

# Diagnosis and nursing interventions in individuals with home gastrostomy: An integrative review

Diagnósticos e intervenções de enfermagem em indivíduos com gastrostomia domiciliar: Uma revisão integrativa  
Diagnóstico e intervenciones de enfermería en individuos con gastrostomía domiciliar: Una revisión integradora

## RESUMO

**OBJETIVOS:** Elaborar diagnósticos, resultados e intervenções de enfermagem para pacientes com GTT domiciliar a partir de problemas de enfermagem levantados na literatura. **MÉTODO:** Revisão integrativa a partir das bases de dados da Biblioteca Virtual de Saúde (BVS), incluindo artigos na língua portuguesa e inglesa, com textos completos e dos últimos cinco anos. **RESULTADOS:** Foi possível observar o déficit no conhecimento dos cuidadores referente às necessidades dos pacientes com gastrostomia e suas implicações para o cuidado. Relacionado às falhas na orientação dos acompanhantes por parte da equipe de saúde, devendo ser realizada de forma efetiva considerando as individualidades de cada usuário e sua família. **CONCLUSÃO:** A falta de manejo com o manuseio da sonda é uma das maiores dificuldades vivenciadas por cuidadores de indivíduos gastrostomizados, para tal, faz-se necessária a educação em saúde pelo profissional enfermeiro à pessoa prestadora dos cuidados.

**DESCRITORES:** Gastrostomia.; Cuidados de Enfermagem; Assistência domiciliar.

## ABSTRACT

**OBJECTIVES:** To elaborate diagnoses, outcomes and nursing interventions for patients with home gastrostomy based on nursing problems raised in the literature. **METHODS:** Integrative review from the databases of the Virtual Health Library (VHL), including articles in Portuguese and English, with full texts and from the last five years. **RESULTS:** It was possible to observe the deficit in caregivers' knowledge regarding the needs of patients with gastrostomy and its implications for care. This was related to the health team's faults in the caregivers' orientation, which should be done in an effective way considering the individuality of each user and his family. **CONCLUSION:** The lack of management of the tube is one of the greatest difficulties experienced by caregivers of gastrostomized individuals. Therefore, health education by the nursing professional to the caregiver is necessary.

**DESCRIPTORS:** Gastrostomy; Nursing Care; Home Care.

## RESUMEN

**OBJETIVOS:** Elaborar diagnósticos, resultados e intervenciones de enfermería para pacientes con gastrostomía domiciliar a partir de los problemas de enfermería planteados en la literatura. **MÉTODOS:** Revisión integrativa a partir de las bases de datos de la Biblioteca Virtual en Salud (BVS), incluyendo artículos en portugués e inglés, con textos completos y de los últimos cinco años. **RESULTADOS:** Se pudo observar el déficit en el conocimiento de los cuidadores respecto a las necesidades de los pacientes con gastrostomía y sus implicaciones en el cuidado. En relación a las fallas en la orientación de los acompañantes por parte del equipo de salud, ésta debe ser realizada de forma efectiva considerando las individualidades de cada usuario y su familia. **CONCLUSIÓN:** La falta de manejo de la sonda es una de las mayores dificultades experimentadas por los cuidadores de personas gastrostomizadas, por lo que es necesaria la educación sanitaria por parte del profesional de enfermería al cuidador.

**DESCRIPTORES:** Gastrostomía; Cuidados de enfermeira; Atención domiciliar.

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**INTRODUCTION**

**G**astrostomy is a surgical procedure in which an ostomy (surgical opening in a hollow organ) is performed in the stomach, inserting a catheter directly into the anterior abdominal wall, which can be temporary or permanent <sup>(1)</sup>. For this procedure to be performed, the gastrointestinal tract must be intact and unable to provide adequate long-term oral nutrition. Also indicated in case of gastric decompression. <sup>(1,2)</sup>

The techniques that can be used in this procedure are: percutaneous or surgical. <sup>(2)</sup> The surgeries are performed from an access in the abdominal wall by laparoscopic or laparotomy, and in most cases with general anesthesia. In percutaneous procedures, mostly under local anesthesia, the catheter is placed under

endoscopic or fluoroscopic guidance. <sup>(2)</sup>

Among the percutaneous techniques, Percutaneous Endoscopic Gastrostomy (PEG) is considered the safest, fastest and least invasive way. No need for general anesthesia and large incisions, reducing risks. PEG is considered revolutionary, since previously the techniques used were exclusively surgical. <sup>(3,4)</sup>

In the impossibility of performing and/or technical failure in the PEG, unavailability of resources for the creation of the PEG or percutaneous gastrostomy by fluoroscopy, difficulty in introducing or very prolonged use of nasogastric tubes, or even if the patient is expected to undergo a laparotomy, the gastrostomy surgery will be considered. <sup>(5,6)</sup>

It is known that the GTT is intended to facilitate food intake, reducing the load on the upper gastrointestinal

tract, therefore, bringing changes within the patient's physical and psychological context. As a result, there is a need to insert new care after the procedure. <sup>(7)</sup> The process requires a transition from hospital-home care, in which there is sharing of knowledge between patients, caregivers, multidisciplinary teams and the health system. <sup>(7,8)</sup>

