

# Inquérito Brasileiro Sobre Terapia de Nutrição Domiciliar: panorama atual

## Brazilian Survey on Home Nutrition Therapy: current overview

### Encuesta brasileña sobre terapia nutricional domiciliar: panorama actual

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# REVISA

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#### RESUMO

**Objetivo:** descrever como a terapêutica nutricional domiciliar é realizada no Programa Melhor em casa do Ministério da Saúde e na Saúde suplementar. **Método:** Estudo transversal, com dados secundários, onde foram selecionados os perfis de profissionais atuantes em atenção domiciliar no Brasil. A coleta de dados ocorreu de março a junho de 2018, depois de submetido e aprovado pelo Comitê de Ética e Pesquisa. **Resultados:** Dos 289 brasileiros, 74% eram profissionais atuantes na Assistência domiciliar. O tipo de Terapia Nutricional realizada foi 67% enteral exclusiva seguida de 33% terapia mista. A prescrição realizada de dieta exclusiva artesanal foi de 9% e de dieta enteral mista 55%. A maioria recebe dieta por gravidade intermitente, seguida de administração em "bolus", gravitacional contínua e controle do gotejamento através da bomba de infusão. **Conclusão:** Os achados nos dão uma visão panorâmica da terapia nutricional enteral domiciliar no Brasil. Aumento da terapia nutricional domiciliar se faz necessária especialmente pelo aumento da população idosa e consequentemente de maior presença das doenças crônicas que podem levar a incapacidade, dependência, maior tempo de hospitalização e custos para o sistema de saúde. É fundamental a presença da equipe interdisciplinar, de boas práticas e do acompanhamento das famílias nos domicílios.

**Descritores:** Terapia nutricional; Nutrição enteral; Nutrição parenteral; Serviços de assistência domiciliar.

#### ABSTRACT

**Objective:** To learn how home nutritional therapy is carried out in the Ministry of Health's Better Home Program and in Supplementary Health. **Method:** Cross-sectional study, with secondary data, in which the profiles of professionals working in home care in Brazil were selected. Data collection took place from March to June 2018, after being submitted and approved by the Ethics and Research Committee. **Results:** Of the 289 Brazilians, 74% were professionals working in home care. The type of nutritional therapy performed was 67% exclusive enteral followed by 33% mixed therapy. The prescription of an exclusive handmade diet was 9% and a mixed enteral diet 55%. Most receive intermittent gravity diet, followed by bolus administration, continuous gravitational and drip control through the infusion pump. **Conclusion:** The findings give us a panoramic view of home enteral nutritional therapy in Brazil. The increase in home nutritional therapy is necessary especially because of the increase in the elderly population and, consequently, the greater presence of chronic diseases that can lead to disability, dependence, longer hospitalization and costs for the health system. The presence of an interdisciplinary team, good practices and monitoring of families at home is essential.

**Descriptors:** Nutrition therapy; Enteral nutrition; Home parenteral nutrition; Home care service.

#### RESUMEN

**Objetivo:** Conocer cómo se lleva a cabo la terapia nutricional domiciliar en el Programa Mejor Hogar del Ministerio de Salud y en Salud Complementaria. **Método:** Estudio transversal, con datos secundarios, en el que se seleccionaron los perfiles de los profesionales que trabajan en la atención domiciliar en Brasil. La recolección de datos tuvo lugar de marzo a junio de 2018, luego de ser presentados y aprobados por el Comité de Ética e Investigación. **Resultados:** De los 289 brasileños, el 74% eran profesionales que trabajaban en la atención domiciliar. El tipo de terapia nutricional realizada fue 67% enteral exclusiva seguida de 33% terapia mixta. La prescripción de una dieta exclusiva artesanal fue del 9% y una dieta enteral mixta del 55%. La mayoría recibe una dieta de gravedad intermitente, seguida de administración de bolo, control gravitacional continuo y de goteo a través de la bomba de infusión. **Conclusión:** Los hallazgos nos brindan una visión panorámica de la terapia nutricional enteral domiciliar en Brasil. El aumento de la terapia nutricional domiciliar es necesario sobre todo por el aumento de la población anciana y, en consecuencia, la mayor presencia de enfermedades crónicas que pueden derivar en discapacidad, dependencia, mayor internación y costos para el sistema de salud. La presencia de un equipo interdisciplinario, buenas prácticas y seguimiento de las familias en el hogar es fundamental.

