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CONTRIBUTIONS AND CHALLENGES OF THE PHARMACIST: MULTIDISCIPLINARY TEAM IN THE FOLLOW-UP OF NEURODEGENERATIVE DISEASES

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Abstract: Neurodegenerative diseases are characterized by the progressive loss of neurons in the structures of the nervous system, which result in functional alterations, and are chronic, incurable and debilitating. The main neurodegenerative diseases are Alzheimer's, Parkinson's and multiple sclerosis, which affect mature adults and the elderly. In order to treat these diseases efficiently and effectively, drug and non-drug strategies are used. In the latter, the pharmacist plays a key role in the success of the treatment. The aim of this study is therefore to carry out an integrative bibliographical review in order to gather information on the contributions and challenges of pharmacists as part of the multi-professional team caring for patients with neurodegenerative diseases and to integrate these with the experiences gained at PAN.

Keywords: neurodegenerative diseases, pharmaceutical care, pharmacist

INTRODUCTION

Neurodegenerative diseases are characterized by progressive loss of neurons in the structures of the nervous system, which result in functional alterations (Marchi et al 2021) presenting chronic, incurable and debilitating progression (Love, 2004) The main neurodegenerative diseases are Alzheimer's disease, Parkinson's disease and multiple sclerosis, which affect mature adults and the elderly (Gilter, 2017), (Stephenson, 2018).

The pharmacological treatment of neurodegenerative diseases is determined according to the pathophysiology of each disease, based on delaying neuronal degradation, worsening and reducing signs and symptoms, with a view to maintaining patients' quality of life (Madureira et al 2018), (Miguel et al 2023).

In addition to pharmacological treatment, multidisciplinary follow-up is extremely important for patients, their families and caregivers, given the progressive onset of

functional symptoms, which are limiting and disabling, requiring constant support and follow-up. The literature lists physiotherapy, nutritional and psychological support as important non-pharmacological therapies (Cófreces et al, 2022).

The Support Group for Patients with Neuromorbidities - PAN is an initiative that is the result of a partnership between the Open University of the Third Age Foundation - FUnATI and the Amazonas Military Fire Brigade - CBMAM, signed under Cooperation Agreement 001/2024 of April 25, 2024. The PAN is staffed by health professionals, with the aim of promoting support for elderly people with neurodegenerative diseases, as well as being a space for sharing experiences.

Among the PAN professionals is the pharmacist, who monitors pharmacotherapy, adverse events and supports the team with information about medicines. It should be noted that this joint action takes place in accordance with the legislation on home care for the elderly.



Figure 01: Multidisciplinary team

Source: The Authors (2024).

Decree 7.508, of June 28, 2011, establishes the regulation of Law 8.080/1990, which deals with the Unified Health System (SUS). One of the pillars of the decree is the promotion of home care as a strategy to improve the quality

of health care, especially for vulnerable groups such as the elderly. This type of care aims to provide personalized and continuous care, ensuring that patients remain in their homes (BRASIL, 2011).

In addition to Decree 7.508, Brazilian legislation is complemented by various rules that support home care for the elderly. The National Health Policy for the Elderly, through Ordinance No. 2.528/2006, stresses the need for comprehensive and humanized care. Law No. 13.146/2015, also known as the Statute for People with Disabilities, contains guidelines that enable the right to health and home care for people with disabilities and the elderly (Brasil, 1990); (Brasil, 2006).

These legal provisions reflect a movement towards an inclusive approach to health care for the elderly, recognizing the importance of the home and community support in the process of health promotion, recovery and maintenance. Home care reduces the demand on the region's health services, allowing for a more rational allocation of the resources available in the region. The effective implementation of these public policies to care for the elderly allows them to be respected and to have access to efficient care in their homes.

The aim of this study is to carry out an integrative bibliographical review in order to gather information on the contributions and challenges of pharmacists as part of the multi-professional team caring for patients with neurodegenerative diseases and to integrate these with the experiences gained at the PAN.

METHODOLOGY

This study is an integrative and descriptive literature review with a qualitative approach, i.e. searching for pertinent information in research, in an orderly and comprehensive manner, to integrate knowledge on the subject, making a reflective analysis with the pharmaceutical experiences in the PAN.

Scientific articles published between 2004 and 2022 were selected. The search for original studies was carried out using the following databases: Scientific Electronic Library Online (SciELO), Virtual Health Library (VHL) and Latin American and Caribbean Literature on Health Sciences (LILACS). The following descriptors were used: neurodegenerative diseases, pharmaceutical care, pharmacist, in English, Spanish and Portuguese. Data was collected between May 2024 and July 2024.