Although the entire multidisciplinary team must contribute during this stage, the figure that stands out in terms of "educating" and "caring" is the nurse, who is extremely important in care education due to his direct and continuous contact with patients and family. <sup>(9)</sup> Therefore, care must be systematized, considering the nursing process, encompassing the patient, family and community redirected to the home context. In addition, listing the affected needs in order to establish the nursing diagnosis,

in order to direct care to the patient's specificities. In this context, considering the necessary health education to be instilled by the professional team, the present study aims to elaborate diagnoses, results and nursing interventions for patients with GTT at home based on nursing problems raised in the literature, based on the North American Nursing Diagnosis Association (NANDA-I), Nursing Outcomes Classification (NOC) and Nursing Interventions Classification (NIC).

## METHODOLOGY

This is an integrative literature review carried out in six stages. In the first stage, the theme of the study was defined and the objective of developing nursing interventions and results was formulated based on the survey of diagnoses in the literature, including the guiding question of the study, namely: "What are the nursing problems in patients with GTT at home described in the literature?."

In the second stage, the criteria for inclusion of studies were established to guide the search and selection, namely: articles in Portuguese (eight articles) and English (four articles) totaling 12 articles, available in full in the databases and published in the period from 2018 to 2022 (last five years). Books, conference reports, conference abstracts, the-

ses and dissertations, epidemiological data, and those that were duplicated in the databases were excluded. The database used was the Virtual Health Library (VHL), and the Boolean AND/OR operators were used together with the descriptors extracted from the Health Sciences Descriptors (DeCS) in Portuguese and English, namely: "gastrostomy" OR "gastrostomy" AND "home care" OR "home care" (six articles); "nursing care" OR "nursing care" AND "gastrostomy" OR "gastrostomy" (six articles), based on the integrated method.

In the third stage, the information to be extracted from the selected studies was defined: article title, authors, year, country of publication, objectives and conclusions. This information was cataloged in a table by the researchers, using the Microsoft Word program. In the fourth stage, the thematic analysis of the included studies was performed, observing similarities and differences between them.

In the fifth, the interpretation of the results was developed and the nursing problems of the person with gastrostomy were evaluated, which made it possible to identify gaps in knowledge. Finally, in the sixth and last stage, a synthesis of knowledge and the main results evidenced on the analysis of the included studies was made, which allowed

the construction of the following theme: Nursing care for individuals with home gastrostomy.

## RESULTS

For the synthesis and presentation of the results of the review, a table containing the identification of the studies was elaborated, as well as the year of publication, objectives, methods, results and conclusion.

In this integrative review, 12 scientific articles were described that strictly complied with the previously established sample selection, and the articles were found in the VHL database. As for the language, the selected articles are in Portuguese and English. According to the year of publication, it was found that 2019 had the highest number of articles produced, with eight articles published. As for the method of the selected articles, six descriptive exploratory studies of a qualitative nature, one observational study of the retrospective and analytical cohort type, one convergent care research, one study with a qualitative approach, developed using the Sensitive Creative Method, one study in the research method qualitative phenomenological study, a prospective and multicenter longitudinal study and a study based on reviews and clinical trials, (Chart 1).

Picture 1: Distribution of studies, according to identification, year of publication, objectives, methods, results and conclusion, 2022.

Identification	Objectives	Methods	Results	Conclusion
Arruda, GO et al., 2018(11) <i>Ciência Cuidado e Saúde</i> - Publication year: 2018	Knowing the family's perceptions about the care of men with chronic conditions and dependence on home care.	Descriptive exploratory study, of a qualitative nature.	The results show that most family caregivers were female, aged between 49 and 83 years and also had some chronic condition. The men cared for had high blood pressure, diabetes mellitus and consequences of stroke. The referred care ranged from helping with bathing to handling more complex devices — tracheostomy and gastrostomy. Family members pointed out different behavioral reasons why, they believe, the men got sick; reported that they performed the necessary care, although the men showed resistance in receiving them	It is noted that it is important to consider gender differences in relation to chronic illness and dependence on family care at home, as a subsidy to support the planning and provision of care centered on the needs of men and their families.

