INTERNATIONAL PANORAMA OF PALLIATIVE CARE: BARRIERS IN ITS IMPLEMENTATION AND PERSPECTIVES FOR THE FUTURE

Panorama internacional dos cuidados paliativos: barreiras em sua implementação e perspectivas para o futuro

Felipe Ferraz Trindade¹
Tatyane Ribeiro de Castro Palitot²
Gizely Teixeira Fernandes¹
Altair Reis dos Santos Júnior¹

Abstract: Palliative Care is a model of health assistance aimed at improving the quality of life of patients and their families in the face of serious life-threatening illnesses. This is done through the prevention and relief of suffering, by the treatment of physical, psychosocial and spiritual problems. Given the scarcity of studies in the area, obvious aging population and increase in chronic-degenerative diseases, this research, based on a narrative literature review, aimed to describe concepts related to palliative care, as well as exposing needs, barriers and solutions for its effective implementation. It can be seen, therefore, that although palliative care was initially applied to the end of oncologic life, this practice has expanded to several other areas and has been applied since the moment of diagnosis and no longer as a last option for the patient when the medicine cannot stop the natural course of the disease. For the purpose of achieving this end, several countries have been implementing palliative care despite some of them have social, political and financial obstacles to do it. These countries show us that despite the difficulties one can enter this practice so that their patients can have peace and comfort at the end of their history.

Keywords: Palliative care; Health investment; Quality of life; Terminality.

Corresponding author: Felipe Ferraz Trindade.
E-mail: ferrazft@yahoo.com.br

¹ Faculdades Integradas Pitágoras de Montes Claros.
² Universidade Federal do Rio Grande do Norte.
**Resumo:** Os Cuidados Paliativos são um modelo de assistência à saúde com o objetivo de melhorar a qualidade de vida dos pacientes e de seus familiares diante de doenças graves que ameaçam a vida. Isso se realiza através da prevenção e alívio do sofrimento, pelo tratamento de problemas físicos, psicossociais e espirituais. Diante da escassez de estudos na área, evidente envelhecimento da população e aumento das doenças crônico-degenerativas, esta pesquisa, seguindo os moldes de uma revisão de literatura narrativa, teve como objetivo descrever conceitos tangentes aos Cuidados Paliativos, bem como expor necessidades, entraves e soluções para a sua implementação efetiva. Percebe-se que, apesar de inicialmente o palliative care ter sido aplicado para o fim de vida oncológico, tal prática vem se expandindo para diversas outras áreas e sendo aplicada desde o momento do diagnóstico, não mais como última opção para o paciente quando a medicina não consegue frear o curso natural da doença. Com a finalidade de alcançar esse fim, vários países vêm implementando o palliative care apesar de alguns deles possuírem entraves sociais, políticos e financeiros para tal. Esses países nos mostram que, apesar das dificuldades, há alternativas para inserir essa prática para que seus pacientes possam ter paz e conforto ao finalizar sua história.

**Palavras-chave:** Cuidados paliativo; Investimento em saúde; Qualidade de vida; Terminalidade.
INTRODUCTION

Learning how to deal with the losses in a context of a chronic illness like cancer is a challenge that a few propose to discuss, and much less to face, and its acceptance varies among different cultures and beliefs. Assisting individuals with advanced diseases and potentially fatal and their relatives in one of the most crucial moments to their lives is an activity or a health care model that is being called “Palliative Care” (PC). It is explained that the word “palliative” comes from the Latin *pallium* and it means cape, vestment, blanket. The word was used to refer to the robes that the pilgrims received when leaving hostels in Europe, called hospices. The purpose of this mantle was protection and hospitality and this is directly related to the purpose of CP.

In this context, the Palliative Care is often confused with historically the term hospice whose the oldest report dates back to the 5th century. A manual of clinical practice in palliative care provides a definition for this practice as being interdisciplinary care (doctors, nurses, social work, psychology and other areas when necessary) that focuses on improving the quality of life of people of any age who deal with some serious illness, besides providing assistance to members of their families. When treating pain, other symptoms and psychological and spiritual suffering through communication skills, the palliative cares provide an additional layer of support to patients, their loved ones, and options of clinical treatments.

Still according to the same manual, Hospice is a formal system of interdisciplinary care that provides palliative care in individuals in end of life. It was first developed in 1967 by Dame Madonna Saunders to provide a model of care for people who are dying of advanced cancer. The precepts of this movement seek to offer the patient an end of life close to family, quiet and based on respect.