**Descriptores:** Terapia nutricional; Nutrición enteral; Nutrición parenteral; Servicios de atención a la salud domiciliario

ORIGINAL

## Introduction

Home nutritional therapy (HNT) has become an integrated modality in home care (HC) with increasing expansion today. HNT can be defined as nutritional and clinical assistance to the patient at home, with the objective of recovering or maintaining the maximum level of health, functionality and convenience. It comprises from oral nutritional therapy, through the use of nutritional supplements and supplements, enteral nutritional therapy (ENT) and parenteral nutritional therapy (PNT).<sup>1-2</sup>

Considering the guidelines and objectives of the National Food and Nutrition Policy (NFNP) and the National Food and Nutrition Security System (NFNSS), it is possible to say that HNT contributes to guaranteeing the right to adequate and healthy food for those with special needs, although it is not yet a reality for individuals in household enteral nutrition therapy (HENT) with low purchasing power.<sup>3-4</sup>

The practice of an adequate and safe diet must be performed by a multidisciplinary team of nutritional therapy (MTNT), following its standardization. The MTNT must prescribe an individualized Nutritional Therapy (TN), with the inclusion of education and nutritional counseling of the oral route or, of diets considered as high complexity, the PNT and TNP4-5, therapies that are contemplated in the NFNP among the Needs Special Food Products (NSFP)<sup>3</sup>:

"The dietary needs, whether restrictive or supplementary, of individuals with metabolic or physiological changes that cause changes, temporary or permanent, related to the biological use of nutrients or the route of food consumption (enteral or parenteral)".

Therefore, individuals with NSFP, considering the human rights to adequate food (HRAF), which involves, among different situations, the guarantee of access to food for special purposes, respect for individual and family habits and comprehensive health care, should be included.<sup>5</sup>

Scientific publications have focused more on the tertiary health sector, with reports that inadequate nutrition associated with malnutrition are public health problems that affect both social and economic performances, prompting health demands to improve the final clinical outcomes. Complication rates in malnourished individuals are high and have a high financial cost in the health sector, related to adjuvant therapies, greater use of medication and days of hospitalization and readmissions, among others. The high incidence of in-hospital malnutrition remains high, even after almost 20 years of the Brazilian Hospital Nutritional Assessment Survey-IBRANUTRI.<sup>6-7</sup>

Research on nutritional status in patients cared for at home is scarce in our literature, mainly with Brazilian data. Some studies with HENT, mainly in the elderly, reflect the high incidence of malnutrition and improvement of the condition, when they receive the ENT with nutritional guidance and multiprofessional monitoring.<sup>8-9</sup>

Thus, the performance of appropriate nutritional interventions, practiced by a trained multidisciplinary team, through good therapeutic plans for NT, can reverse unfavorable situations, improving clinical and nutritional outcomes, as well as the quality of life of individuals, in addition to cost reduction with health.<sup>10</sup>

In this context, NSFP-related actions have been guided by the Food and Nutrition Security (FNS) agenda, which is structured in an intersectoral manner and with broad social participation. Their demands are established by the National Food and Nutritional Security Plans (NFNSP), which from 2014, after the review of the interministerial Chamber of food and nutritional security, inserted a new goal directing care in the Health Care Networks (HCN), especially at home.

Thus, individuals in NT can be accompanied by several points of the HCN, depending on their clinical status and the resolving capacity of the points of attention. Their care must be inserted in the lines of comprehensive care based on the needs of individuals, reducing the fragmentation of care, maintaining adequate nutritional care, according to what is recommended by NFNP.<sup>5</sup>

Among public policies, it is important to note that NSFP, meets the principle of equity, one of the three principles of SUS and also one of the principles of NFNP, although we still find many challenges to be faced to operationalize the care for these individuals by HCN, specifically in HC.<sup>5</sup>

HC is a modality of health care, substitutive or complementary to hospital care, which involves actions to promote health, prevention and treatment of diseases, as well as the rehabilitation of individuals in the home environment, with guaranteed continuity of care and integrated with health care networks. health care. In this way, it allows dehospitalization for chronic patients, clinically stable and who need to maintain a multidisciplinary follow-up in a humanized way. For this practice to occur with humanization, a good hospital discharge strategy is necessary.<sup>11-13</sup>

