

# Nursing assistance to patients with discommended heart failure: an integrative review

**ABSTRACT** | The aim of the study was to identify nursing care for patients with decompensated heart failure described in national and international literature. Method- An Integrative Review was carried out. The search was carried out systematically in the databases LILACS, BDNF, IBECS, MEDLINE and Pubmed. Results- The sample consisted of eight articles, it was possible to identify educational nursing interventions for the control and prevention of the disease, interventions during hospitalization and after hospital discharge. Conclusion- Among the selected studies, it was evidenced that nursing interventions are essential for the prevention and promotion of health to patients with decompensated heart failure in the different health care scenarios. Monitoring and health education for heart failure patients has great potential to achieve changes in attitudes and behavior in coping with the disease.

**Keywords:** Nursing; Heart Failure; Nursing care.

**RESUMEN** | El objetivo del estudio fue identificar los cuidados de enfermería para pacientes con insuficiencia cardíaca descompensada descritos en la literatura nacional e internacional. Método- Se realizó una Revisión Integrativa. La búsqueda se realizó de forma sistemática en las bases de datos LILACS, BDNF, IBECS, MEDLINE y Pubmed. Resultados- La muestra estuvo formada por ocho artículos, fue posible identificar intervenciones educativas de enfermería para el control y prevención de la enfermedad, intervenciones durante la hospitalización y tras el alta hospitalaria. Conclusión- Entre los estudios seleccionados, se evidenció que las intervenciones de enfermería son fundamentales para la prevención y promoción de la salud de los pacientes con insuficiencia cardíaca descompensada en los diferentes escenarios asistenciales. El seguimiento y la educación sanitaria de los pacientes con insuficiencia cardíaca tiene un gran potencial para lograr cambios en las actitudes y el comportamiento para afrontar la enfermedad.

**Palabras claves:** Enfermería; Insuficiencia Cardíaca; Atención de Enfermería.

**RESUMO** | O objetivo do estudo foi identificar os cuidados de enfermagem a pacientes portadores de insuficiência cardíaca descompensada descritos em literatura nacional e internacional. Método- Foi realizada uma Revisão Integrativa. A busca foi realizada de forma sistematizada nas bases de dados LILACS, BDNF, IBECS, MEDLINE e Pubmed. Resultados- A amostra constituiu-se de oito artigos, sendo possível identificar intervenções de enfermagem educativas para o controle e prevenção da doença, intervenções durante a internação e após a alta hospitalar. Conclusão- Dentre os estudos selecionados, ficou evidenciado que as intervenções de enfermagem são fundamentais para prevenção e promoção a saúde a pacientes portadores de insuficiência cardíaca descompensada nos diversos cenários de atenção à saúde. O acompanhamento e a educação em saúde ao paciente com insuficiência cardíaca têm grande potencial para atingir mudanças de atitudes e comportamento no enfrentamento a doença.

**Palavras-chaves:** Enfermagem; Insuficiência cardíaca; Cuidados de enfermagem.

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## INTRODUCTION

Heart failure (HF) is conceptualized as a complex clinical syndrome, where the heart is unable to pump blood in order to meet metabolic tissue needs, or it can do so only with high filling pressures.<sup>(1)</sup>

According to estimates, HF affects around 26 million people worldwide, being in Brazil the main cause of hospitalization for cardiovascular reasons with a rate of 21% of cases.<sup>(2)</sup>

Still in Brazil, when talking about patients over 60 years of age, decompensated HF is the first cause of hospitalization, being responsible for a high rate of hospitalization and a high mortality

rate, being characterized as a disease of high prevalence. Its development is common as an outcome of most heart diseases, being a great challenge in the multidisciplinary medical approach.<sup>(3)</sup> In the world, HF represents a major public health problem.<sup>(3)</sup>

As a disease with a high rate of hospitalization, it is essential to monitor the disease in all its stages, from control and health promotion measures to specific interventions during decompensation. The nurse has a great role in this approach, being able to be a facilitator at all levels of health, with nursing interventions having the purpose of satisfactorily meeting the patient's needs.<sup>(4,5)</sup>

The management and monitoring

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of patients with HF by the multidisciplinary team is essential. Among these, the nurse is seen as an outstanding agent in the potential to reduce morbidity and mortality due to HF. Its approach is broad, from health education in adherence to treatment, pharmacological and non-pharmacological, in order to avoid complications, to interventions during hospitalization due to decompensation. <sup>(5)</sup>

Considering that HF is a syndrome of high prevalence and with a high rate of decompensation, the objective of this study is to identify which nursing care for patients with decompensated heart failure described in national and international literature.