Therefore, based on the scarcity of studies in this area, clear aging of the population and growing demand for palliative activities, it is realized the need to analyze the international panorama of implementation of palliative care in developing countries, thereby justifying the implementation of this review. From this perspective, the aim of this study was to describe the concepts of palliative cares and hospice to establish the difference and similarity between both, as well as analyze the literature which the international panorama in the implementation of palliative care in developing countries and what difficulties presented by those who cannot stand such practice, and finally present the solutions found by the countries that have achieved success and accession of palliative care in its population and deployment in their health care system.

METHODOLOGY

This research followed the lines of a literature review narrative. A priori criteria were defined to be followed regarding the type of study, publication period, among others. The searches were carried out in national and international databases (PubMed, LILACS, Scielo, BMJ Supportive & Palliative Care, NEJM, Capes Journals and Science Direct). Articles published between the years of 1992 and 2017 were selected, written in English or Portuguese and, after previous reading of the abstracts, it was selected those whose theme were in line with the objective of writing of
this article. Due to the differences of indexation in different databases, it was decided by the search terms, without the use of controlled vocabulary (descriptors). Therefore, it was ensured the recovery of a greater number of references, ensuring the central theme without limiting the tangent matters. In the databases already mentioned the following words were previously sought: “palliative care AND health investment”, “palliative care AND quality life”, “palliative care AND terminality” e “palliative care AND hospices”, such a search returned 68,978 articles. The first exclusion criterion was the repetition of returns among the different bases, resulting in 12,616 different articles. Then it was selected preferentially those published in the last 10 years, thereby having 7,518 publications. Those articles which, starting from the analysis of its titles were excluded, had thematic biases and the targeting of palliative care for diseases in specific or in certain hospital services, leaving 374 works. Finally, the prior reading of abstracts of these 374 works allowed to filter those that were in accordance with the objectives, leaving 48 articles that were used in this review.

LITERATURE REVIEW

Overview:

Initially, in the year 1998, the Palliative Cares were categorized by WHO as the last stage of care, however, it is known that these should be offered as early as possible in the course of any chronic disease is potentially fatal. The most recent definition of the World Health Organization (WHO, 2012) published in its website states that

[...] Palliative Care is an approach that improves the quality of life of patients and their families facing the problems associated with terminal illness, through the prevention and relief of suffering by identifying, assessing and treating pain and other physical, psychosocial and spiritual problems [...].

An analysis showed the main purpose of palliative care, and they summed up to a philosophy that: a) affirms the death as a normal process of living; b) it does not rush or postpone death; c) it seeks to relieve pain and other distressing symptoms; d) it integrates the psychological, social, and spiritual aspects in the care of the patient; e) it offers a support network to assist the patient to live as actively as possible until his death; f) it offers a support system to the patient’s family in the experience of the mourning process.

In 2012, it was issued a clinician’s report by the American Society of Clinical Oncology stating that patients with metastatic cancer should receive palliative care and standardized oncology curative treatments simultaneously from the time of diagnosis. This recommendation of earliness was based on the evidence found in randomized controlled studies that demonstrated that the association between curative and palliative cares result in improving the quality of life, humor and stress of caregivers. Despite the increase in survival has not been considered in the publication of the American Society of Clinical Oncology, a study has shown that palliative care interventions have positive impact on the survival curve of oncology patients, affirming that the duration of services of palliative care was proportional to the duration of survival.

It is known that there are evidences clinically significant from an increase of almost 3 months in the survival of patients in palliation, compared to those who followed only the standardized oncologic treatment. Curiously, the specific mechanisms could still not be fully clarified by which the palliative care culminated in increasing the survival of these patients, since this finding is considered to be the result of a multifactorial
set of improvements. Furthermore, it has been demonstrated that the early palliative care is related with a lower number of decompensations and visits to emergency rooms.

It was hypothesized, then, that, to affect the well-being of the patient, his experience with the suffering, social support and improving the understanding before the process of illness, the palliative cares have potential for increasing the overall survival. Although the survival rate improved in oncologic patients may be a result of the activities of palliation, this finding should not overshadow all other benefits of this practice, and not to be considered primary objective of palliative cares.

