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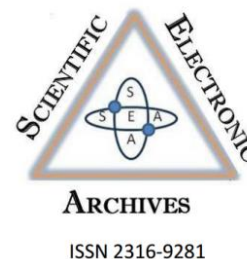
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The importance of pharmacotherapeutical follow-up in hospital discharge

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Abstract. The hospital discharge moment can be considered a critical moment for the pharmacotherapy of patients, leading to a series of problems related to the use of medicines at home. Lack of knowledge about duration of treatment, adverse effects, interference from food and other medications, changes in lifestyle and whether or not to continue treatment with the medications they used before hospitalization are frequent questions that patients have and can be reversed with the implementation of clinical pharmacy and pharmaceutical care activities. The objective of the work was to analyze and synthesize scientific production, through a bibliographic review, on patient education regarding the therapeutic drug regime in the discharge process. In view of the evidences proven in the reported studies, the contribution of the pharmacist's performance with the patient on discharge is undeniable, bringing benefits to the patient and health institutions, and promoting the appreciation of the pharmacist as a health professional.

Keywords: Pharmaceutical care. Hospital discharge. Pharmacotherapeutical follow-up

Introduction

The Pharmacy Hospital occupies, according to the Ministry of Health (2001), an important position within the healthcare context, being responsible for activities related to medication, a therapeutic input with a strong impact on health and hospital cost, justifying the importance of a constant process evaluation and monitoring of Hospital Pharmaceutical Assistance, in order to minimize the problems related to this input and increase the safety of pharmacotherapy (SILVA, 2010; CARVALHO, 2018).

Pharmaceutical Assistance is a multidisciplinary activity, understood as "a set of actions aimed at the promotion, protection and recovery of health, individual and collective, with medication as an essential input and aiming at access and its rational use" (BRASIL, 2004). This group of actions involves research activities, the development and production of medicines and supplies, and in addition to these, the selection, programming, acquisition, distribution, dispensation, quality assurance of products and services, monitoring and evaluation of their use, these activities being known as the "Pharmaceutical Assistance Cycle" (BRASIL,

2004; SOUZA, 2017). Arises in this context, the Pharmaceutical Care, with strong humanistic component, defined as: "responsible provision of drug therapy, in order to achieve defined results that improve the quality of life of patients," seeking to meet the pharmacotherapeutic needs of patients and solve problems their medication (PAHO, 2002; PEREIRA; FREITAS, 2008; COSTA, 2014; SOUZA, 2017).

There are several Pharmacist duties related to the Pharmaceutical Care Cycle, including the selection, programming, acquisition, storage, distribution and dispensing of medicines; the management of human resources activities, financial resources and material resources and the following pharmacotherapeutic actions, pharmacovigilance, drug information, pharmaceutical technology, education and research (BRAZIL, 2004; Neto, 2005; MANZINI et al, 2015;. MONTI, 2018).

Drug administration is a multi and interdisciplinary process, requiring constant knowledge and training from responsible professionals (SILVEIRA, et. Al, 2013). In this way, the functions of the hospital pharmacist require commitment to the results of their services and not

only to their provision (SILVA, 2010; CARVALHO, 2018). The pharmacist must be proactive and be part of the multiprofessional health team, contributing to the various discussions, asserting himself as the medicine's reference professional (VIKTIL, 2008).

drug related problems (DRP) are constant and can reduce quality of life and increase mortality. Clinical pharmacists, in addition to identifying and preventing clinically significant DRPs, contribute to increasing patient adherence to treatment and obtaining other positive clinical results (VIKTIL, 2008; SANTOSCHI, 2014; DOS SANTOS, 2017).

Lack of knowledge about the duration of treatment, adverse effects, possible interference of food and other drugs, changes in lifestyle and whether or not to continue treatment with the medicines you were taking prior to hospitalization are common questions that patients have (MARQUES, 2011; ULAYAR, 2011; DA SILVA et al., 2016). These can be reversed with the implementation of clinical pharmacy and pharmaceutical care activities (OLIVEIRA, 2013, SILVA, 2020). The pharmacist's role in caring for hospitalized patients has evolved over time, with increased patient acceptance and collaboration and greater insertion and development of clinical activities (LUPATINI, 2014; DE LIMA, 2019).