Regina, V et al., 2019(12) <i>Ciência Cuidado e Saúde</i> - Publication year: 2019	To describe the prior knowledge of caregivers of children with special health needs about caring for their children.	Assistive Convergent Research	The caregivers of these children have prior knowledge, especially from observations of taking care of their children during hospitalization. This knowledge should be considered for carrying out the practice of health education based on a dialogic relationship of exchange with the user	In conclusion, we suggest the development of a care plan that is unique and consistent with the reality of children with special health needs, contributing to the quality of care for these children.
Rodrigues, LN et al., 2019(13) <i>Revista de Enfermagem UFPE (Nursing Magazine)</i> Publication year: 2019	Understanding the experience of caregivers of children with gastrostomy.	Qualitative, descriptive, exploratory study	The main difficulties encountered by caregivers were fear and handling the catheter. Advantages after the use of the catheter were also reported, such as the reduction of hospitalizations and the improvement of quality of life, confirming the importance of the educational and assistance role of the health professional, including the nurse, for the effectiveness of this process.	Through the study, it was possible to understand the experience of these caregivers, identifying the difficulties and paths taken to cope with everyday situations.
Nóbrega, VM et al., 2019(14) <i>Revista Mineira de Enfermagem</i> - Publication year: 2019	Analyze the maternal experiences in the care of the child with gastrostomy and reflect on the performance of the multidisciplinary team in the face of the identified care demands	Descriptive exploratory study, of a qualitative nature.	The maternal experiences regarding the needs of the gastrostomized child indicate that the fears change along the trajectory and that the ways of caring are built in daily practice. In this way, inadequate care is developed at home due to lack of support and knowledge, which may result in damage to the child's health.	The care for the gastrostomized child must be continuous, collaborative and shared between the multidisciplinary team and the family in the hospital and home environment. By meeting the unique demands of this population, readmissions are avoided and a better quality of life is promoted for the child and family.
Zacarin, CFL et al., 2018(15) <i>Ciência Cuidado e Saúde</i> - Publication year: 2018	Understanding the family experience of children and adolescents who have gastrointestinal ostomies	Exploratory-descriptive study with a qualitative approach.	The results of this study made it possible to understand that the family of children and adolescents with gastrointestinal stoma goes through a process of progressive acceptance of their child's condition. Symbolic Interactionism made it possible to visualize the experience of these families through the actions they performed, guided by the meanings of the interactions established in this continuous process.	The results of this study make it possible to deepen knowledge about the family's experience in this context, and this allows improving health care, advancing in nursing care issues. In this context, the study highlights the need for support from a structured network for the family to monitor, guide and resolve existing doubts in the process of placing and caring for the stoma.
Menezes, CS et al., 2019(16) <i>Revista Latino-Americana de Enfermagem</i> - Publication year: 2019	Evaluate the clinical and nutritional evolution of elderly people who receive home enteral nutritional therapy	Retrospective and analytical cohort observational study	Most patients undergoing home enteral nutrition therapy maintained and/or improved their clinical and nutritional status. Therefore, this therapy can contribute to a better clinical and nutritional evolution.	These results indicate that the Home Enteral Nutritional Therapy Program (PTNED) of the SES-DF is essential for the clinical and nutritional evolution of the patients assisted by it, in addition to representing a satisfactory strategy for the hospitalization and humanization of care in the SUS.

<p>Viana, IS et al., 2018(17) Texto &amp; Contexto – Enfermagem - Publicação year: 2018</p>	<p>Knowing the doubts of family members of children with special health needs regarding home care related to technological devices; and to analyze the use of the conversation wheel as a health education strategy in the preparation for hospital discharge of relatives of children with technological devices.</p>	<p>Exploratory-descriptive study with a qualitative approach.</p>	<p>Family members highlighted doubts about learning and adapting to technology during the transition from hospital to home and in emergency situations after hospital discharge. These doubts were mainly about procedural care with tracheostomy and gastrostomy. However, the conversation wheel strategy using a doll with technological devices attached was well accepted by the family members, as it favored dialogue and the exchange of knowledge and experiences among the participants, in addition to promoting safety in care</p>	<p>It is noted that the conversation wheel is a health education strategy, which can be used by Nursing in preparing for hospital discharge of children with special health needs, dependent on technology. However, this preparation must happen procedurally during hospitalization</p>
<p>Ribeiro, APLP et al., 2022(18) (Revista Brasileira de Enfermagem - Brazilian Journal of Nursing) - Publication year: 2022</p>	<p>To describe the practices of home care performed by family members to maintain the life of a child with gastrostomy</p>	<p>Study with a qualitative approach, developed using the Sensitive Creative Method</p>	<p>Care with the gastrostomy tube at home is based on the perspective of the nurse to enhance the family member's ability to promote and elaborate the procedure and enable him to develop the necessary skills to perform the care and handling of the technological device. This care performed at home by family caregivers incorporate care measures to maintain life. However, some difficulties are experienced by them, highlighting fear and handling the probe.</p>	<p>Family caregivers used strategies to maintain the device and acquired new knowledge in the field and nursing competence regarding stoma care, administration of food, medication and syringe.</p>
<p>Sezer, RE. et al., 2019(19) Journal of Parenteral and Enteral Nutrition - Publication year: 2019</p>	<p>Identify post-discharge problems and the needs of caregivers of patients with percutaneous endoscopic gastrostomy and seek crucial solutions to improve the quality of life of patients and caregivers.</p>	<p>Qualitative phenomenological research method.</p>	<p>The study revealed 8 themes and 24 sub-themes in 3 categories of PEG management, caregivers' socio-emotional change and expectations, and it was observed that caregivers made mistakes in stoma care, tube feeding and medication administration through the PEG tube.</p>	<p>The results indicated that comprehensive and hands-on training and home care and counseling services must be provided to effectively address the challenges faced by caregivers of patients with PEG.</p>
<p>Muoki, DC. et al., 2020(20) Gastroenterology Nursing - Publication year: 2019</p>	<p>To identify factors associated with the decision-making process for the placement of a gastrostomy tube in adults.</p>	<p>Three quantitative, 4 qualitative and 1 Q methodology studies were analyzed.</p>	<p>Social life, body image and intimacy, uncertainty and fear, complications and overload for the caregiver were central factors that influenced decision-making. Social life and body image associated with intimacy were the most prevalent themes in the review.</p>	<p>Patients need adequate information to make informed decisions that are congruent with their health goals. Nurses should act as the patient's ally, having frank discussions to ensure that the patient receives full and adequate information about gastrostomy tube placement and management.</p>

