# Hospital Discharge of Cancer Patients in Palliative Care: Understanding the Process for Integration of Clinical Pharmaceutical Services

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*Alta Hospitalar de Pacientes com Câncer em Cuidados Paliativos: Compreensão do Processo para Integração dos Serviços Clínicos Farmacêuticos*

Alta Hospitalaria de Pacientes con Cáncer en Cuidados Paliativos: Comprensión del Proceso para la Integración de los Servicios Clínicos Farmacéuticos

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ABSTRACT

**Introduction:** With the aging of the population, an increase in cancer incidence and demand for palliative care can be observed. The pharmacist, as a member of the multidisciplinary team, strives to ensure safety and comfort for the patient. Pharmaceutical care includes services such as medication reconciliation and health education, which help prevent medication-related errors during care transitions. Upon hospital discharge, this role is critical, as pharmacotherapy changes often occur during hospitalization, potentially causing medication-related problems at home. **Objective:** To conduct a situational diagnosis of the hospital discharge process, focusing on prescribed medications for home use and to understand the perception of healthcare professionals regarding the integration of the pharmacist into the team. **Method:** Qualitative, exploratory, and descriptive study conducted in an oncological palliative care hospital unit through semi-structured interviews with physicians and nurses, using Bardin's content analysis and the MAXQDA® software for data processing. **Results:** From the analysis of interviews with 12 professionals, three thematic dimensions emerged: criteria for defining hospital discharge, factors that may influence guidance and understanding of medication use at home, and the integration of the pharmacist in the hospital discharge process. **Conclusion:** The implementation of strategies at hospital discharge is essential to ensure medication safety and rational use for home treatment. Further studies are needed to enhance the understanding of this process and to guide the pharmacist's actions in caring for patients with advanced cancer.

**Keywords:** Neoplasms/drug therapy; Palliative Care; Patient Discharge; Pharmacist; Hospital to Home Transition.

***RESUMO***

**Introdução:** Com o envelhecimento populacional, é possível observar o aumento da incidência do câncer e a demanda pelos cuidados paliativos. O farmacêutico, membro da equipe multidisciplinar, busca trazer segurança e conforto ao paciente. O cuidado farmacêutico envolve serviços como conciliação medicamentosa e educação em saúde que contribuem para evitar erros relacionados aos medicamentos nas transições do cuidado. Na alta hospitalar, essa atuação é crítica, pois, durante a internação, geralmente ocorrem alterações na farmacoterapia, podendo gerar problemas relacionados ao uso de medicamentos em domicílio. **Objetivo:** Realizar o diagnóstico situacional do processo da alta hospitalar com foco nos medicamentos prescritos para domicílio e compreender a percepção dos profissionais envolvidos sobre a integração do farmacêutico junto à equipe. **Método:** Pesquisa qualitativa, exploratória e descritiva realizada em uma unidade hospitalar de cuidados paliativos oncológicos, por meio de entrevistas semiestruturadas com médicos e enfermeiros, utilizando a análise de conteúdo de Bardin e o *software* MAXQDA® para tratamento dos dados. **Resultados:** A partir da análise das entrevistas com 12 profissionais, emergiram três dimensões temáticas: critérios para definição da alta hospitalar, fatores que podem influenciar a orientação e a compreensão do uso de medicamentos em domicílio e a integração do farmacêutico no processo de alta hospitalar. **Conclusão:** É importante a implementação de estratégias na alta hospitalar para segurança e uso racional dos medicamentos prescritos para domicílio. Estudos futuros são necessários para aprimorar a compreensão desse processo, bem como para orientar as ações do farmacêutico no cuidado ao paciente com câncer avançado.

**Palavras-chave:** Neoplasias/tratamento farmacológico; Cuidados Paliativos; Alta do Paciente; Farmacêutico; Transição do Hospital para o Domicílio.