#### METHOD

It is an Integrative Review, which allows synthesizing various types of studies for the analysis of broad knowledge and synthesis of a given subject. <sup>(6)</sup>

The review was carried out in 6 stages, according to Mendes, Silveira and Galvão<sup>(7)</sup>: 1) Identification of the theme and selection of the hypothesis or research question for the elaboration of the integrative review; 2) Establishment of criteria for inclusion and exclusion of studies / sampling or literature search; 3) Definition of the information to be extracted from the selected studies / categorization of the studies; 4) Evaluation of the studies included in the integrative review; 5) Interpretation of results and, 6) Presentation of the review / synthesis of knowledge.

The guiding question of the research was elaborated using the acronym PICO, P (Population or Problem: Patients with HF), I (Intervention: nursing care), C (Comparison or Control: Not applicable to this study), O (Outcomes or Outcome or Result: Nursing interventions) <sup>(6)</sup>, resulting in the following guiding question: What nursing interventions can be applied to patients with decompensated heart failure?



Considering that HF is a syndrome of high prevalence and with a high rate of decompensation, the objective of this study is to identify which nursing care for patients with decompensated heart failure described in national and international literature.



PubMed's Health Science Descriptors (DeCS) and PubSed's MeSHTerms (Medical Subject Headings) were consulted in order to select the descriptors in Portuguese, English and Spanish to be used in the search. Those identified were: "insuficiência cardíaca", "Heart Failure", "Insuficiencia Cardíaca", "Cuidados de Enfermagem", "Nursing Care" and "Atención de Enfermería".

The inclusion criteria were scientific articles published in the last 10 years, as a way of monitoring the evolution of the care provided to patients with decompensated heart failure and presenting the most current literature. And, works written in Portuguese, English and Spanish. The exclusion criteria were defined as review articles and studies that did not answer the guiding question and duplicate articles. The articles found in duplicate were counted in the database with the highest number of references. For the search, the descriptors were crossed using the Boolean logic in the search field.

The literature search was carried out in August 2020, through two research portals: 1) VHL in which searches were carried out in the databases: Latin American and Caribbean Literature in Health Sciences (LILACS), Nursing Database (BDENF) and Spanish Bibliographic Index of Health Sciences (IBICS). 2) PubMed in which the literature search was carried out in the Medical Literature Analysis and Retrieval System Online (MEDLINE) database. The review was validated by two researchers in order to increase the reliability of the study.

The collection of information was carried out with the aid of an instrument designed in accordance with the objective of this study. The instrument contains information related to the title of the publication, authors, year, objectives, sample and description of nursing care for patients with heart failure. The selected studies were classified according to the level of evidence. <sup>(8)</sup>

## RESULTS

The combination of descriptors resulted in 460 publications. After applying the inclusion criteria, 263 publications were maintained. By reading the titles and abstracts, it was possible to exclude those studies that did not address the proposed theme. Of these, 30 articles were selected for reading in full, with nine articles answering the guiding question and constituting the final sample of this review (Figure 1).

It was found that 87,5% of the chosen articles were found through the VHL research portal and 12,5% on PubMed. Regarding the year of publication, 50% of the works were published in the last 5 years.

Regarding the language, articles published in Portuguese comprise 25%, in English also: 25% and published in both languages, Portuguese and English 50%. Regarding the level of evidence in the studies, it was observed that 50% of the articles are clas-

sified at level four, 37,5% at level five and 12,5% at level two.

## DISCUSSION

After evaluation and critical analysis of the articles, the information was grouped for discussion according to the following categories: Educational interventions aimed at disease control and prevention; Nursing interventions during hospitalization; Nursing interventions for hospital discharge.