DEVELOPMENT

Although the importance of pharmacists has been established since the implementation of the Unified Health System (Sistema Único de Saúde - SUS), Article 6 of Law 8080/1990 establishes that the Unified Health System (Sistema Único de Saúde - SUS) includes “the execution of comprehensive therapeutic care actions, including pharmaceutical care”, in Brazil we can mention two milestones in the consolidation of the pharmacist’s role in public health, the first being the National Medicines Policy (Política Nacional de Medicamentos - PNM), established by Ordinance no. 3.916, October 30, 1998, which reinforced the rational use of medicines as a pillar of the pharmacist’s actions. The first was the National Medicines Policy - PNM, instituted by Ministerial Order No. 3.916, of October 30, 1998, which reoriented Pharmaceutical Services, reinforcing the rational use of medicines as a pillar of the pharmacist’s actions. The second is the National Pharmaceutical Services Policy, approved by Resolution No. 338, of May 6, 2004, which includes Pharmaceutical Care as one of its principles (Brasil, 1990), (Brasil, 1998), (Brasil, 2004).

Pharmaceutical care as a tool in the pharmacist’s work goes back to the concepts and practices of Pharmaceutical Care developed internationally, with the contributions of those who were relevant to the Brazilian case,

such as Hepler & Strand and Dader. In this sense, the analysis of the origin of the concept in the United States and subsequent contributions from Spain (Angonesi & Sevalho, 2010).

Within the concept of pharmaceutical care, the literature shows that the role of this professional is to inform, train, communicate, get involved and help patients make decisions regarding treatment, so knowledge and systematic practice of pharmaceutical care is essential (DADER et al, 2019).

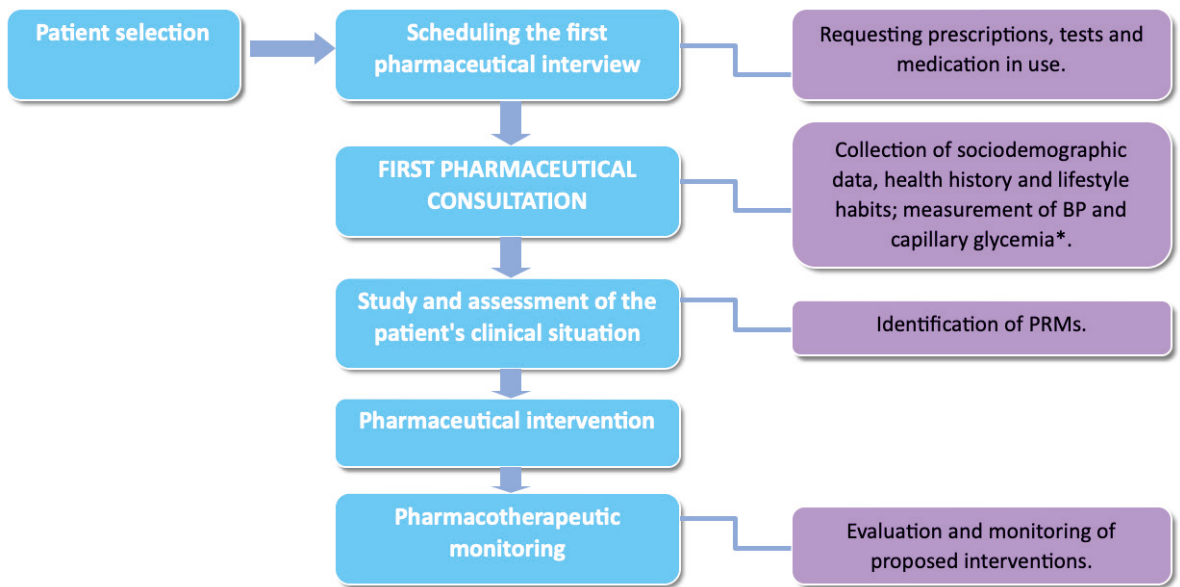
Pharmaceutical care processes include pharmacotherapeutic monitoring and medication reconciliation.

Pharmacotherapeutic follow-up is defined as: “the professional practice in which the pharmacist takes responsibility for the patient’s needs associated with medicines, through the detection of drug-related problems (DRPs) and the prevention and resolution of drug-related negative outcomes (MDRs) (Dader et al, 2019), (Souza & Broetto-Biazzon, 2021)”

According to the 2nd Granada Consensus, PRMs encompass any undesirable event related to pharmacotherapy, whether proven or suspected, which interferes or may interfere with the expected health outcomes for the patient and comprise six categories and three subcategories, the latter comprising: necessity, effectiveness and safety (Santos et al, 2021).

