; who were part of the MHT and worked at the hospital's outpatient service. The interview questions aimed at knowing the team's view on the CPh's performance in the outpatient setting.

The participants were professionals of both genders, with time working in the institution equal to or greater than six months. The sample of participants was determined at random. All the interviewees voluntarily agreed to participate in the research protocol.

The researchers elaborated the questions based on the study objectives. The interviews took place from January to February 2022, at the institution itself or via telephone calls. Recordings of the interviews was authorized and carried out on a cell phone (iPhone), for subsequent textual transcription.

The main researcher exclusively collected and analyzed data. The analysis of the interviews took place in three phases, using the methodological approach of qualitative studies: floating reading; selection of the analysis units; and categorization and subcategorization phase^{14,15,16,17,18}.

Selection of the analysis axes resulted from consolidation of the answers to the proposed questions based on the research objectives. The clippings selected were identified with keywords that covered the central idea of each paragraph, thus resulting in the first categorization, separated according to the common topic. These clippings made it possible to link the collected material, allowing understanding what the interviewees said and investigating the existence of other interpretations of the collected message¹⁵.

The third step was the creation of categories and subcategories, bringing together the axes determined in the previous stage, grouping data presentation. The categories are listed with a variable number of topics. They can be predefined, also called *a priori*, created according to relevant factors during the analysis, or *non-a-priori*¹⁴. We used *non-a-priori* categorization, which allows for greater flexibility in defining the numbers and which the categories will be, according to data analysis. The researcher revisited the material, following systematization of the methodology.

The Ethics Committee for the Analysis of Research Projects, at the same Institution where the researcher was linked, approved the project, registered under CAAE number 52715821.5.0000.0068. The subjects who agreed to participate read and signed the Free and Informed Consent Form.

The confidentiality of the interviewees and the reduction of constraints were guaranteed by assigning an identification code to each pair. The questions were asked with explicit consent of the interviewee.

Table 1 contains the questions applied to the pharmacists,residents and students in the area (left column) and to the nursesand physicians (right column).



Table 1. Questions presented to the pharmacists, resident pharmacists and pharmacy students (left) and to the physicians, resident physicians, nurses and nursing technicians (right), about the Clinical Pharmacists' role in the hospital setting.

Semi-Structured Interview for Pharmacy Professionals and Students		Semi-Structured Interview for Physicians and Nursing Team Members		
Q1	How long have you been working in this institution?	How long have you been working in this institution?		
Q2	In your opinion, which is the role of outpatient clinical pharmacists?	Which health professionals work in the team where you work?		
Q3	How can this role be performed with the prescribing professional?	Do you consider that your team is complete?		
Q4	How can this role be performed with the patient?	If not, which health professional would you like to have included in your team?		
Q5	How do you perceive the understanding of the other health team members about the role of outpatient clinical pharmacists?	In your opinion, which is the role of outpatient clinical pharmacists?		
Q	uestion	In your opinion, at which stage of your work process would a pharmacist's performance optimize the patient's therapy?		

Results

In all, 19 health professionals were invited, five of whom had no time available for the interview. Fourteen participants were interviewed, two professionals from each of the aforementioned representations (Table 1).

Table 2 contains the characterization of all fourteen volunteerresearch participants.

Most of the sample belongs to the female biological sex (64.3%). Their age varied between 22 and 62 years old. The time working at the institution ranged from six months to 28 years, schooling from the technical level, with predominance of complete graduate studies.

Table 2. Characterization of the sample

Casuistry		
Gender	n	%
Female	9	64.3
Male	5	35.7
Age group		
21-30 years old	5	35.7
31-40 years old	4	28.6
41-50 years old	2	14.3
51-60 years old	2	14.3
61-70 years old	1	7.1
Professional Category		
Pharmacists	2	14.3
Resident Pharmacists	2	14.3
Undergraduate Pharmacy students	2	14.3
Assistant Physicians	2	14.3
Resident Physicians	2	14.3
Nurses	2	14.3
Nursing Technicians	2	14.3
Schooling		
Complete graduate studies	6	42.8
Graduate studies in progress	4	28.6
Undergraduate studies in progress	2	14.3
Technical level training	2	14.3

The answers were organized into the four categories described in **Table 3**.

The first category (Duties/Activities of outpatient clinical pharmacists) shows the view of the interviewees regarding CPh activities for clinical patients, at the tertiary level of complexity, and in care continuity at the home level. Non-pharmaceutical professionals cite as activities the evaluation of medical prescriptions in order to avoid errors, patient guidance, assessment of adherence to pharmacotherapy, activities related to reducing health costs and guaranteeing access to the treatments proposed. The pharmacists interviewed also mentioned the monitoring of patients based on medical referrals. The answers suggest that non-pharmaceutical professionals were not aware of aspects of the full action of CPhs in the outpatient setting, regardless of their time working in the institution.