The moment of hospital discharge can be considered a critical moment for the pharmacotherapy of patients, as there can be significant changes in it, either in relation to the replacement or suspension of the used drugs, or in relation to the introduction of new drugs. These changes, combined with the lack of information and patient preparation, end up leading to a series of problems related to the use of medicines at home (MARQUES, 2012; ANDERSON, 2013; BONETTI, 2017; DE OLIVEIRA LUPATINI et al, 2017).

The transition of care is presented, therefore, as a vulnerable period, requiring health professionals prepared to guarantee the uninterrupted care of patients (Kripalani, 2007; MCGAM, 2007; MONTI, 2018).

Therefore, this study aimed to analyze and synthesize the scientific literature on patient education about the drug regimen in the hospital discharge process.

Methods

A review was conducted by consulting the following databases: Medical Literature Analysis and Retrieval System online (Medline), Scientific Electronic Library Online (SciELO), Bireme and Latin American and Caribbean Literature in Health Sciences (LILACS). We opted preferentially for articles from the last 10 years, in Portuguese and English, with full online content without, however, excluding articles of interest that might be in Spanish and French. The following descriptors were used: Pharmaceutical assistance. Hospital pharmaceutical care. Hospital discharge. Pharmacotherapeutic Monitoring.

The publications were selected after reading the title and abstract, verifying the existence or not of information on the proposed theme, excluding those that did not meet the established criteria or the objective of this study.

After a critical reading of the selected articles with the necessary impartiality and objectivity, seeking answers to the research objectives, an interpretative reading was carried out relating the information and ideas of the authors to the guiding questions and the problems for which solutions are sought. After the readings were performed, the data were organized and an analysis text of the represented data was prepared, in the form of an article, based on the proposed objectives.

A conceptual approach

The hospital pharmacy is an integrated place to the other hospital care units to the patient, is of great importance with regard to the safe and rational use of medicines, services and other health products (NASCIMENTO, 2013; PELENTIR, 2015).

Over time, the hospital pharmacy is no longer seen as a simple administrative division, with the function of only distributing medicines, and today it is seen as a service of fundamental importance in actions that focus on the prevention and recovery of the health of patients. patients (PELENTIR, 2015).

Thus, the way Pharmaceutical Assistance is defined by the National Medicines Policy corresponds to:

“The group of activities related to the medicine aimed at supporting the health actions demanded by a community. It involves the supply of medicines in each and every one of their constitutive stages, the conservation and quality control, the safety and therapeutic efficacy of medicines, the monitoring and evaluation of use, the obtaining and dissemination of information about medicines and the permanent education of health professionals, the patient and the community to ensure the rational use of medicines ” (MINISTÉRIO DA SAÚDE, 1999).

All stages of the Pharmaceutical Assistance Cycle (characterized as: selection, programming, acquisition, storage, distribution and dispensing) must be carried out systematically, with a view to promoting access and the rational use of medicines, which is fundamental for the planning and management of the Unified Health System (CASTRO et. al, 2015; de LIMA, 2019).

Pharmaceutical Care, a practice included in the Pharmaceutical Assistance Cycle, was made official in Brazil, after discussions led by the Pan American Health Organization (PAHO), jointly with the World Health Organization (WHO) and the Ministry of Health (MS).

Cases described in the literature

Pharmaceutical assistance and pharmaceutical care in the hospital environment,

which expand the role of the pharmacist within the institution, are necessary measures for patient care and to avoid unnecessary expenses, with drug costs being among the highest costs for the proper functioning of a hospital (YUK et al, 2006; PELENTIR, 2015). Also, if used properly, they are the most cost-effective therapeutic resources (REIS, 2013).

Through monitoring the patient's treatment, health promotion and disease surveillance, evaluating medical prescriptions, seeking to reduce errors in relation to the dose, routes of administration, concentration and exchange of the medication itself, the pharmacist is able to work with the clinical staff to other professionals improving the assistance provided, thus forming a multidisciplinary team (VIEIRA, 2007. NUNES, et al., 2008; REIS et al., 2013; PELENTIR, 2015).