Medication reconciliation is a formal process in which all of a patient’s prescribed and non-prescribed medications are evaluated, usually on hospital admission, discharge or change of doctor in charge. The ultimate goal of reconciliation is to improve patient safety by reducing and eliminating medication errors that could cause harm. This procedure must be recorded (Dader, 2019); (Carvalho, 2017), using specific manual or digital forms (computerized system) or in the pharmaceutical evolution in the patient’s medical record.

Other tools are useful and can be used alongside pharmaceutical care tools, such



PRM: Medication-related problem (*): When relevant.

Figure 2: Structuring Pharmaceutical Follow-up taken from Infarma Ciências Farmacêuticas v33.e1.a2021, p. 69 (Souza and Broetto-biazzon, 2021).

as algorithms, health assessment and survey methods and verification criteria. As patients with neurodegenerative diseases are elderly, the Beers Criteria are important for determining the inappropriate use of medication (Oliveira et al, 2020), and also for the elderly population, the Comprehensive Global Assessment - CGA (Carvalho, 2017) can be used for a detailed anamnesis aimed at this audience, which has its own specificities.

Among the contributions to pharmacotherapeutic assessment and a key point to be included in follow-up forms is Treatment Adherence, which can be defined as: *“the degree to which a person’s behavior is in accordance with the recommendations of a health professional”* (Oliveira et al, 2020). A widely used methodology for assessing adherence to treatment is the Morisky-Green Test (MGT) (Thrauthman et al, 2014), which has modified and validated formats for better application in the Brazilian context.

In addition to the physiological processes involving the age of the patients, there are also the changes resulting from the disease and polypharmacy, where both elderly patients

and those with chronic diseases are polypharmaceutical (Souza and Broetto-Biazzon, 2021). Thus, the need for pharmaceutical monitoring and the application of the tools mentioned above is reinforced, with a view to the rational use of medicines, better results from pharmacological therapies and consequently the quality of life of the patient (Cardoso et al. 2015).

The following is a model of how pharmaceutical follow-up takes place in a pharmacotherapeutic assessment

RESULTS AND DISCUSSION

Of the papers surveyed in this research, no evidence was found of the pharmacist’s work in papers dealing with neurodegenerative diseases, when it comes to multi-professional teams, except for the articles specific to the pharmaceutical area, which present the professional’s work in monitoring Alzheimer’s and Parkinson’s patients.

With this research, it was possible to verify that one of the factors that corroborate the importance of the pharmacist in the multiprofessional team working with neurodegenerati-

ve diseases, as seen in the bibliographic survey, is the fact that most patients are elderly, for this reason, they usually already use medications for chronic diseases such as diabetes and hypertension, so these medications are added to the different medications used in Parkinson's and/or Alzheimer's, leading to polypharmacy.

As for the pharmacist's role in relation to family members and caregivers, it involves guidance, education in the rational use of medicines and the presentation of possible adverse events to support decision-making.

Family members' decisions. The pharmacist's work with other professionals is informative and collaborative, the former with information on the drugs used by patients, and the latter in discussions and decision-making when outlining the care process.

The above findings corroborate the literature, where polypharmacy is one of the main problems associated with treatment in elderly and chronic patients.

From the information gathered, it can be seen that pharmacists have a well-defined, systematized and fundamental role in the care of patients with neuromorbidities. Their duties are outlined in the processes of Pharmaceutical Care, centered on patient care, but encompassing the interrelationship with the team, family members and caregivers.

As a contribution to pharmacists with less experience in Clinical Pharmacy and Pharmaceutical Care tools, we can say that the analysis can be made based on the needs of each patient, where the tools can be adapted to their work reality, available resources and types of patients. It is worth noting that although standardized forms and validated methodologies are essential, patient assessment should not be a watertight process and should be flexible to the particularities of each situation and patient.

Finally, when analyzing the pharmacist's actions in the PAN, we see that the information in the literature corroborates what is experienced in the group, whether due to the age range of the patients, the presence of polypharmacy, or the anxiety about the treatment and prognosis of the disease, which leads them to seek out different doctors, and the need for psychiatric treatment for emotional balance in the acceptance of the disease, leading to the use of more medication. This occurs mainly in Parkinson's patients who preserve physical autonomy for movement and mental orientation. Thus, the presence of the pharmacist is validated in the multi-professional team monitoring patients with neurodegenerative diseases.

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