There is agreement that many times the doctors still overestimate the increase in the survival of cancer patients, using this factor in an inadequate way as a main motivation for reference to palliative cares.

In addition, Palliative Cares seek to treat the patient holistically, both in the field of the physical body as in the spiritual field and attention to these dimensions should be egalitarian because it is natural to human beings to seek not only to cure the disease but also give meaning and significance to everything that is around, justifying the search by the strengthening of spirituality, especially in moments of physical suffering for the purpose of acquiring wellness and quality of life.

Thus, in which treats the spiritual field, it was written that the attention to this aspect becomes increasingly necessary in the practice of health care and emphasize that several studies have examined the relationship of religiousness and/or spirituality with various aspects of mental health. The majority of them points for better indicators of mental health and adaptation to stress in people who practice religious activities.

As an adjuvant to the treatment of the physical body, the patient must go through care in mental health, especially those who have mental illnesses already established. According to an international report on Alzheimer’s disease published in 2015, it is estimated that 46 million people in the world have dementia, a number that can triple by 2050 and, already today, it should be noted that the majority of these patients end up dying in hospital and with high load of medical and pharmacological intervention, which does not relieve the symptoms and prolong the outcome at the end of life.

Being the dementia a disease that limits life and has no curative treatments, it would be essential that patients and families were assisted by the scope of Palliative Cares. However, a study showed that patients with dementia often receive care of end of life in an inadequate way, without access to pain control and services offered in the oncologic palliation.

It is known that patients with dementia are subjected to iatrogenic suffering and unnecessary investigations during the course of their disease. Accordingly, it was demonstrated that psychiatric patients are, in fact, more prone to iatrogenic diseases because health professionals prefer to make the pharmacological control of possible psychomotor manifestations with high doses rather than calm them down with the usual doses of medications and with psychological control. Furthermore, the lack of direct communication with the patient on the part of team professionals also aggravates the disturbances, because it creates anxiety and insecurity among patients.

It is a fact that communication with patients with dementia and their families requires special skills, since the cognitive problems complicate the decision-making process. The support and communication with families is essential to help them if the worsening of the signals makes it impossible for the patient to decide for themselves, the measures adopted, as well as to assist with the
suffering caused by the continuing deterioration of the patient.\textsuperscript{17}

Even in the face of growing interest about palliative cares, there are few studies on palliative care before the dementias. In consequence of this lack, several voluntary organizations working in the area of mental disorders, such as Alzheimer’s Society\textsuperscript{20}, recognized that research on palliative care in psychiatric patients are a priority.

Due to that, with the objective of supplying this demand for clinical advice and guidance about palliative care in dementias, a Delphi study of 5 stages was carried out with the participation of 64 experts from 23 countries, culminating in the production of the first definition of Palliative Cares in dementia. This document is structured based on 11 postulates and 57 recommendations. Initially, there was total and immediate consensus about 8 of 11 postulates, namely: care focused on the person; communication; decision of shared decisions; optimization of symptomatic treatment; promotion of comfort; health care staff education; ethical issues; and social issues. After the revision of the material, it was a consensus as regards the definition of prognosis and timely recognition of death. The postulates about the recommendations for nutrition and hydration and correlation of the goals of care with the stage of dementia had moderate consensus.\textsuperscript{17}

It is added to the holistic care the integrated care to the socio-economic-family context. One of the important points of the palliation is the comfort at the end of life and, therefore, many patients decide to die at home, however, in the developed world, most people die in hospital. Dying at home requires that complex factors of health and informal networks of care be established as a support and an analysis of how the health systems, services and health professionals influence the care at home at the end of life. A current issue is the constant doubt if the informal household services, used mainly when there is a shortage of family financial resources, are a help or a barrier in the palliative care, since much of the support is not provided in the proper environment and is often carried out by professionals with little preparation in terms of palliative care.\textsuperscript{21}

It was reported that the families which cannot keep their beloved family members in domicile palliation, either by the patient’s state of impairment or lack of family structure and/or financial information, they submit the family member to a higher risk of hospitalization with intervention with too much medical care.\textsuperscript{21} Yet, from the 20th century, the power of intervention of the doctor has grown enormously, without occurring simultaneously a reflection on the impact of this new reality on the quality of life of the sick people.\textsuperscript{22}