Wanden-Berghe, C. et al., 2019(21) - Nutrients - Publication year: 2019	To determine the association between home enteral nutrition (HEN) mode of administration and its complications in patients.	Longitudinal prospective multicenter study.	The study consisted of 306 patients; 4 were lost due to death. Specific HEN modalities protected against constipation (odds ratio (OR) = 0.4) and regurgitation (OR = 0.4). The use of a nasogastric tube (NGT) resulted in a lower risk of diarrhea compared with the percutaneous endoscopic gastrostomy (PEG) route (OR = 0.4) but resulted in a higher risk of tube obstruction (OR = 7.4). Intermittent gravity versus bolus feeding was protective against vomiting (OR = 0.4), regurgitation (OR = 0.3), constipation (OR = 0.3), diarrhea (OR = 0.4) and abdominal distention (OR = 0.4). Increasing the number of doses was a risk factor for the incidence of regurgitation (OR = 1.3).	Gastrointestinal complications were the most frequent problems, but proper choice of formula, route, feeding modality, number of doses, administration time and dose volume can reduce the risk of these complications.
Johnson, TW. et al., 2019(22) Nutrition in Clinical Practice - Publication year: 2019	The objective of this review is to provide the HEN team with strategies to address the main problems of home enteral feeding.	Reviews and clinical trials were used.	The article does not address all potential feeding problems in the HEN population. However, it covers the patients most frequently encountered by these authors and are frequently presented in the published literature. Concomitant efforts to reduce malnutrition and shorter length of stay in intensive care continue to drive the increased use of HEN.	HEN teams must act by providing initial and sustained supervision for this diverse and complex patient population, anticipating, preventing, and managing common tube feeding problems.

Source: author's data, 2022.

## DISCUSSION

From the analysis of the articles, it is observed the complexity in the assistance, guidance and management of patients with gastrostomy and their companions, in order to enable the provision of a comforting and resolving care, contributing to the total recovery or in the impossibility of this, a better quality of life for patients with gastrostomy.

Percutaneous endoscopic gastrostomy is considered the gold standard for tube access, and its use is indicated when tube feeding lasts for more than three weeks, as the intervention consists of a lower risk of complications, length of stay and better quality of care. user life.<sup>(16,23)</sup>

Among the various clinical conditions that trigger the need for intervention for gastrostomy, the high prevalence of neurological disorders, stroke, head and neck cancer and esophageal cancer stands out. The most studied populations in relation to care regarding home enteral nutritional therapy are elderly people and children with different approaches and coping.<sup>(16)</sup>

It is known that each child requires attention, time, and care from their family members, demands that are common at this age. However, the literature points out that caring for children with unique needs becomes a constant challenge for families. Involving several issues and factors beyond care, but which, nevertheless, directly influence the provision of care to the sick family member.<sup>(13,24)</sup>

Thus, it becomes the family's responsibility to carry out the necessary procedures, previously performed by a health professional inserted in a medical care environment. These procedures include positioning the patient, preparing and/or administering enteral nutrition, liquids, as well as medications that would previously be administered orally, cleaning the peristomal skin and the tube.<sup>(18)</sup>

This scenario generates a process of tension in caregivers and family members, often triggering fear and anxiety, resulting from the importance of taking on a demand for which they do not feel able, and on which the health of another individual depends.<sup>(18)</sup>

Even so, this process is sensitized by

the affective bonds that exist between those who provide assistance and those who receive it. Since the main caregiver is mostly the person closest to the patient, such as mothers, daughters and wives. Personal, family and social pressure takes on a new proportion and soon the role of caregiver becomes confused with the role previously committed within the family.<sup>(13,15)</sup>

It is observed, therefore, that the way each family faces the new condition presented is related to their beliefs, values and spirituality. The caregiver figure, as well as care, is constructed in a dynamic process, which takes time and is susceptible to the sociocultural experiences of each family and its components.<sup>(13,15)</sup>

Thus, it is essential to build a broad view that sees the patient beyond their clinical conditions. Understanding that the listed nursing problems often need to reach the psychobiological, psychosocial and psychospiritual needs beyond the hospital-centered scenario. In order to educate in health, it is necessary to build an effective communication path, a dialogic relationship, which reaches the particularities of each user, making

him part of this process and, therefore, more receptive to the guidelines provided.<sup>(12)</sup>

The patient with gastrostomy who returns home, but continues to need care, is an important example of assistance that needs to go further. Health education needs to generate security, enable greater quality of care and, within the limitations of each framework, autonomy. The listed diagnoses will involve their caregivers, their family, support network and social interaction.