RESUMEN

**Introducción:** El envejecimiento poblacional aumenta la incidencia del cáncer y la demanda de cuidados paliativos. El farmacéutico, como parte del equipo multidisciplinario, contribuye a la seguridad y bienestar del paciente. El cuidado farmacéutico involucra servicios como conciliación medicamentosa y educación en salud, que contribuyen para evitar errores relacionados con los medicamentos en las transiciones del cuidado Su actuación en el alta hospitalaria es fundamental, ya que los cambios en la farmacoterapia durante la hospitalización pueden generar problemas en el uso de medicamentos en el hogar. **Objetivo:** Diagnosticar la situación del proceso de alta hospitalaria con enfoque en los medicamentos prescritos para usar en el hogar y analizar la percepción de los profesionales sobre la integración del farmacéutico en el equipo. **Método:** Estudio cualitativo, exploratorio y descriptivo en una unidad hospitalaria de cuidados paliativos oncológicos. Se realizaron entrevistas semiestructuradas con médicos y enfermeros, analizadas mediante el método de Bardin y el *software* MAXQDA® para el tratamiento de datos. **Resultados:** Del análisis de 12 entrevistas, emergieron tres temas: criterios para definir el alta hospitalaria, factores que influyen en la orientación y comprensión del uso de medicamentos en el hogar, e integración del farmacéutico en el proceso del alta hospitalaria. **Conclusión:** Es esencial implementar estrategias en el alta hospitalaria para garantizar la seguridad y el uso racional de los medicamentos prescritos para uso en el hogar. Se requieren estudios futuros para profundizar la comprensión del proceso y orientar la actuación del farmacéutico en el cuidado del paciente con cáncer avanzado.

**Palabras clave:** Neoplasias/tratamiento farmacológico; Cuidados Paliativos; Alta del Paciente; Farmacéutico; Transición del Hospital al Hogar.

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## INTRODUCTION

Over the last decades, Brazil went through social, economic, and health transitions, resulting in population aging and an increase in cancer incidence, which may cause physical and emotional dependence[1]. This makes symptom control necessary to minimize patient suffering and give new meaning to care for this population with special needs. Therefore, there is a growing demand for palliative care in oncology, which can help patients and their families cope with the disease[2].

Patients with advanced cancer are usually polysymptomatic, and adequate management of those symptoms is essential in palliative care. Control must be individualized, catering to the specific needs[3]. Considering this complexity, the multidisciplinary team's actions contribute to better assisting these patients. Although the minimum composition required includes a doctor, a nurse, and a social assistant, the participation of other health professionals, such as pharmacists, physiotherapists, nutritionists, and psychologists, is important for individualized care[4].

Pharmaceutical care focused on the patient involves services such as medication conciliation and health education[5]. Conciliation is an essential service for preventing medication errors during transitions of care (including admission, transfer between wards, or hospital discharge)[6], and is a globally recognized strategy for ensuring patient safety[7].

The Canadian Society of Healthcare-Systems Pharmacy considers education at discharge as comprehensive education to ensure patient adherence to the treatment plan during transition from the hospital to the home care environment. This is done by pharmacists aiming to optimize the process of hospital discharge, in addition to providing the necessary tools and guidance to ensure medication management at home[8].

The discharge moment is critical as changes in pharmacotherapy may cause issues related to the use of medications at home, which makes understanding the dosage scheme important[9]. The patient must receive a complete prescription for treatment continuity, and the participation of pharmacists can ensure the safe use of drugs[10]. Thus, the combined action of professionals improves the quality of care during transition and reduces hospitalizations[11]. A preliminary study[12] has pointed out difficulties reported by caregivers of advanced cancer patients in palliative care regarding medication management at home, even after being discharged from the hospital, which include: following the medical prescription, storage and disposal of medication, low understanding of how medication associates with symptoms, and a lack of understanding of how to administer medication prescribed for emergency use (SOS). This study aims to conduct a situational diagnosis of the hospital discharge process, focusing on prescribed medications for home use and understanding the perception of healthcare professionals regarding the integration of the pharmacist into the multidisciplinary team.

Considering the above, it becomes relevant to address the development of actions targeted at reviewing the discharge routine in this same hospital unit, as it is believed that integrating the pharmacist into the team can contribute to this process.

## METHOD

The research was conducted on a qualitative approach. This exploratory and descriptive study was conducted in an exclusive palliative care hospital unit of a national reference institute in oncology located in Rio de Janeiro. The study location has 56 hospital beds spread over four floors.

The study selected professionals who participated in the hospital discharge process, involved directly in elaborating the medical discharge prescription and guidance on medication use at home, including doctors and nurses, following the inclusion, exclusion, and convenience criteria. Professionals working in the hospital discharge ward of the institution for at least two years were included. Those who worked only on the night shift, were on vacation, or licensed during the data collection period were excluded.