Analyzing the ideas, it becomes apparent that the biggest challenge of palliative care is to integrate the curative care. Palliating is a critical dimension of care in health and all health professionals should know when palliative care is necessary. When any individual is approaching the last moments of a debilitating health condition, the need for palliative care increases. At that moment (and after death), ensuring this kind of attention provides a careful quality no matter if offered in a health institution or in the residence of the individual.\textsuperscript{1}

\textbf{Demand expansion:}

The census conducted by the Brazilian Institute of Geography and Statistics (IBGE) in 2016\textsuperscript{23} indicated an increase of about 29 years in life expectancy of the Brazilian, since 1940. However, the increase in the time of life does not mean, necessarily, an improvement in the quality
of life in old age or illness. It was noticed that the constant struggle for the quest for healing and the sophistication in the area of health created a reality of denial of death and personification of failure training before this fact. Thus, many protocols prioritize the maintenance of life at high costs, taking little account of the quality of life of patients in the last months. The result is demonstrated by the fact that most of the hospitals in Brazil do not have a guideline on the care of patients in the terminal stage.

According to the Atlas published in 2014 by the World Alliance of Palliative Cares, in spite of more than 100 million people already benefit by the amplitude of the protocols of palliative cares, including family members and caregivers, this still represents less than 8% of the total number of individuals who need this type of assistance. This scenario is more alarming in the face of feasible reality that the human being is living longer. Despite scientific and technological advances have representative rates for the reduction of mortality on the planet, the majority of patients affected by severe diseases and chronic-degenerative diseases still cannot take advantage of these modern resources. Therefore, the aging of the population requires that countries develop policies to implement support and Palliative Cares to not only get the efficient management of symptoms in their patients but also to improve the quality of care by caregivers and family members as an assisted and well-conducted palliation reduces symptoms of stress, depression and anxiety in addition to improving the confidence of caregivers and patients.

In addition, an increase in the interest of society regarding issues such as euthanasia and assisted death has led to many questions and research about the wish of death and depression in chronic patients. In this way, several studies presented conflicting numbers, but still relevant, which demonstrated the presence of desire for death, even if transient, between 11% and 55% of terminal patients surveyed.

A survey carried out concluded that the correlation with the desire of death comes before symptoms such as pain, extreme fatigue, anxiety and other characteristics such as loss of functional status, hopelessness, low social support and depression.

It is realized that, many times, the anticipated death is seen as a hypothetical strategy to prevent the foretold suffering. Before the fact that some patients present the real and immediate desire for death, it was perceived a dichotomy that fits this aspiration as an expression of momentary despair or manifestation of giving up.

In an association established between the newspaper The Economist Unit and the philanthropic organization Lien Foundation, from Singapore, it was elaborated an index of quality of death, which positions each country in relation to its provision of care for end of life. From scores obtained through topics such as the environment of palliation, availability of human resources, accessibility of palliative care, quality of the measures adopted and community engagement, the countries are analyzed and classified. The first report became public in 2010, analyzing the palliative care in 40 countries, including Brazil which occupied the 38th position. In 2015, this alliance published a second report, more up-to-date and comprehensive, which included 80 countries and Brazil in the 42nd position.

**Barriers and solutions:**

The Index of Death Quality identifies that the financing of palliative care is still a major barrier to be transposed, especially as regards political barriers for the release of funds. It is necessary the development of laws that recognize the palliative care as public health policy; to obtain standards,
International panorama of palliative care: barriers in its implementation and perspectives for the future

TRINDADE, F. F.; PALITOT, T. R. C.; FERNANDES, G. T.; SANTOS JÚNIOR, A. R.

ISSN 2236-5257

Guidelines and protocols that describe, govern and guide the care; to establish the Palliative Care as a specialty or sub-specialty care and that public funds are intended to finance such practice. Such guidance is due to the perception that income levels have been strong indicator of greater or lesser presence of palliative care in the healthcare system of a country. More developed countries and, consequently, with older populations tend to receive more pressure for the implementation of policies for the elderly, while in less developed countries the pressure is lower even though there are already growing demand of palliative care.

The low economic development of a country does not prevent it from finding alternatives for the insertion of public health policies in palliation, the example of Mongolia, in 15 years, joined the palliative care in its legislation on health and social well-being and the national program for cancer control.