Tahela 3	Categorias	e subcategorias	ohtidas no	r meio das	entrevistas realizadas.
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Categorias	Subcategorias
	Avaliação de prescrição (evitar erros)
	Orientação de pacientes
Atribuições/Atividades farmacêutico clínico	Acompanhamento de pacientes à partir do encaminhamento médico
ambulatorial	Avaliação de adesão
	Redução de custos (farmacoeconomia)
	Garantir acesso aos medicamentos
	Avaliar prescrição para otimizar a farmacoterapia
Atuação junto ao prescritor	Adequar a farmacoterapia de acordo com a rotina do paciente (à partir da prescrição médica)
	Consultas imediatamente após a consulta médica (atuação complementar)
	Orientação farmacêutica (educação em saúde)
Atuação junto ao paciente	Avaliar relação do paciente com o medicamento
	Acolhimento (escuta qualificada)
Compreensão da equipe	Falha na percepção da atuação do farmacêutico clínico ambulatorial (por vezes encaminham paciente "muito tarde")
multi quanto a atuação do	Equipe conhece a atuação do farmacêutico em outros contextos (drogaria, hospitalar)
farmacêutico	Área com potencial para crescer (mais profissionais para atender mais pacientes)





Discussion

The results obtained in the small researched group suggested the need to confer greater visibility of the clinical services provided by pharmacists throughout the community and of the benefits arising from these professionals' work, guaranteeing the right to information, highlighting the true role of pharmacists as health professionals¹⁸.

The literature reveals that, as partners of an interprofessional health team, pharmacists assist in the management of chronic diseases such as hypertension, diabetes and hyperlipidemia, as well as in assistance in smoking cessation programs. Physicians, nurses, pharmacists, dentists, occupational therapists, physiotherapists and speech therapists can positively influence patient care by aligning and reinforcing the importance of nutrition in all expertise areas¹⁹.

The American College of Clinical Pharmacy (ACCP) defined the 6 CPh competencies, necessarily through integrated care provided by health professionals. According to the ACCP, direct patient care requires "direct observation and assessment of the patients and their medication-related needs; initiation, modification or discontinuation of patient-specific drug therapy; and continuous pharmacotherapy monitoring and follow-up of patients in collaboration with other health professionals". That American body considers the residency in Clinical Pharmacy as the means for training pharmacists in this area²⁰.

There are barriers in the career development of CPhs, such as those related to the pharmacists themselves (unpreparedness, fears, inadequate qualification); insufficient number of professionals; lack of educational and financial investments; inadequate professional remuneration; interprofessional barriers (care fragmentation- neglect of the system as a whole; inadequate functioning of health teams due to unpreparedness)²¹.

In our study, the participants' answers indicated a limited perception of the pharmacists' clinical duties among health professionals, even though they are members of the same team, and despite reported improvements in recent years. This is mainly a result of the still small number of pharmacists who carry out outpatient clinical activities^{24,25}. According to De Freitas et al., the main difficulty for the clinical practice is insufficient knowledge acquisition to carry out such activities with good quality and effectiveness, at the undergraduate and specialization levels²⁶. The ACCP considers the specialized residency as the main training moment for clinical pharmacists²⁰. In Brazil, the MEC authorized residency programs only from 2004 onwards.

The Physician-Pharmaceutical Collaborative Instrument (*Instrumento Colaborativo Médico-Farmacêutico*, ICMF) assesses the characteristics of the exchange between professionals and was used by Meredith et al. for clinical pharmacists and resident physicians of Internal Medicine and Family Medicine in Indianapolis, USA². These authors verified that resident physicians could be more receptive when they become familiar with the pharmacists' professional skills and trust in the benefits of this collaboration. Despite this, and surprisingly, part of these resident physicians considered that referring their patients to CPhs for medication management could harm their physician-patient relationship²².

In a qualitative study, Tegegn et al.²³ interviewed 15 health professionals (nurses, pharmacists and physicians) using the content analysis qualitative method. Most of the interviewees recognized the benefit of joint action by pharmacists, but were concerned about the small number of professionals, given

the demand. Most of them noticed that the services are not provided continuously and that pharmaceutical assistance should be periodic, without interruptions. They emphasized that cooperation among health professionals assists in teamwork, avoiding unnecessary conflicts related to overlapping tasks. They highlighted that infrastructure, human resources and the initiation of programs would offer a better chance of involving and providing clinical pharmacy services more effectively, to be expanded and sustained through public policies. Most of them stated that poor attitudes towards the services, conflicts of interest due to the unclear scope of the CPh practice and lack of cooperation are the challenges that radiate from nurses and physicians²³.