The data was obtained from individual semi-structured in-person interviews with audio recorded from April to July 2021. An open-question script guided the interview, allowing the interviewee to elaborate on the theme without being tied to the formulated question[13]. The questions were elaborated by the main researcher, given her experience in clinical practice in the studied location, and covered different aspects related to the hospital discharge process. The interview script can be viewed in Chart 1.

The interviews lasted around 14 minutes and were conducted in private rooms, scheduled to prevent interruptions. The recorded interviews were then transcribed in full by the researcher herself and stored in digital format for personal use, ensuring complete privacy of the obtained data and preserving the identity of participants by changing their names for codes.

The data treatment was conducted according to the Laurence Bardin technique of thematic content analysis, which encompasses explicitness, systematization, and content expression initiatives to make justified deductions on their origins[14].

Chart 1. Interview script with questions asked to the research participants

| Interview script – questions asked |
|---|
| "How is the hospital discharge moment organized?" |
| "What are the main challenges in preparing patients and families for discharge?" |
| "What is your impression on how patients/caregivers understand the use of prescribed medication at home during the hospital discharge process?" |
| "Have you had the opportunity to work with a pharmacist participating in the patient/caregiver discharge and guidance process? If yes, how was that experience?" |
| "Do you believe that inserting the pharmacist in the discharge process is beneficial to patient care? In your view, how can this professional contribute?" |

The MAXQDA®[15] software (version 2020) was used, a program developed for qualitative data analysis that allows categorizing information by codes, in addition to integrating quantitative data, generating word cloud and frequency graphs of categories in the codified segments. The data was categorized following the inductive method with open codification.

This research was submitted to the Research Ethics Committee (CEP) of the *Faculdade de Medicina da Universidade Federal Fluminense* and the National Cancer Institute, approval report number 4.510.313 (CAAE (submission for ethical review): 40080420.5.0000.5243) and 4.602.265 (CAAE: 4008l0420.5.3001.5274), respectively, according to Resolution no. 466/12[16] of the National Health Council (CNS). All the participants agreed and signed the Informed Consent Form.

## RESULTS AND DISCUSSION

The sample had 12 professionals, including four doctors and eight nurses, representing 100% of the doctors and 40% of the nurses working in the hospitalization ward, according to the previously defined inclusion and exclusion criteria. After the interviews and considering that all the doctors in the ward had been interviewed, the researcher decided not to include new nurses due to the redundancy and repetition of data obtained.

All interviewed professionals had over three years of experience in the field and a specialization degree. Most interviewees were female (91.7%), and, regarding work regime, most (66.7%) worked as on-call professionals.

The data analysis during the codification process identified three thematic dimensions and their respective categories, shown in Chart 2.

### Criteria for defining the hospital discharge

This first thematic dimension surfaced factors highlighted by the interviewees as important criteria for defining a safe and quality hospital discharge. Among the aspects to be considered, planning was the most frequent criterion in the discourse codified segments (42.5%), followed by the participation of the multidisciplinary team in organizing and defining discharge (23.3%). Another topic addressed by the participants was the presence and involvement of family members in structuring the home care network (19.2%), followed by assessing the patient's clinical condition for being discharged (15.1%).

#### *Planning*

Planning the discharge consists of creating a personalized plan for each patient who is leaving the hospital. Its goal is to reduce hospitalization time and unplanned rehospitalizations, in addition to improving the coordination of services after discharge[17]. That was the most highlighted criterion according to the research participants, as portrayed in the following speech fragments:

> The unit proposes to discharge in advance so that there is, in fact, an organization of both team and family concerning this process. So, that's it; programming the discharge is what I think makes all the difference in this process of structuring care and even medication (D1).
>
> I think that when the discharge is well programmed, it's easier for everyone, and we can provide a higher quality discharge (N6).

The study by Walker et al.[18] pointed out difficulties regarding medical prescriptions not being drafted in due time for pharmacists to perform the proposed actions, such as assessing the prescribed medication, conciliating medication, and making eventual interventions, in addition to offering guidance and education to patients at the time of discharge. Programming allows for a better viability of the pharmacist's participation in this process, helping organize the pharmacy's routine activities.