Regarding education as a barrier key element, the area of palliative care is recent and still arouses many questions and low compliance, some countries do not have even aware of its existence. However, a growing number of knowledge has been accumulated over the past 40 years in the science of Palliative Cares and Palliative Medicine. Currently, there are at least 12 professional journals devoted to CP, a growing body of literature reviewed, numerous books, internet sites, blogs and forums dedicated to all aspects of the palliative care. But in spite of that, in theory, being an ancient practice and accumulated knowledge in recent decades, only in 1990 WHO published its first definition and therefore becomes a little known principle of care. It is recommended that all medical schools should include basic training in palliative care and education vocational training should include palliative care for health professionals.

It was noticed that the expertise in Palliative Care became prominent only after the drugs were controlled more effectively and, in this beginning, based on misconceptions, health professionals established a close relationship of this expertise with the Oncology, starting to apply it only in cases of cancer in which there were no more curative treatments possible, associating directly to palliation with loss of hope of cure. Therefore, the creation of paths to enable a greater public awareness and training of professionals becomes urgent, as well as the integration of palliative care to health systems, creating incentives so that society is more willing to invest in the area and attract skilled professionals trained in the field in order to complement the small number of specialists who already work.

Whereas in terms of availability of drugs, there are certain obstacles. Some of the main drugs for management of symptoms in patients are opioids used for pain control. Access to these drugs is a global problem, in which 80% of the population, especially in poor countries, has difficulty of access. In contrast, richer countries are responsible for 90% of the use of opioids, revealing a clear discrepancy in the distribution of these drugs among the countries and leading to the conclusion that patients requiring palliation in most developed countries receive greater support for pain management. Thus, the worldwide community of palliative care and human rights organizations argue that the balance is restored since that it is called the attention both for the conscious medical use and the prevention of illicit use.

On the other hand, it is discoursed on the real need of opioid use per capita, because this information will vary according to the patients’ age, the cause of morbidity, the country and several
other influential factors. In accordance with the report of the International Narcotics Control Board (INCB) 201243, there are several barriers that limit the use of drugs for palliative care, among them the too strict rules; limitations on the forms of medication available, particularly the oral opioids; lack of supply and distribution; limitations on who may prescribe; fear of police intervention in the medical use and so on. However, in Uganda, the collaboration with local narcotics agents facilitated the access, allowing the professionals registered to prepare colored solutions of morphine so that the patients could take home with a measuring glass, avoiding an overdose. This was a simple, cheap and effective solution, that demystified the idea that having more resources would lead to a more effective palliative care.

Categorize the morphine as an essential medication is simple, but it promotes a great impact, because it indicates to the doctors that it is necessary to adopt a change of attitude in relation to opioids. The opioids need to be more accessible and, although the current measures of distribution limit the quantities distributed to avoid indiscriminate use and addiction in big cities, this control of quantity is done also for inhabitants of rural areas that have difficult access to larger cities for the acquisition of opioids, and, with it, spend more time without the drug, since larger quantities are not supplied to them.

The implementation of palliative cares in developing countries has been made very unequally and this distribution is closely linked to Human Development Index. Without political support and financial resources for the implementation of the palliative care, all the development achieved is restricted to the creativity of health professionals, help from institutions and non-governmental organizations (NGOS) and the leaders who make personal sacrifices and financial resources to implement palliative care in their community. Therefore, the implementation of this practice must obey a government strategy, not a chaotic spray of resources. Any strategy has as its starting point a necessity assessment, which, when not identified in real form, can be estimated.

In the end, the implementation of palliative cares are not restricted only to the factors already mentioned but also the psychological, social and financial barriers of the community itself. Since the beginning, the palliative care was strongly associated to the end of life, and psychologically, most people avoid recognizing any issue related to death. Even in the face of the possibility of dying soon, it is pointed that it is harmful to mental health of the patient excessive reflection on this theme, directly influencing the palliative treatment. In many countries informing the patient about his or her diagnosis and prognosis is prohibited or strongly discouraged when there is a threat to life. Previously, this was the case in most cultures, however, today it is encouraged that the patient not only learn, but actively participate in the decisions taken by the health team for his or her case.

In another angle, WHO, in its Atlas, reports that the disease that threatens the life can have a big impact on financial plan. In many countries, effective medical treatment can only be available to those with financial resources to pay for the care. In the United States, for example, at least half of bankruptcy is due to medical bills. Although palliative care has been considered profitable in many studies, these are mainly in developed countries.