The act of eating goes beyond the concept of meeting a basic need for nutrition, inherent to each individual. It is something much more complex, it is also a cultural, social and religious act. The challenges related to not being fed orally go far beyond techniques for administering the diet or cleaning and handling the equipment used, permeating the construction of a new lifestyle, conviviality and socialization. This process belongs to the individual with gastrostomy, as well as their family and support networks.

The user who performs tube feeding, especially in home care, is subject to some complications that may affect him, such as displacement of the tube, risk of infection, occlusion or leakage of the tube, irritation of the perilesional skin, in addition to symptoms such as constipation, nausea, vomiting and diarrhea. The severity of these varies according to the clinical condition of the patient, the elderly and children make up the most vulnerable populations. (21,22)

The application of nursing diagno-

ses is essential for meaningful health education. Thus, generating responsible care and a better quality of life for the patient, preventing interurrences and providing greater security for the caregiver. Thus, generating responsible care and a better quality of life for the patient, preventing interurrences and providing greater security for the caregiver.

The nursing practice classification systems Nanda, NIC and NOC emerged in the 1980s with the main purpose of standardizing the language of Nursing diagnoses, so that Nursing teams around the world use the same terms and categorization for care. Therefore, when the client is hospitalized for some procedure or other reason, the nursing team has the duty of perception, because through the clinical history of the user, assistance will be established.

Nursing diagnoses have great relevance in the care related to the patient who needs assistance. Through your needs, Nanda's taxonomy will contribute to obtain the clinical picture of this user. In this sense, it is possible to perceive that the Nursing records will allow us to maintain or not the diagnosis of that patient depending on each evolution of the presented condition.

In evaluating daily nursing care, the professional needs to provide guidance to each companion in a way that is accessible to their language, as when they leave the hospital environment they will be able to provide adequate care.

In this sense, in the articles that were listed for the construction of the work,

it was observed that the nursing team did not have a dialogue with the caregivers and there was also a lack of explanations about the procedures for care in relation to people with gastrostomy, as we know that the family, by receiving access to instruction and appropriate specific knowledge, will know how to best proceed when arriving at their home, in addition to avoiding early readmission.

This exchange of information is also important, as we know that patients with gastrostomy have impaired swallowing, which means that they do not eat orally. Therefore, the person who will help in this assistance, understanding how to clean correctly, tends to avoid several complications, thus causing a drastic change in life both for those who are in care and for those who care.

Therefore, based on the literature addressed, there was a great deficit in knowledge about patients with gastrostomy on the part of their caregivers. As well as the guidance given by the health team, the care to be performed by the companion at home, management and administration techniques. An aggravating factor is the difficulties in the adaptation process of the GTT user, as well as their family members, resulting in a lower quality of care provided. From the problems identified in the reviewed articles, the main nursing diagnoses, expected results and proposed nursing interventions, to be used in the studied populations, were constructed.

#### 4.1 Nursing Diagnoses

Table 2: nursing diagnoses, NOC results and NIC interventions sometimes unique to gastrostomized patients, 2022.

Nursing Diagnosis (NANDA-1)	Expected nursing outcomes (NOC)	Nursing Interventions (NIC)
Deficient knowledge, defined by: Absence of cognitive information or acquisition of information relating to a specific topic.	Knowledge: Ostomy Care, Prescribed Activity, Prescribed Diet, Disease Process, Treatment Regimen.	Determine the caregiver's level of knowledge; - Teach the patient's therapy to the caregiver according to the patient's preferences; - Teach caregiver techniques to improve patient safety.

Caregiver role tension, defined by: Difficulty meeting responsibilities, expectations and/or care behaviors related to family or significant others. - Defining characteristics: Caring activities, Apprehension about the future ability to provide care, Apprehension about the future health of the care recipient, Apprehension about the well-being of the care recipient if he is unable to provide care, Difficulty carrying out necessary activities, Concern about the care routine.

Family support during treatment, Role performance, Caregiver willingness for home care, Family coping, Mood balance, Rest, Personal resilience, Emotional health of the caregiver.

Determine acceptance of the caregiver role, recognize the difficulties of the caregiver role, provide follow-up health assistance to the caregiver through phone calls and/or community nurse care, monitor stress indicators, check with the caregiver how he is coping with the situation, encourage the individual to identify their strengths and abilities, make positive statements about the caregiver's efforts, encourage the caregiver to take responsibility, as appropriate. - Monitor family interaction problems related to patient care, Reinforce the caregiver's social network, Inform the caregiver about health care resources and resources in the community.

Anxiety, defined by: A vague, uncomfortable feeling of discomfort or dread, accompanied by an autonomic response. - Defining characteristics: Restlessness, worries due to changing life events, Decreased productivity, Insomnia.

Anxiety self-control, coping, level of agitation, sleep. - Results associated with related factors: Adaptation to change.