To advance the practice of pharmaceutical care in Brazil, public policies to encourage its exercise through specific programs, implementation of services in health units, pharmacies, drugstores and hospitals are necessary (AMBIEL; MASTROIANNI, 2014).

The pharmacist represents one of the last opportunities to identify, correct or reduce possible risks associated with therapy within the multiprofessional team and several studies have shown a significant decrease in the number of medication errors in institutions where pharmacists intervene with the clinical staff, reinforcing the idea that the role of the pharmacist, in order to reduce the number of adverse events, increases the quality of the care provided (NUNES et al., 2008; SOUZA et al., 2018; MAGALHÃES et al, 2020).

Due to the easy access to the patient and the information in their medical records, the multidisciplinary team and the research sources, pharmacists are in a privileged position to act in the prevention, detection and resolution of problems related to medications, whether at the time of hospitalization, either at the time of hospital discharge (GRIFFITH et al, 1998; COSTA et al, 2014).

The study by Silva (2014), which aimed to assess the situation of drug reconciliation in an academic hospital, showed that information from 413 patients was collected, with 165 patients (who cited 686 medications) making continuous use of these drugs at home. 70% (n = 480) were not prescribed in the hospital. The need for an accurate medication history to be obtained on the admission of patients is emphasized, as well as the execution of medication reconciliation and subsequent home care to minimize adverse events caused by medications even after hospital discharge.

The pharmacist is of fundamental importance at hospital discharge, given that it is the moment where the detection and resolution of possible discrepancies between pre- and post-hospital pharmacotherapy occurs, guidance in relation to home drug therapy, verification of possible problems of adherence to the treatment and for possible adverse events that may occur after hospital discharge. In addition, the pharmaceutical

professional participates in the preparation and documentation of the pharmacotherapeutic plan, monitoring the patient after discharge by different means (telephone contact, messages, home visit), including seeking the possibility of contact with the primary care team, to carry out coordinated action (KERZMAN et al, 2005; SAUNDERS et al, 2003; COSTA et al, 2014).

Thus, the work of the pharmacist is able to improve adherence to treatment, reducing the rate of adverse events and the need for new visits to health services, both in emergency and hospital readmissions (AL-RASHED et al. , 2002; KABOLI et al., 2006; SCHNIPPER et al., 2006; PRADO et al., 2017).

The research by Schnipper et al. (2006) demonstrated that it was possible to detect, through pharmaceutical guidance and subsequent follow-up by telephone contact, within a period that varied from 3 to 5 days, of discrepancies between the prescription at the time of discharge and the form of home use of the patients. themselves. Problems were found in 71% of the intervention cases, and after 30 days of discharge, the accompanied group had a lower number of adverse events (1% of events), while the control group had a higher rate (11% of adverse events). Likewise, there was a lower rate of emergency room visits to the monitored group compared to the control group (1% versus 8%).

In another study, a pharmacist was responsible for carrying out reconciliation, providing recommendations to doctors about pharmacological therapy, preparing a list of medicines for discharge, guiding patients, transmitting information to the primary care physician about medicines prescribed at discharge, including a monitoring plan, and make telephone contact with patients within 3 to 5 days. The average number of interventions performed by the pharmacist was 9.4 interventions per patient, with a 96% acceptance rate for recommendations by doctors (BAYLEY et al., 2007).

Takahashi (2009), visited homes with the multidisciplinary team and found that, among the 87 patients visited, 62% had negative results related to drugs (MRI), with 33% having an MRI and 29% having more than one MRI. In this study, the pharmacist's opportunities for action were demonstrated, since the interventions were positively received by the medical team, as well as the possibility of preventing the occurrence of MRI, since most of the results found were due to the lack of information or the lack of reinforcement of the guidance received by the patient.

In the research of Martins (2015), 883 reconciliations were performed (84.7% of admissions in the sector) that found 242 (31.9%) discrepancies between home-use medications and medical prescription at admission. Discharge instructions were provided to 147 patients, of which 41 (27.9%) needed intervention with the prescriber due to the detection of drug interaction or, to replace the prescribed item with another available on the public network. Among the 323 interventions proposed

during the admission and discharge of these patients, 301 (93.2%) had adherence from the clinical staff.