Chart 2. Thematic dimensions and respective categories after interview analysis

| Thematic dimensions | Categories |
|---|---|
| **Criteria for defining the hospital discharge** | Planning<br>Participation of the multidisciplinary team<br>Care network<br>Clinical condition |
| **Factors that may influence guidance and understanding of the use of medication at home** | Level of understanding<br>Polypharmacy<br>Medical prescription model<br>Lack of time to provide guidance on a lot of information |
| **Integrating the pharmacist into the hospital discharge process** | Pharmacist participation<br>Contributions of pharmaceutical integration |

In this context, it's important to plan the hospital discharge of this vulnerable population and prevent or minimize several problems.

### *Participation of the multidisciplinary team*

To provide integral care for the patient and their family, preventing and alleviating physical, psychosocial, and spiritual suffering, the presence of several categories of professionals is needed[19]. The interviewees highlighted the participation of the multidisciplinary team in the hospital discharge process:

> When the team is cohesive and well-rounded, things flow better (D2).

> The multidisciplinary team works to help this family care for their family member, that's basically it, so it's a joined decision of the team as a whole, what we need to identify are several factors, if the family understands how this care is going to be, if they understand the patient's prognosis too, because that makes a difference (N1).

Teixeira et al.[19], through an integrative review, showed that interdisciplinary partnerships with active participation of patients, implementation of medication conciliation, and ensuring patients, family members, and caregivers understand the information, among others, are fundamental aspects of the effectiveness of the hospital discharge process.

Martinbiancho et al.[20] demonstrated that hospital discharge was one of the criteria included in the pharmaceutical assistance protocol. At the time of discharge, patients with complex needs received guidance on the acquisition of prescribed medication, in addition to information on how to administer medication through catheters and adapting pharmaceutical formulas for home use.

Thus, it is understood that when there is the possibility of different approaches through joint action by the team, including the pharmacist, the chances of a careful evaluation of the problems that cause anguish and suffering are greater.

### *Care network*

Strengthening the support network is a coping strategy for solving problems related to the disease[21]. For dehospitalization to be possible, the family must organize for continuing care at home. In addition to suffering due to the patient's health condition, family members need to learn technical procedures employed by health professionals, such as, for instance, administering medication and caring for bandages, as highlighted by the interviewees:

> The idea is to relay the discharge planning and proposal to the family daily so they can define goals, understand the process, what the objective is, and have them follow up with the outcomes so they are not caught off guard (D2).

> (...) then, decide along with the patient and the family this return to home (N6).

The transition from hospitalization to home care of a patient with cancer in palliative care is complex and usually followed by a change in the objectives of care. This can lead to stressful situations for patients, family members, and health professionals[22]. Aiming to reduce hospitalization time and broaden home care, caregivers are increasingly responsible for assistance continuity. As such, they need to take on the role of health caregivers and help control symptoms in the home environment[23]. For them to assist patients 24 hours a day, they should rely on a structured support network and be properly received and guided[24].

### *Clinical condition*

Due to the disease's course or the established treatment, patients with advanced cancer are polysymptomatic[25]. To make dehospitalization viable, it is important to have an approach aimed at symptom control within a clinical condition that enables comfortable maintenance of care in the home environment.

> Usually, the patient is hospitalized due to a symptom imbalance, and when this symptom is controlled, we start considering hospital discharge (N6).

It is worth mentioning that changes in the administration of drugs to intravenous routes are common at the time of hospitalization; however, as soon as there is a discharge prediction, that medication should be changed to the route of administration that will be used at home to ensure the therapy is better tolerated.

> (...) if you think the patient is ready to go home, you should already ask to change the venous route to the oral route (N2).

> Regarding medication, I particularly like to run a test before discharging, I like to leave intravenous medication for a few hours and add the oral medication to see if the patient will maintain pain compensation, pain and dyspnea control... Before going home, to see if they'll be comfortable (D3).

In this context, it is clear that, in addition to the involvement of patients, families, and multidisciplinary teams, the discharge plan must include a review of pharmacotherapy for home use.

## Factors that may influence guidance and understanding of the use of medication at home

The main categorized factors were level of understanding (47.0%), polypharmacy (19.7%), and medical prescription model (18.2%), in addition to lack of due time for providing lots of information (18.2%).