**Educational interventions aimed at disease control and prevention**

Educational interventions have an important place in nursing actions, especially when related to the precipitating factors of decompensated heart failure in the home environment, and work as a way to control and prevent complications of the disease.<sup>(9)</sup>

The interventions must originate from the observations made in the patient's daily practices.<sup>(10)</sup> An important fact is that the main behavioral

and conduct factors associated with risk factors for HF decompensation are susceptible to health education interventions, which over time reduce the chance of hospitalizations and / or premature death from HF.<sup>(11)</sup>

Among the educational strategies, there are several ways to intervene such as educational meetings, use of printed educational materials, approach through home visits and even telephone follow-up. These interventions not only improve the patient's knowledge of HF, but also stimulate reflective critical thinking and self-management of the health-disease process.<sup>(11)</sup>

In this sense, interventions and nursing care for HF patients aim to improve the resistance and capacity of their organism, establishing joint goals and observing pharmacological and non-pharmacological measures.<sup>(10)</sup>

In addition to the pharmacological approach<sup>(12)</sup>, there is evidence that non-pharmacological treatment plays a major role in the prevention and control of HF.<sup>(10)</sup>

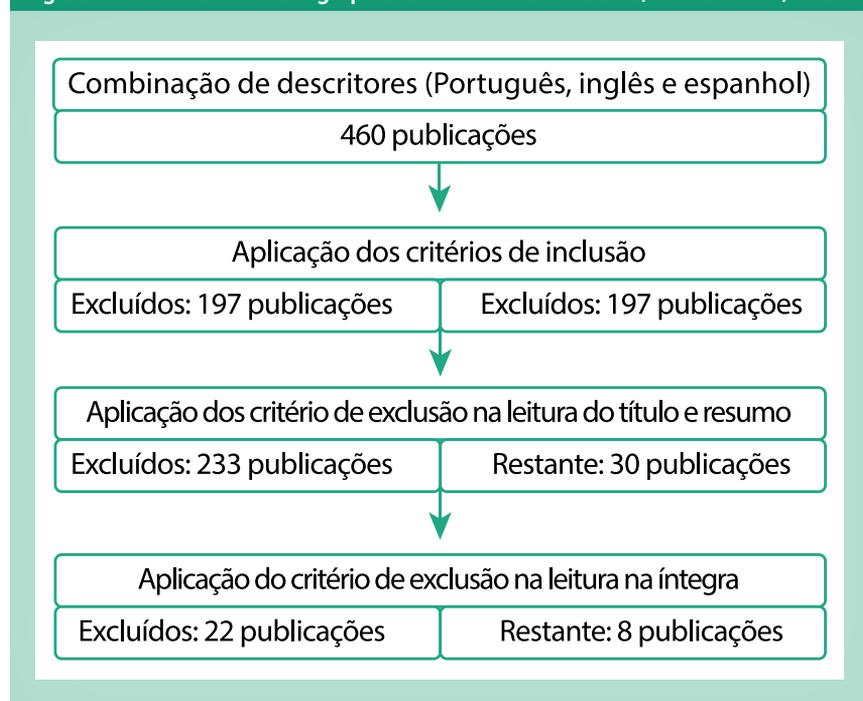
Among the actions related to interventions and non-pharmacological care are nutritional support guidelines especially aimed at restricting sodium and fluids, weight control and monitoring, stimulating active life with physical exercises, techniques to improve sleep and rest, and especially recognition signs and symptoms of clinical decompensation.<sup>(9;12)</sup>

**Nursing interventions during hospitalization**

HF patients, when admitted to the emergency, require great preparation by the team, a quick assessment is necessary to define appropriate conducts based on the best scientific evidence. At this moment, the physical examination is a great tool for diagnosis and management of decompensated HF.<sup>(10)</sup>

In an initial approach, measures of basic and advanced life support should

Figure 1 - Flowchart of bibliographic research. Belo Horizonte, Minas Gerais, 2020.



be prioritized as a way of preserving the patient's life. The nursing team must be ready to meet emergency demands. <sup>(10)</sup>

With the patient already stabilized, the assessment of peripheral perfusion is seen as one of the main nursing interventions, in order to prevent the development of thromboembolism, in addition to monitoring respiratory function through the observation of cyanosis. <sup>(10;13;14)</sup>