Of those interviewed for a job developed at a University Hospital, 93% of a total of 30 patients with an average hospital stay of 12.4 days stated that they would agree to have a conversation with the pharmacist about their medications before leaving the hospital. Patients who would not accept having the pharmacist's guidance at discharge said that they had already understood all the information about the medications and that the doctor would have already clarified all their doubts (LUPATINI, 2014).

Regarding professional-patient communication, Leite and Vasconcellos (2003) reinforce the importance of the language of the health professional in the construction of dialogue with the patient. In an interview with health professionals and patients in a health unit, the authors identified that professionals who used a simpler and more popular language were better received by the unit's clients, as they showed more respect for the patient and their beliefs and assumed an attitude less discriminatory. Another research by Lupatini (2017) sought to verify the degree of understanding of patients or their caregivers in relation to the drugs prescribed during hospital discharge. 107 patients were interviewed, and each patient was given a degree of knowledge according to the answers obtained. Thus, 10.3% obtained an insufficient level, 58.9% obtained a regular level and 30.8% obtained a good level. It was noticed that the greater the number of prescription drugs, the greater the difficulty encountered.

Other studies demonstrate that the follow-up of drug treatment can be reinforced through the use, by the patient, of a simple and explicit card, with information on the use of the drugs prescribed during hospitalization and after hospital discharge (SIMONET, 2005); instructions must be complete, precise and understandable (CUA, 2008; KRAMER, 2007; YOUNG, 2008).

Establishing such relationships in a symmetrical perspective, of equality between the parties, in which both professionals and patients have something to learn and teach is an important step in the search for the professional-patient relationship (LUPATINI, 2014).

The follow-up of the patient after discharge can also be performed, at home, by primary care professionals, with "feedback" to the hospital team, in an integrated process. In Brazil, this type of partnership could be carried out with the Family Health Program, with the participation of the pharmacist in the multidisciplinary team that provides care to patients at home (MARQUES, 2010).

In a study to compare the rates of rehospitalization of patients being followed up by a multidisciplinary team in which a clinical pharmacist participated with those of patients who received visits made by a team formed only by doctors, in patients seen in the period of May 2012 and January 2013 there was a readmission rate of 14.3% in the first group, and 34.3% in the second. It was also observed that the interventions performed during visits in

relation to medications, were uneven between the two groups, being more frequent in the multidisciplinary team (CAVANAUGH, et al., 2015).

According to Marques and Romano-Lieber (2014) in a research carried out at the University Hospital of the University of São Paulo (HU / USP), from July to October 2012, where interviews were conducted with four doctors, three nurses, three pharmacists and one social worker, on the subjects of care with pharmacotherapy during hospitalization, care with pharmacotherapy after hospital discharge, articulation with other health services in care after discharge, and facilitators and barriers it was observed that home visit care after hospital discharge is performed only for patients who are assisted by the Home Care Program, which is intended for patients who do not have clinical and mobility conditions to travel to the hospital after admission. The authors conclude that discharge guidance to patients and their caregivers is an activity related to patient safety after hospitalization with a focus on the use of medications, being an activity that has great importance in a hospital.

The lack of preparation of the patient or the caregiver about the care that should be provided at home, such as ignorance of the way of preparing and / or administering medications, changes in lifestyle, the emergence of needs resulting from the disease that did not exist until then, among others, they can lead to subsequent hospitalizations that could be avoided (PEREIRA et al., 2007).

The role of the pharmacist in promoting the rational use of medicines by the elderly and their inclusion in multiprofessional teams is another relevant area in the hospital environment, as they optimize the pharmacotherapy of geriatric patients and expand the quality and safety of care (MEDEIROS, 2011; SPINEWINE, 2007), in addition to improving the quality of medication use during hospitalization and after hospital discharge, reducing risks and improving therapeutic results (SPINEWINE, 2007).

Since the elderly often use polypharmacy, that is, they use five or more medications, and that this implies a higher prevalence of non-adherence to treatment, adverse reactions to medications, medication-medication interactions, greater risk of medication errors, risk of falls, increase in the hospitalization rate, it is important that they receive multiprofessional care, mainly from the pharmacist (JYRKKÄ, 2009; ROLLASON; VOGT, 2003).