Hospital discharge can occur even when there is no complete recovery of nutritional status or full capacity to eat normally orally and have an adequate absorption of all nutrients. Thus, the promotion of a better quality of life for individuals with special dietary needs after hospital discharge, must consider aspects that involve not only food, but also consider the clinical, nutritional, social, cultural and affective aspects related to health status. of the individual, involving the family and the entire multidisciplinary health team.<sup>14</sup>

Within the scope of SUS, HC was effective as of Decree 2029, of 2011, which came to promote the institution of the Best at Home program in November 2011 and has undergone successive adjustments to the current regulations, inserted in Consolidation Ordinance 1, 5 and 6, of September 28, 2017. According to data from the coordination of the Melhor em Casa do MS program, in April 2020 this program had Services in 583 Brazilian municipalities in 26 states potentially covering 37% of the Brazilian population, through performance of 1458 multiprofessional teams.<sup>5,15</sup>

Considering this scenario that involves HNT, the right to adequate food supported by public policies and chronic diseases, which increase with population aging, NSFP and the lack of publications referring to HNT, mainly in SUS, was the objective of the Research Committee. Home Nutritional Assistance (HNA) of the Brazilian Society of Enteral and Parenteral Nutrition (BRASPEN-SBNPE), conduct a second HNT survey to learn how this practice is carried out in the Best at Home Program in MS and also in supplementary health.

In this sense, the objective of the study was to describe how home nutritional therapy is carried out in the Better Home Program of the Ministry of Health and in Supplementary Health.

## Method

Epidemiological, observational and cross-sectional study, carried out in Brazil with secondary data from the BRASPEN database, contained in the Latin American HNT survey, conducted with member countries of the Latin American Federation of Parenteral and Enteral Nutritional Therapy (LAFPENT), through application of a questionnaire prepared by HNA composed of 15 multiple-choice questions, through the Survey Monkey tool (<http://www.surveymonkey.com/>), sent to parenteral and enteral nutrition societies in LAFPENT member countries. The collection period took place from March to June 2018, including 17 countries in Latin America plus Spain.

From this database, information from Brazilian data was selected, considering only professionals working in home care, both from the Better at Home program of the Ministry of Health, representing the public and private sectors, the profiles of professionals working in home care, including the coordination of the Best at Home program at the Ministry of Health, as well as HC companies with the help of the National center for Home Care Services companies (NHCS) and the pharmaceutical nutrition industries.

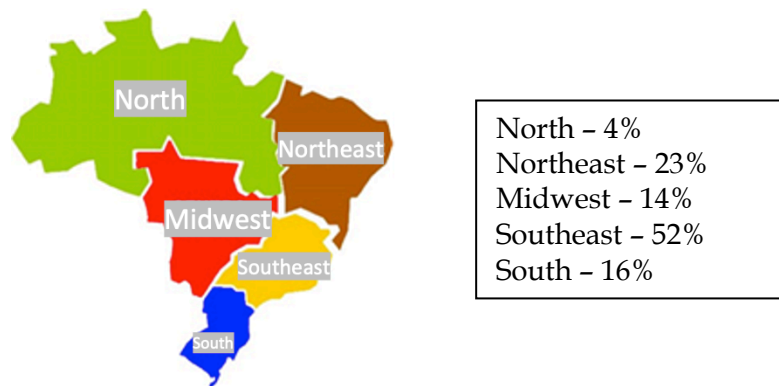
In compliance with Resolution 466 of 2012, the project was submitted to and approved by the Research Ethics Committee of the University of São Paulo School of Nursing, under No. 3,995,405.

## Results

From the total of 289 Brazilian respondents, 74% (214) were professionals working in the HC and of these, 84% (180) were from the public sector, along with the Best at Home program of the Ministry of Health. 34% of nurses, 8% of doctors and 17% of other health professionals.

All Brazilian regions were included in the survey, with a greater participation of the Southeast region (52%) followed by the Northeast region (23%) as shown in Figure 1.

**Figure 1-** Percentage distribution of responses to the HNT survey received from different Brazilian regions



**Source:** LAFPENT 2018 home nutrition therapy survey.

We observed that the majority (79.0%) of the patients seen in the HC are elderly, in all clinical conditions observed and 82.7% of the illnesses fall on neurological disease, with the elderly having 67.8% (Table 1 ).