Assess the causative factors; Encourage the patient to express feelings of anxiety, anger or sadness, Determine the level of knowledge about the situation to identify misconceptions, lack of information and other pertinent problems, Help the patient to deal with the situation, Use therapeutic communication (attentive listening) , Respect the patient's wish not to talk, Express hope while considering the limits of the individual's situation, Help the patient engage in activities that promote spiritual growth, , Refer for counseling as appropriate.

Risk of infection defined by: Susceptibility to the invasion and multiplication of pathogenic organisms that can compromise health. - Risk factors: Change in skin integrity; Change in peristalsis; Insufficient knowledge to avoid exposure to pathogens; Malnutrition. - Associated conditions: invasive procedure.

Results associated with risk factors. Knowledge: Control of chronic disease; Risk control, Nutritional status, Gastrointestinal function, Tissue integrity: skin and mucous membranes; Weight: body mass.

Monitor signs and symptoms of infection (edema, hyperemia, heat, flushing, hyperthermia), Orient the patient and family on ways to prevent infection, such as avoiding crowds, using good hygiene, hand washing techniques, as appropriate. - Monitor for signs and symptoms of systemic infection, Clean hands with alcoholic gel before and after each procedure, Disinfect the probe with 70% alcohol before administering the diet, Use aseptic technique for aspiration, Use aseptic technique for administering the diet.

Impaired tissue integrity, Associated conditions: surgical procedure.

Tissue integrity: skin and mucous membranes. - Results associated with related factors: Ostomy self-care, Knowledge of treatment regimen, Risk control of the infectious process, Nutritional status: food intake.

Evaluate the conditions of the surgical incision, Evaluate the conditions of the dressing, Examine the color, texture, and turgor of the skin, Evaluate the presence of phlogistic signs (pain, heat, redness, swelling) at the insertion sites of the probes, Monitor the temperature of the patient's skin .

Impaired comfort - Defining characteristics: Discomfort with the situation, Dissatisfaction with the situation, Feeling of discomfort, regret, restlessness, crying.

Comfort state: environment, physical, psycho-spiritual and socio-cultural. Results associated with related factors: Safe home environment, Social support and Personal autonomy.

Determine the patient's comfort level; Reduce physical discomfort that may interfere with cognitive function and self-monitoring/regulation of activities; Provide physical comfort before interactions; Provide psychological comfort to the patient as needed.

Imbalanced nutrition: less than body requirements, Defining characteristics: Diarrhea, Aversion to food, Abdominal pain - Food intake less than the recommended daily intake (RDI)

Weight control, nutritional status Food and liquid intake, nutritional status Nutrient intake.

Help to gain weight, Diet steps, nutrition management, fluid monitoring and nutritional monitoring.

Readiness for improved nutrition, defining characteristic: Expresses desire to improve nutrition.	Compliance behavior, knowledge of the therapeutic regimen	Behavior modification, Healthy education, Education: procedure, - Education: treatment.
Aspiration hazard. - Risk factors: Decreased gastrointestinal motility, Ineffective cough. - Associated conditions: Enteral feeding Impaired ability to swallow.	Prevention of aspiration, Self-care: nutrition, control of nausea and vomiting, Gastric function, cognitive orientation.	Assess the patient's ability to swallow and the strength of coughing or gagging reflexes and also the consistency and elevation of the headboard.
Low situational self-esteem. Defining characteristics: Underestimates the ability to deal with the situation, Self-negative verbalizations. Related factors: Change in body image	Self-esteem, life change.	Self-esteem autonomy, emotional support
Disturbance in body image Defining characteristics: Alteration in the body structure, Alteration in the vision of the own body, focus on the previous appearance, Fear of the reaction of the others, Change in the lifestyle, Concern with change. Associated conditions: Surgical procedure, Disease, Change in body function	body image, psychosocial adaptation,	Risk identification and active listening
impaired swallowing Defining characteristics: Observed evidence of difficulty swallowing, lack of chewing. Related factors: Mechanical obstruction, Trauma, Cerebral palsy.	Keeps food in the mouth, controls oral secretions, chewing ability, and gag reflex	Train caregivers and family members involved in the care of these patients, promote adaptations at home to improve swallowing during meals, Prevent the patient from lying down naked for 30 minutes after meals, and Perform oral cavity hygiene always after meals.

Source: data adapted by the authors, 2022.

## CONCLUSION

The job of caring for people with a gastrostomy is, for the most part, understood by women and/or their mothers. It was observed that the need for health education by the professional nurse to the caregiver of the individual who performs enteral nutrition at home is of paramount importance, since the greatest difficulty reported is insecurity

with the management of the gastrostomy.<sup>(12,13,18)</sup>

Bearing in mind the need for many caregivers to be the main handlers of people with such needs, it is necessary that the knowledge regarding management is passed on with quality and in an integral and facilitated way, in order to understand and remedy doubts and insecurities of the caregiver, making him understand his value and the need to obtain knowledge and handling techni-

ques for the individual who needs to be assisted.<sup>(12,13,15)</sup>

In addition, understanding the demands of the subject with gastrostomy is of great value to him, since it concerns the supply of Basic Human Needs to the human being in order to provide better living conditions for him, providing individuality with quality of life within the standards adequate to the estimated ideal.