Also related to respiratory function, other interventions stand out, such as maintaining positioning in the bed, maintaining patient comfort with a headboard at least 30°, which facilitates breathing and reduces venous return to the heart, relieving pulmonary congestion, in addition to performing auscultation and water control for investigation of signs of congestion. <sup>(10; 13; 15)</sup>

In congested patients, some important interventions were raised, such as daily assessment of edema, water control, administration of prescribed diuretics, observation of diuresis. Some specific signs of fluid overload should be observed, such as jugular turgence, dyspnoea, rapid weight gain and adventitious lung sounds. <sup>(9;10; 14;15)</sup>

Some of these patients are submitted to the use of oxygen therapy, with the nurse having a fundamental role in its administration. Among the interventions are: maintenance of the water level in the humidifier, identification of signs of cerebral hypoxia and monitoring of respiratory rate. <sup>(10;13; 14; 15;)</sup>

Also noteworthy are interventions aimed at preventing aspiration and skin lesions such as patient positioning in Fowler and changes in decubitus at regular intervals. These measures focus on safety, by preventing potential health risks for this patient. <sup>(10;13;14)</sup>

It is also important to stimulate mobility in order to reduce functional losses due to the decompensation of the disease, walking should be encouraged taking into account the patient's capa-



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city limits and as a facilitator, a low bed should be provided, encouraging to sit on the edge the bed according to tolerance and help the patient to transfer, as needed. <sup>(13; 15;16)</sup>

Another relatively common problem in patients hospitalized for decompensated HF is the presence of pain, some nurse interventions are: assessing the level of pain, the factors that intensify and alleviate the symptom; administer analgesics according to the patient's condition and investigate the response to medication for pain relief, in addition to assisting in comfort measures for indirect pain improvement, such as adopting environmental control measures to improve sleep quality and reduce anxiety. <sup>(13;14;15)</sup>

These interventions can be performed by the nurse himself or prescribed for the technician under supervision. It is important that all prescriptions and guidelines are easily understood by the nursing team. It is up to the nurse to define the interventions and prioritize activities based on scientific evidence for better patient care. <sup>(14)</sup>

### Nursing interventions for hospital discharge

Health education is a potential strengthening force for the patient's knowledge of the disease itself, as well as the relationship between drugs, lifestyle and disease. Educational nursing interventions performed during hospitalization for discharge bring improved knowledge of HF, self-care and quality of life for patients and their families. This knowledge can change the rates of rehospitalization. <sup>(10)</sup>

The nurse's knowledge about drug therapy is the basis of one of the main nursing care methods in preparing the patient for discharge, the pharmacological guidelines. These guidelines should be carried out according to the specific prescription proposed to that patient, reaffirming with the patient the correct name of the medications, the

appropriate dose, the regular schedule and the correct route of administration of these and their main indications, reinforcing, whenever necessary, the possible adverse and side effects that may occur. <sup>(9;12)</sup>

In addition to interventions aimed at orienting pharmacological therapy, the importance of recognizing the main signs and symptoms of HF was also identified, especially signs of worsening, such as precordial pain or discomfort, dyspnea, orthopnea, fatigue and edema of the lower limbs. <sup>(12)</sup>

In addition, there is also information about measures to control HF, such as improving eating habits, controlling water intake, and concern about nutritional status. The broad orientations of the precipitating factors can potentiate the effects of the treatment. <sup>(12; 15)</sup>

Reaffirming the importance of these actions by the nursing team, health education and discharge planning are increasingly useful to



This work made it possible to list the main interventions carried out in different scenarios, such as the home and hospital environment.



ols to help control symptoms, and have great potential for reducing the number of readmissions for decompensated HF. <sup>(12)</sup>

## CONCLUSION

The studies present nursing interventions as fundamental for the prevention and promotion of health to patients with heart failure, and these interventions are part of an individualized follow-up that must take into account the specific characteristics of each patient, thus promoting self-care and self-responsibility.

This work made it possible to list the main interventions carried out in different scenarios, such as the home and hospital environment.

Monitoring and health education for patients with HF used at different levels of health care has great potential to achieve changes in attitudes and behavior in coping with the disease. 🐦

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