**Table 1 -** Distribution of age group and type of clinical condition of patients seen at home, according to a HNT survey. Brazil, 2018

Type of clinical condition	Age Range (years)			Total N(%)
	< 18 N.(%)	18 a 60 N.(%)	> 60 N.(%)	
Neurological	9(4,2)	23(10,7)	145(67,8)	177(82,7)
Oncology	0 (0)	7(3,3)	12(5,6)	19(8,9)
Surgical	0(0)	0(0)	2(0,9)	2(0,9)
Others	1(0,5)	5(2,3)	10(4,7)	16(7,5)
Total	10(4,7)	35(16,3)	168(79)	214(100)

**Source:** LAFPENT home nutritional therapy survey.

Analyzing the type of TN performed, most companies providing home care (DC) serve patients, mainly in exclusive ENT (67%), followed by 33% mixed TN, besides being able to have PNT and use of supplements by orally.

Regarding TNPD, this has been gaining space among the DC, being reported by 50% of the professionals who responded to the survey and the percentage in the last 12 months, varies from 10% to more than 30% of the patients seen. This practice has been adopted both in public and private services, but with more followers in the first group, which also serve a higher percentage of patients (Table 2).

**Table 2-** Patients percentage in NPTT attended in the last 12 months. Brazil, 2018.

NPTT patients	Type of service		Total %
	Public Service <sup>o</sup> %	Private Service <sup>o</sup> %	
< 10%	12,1	6,1	18,2
10 to 30%	18,7	1,4	20,1
> 30%	10,3	1,4	11,7
None	43,0	7,0	50,0
<b>Total</b>	<b>84,1</b>	<b>15,9</b>	<b>100</b>

**Source:** LAFPENT 2018 nutritional therapy survey.

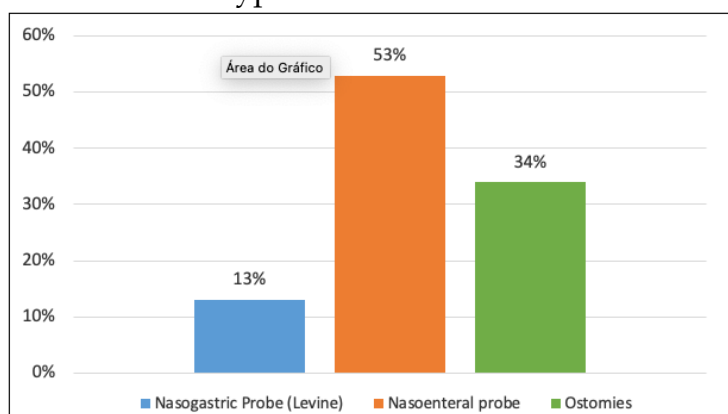
In this survey, when analyzing the HENT, considering the type of prescription performed by health professionals, there was a low practice in the use of exclusive handmade diet (9%) and the highest frequency was in the use of mixed enteral diet (55%), mainly in the public service, the industrialized diet, despite representing 36% of the prescribed diets, was more frequent in the private sector (Table 3). The same table also shows that the frequency of using artisanal diets is the same in both the public and private sectors.

**Table 3-** Type of enteral nutrition diet prescribed by Brazilian health professionals, working in HC. Brazil, 2018.

NE prescription	Type of service		Total n. (%)
	Public Service n(%)	Private Service n (%)	
Industrialized diet	57(32)	17(50)	74(36)
Craft diet	16(9)	3(9)	19(9)
Mixed Diet	107(59)	14(41)	121(55)
<b>Total</b>	<b>180(100)</b>	<b>34(100)</b>	<b>214(100)</b>

**Source:** LAFPENT 2018 nutritional therapy survey.

The most widely used access route for administering HENT is the nasoenteral tube (53%). Although most patients are neurological, gastrostomy was less used (34%). Levine's nasogastric tube is unfortunately a reality in the public sector and was referred to as the access route in 13% of cases, as shown in Figure 2.

**Figure 2 -** Distribution of the type of access roads used in HENT. Brasil, 2018.

**Source:** LAFPENT nutritional therapy survey.

Considering the form of administration of HENT, it was observed that the majority (61.7%) received NE by intermittent severity, mainly in the public service (64%), but it is also adopted by 50% of the private services. Bolus administration is the second most used form (24.7%), with greater use in the private sector (38.2% vs. 22.1%). It was found that only 3.9% of patients receive the diet by infusion pump, being more frequent in private services (8.8%). Continuous dripping without the use of an infusion pump, although it is still a new practice in our country, with greater adherence to the public service (11% X 3%) (Table 4).