## REFERÊNCIAS

1. Anselmo CB, Terciotti Junior V, Lopes LR, Coelho Neto de JS, Andreollo NA. Gastrostomia cirúrgica: indicações atuais e complicações em pacientes de um hospital universitário. *Rev Col Bras Cir* [Internet]. 2013 Nov [cited 2022 Nov 27];40(6):458-62. Available from: <http://www.scielo.br/j/rcbc/a/zSGnZCxdwB-VxsdVkfV839nt/?lang=pt>
2. Souza ATG, Costa CCP, Souza NVDO, Soares SSS, Pereira SRM, Carvalho EC. Complicações e cuidados de enfermagem relacionados à gastrostomia. *Rev Enferm Atual In Derme* [Internet]. 2021 [cited 2022 Nov 27];95(35). Available from: <https://revistaenfermagematual.com/index.php/revista/article/view/1004/944&gt>
3. Gauderer MWL, Ponsky JL, Izant RJ. Gastrostomy without laparotomy: A percutaneous endoscopic technique. *J Pediatr Surg*.

1980 Dec 1;15(6):872–5.

4. Rodiguero G. Perfil epidemiológico, indicações e complicações de pacientes submetidos à gastrostomia endoscópica. *Univ Fed da Front do Sul* [Internet]. 2019 [cited 2022 Nov 27];56. Available from: <https://rd.uffs.edu.br/handle/prefix/3548>
5. Pisano G, Calò PG, Tatti A, Farris S, Erdas E, Licheri S, et al. Surgical gastrostomy when percutaneous endoscopic gastrostomy is not feasible: indications, results and comparison between the two procedures [Internet]. *Chirurgia Italiana*. 2008 [cited 2022 Nov 27]. p. vol. 60 n. 2 pp 261–6. Available from: [https://www.researchgate.net/publication/23157936\\_Surgical\\_gastrostomy\\_when\\_percutaneous\\_endoscopic\\_gastrostomy\\_is\\_not\\_feasible\\_indications\\_results\\_and\\_comparison\\_between\\_the\\_two\\_procedures](https://www.researchgate.net/publication/23157936_Surgical_gastrostomy_when_percutaneous_endoscopic_gastrostomy_is_not_feasible_indications_results_and_comparison_between_the_two_procedures)
6. Santos JS, Kemp R, Sankarankutty AK, Junior WS, Tirapelli LF, Júnior OCS. Gastrostomia e jejunostomia: aspectos da evolução técnica e da ampliação das indicações. *Med (Ribeirão Preto)* [Internet]. 2011 [cited 2022 Nov 27];44(1):39–50. Available from: <https://www.revistas.usp.br/rmrp/article/view/47321/51057>
7. Sato DM, Teston EF, Andrade GKS, Marcon SS, Giaccon-Aruda BCC, Silva JL, et al. Preparo de cuidadores para desospitalização de pacientes dependentes de tecnologia: perspectiva de profissionais da Atenção Domiciliar. *Rev Rene* [Internet]. 2022 Jul 19 [cited 2022 Nov 27];23:11. Available from: [http://www.revenf.bvs.br/scielo.php?script=sci\\_arttext&pid=S1517-38522022000100328&lng=pt&nrm=iso&tlng=pt](http://www.revenf.bvs.br/scielo.php?script=sci_arttext&pid=S1517-38522022000100328&lng=pt&nrm=iso&tlng=pt)
8. Rajão FL, Martins M. Atenção Domiciliar no Brasil: estudo exploratório sobre a consolidação e uso de serviços no Sistema Único de Saúde. *Cien Saude Colet* [Internet]. 2020 May 8 [cited 2022 Nov 27];25(5):1863–77. Available from: <http://www.scielo.br/j/csc/a/wqxNqstXftvkTvLxzHz3gJn/?lang=pt>
9. Costa DA, Cabral KB, Teixeira CC, Rosa RR, Mendes JLL, Cabral FD. Enfermagem e a educação em saúde [Internet]. *Rev Cient Esc Estadual Saúde Pública Goiás “Candido Santiago.”* 2020 [cited 2023 Jan 4]. Available from: <https://revistaenfermagem-matual.com/index.php/revista/article/view/1004/944>
10. Paz AA, Santos BRL. Programas de cuidado de enfermagem domiciliar. *Rev Bras Enferm* [Internet]. 2003;56(5):538–41. Available from: <http://www.scielo.br/j/reben/a/MgVGLT87Gx-SWtwtyHrjDwyc/?lang=pt>
11. Arruda GO, Leal LB, Peruzzo HE, Nass EMA, Reis P, Marcon SS. Percepções da família acerca do cuidado ao homem com alguma condição crônica. *Ciência, Cuid e Saúde* [Internet]. 2018 Jul 25 [cited 2023 Jan 5];17(1). Available from: <https://periodicos.uem.br/ojs/index.php/CiencCuidSaude/article/view/43845>