### *Level of understanding*

The way people assimilate information provided by the team can be different, depending on each individual's ability to understand. When the professional who does the guidance identifies that the main caregiver cannot read, for instance, they can arrange for the pharmacy team to elaborate a special prescription. The pharmacist makes the transcription in a different model, with drawings, figures, and pill attachments to facilitate understanding.

In this sense, some interviewees reported that caregivers seemed to understand the medical prescription, while others noticed cultural barriers and cognitive difficulties for understanding the guidance. This divergence of perceptions among research participants can be explained by the different experiences they have had:

> Sometimes, we are faced with cognitive, intellectual difficulties; we deal with people from different educational backgrounds, but those are very specific cases, and most people understand and can have a good adherence (D3).

> (...) our patients mostly have some degree of difficulty understanding; they can read and write, but not always understand a prescription (N4).

> I think it depends a lot on the family, it depends a lot on the patient. Unfortunately, we have people here with several degrees of understanding; some people need us to simplify the prescription a lot (N5).

> They might have completed high school, higher education, it doesn't matter. I think facilitating the prescription, regardless of the education level, helps them a lot in adhering to the prescription (D1).

Regarding the education of caregivers, a low instruction level may generate difficulties in understanding some practices of care. Thus, guidance will rely on the patient and/or caregiver's response, according to their understanding and ability in medication management[25,26].

### *Polypharmacy*

Although the literature diverges on the definition of polypharmacy, the most widespread concept is "concomitant use of four or more drugs". The higher the number of medications used by patients, the greater the risks of adverse events[27]. For therapies where multiple medications are prescribed, different dosages and routes of administration, such as in palliative care, patients usually have difficulties assimilating and understanding the prescription[28], as reported by the interviewed doctors and nurses:

> Our patients are polysymptomatic, so they have many prescribed medications, and sometimes you

> give them an eight-item prescription, so, sometimes the impression I have, and I do guide them, is that they don't ask questions and remain in doubt, you see? (N1).

> (...) it's complicated because normally there are too many drugs... It's a big polypharmacy, drugs with many side effects, many drugs that act in the central nervous system, you know, difficult drugs to deal with, compared to the population with no cancer, no palliation, it's a polypharmacy with very high doses and drugs with several side effects... It's appalling; everyone who comes here is startled (D2).

Polypharmacy is common for patients with cancer in palliative care due to the need to control symptoms presented by treatment sequelae and disease progression. A medication prescribed to improve a certain symptom can often cause side effects that need to be minimized by another drug. For instance, the need for laxatives due to constipation caused by opioid drugs.

In a study conducted at the same palliative care unit, Ferreira, Bittencourt, and Cordeiro[12] investigated the difficulties faced by caregivers of patients in home care regarding medication management. Polypharmacy was also mentioned as one of the obstacles to following the medical prescription. The average number of medications per patient is 10.9 items. In this study, the prescription of multiple drugs was considered one of the factors responsible for non-adherence to pharmacotherapy. Patients in a polypharmacy regime, more than any other, should be empowered with correct information to perform the vital role of safely using medication[29], along with their caregivers.

### *Medical prescription model*

The institutional medical prescription is computerized, and prescribed medications are presented in alphabetical order with their respective administration times. According to reports from professionals, patients, and caregivers in clinical practice, this way of presenting medications can cause difficulties in following the prescription. Thus, some family members prefer to elaborate a model in which the drugs are disposed by time of administration while others find the current format satisfactory.

Although pharmacists can elaborate special prescriptions for illiterate individuals, transcribing an individualized model requires time, making it unfeasible to do for a large number of patients. Some professionals interviewed considered that the institutional prescription format addresses the demands, while others reported the model can be hard to understand:

> (...) we used to think like this: the person is not able to understand, they are not following because they can't read the doctor's handwriting; this was an issue before, perhaps it's still an issue elsewhere, but now our prescriptions are typed (D4).

> So, our prescription is self-explanatory, it comes with the exact times for taking the medications (N4).

> Something else I don't like is the prescription model, I think it's a bad format; it's cute, but not very practical (D1).

One of the goals of electronic prescriptions is to reduce errors when elaborating and reading information. The advantages of using this type of prescription in comparison to manual prescription are readability, agility, and organization, while the disadvantages are unrevised repetition of prescriptions from days before[30].