**Table 4-** Form of administration of enteral nutrition used by HENT. Brazil, 2018.

Way of NE Administration	Type of Service		Total n (%)
	Public n(%)	Private n (%)	
Infusion bomb	5(2,9)	3(8,8)	8(3,9)
Intermittent drip	110(64)	17(50)	127(61,7)
Continuous Drip	19(11)	1(3)	20(9,7)
Bolus	38(22,1)	13(38,2)	51(24,7)
<b>Total</b>	<b>172(100)</b>	<b>34(100)</b>	<b>206(100)</b>

**Source:** LAFPENT nutritional therapy survey.

The data found also reveal that HNT needs greater adherence and investment in services, whether public or private, as well as the health professionals involved.

## Discussion

The results obtained in this survey are important for us to understand how HENT is carried out in our country, mainly in the HC with the Better at Home program of the Ministry of Health and to guide new searches in HENT, in addition to reflecting on this practice in relation to public food policies. and the HRAF, which will allow us to analyze how the HNT guidelines are assisting health professionals in HC to carry out an appropriate practice for individuals with indication for HNT.

The reports of Brazilian literature regarding DA are still shy, especially the practice of HNT, which can be justified by the lack of criteria to record its implementation, monitoring and evaluation in a single system, to facilitate a systematic and permanent analysis, as they exist in other countries. Spain is an example in this sense, in which the sociodemographic data of home patients are updated frequently, facilitated by presenting regulated HC.<sup>16</sup>

It is a fact that we are changing our demographic pyramid, with a gradual increase in the number of elderly people and, consequently, a greater presence of chronic diseases and, despite the more incentive to promote and prevent health with a focus on healthy and active aging, it was found that in HC the elderly represented most of the inquiries in this survey, accompanied by neurological diseases, as indicated by both Brazilian and international literature.<sup>17-19</sup>

Considering that the objective of HNT is to maintain or recover the nutritional status of patients in the home environment, the prescription of PNT is important, but seen as an enhancing component among home care, being a common practice, the request by managers to use diets handmade. Contrary to this information, our study revealed a low indication of prescribing an exclusive artisanal diet, even though most respondents were from the public sector.

The use of more than a third of industrialized diets that added to the use of mixed diets, as shown in this survey, correspond to almost all indications, which suggests a concern in maintaining a controlled supply of nutrients by the prescribers. Perhaps this is the tendency of our services, as demonstrated in a recent survey, in all patients of a public service, receiving industrialized or mixed diet.<sup>20</sup>

The mixed diet has a high indication in this study, both in the public sector and in supplementary health, a reality also found in the international literature, especially in pediatrics and in individuals with food intolerance, however the criteria for indicating this prescription are well reported, which are: the patient's clinical stability, having probes with a caliber greater than 14 Fr for at least six months and making the diet transition slowly for better adaptation.<sup>21</sup>

In Brazil, a classic economic study considering HENT, was carried out by Baxter et al (2005), which strengthened the formation of the HC of the Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo, where through a controlled study, of integrated hospital model compared to an exclusively hospital model, it was concluded that there was a reduction in costs, nutritional benefits, with shorter hospital stay in the HC group, in addition to promoting greater turnover between the hospital's surgical beds.<sup>22</sup>

Several authors have shown that the guidance of HENT is essential and must consider nutritional and economic aspects, being important that each service has eligibility criteria for selecting the type of guidance to be prescribed, maintaining a balance between cost-effectiveness, as well as prevention of weight loss and malnutrition, the improvement in the quality of life of users, whether oncological or elderly<sup>23</sup>, also considering the presence of the trained health team and monitoring, which are part of the efficiency of care for patients in HENT.<sup>8,20</sup>

In Brazil, there is this concern for the public sector, since the Ministry of Health's "Best at Home" program has made great strides in recent years and many publications referring to home care and a specific one that addresses HNT's shared care, from assessment initial, nutritional recommendations, indication, prescription, care in handling enteral formulas care in the administration and monitoring of patients in HNT, assisting HC professionals in the elaboration of their care protocols and DC.<sup>17,24</sup>

NPT is a therapeutic alternative when the individual cannot or cannot use the gastrointestinal tract as a route of food. It can be in exclusive or complementary form depending on the clinical and nutritional situation of the patient.<sup>13</sup> In Brazil, despite the TNPD, having been the first form of HNT adopted<sup>25</sup>, it is still little accomplished, in part, because it depends on a team trained to accompany patients of this complexity and also, because it is a more expensive therapy and following the legislation in force in our country, with the need to have a specialized nursing team at home, during the entire period in which NPT is administered.