12. Severo VRG, Santos RP, Neves ET, Ribeiro CF. Conhecimento prévio de cuidadoras de crianças com necessidades especiais de saúde: uma abordagem freiriana. *Ciência, Cuid e Saúde*. 2019;18(1):1–8.
13. Rodrigues LN, Silva WCP, Santos AS, Chaves EMC. Vivências de cuidadores de crianças com gastrostomia. *Rev Enferm UFPE line* [Internet]. 2019 Mar 16;13(3):587–93. Available from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/236715>
14. Nóbrega VM, Araújo MGF, Coutinho LRPC, Oliveira CKN, Dantas JC, Collet N. VIVÊNCIAS MATERNAS NO CUIDADO À CRIANÇA GASTROSTOMIZADA: SUBSÍDIOS PARA ATUAÇÃO DA EQUIPE DE SAÚDE. *REME - Rev Min Enferm*. 2019;23.
15. Zacarin CFL, Borges AA, Dupas G. <b>Experiência da família de crianças e adolescentes com estomas gastrointestinais/ The family’s experience of children and adolescents with gastrointestinal stomas<b>. *Cienc Cuid Saúde* [Internet]. 10º de setembro de 2018;17(2). Available from: <https://periodicos.uem.br/ojs/index.php/CiencCuidSaude/article/view/41278>
16. Menezes CS, Fortes RC. Estado nutricional e evolução clínica de idosos em terapia nutricional enteral domiciliar: uma coorte retrospectiva. *Rev Lat Am Enfermagem* [Internet]. 2019 Oct 14;27. Available from: <http://www.scielo.br/j/rlae/a/dgCH83K-cXfnCMcjFwWKS5pn/?lang=pt>
17. Viana IS, Silva LF, Cursino EG, Conceição DS, Goes FGB, Moraes JRMM. ENCONTRO EDUCATIVO DA ENFERMAGEM E DA FAMÍLIA DE CRIANÇAS COM NECESSIDADES ESPECIAIS DE SAÚDE. *Texto Context - Enferm* [Internet]. 2018 Aug 6 [cited 2023 Jan 5];27(3). Available from: <http://www.scielo.br/j/tce/a/wPSSMCMNsg49V6M7gBc6pb/?lang=pt>
18. Ribeiro APLP, Moraes JRMM, Queiroz ABA, Góes FGB, Silva LF, Souza TV. Cuidado de manutenção da vida de criança com gastrostomia no domicílio. *Rev Bras Enferm* [Internet]. 2022;75(Suppl 2):1–7. Available from: <https://search.ebscohost.com/login.aspx?direct=true&db=c-cm&AN=159467630&amp%0Alang=pt-pt&site=ehost-live>
19. Sezer RE, Koken ZO, Celik SS. Home Percutaneous Endoscopic Gastrostomy Feeding: Difficulties and Needs of Caregivers, Qualitative Study. *J Parenter Enter Nutr* [Internet]. 2020 Mar 1 [cited 2023 Jan 6];44(3):525–33. Available from: <https://onlinelibrary.wiley.com/doi/full/10.1002/jpen.1612>
20. Muoki DC. Decisional Conflict in Percutaneous Gastrostomy Tube Placement in Adults: An Integrative Review of the Literature. *Gastroenterol Nurs* [Internet]. 2020 Sep 1 [cited 2023 Jan 6];43(5):355–62. Available from: <https://pubmed.ncbi.nlm.nih.gov/33003022/>
21. Wanden-Berghe C, Patino-Alonso MC, Galindo-Villardón P, Sanz-Valero J. Complications Associated with Enteral Nutrition: CAFANE Study. *Nutrients* [Internet]. 2019 Sep 1 [cited 2023 Jan 6];11(9). Available from: <https://pmc/articles/PMC6770113/>
22. Johnson TW, Sara Seegmiller RN, Epp L, Mundi MS. Addressing Frequent Issues of Home Enteral Nutrition Patients. *Nutr Clin Pract* [Internet]. 2019 Apr 1 [cited 2023 Jan 5];34(2):186–95. Available from: [https://www.researchgate.net/publication/331028664\\_Addressing\\_Frequent\\_Issues\\_of\\_Home\\_Enteral\\_Nutrition\\_Patients](https://www.researchgate.net/publication/331028664_Addressing_Frequent_Issues_of_Home_Enteral_Nutrition_Patients)
23. Sznajder J, Ślęfarska-Wasilewska M, Wójcik P. Nutrition accesses among patients receiving enteral treatment in the home environment. *Polish J Surg*. 2017;89(5):6–11.
24. Assis FAG, Pinto MB, Santos NCCB, Torquato IMB, Pimenta EAG. A família da criança com necessidades especiais de saúde: o processo de enfrentamento e adaptação. *Ciência, Cuid & Saúde* [Internet]. 2013;12(4):736–43. Available from: [http://www.revenf.bvs.br/scielo.php?script=sci\\_arttext&pid=S1677-38612013000400016&lng=pt&nrm=iso&tlng=pt](http://www.revenf.bvs.br/scielo.php?script=sci_arttext&pid=S1677-38612013000400016&lng=pt&nrm=iso&tlng=pt)