Before hospital discharge, the patient must be instructed by the pharmacist about drug therapy to be carried out at home, guiding him on access to the medication in the health network and the dosing schedules to be followed. To this end, oral and written communication strategies should be used, appropriate to the level of understanding of each patient. About a week after discharge, the pharmacist, via telephone, should make contact with the patient to obtain information on access, adherence, safety (occurrence of adverse reactions) and effectiveness of the medications. Upon

identification of the existence or probability of the existence of problems related to the use of medicines, pharmaceutical interventions must be performed (PINTO, 2013).

The use of differentiated strategies can bring good results. Cardoso et al (2016) proposed carrying out a set of questions and answers addressing the importance of adherence to treatment after hospital discharge and resulted in greater interest from patients compared to patients who received conventional guidance.

The high frequency of interventions developed directly by the pharmacist with the patient and in an integrated manner with the multiprofessional team, identified in the study by Pinto (2013) demonstrates the relevance of the role of the pharmaceutical professional in a multiprofessional team with an emphasis on care for hospitalized elderly.

Studies reveal that the presence of the pharmaceutical professional in hospital institutions contributes to the reduction of prescription errors. The difference was more evident in the verification of wrong concentrations when comparing hospitals where there were pharmacists in screening prescriptions and where they were made by technical professionals (93.3% versus 83.3%) (KUHNER; MARQUES, 2004). Such data are in line with the work of Novaes (2009), where they concluded that the presence of the pharmaceutical professional allowed to reduce medication errors by around 66%, improved the results that patients obtain with the therapy and helped to change the patterns of prescription quality (NOVAES, 2009).

Aburuz et al. (2011) concluded that 64% of drug-related problems were resolved or avoided and 91% of recommendations were accepted by doctors. This study showed that pharmaceutical intervention has significantly contributed to the quality of care provided to the patient, preventing medication errors from happening.

Therefore, pharmacists must have an effective participation in clinical activities, assuming spaces in health services and making themselves present in the daily health care of patients. The guidelines should be given to the patient at the time of hospital discharge, but also throughout the entire hospitalization period, increasing the patients' knowledge about pharmacotherapy and motivating their autonomy and control over their health (LUPATINI, 2014).

Conclusion

The role of the pharmacist on hospital discharge can occur in several stages, such as participation in the adequacy of the pharmacotherapeutic regime through medication reconciliation, patient and family guidance or caregivers, preparation of the discharge plan, and follow-up of the patient after hospital discharge. In view of the evidences evidenced in the reported studies, the contribution of the pharmacist's

performance with the patient on hospital discharge is undeniable, bringing benefits to the patient and health institutions, and promoting the appreciation of the pharmacist as a health professional.

The pharmacist must seek training through participation in graduate courses and technical-scientific events so that, in addition to keeping up to date with knowledge related to pharmacotherapy, develop skills for direct action with patients. The adaptation of curricula menus for undergraduate courses to prepare future pharmacists, especially regarding the patient's psychosocial approach, is necessary, since, in general, the curricula are flawed in terms of training in the humanities. In this way, with comprehensive and integrated care, inside and outside the hospital, the pharmacist can prevent interruption in patient care, thus promoting professional performance in response to a social need.

Through participation in various activities, the pharmacist can contribute to the prevention and resolution of problems related to the use of medications and, thus, share with patients and other members of the health team, the responsibility for pharmacotherapeutic results after hospital discharge, in line with the principles of pharmaceutical care.

In this sense, the pharmacist is an integral and necessary part of this process, as he can help prevent many errors related to the use of medications, such as errors in the administration schedule, interference with food, beverages and other medications. It is the professional trained to provide such guidance and to clarify the doubts that patients may have. It is important that more and more other hospitals adopt these measures of the multidisciplinary team to take better care of their patients.

It is concluded with the present work that the activities developed by a multidisciplinary team are fundamental in the hospital environment, since working together these professionals have the potential to improve the patient's health in several aspects, being able to share knowledge among themselves and contribute to reduce the risk of readmission of these patients.

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