### *Lack of time to provide guidance on a lot of information*

The patient's clinical condition at admission is usually different from the one at hospital discharge, so changes in pharmacotherapy and routes of administration may occur, in addition to new demands caused by the worsening of the disease. Although the oral route is usually preferred, it may not always be feasible. The use of alternative routes, such as probes and subcutaneous, is often necessary. This requires the professional to take time to train the caregiver, who is not always able to assimilate so many different pieces of information in a brief time, as reported by the following interviewee:

> (...) that is the time everyone is going to give instructions on everything, we instruct about the prescription, but also the bandages and other things, then comes in the nutritionist with their instructions, the social assistant, everybody is in a fuss and hustle too, it's too much information altogether, sometimes not even they can process all the information they've just received (N6).

The transition from hospital to home can be challenging as patients and family members receive a significant amount of new information and assume responsibility for managing care at the time of discharge[31]. Benzar et al.[32] applied a questionnaire to patients under palliative care and their caregivers, which addressed

questions related to the quality of the hospital discharge process. As a result, one of the surfaced themes was difficulty managing symptoms. The study concluded that many families did not receive the necessary guidance to use the prescribed medications. Thus, starting guidance and training early, during hospitalization, may help them understand the home care instructions.

## Integrating the pharmacist to the hospital discharge process

In Brazil, there was an increase in the implementation of pharmaceutical clinical services over the last years, providing care to patients, families, and communities. Those actions help promote health and reduce morbidity and mortality associated with the use of medications[33].

Many preventable adverse events can happen due to discrepancies between the medications used in hospitalization and discharge, prescription of inadequate medications, inadequate monitoring of adverse events, and low adherence, among others. Patient safety strategies should be developed to reduce such events, and clinical pharmacists can play a leadership role in this scenario[32].

### *Pharmacist participation*

In the studied palliative care hospital unit, the pharmacist participates in some discharge processes with the multidisciplinary team. All the interviewees reported having worked with this professional at some point and described their experiences regarding this joined action, considering it beneficial for care.

> Oh! It was really good! Really good because it's a completely different perspective. I think it's essential (N4).

> Having a pharmacist there provides much more safety, it's great, wonderful, it helps a lot, gives us a lot of confidence, I find it beneficial, I'm all for #pharmacy (laughs) (D2).

In the study by Fontana et al.[34], the interviewed health professionals reported the pharmacist role at discharge as extremely relevant and that this professional should leave the pharmacy environment once in a while and work with the health team more often. They also mentioned the pharmacist's participation in guiding the discharge as important for patient safety when using the medications at home[34]. However, despite the increasing clinical participation of pharmacists, hospital pharmacies rarely have these professionals available to perform this activity.

> I think the clinical pharmacist makes all the difference, right? In our experience, the pharmacist is usually at the pharmacy, and we do not have contact with this professional. Having the pharmacist complement our work makes all the difference and is very enriching (D1).

> And I think pharmacists should be present in every discharge, you know? Here, unfortunately, nowadays, they can't handle it (N6).

According to Walker et al.[18], there are many obstacles to the pharmacist's clinical activity. The authors highlighted barriers such as the lack of information before discharge, the fact that medical prescriptions cannot be drafted in due time for pharmaceutical guidance, and that pharmacists cannot leave the pharmacy to provide their clinical service[18]. Despite the obstacles and acknowledging the importance of pharmaceutical clinical services, it is possible to redesign and systematize processes, resident training, and even hire new professionals to better integrate pharmacists into clinical practice.

### *Contributions of pharmaceutical integration*

The interviewees suggested how pharmacists can help teams, patients, and caregivers at the time of discharge. They all mentioned activities that can be performed in case this professional is institutionally integrated into the process.

> Families sometimes have doubts about adverse events, and they may not even mention them, but the pharmacist includes them in their guidance. Because you often make a little conciliation before guidance, right? So, I believe you clear doubts about medications prescribed, unprescribed. You focus more, dedicate more at the time of guidance, and you have much more refined pharmacological knowledge than a nurse, right? (N1).