In our study, we observed that pharmacists considered that other professionals do not understand the activities that they can develop. Some other categories recognized that they are not very familiar with the activities performed by CPhs. Santos et al. found similar results when investigating the perception of health teams about the performance of nutrition professionals, mainly due to the higher frequency of absence of these professionals in health teams²⁷.

In addition to the activities mentioned by the interviewees, CPhs can also prescribe Over-the-Counter Medications (OCMs), promote rational medication use, guide non-drug measures to control comorbidities, instruct self-monitoring of clinical parameters and perform blood pressure and blood glucose measurements. All interventions must be thought out, organized according to each patient's demand and needs, and recorded to enable adequate monitoring²⁸.

Despite the difficulties, several clinical pharmacy services have been implemented in Brazil, both for general patient guidelines and for specific diseases (diabetes, hypertension, leprosy, tuberculosis, cancer and HIV)^{28, 29, 30, 31, 32, 33, 34}. These services show positive results in improving adherence to pharmacotherapy^{28, ³², in rational medication use³³ and in cost reductions for health systems^{29, 30}.}

In the population, the limited CPh performance generates ignorance about the activities of these professionals for their well-being. Our study did not include users. However, Lacerda et al. observed that the population sees pharmacists are as health professionals, although most people still do not know how they can count on these professionals for health care³⁵.

The scientific evidence indicates that pharmacotherapy monitoring or pharmaceutical guidance from the beginning improves adherence to the treatment, the patients' understanding of their comorbidities and the importance of correct medication use, reducing potentially dangerous drug interactions by analyzing the prescriptions and through a more accurate control of health problems³⁰. Controlled comorbidities generate savings for the health system, given the reduction in the number of hospitalizations or emergencies^{28,29}. In Brazil, the development of a shared care culture stems from the inadequate prevalence of unprofessional training (concentrated in a single profession), centered on the biomedical aspects and with an emphasis on technological density and the health care tertiary level. Added to these variables is the fact that these graduates will begin to perform their functions in a Public Health System that has transformed the labor market, through health care networks (in multiprofessional teams), redesigning the practices, without any prior and proper understanding of the competencies of each profession for the construction of individual and team identity by the professionals³⁴.





Through the initially very timid Clinical Pharmacy movement, in one of the Brazilian northeastern states, the pharmaceutical profession was consolidated after the promotion of meetings by the World Health Organization in New Delhi, Tokyo, Vancouver, the HAIA, and by the Pharmaceutical Forum of the Americas in 1999. Amid the demands and needs, pharmacists were not part of the priorities in public health budgets, resulting in a reduced number of vacancies within the Unified Health System³⁶.

Kherin et al. showed that, for the development of hospital pharmacy services, undergraduate curricula, national health strategies and leadership are considered good opportunities³⁷. In Qatar, a qualitative study highlighted the pharmacists' workload, low salary and disinterest as the main challenges for clinical pharmacy services³⁷.

The results obtained in this study were very similar to those in developing countries. The history of the health profession and public policies in Brazil explain part of the data collected. The Clinical Pharmacy residency and the specialization courses can enhance the function of these professionals, as well as the enlightened population demand, due to the understanding and familiarity of the clinical pharmacists' collaboration in improving quality of life, given the better control of diseases, with consequent recognition and mobilization of managers with public incentive policies.

The current paper has limitations. Data collection took place in a single public institution, a tertiary-level teaching hospital from a large city in the Brazilian Southeast region. The findings cannot be generalized. Despite using some qualitative approach, this is a descriptive study whose methodology does not support any explanation of the phenomena observed. The interviews were conducted with a small sample of professionals from the Medicine, Pharmacy and Nursing areas, not including social workers, nutritionists or psychologists, among other professionals from the team.

Conclusion

This study observed that nurses, physicians and pharmacists (with professional experience or training) working in an outpatient medical clinic are unaware of the potential of CPh care for patients with multimorbidities in the hospital researched. The interviewees also acknowledged that they are not very familiar with the activities performed by CPh, which may restrict timely referrals.

There is favorable evidence of outpatient pharmaceutical clinical services, with positive repercussions for the patients, improving adherence and controls, with evident financial savings for the health system. The CPh function is still restricted in Brazil due to several factors, with a fundamental need to implement public (training - residency) and professional career policies. This is a more recent role compared to that of nursing and physicians, with greater diffusion in health teams and training loci, particularly in outpatient care.

Funding sources

Author Tainá Veras de Menezes received a grant from the Ministry of Health as a uniprofessional resident in Hospital and Clinical Pharmaceutical Assistance from 2020 to 2022.



Declaration of conflict of interest

The authors declare no conflicts of interest.

Collaborators:

Conception and planning of the research project (TVM, MCG, MPN); Data collection, analysis and interpretation (TVM); Initial writing of the scientific article (TVM, MCG, VBP, MPN); Data analysis and interpretation (GCM, VBP); Critical review (MCG, MPN)

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