However, in this survey it was observed that 50% of the participating professionals had patients with NPTD in the last 12 months and it is interesting to note that in the public sector there were more patients with this nutritional therapy compared to the private sector, making it clear that there was an adaptation in health team to attend this type of nutrition, greater than that seen in the first Brazilian HNT survey, in which the incidence of TNPD was reported in only 1% of the total respondents.<sup>13,17</sup>

We realized that, in other countries as well, there has been a progressive increase in the care of patients with NPTD. The Home and Outpatient Artificial Nutrition group of the Spanish Society of Clinical Nutrition and Metabolism saw an increase of more than 400% in 17 years of registration (2000 to 2017) with an increase, especially in the last years of the TNPD in cancer patients under palliative care.<sup>16</sup>

This survey showed an important representation of elderly, neurological and in use of enteral tubes, although the recommendations for these cases indicate the use of stomata.<sup>17</sup> This fact is often due to the lack of access to this device, as shown by a recent study by Domingues (2019) in our country, with a similar population.<sup>20</sup>

European studies show that the use of ostomies is also not necessarily a reality in HC, with the use of nasoenteral tubes being indicated in up to 73%, mainly in very old elderly (80 years and over), even with an average of 174 days for HENT.<sup>26-27</sup>

This survey also showed that the use of the Levine probe, which has an indication for drainage, is a national reality, perhaps because the universe of patients belongs to the public network, where the acquisition of supplies is not always facilitated and that, necessarily, not corresponding to a general practice in HC.

We also shown that the most frequent form of administration was intermittent gravitational dripping, a practice consecrated by the nursing team, in all situations, considered the most physiological, especially when they do not have infusion pumps and when the diet is using the Levine probe, situations present in the sample.<sup>28-29</sup>

Still regarding the type of administration, in some studies, a greater tendency was observed in the use of bolus administration, especially when the prescribed diet is the so-called blenderized diet, similar to our mixed diet, in which the viscosity is higher and hardly adequate for gravitational drip. The greater indication of ostomies also favors the administration in "bolus", although it has been described that it has a higher incidence of gastrointestinal complications. Thus, it can be suggested that in this investigation the lesser indication of this type of administration may be related to less use of artisanal diet and less presence of ostomies for HENT.<sup>30</sup>

This survey showed advances in relation to the previous one, since the majority of respondents (74%) work directly at HC and brought data mainly from the public sector, with more than 80% of professionals working in the Best at Casa do MS program, in which has seen a trend in the last three years, of monitoring patients of greater complexity and need for TNPD, little reported in the first HNT survey, where most participants worked in supplementary health. These findings indicate an organization of primary health care, strengthening the performance of the health team in HC. Still, comparing the two surveys, less indication of artisanal diet was observed in this study, suggesting an evolution

in dietary prescriptions, with greater concern in offering known amounts of nutrients to combat malnutrition.

## Conclusion

There are still few Brazilian studies related to HC, mainly with consistent epidemiological data and few longitudinal studies to understand how the evolution of home care is, mainly related to HNT. This is the second Brazilian survey on the subject, closer to reality, as it presents data from professionals working in HC and shows how these patients in need of HNT are. It also reveals the importance of the Better at Home Program, which expanded the use of HNT, especially to the most needed populations. It brought important data to be observed by professionals working in the area, when implementing HNT, for greater benefits for users and the System (which). However, further research is still needed in this context and that includes other important data, such as time of HNT, evolution, complications and outcomes regarding the use of HNT.

These results reveal a promising future, where we can glimpse the growing concern with the nutrition of outpatients, either early or not, considering that the nutritional status is reflected in a better therapeutic response, better quality of life and, consequently, greater survival and lower rate of readmissions, leading to a reduction in health costs.

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