In the face of many difficulties in the establishment of effective Palliative Care, the Global Atlas of Palliative Cares at the End of Life highlighted examples of how these services are offered in several regions of the world, in different political, cultural and economic contexts. There
are models that use effectively volunteering in community health, applied in India and Tanzania; an initiative of education and training in Palliative Cares implemented in Romania; programs to increase adherence to protocols of palliation, used in the United States; a movement of installation of quality hospices started in the United Kingdom. There are also many other methods of development of palliative cares that found a successful way to promote assistance even in the face of limitations and lack of resources.

The network of neighborhood in Palliative Cares (NNPC), a program installed in communities of India, is a project started in 2000 in which the volunteers from the local community are trained to identify problems of chronic diseases in their area and to work effectively, with the active support of a network of trained professionals. Essentially, the NNPC has as objective to empower local communities to take care of chronic patients and moribunds in the region. Within 10 years, the initiative became a vast network that handles more than 15,000 patients, has a workforce of more than 15,000 trained volunteers, 50 physicians and 100 nurses in palliative cares.\(^\text{26}\)

The Hospice Casa Sperantei is a charity institution in Romania, founded in 1992 in Bucharest, in partnership with a British hospice. Its mission is to support the development of hospices and Palliative Cares for patients with incurable diseases in terminal stages. The organization has actively participated since 1997 in the education of professionals interested in creating new services of palliative cares.\(^\text{26}\)

At Hope Hospice, Florida, professionals noted the growing need for a special type of care, directed to those who were not eligible for the hospices. Thus, this team was one of the pioneers in the concept of broad access to palliative care. This was done through the continuous improvement of the palliation skills, including pain control, management of symptoms, counseling and care focused on the person. This care is provided through an approach of interdisciplinary team that allows adults to remain in their own homes, providing daily assistance, proactive medical care and innovative management of diseases. This coordinated approach to palliative cares addresses the fragmented services in that the caregivers often must look for in the healthcare system of the United States.\(^\text{26}\)

**FINAL CONSIDERATION**

In short, dealing with the loss or with disease itself has always been a challenge, and death is a subject that a few propose to discuss, leading to a mechanism of denial. Historically, arose in Europe, even in the 5th century, the initiative of hospices, places where patients at end of life were housed, with the goal of providing care and relief of pain until their last day. This continued until the 1990s, when there was the renewal of the model of the hospices, starting to encompass multidisciplinary practices, called Palliative Cares, seeking to offer patients a life close to family, without pain and based on respect.

Based on the relevance of the subject, came the proposal for literature review focusing on the basic concepts related to the topic, the situation of palliative cares internationally, the main barriers to their implementation and possible solutions to their applicability.

It was noted that although initially the palliative care having been employed for the purpose of the end of oncologic life, this practice has expanded to several other areas and being
applied from the time of diagnosis with the aim to control the symptoms, and not as a last option in the face of the impossibility of halting the natural course of the disease. However, the implementation of palliative cares has been made very unequal among countries, since some of them are not able to overcome the difficulties that present themselves throughout the implementation process.

Thus, in addition to some countries being totally unaware of this practice, those who have knowledge of the theme still find legislative, educational, financial barriers, pharmacological, psychological and sociocultural restrictions. However, even if there are barriers in implementation, there are also examples of success in the insertion of palliative care in different political, cultural and economic contexts, as in India, Romania and the United States. These models have proved that, even with limited human and financial resources (India and Romania) or with a health system heavily privatized and focused on profit (the USA), one can find viable and effective alternatives for the implementation of the palliative care and that, even if death is an inevitable visit, there is urgent need to give comfort to those who had a history and who need peace, absence of pain and comfort to relive it and, thus, end it in the best way.

The authors declare that this article is free of conflicts of interest. They also declare that there is no source of external financing.

REFERENCES


3. EHMAN, J. et al. Do patients want physicians to inquire about their spiritual or religious beliefs if they become gravely ill? Archives of Internal Medicine., v. 159, n.15, p.1803-1806, 1999.


13. RANDÉN, M. et al. Treatment decisions and discontinuation of palliative chemotherapy near the


42. SEYA M.J. et al. A rst comparison between the consumption of and the need for opioid analgesics at country, regional, and global levels. *Journal of Pain and Palliative Care Pharmacotherapy*, v. 25, n. 1, p.6-18, 2011.