> The pharmacist receives different training when it comes to prescriptions that we doctors do not. So, the level of interaction, adjusting a certain medication to a certain route, are things we just can't do. Identifying this caregiver's difficulty in understanding the importance of the prescription in the way it is written, attention to side effects, adverse events, the issue of polypharmacy in general, and how we draft that prescription, I think we all win with that (D4).

Chart 3 describes the main contributions of integrating pharmacists into the hospital discharge process as reported by the interviewed doctors and nurses.

The participants' testimonies are in line with Resolution n. 585/2013[35] of the Brazilian Federal Pharmacy Council that regulates clinical attributions of pharmacists, and the recommendations by the American Society of Health-System Pharmacists (ASHP) Guidelines on the Pharmacist's Role in Palliative and Hospice Care, document that highlights several essential and desirable clinical activities to be performed by pharmacists in palliative care[36]. These include symptoms and pharmacotherapy management, medication conciliation, educational guidance, and therapeutic counseling to patients and caregivers. The interviewed doctors and nurses highlighted the importance of the clinical pharmacist's role:

> I think clinical pharmacists have a role I consider fundamental, especially for us here in palliative care, because there are too many medications, right? They require us to be more vigilant; these are not simple medications, and it's rare to have patients who use just three or four medications; they are usually complex patients with many comorbidities (D4).

> It would be perfect if we had them... If we had pharmacists in hospitalization... It would be great, one by floor, can you imagine it? (N4).

The interviewees were asked about their experience working with a pharmacist participating in the hospital discharge process in guiding patients/caregivers, the benefits, and possible contributions of this professional in care. Their responses generated a word cloud presented in Figure 1. Observe how "patient" is at the center, representing the stronger word in the interviews, followed by "process", "prescription", "medication", "medical prescription", "doctor", "nurse", and "pharmacist". These results suggest patient-centered care, with interest in the hospital discharge process, more specifically on the medication prescription drafted by the doctor, guided by the nurse, discussing integration and contributions of pharmacists in this process. The word "family" should also be highlighted, referencing the patient-caregiver binomial in this relationship, which should be guided, trained, and clarified to give continuity of home care with patient safety.

## CONCLUSION

The present study shows the complexity of the hospital discharge process for advanced cancer patients in exclusive palliative care. The interview analysis revealed criteria for defining discharge and acknowledged the importance of pharmacists in the multidisciplinary team in ensuring patient safety, optimizing pharmacotherapy, and instructing how to take prescribed medications. Broadening awareness of pharmacists' activity may help

Chart 3. Main contributions of pharmacists to hospital discharge, according to study participants

| Pharmacist contributions | Actions performed |
|---|---|
| **Regarding medication prescription** | • Comparing medications prescribed at hospitalization and discharge (medication conciliation)<br>• Checking prescriptions and reducing nonconformities<br>• Dosage review |
| **Patient safety and adequacy** | • Adjusting medication to a certain route<br>• Reducing risk and increasing safety<br>• Possibility of fractionating pills<br>• Diluting medications for subcutaneous therapy<br>• Reducing polypharmacy<br>• Contributing to the whole guidance process<br>• Identifying the difficulty in understanding prescriptions |
| **Clearing doubts** | • Prescribed medications<br>• Suspended medications<br>• Adverse events<br>• Side effects<br>• Correct timings<br>• General care in administering medications<br>• Drug interaction |


Figure 1. Word cloud generated by the thematic dimension integrating the pharmacist into the hospital discharge process

develop strategies to integrate pharmaceutical clinical services into the hospital discharge process.

The results also indicate that, despite acknowledging the challenges faced by caregivers and patients, professionals still need to be more aware of the shared responsibilities in the hospital discharge process. Improvements in organizing teamwork, saving time for guidance, and the availability of clinical pharmacists may contribute to overcoming such difficulties.

Despite covering only a single health unit, the results of this study can offer valuable grounds for this practice in other services. Further research is needed to guide pharmacist actions in the care of advanced cancer patients, as well as offer better evidence on the results of pharmaceutical interventions in this scenario.

## CONTRIBUTIONS

Luciana Favoreto Vieira Mattos has contributed to the study design, planning, acquisition, analysis, and interpretation of the data, as well as the wording. Ana Rosa Navegantes de Sousa, Selma Rodrigues de Castilho and Mariana Fernandes Costa contributed substantially to the study conception and planning and critical review. All the authors approved the final version for publication.

## DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interest to declare.

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