

## ASPECTS OF NURSING ASSISTANCE FOR THE PERSON WITH HEART FAILURE

### ASPECTOS DA ASSISTÊNCIA DE ENFERMAGEM PARA PESSOA COM INSUFICIÊNCIA CARDÍACA

### ASPECTOS DE LA ATENCIÓN DE ENFERMERÍA PARA PERSONA CON INSUFICIENCIA CARDÍACA

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#### ABSTRACT

**Objective:** To identify aspects of nursing care for people with chronic heart failure in a cardiology specialty hospital. **Method:** Retrospective study of documentary analysis, in a cardiac hospital institution, with 39 medical records of hospitalized people with heart failure between 2010 and 2015. Sociodemographic and clinical-epidemiological data were collected, and the elements of nursing care were analyzed based on the absolute and relative frequency. **Results:** Nursing diagnoses *Risk of infection* and *Ineffective Respiratory Standard*, and interventions such as *Evaluate peripheral perfusion*, *Position in Fowler*, *Inspect skin* and *Make change of position* were prevalent. In the nursing results, only 10 medical records could reach 50% or more of these. **Conclusion:** We identified nursing diagnoses, interventions and outcomes based on the risks of hospitalization and secondary cardiovascular prevention, as well as the prevention of potential problems such as infections and injuries and conservation of target organs.

**Descriptors:** Nursing; Cardiovascular Nursing; Nursing Care; Heart Failure.

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## RESUMO

**Objetivo:** Identificar os aspectos da assistência de enfermagem a pessoas com insuficiência cardíaca crônica, em hospital de especialidade cardiológica. **Método:** Estudo retrospectivo, de análise documental, em instituição hospitalar cardiológica, com 39 prontuários de pessoas internadas com insuficiência cardíaca, entre 2010 e 2015, sendo coletados dados sociodemográficos e clínico-epidemiológicos e os elementos da assistência de enfermagem, analisados com base na frequência absoluta e relativa. **Resultados:** Evidenciou-se prevalência dos diagnósticos de enfermagem Risco de infecção e Padrão respiratório ineficaz e intervenções, como Avaliar perfusão periférica, Posicionar em Fowler, Inspeccionar pele e Fazer mudança de decúbito. Nos resultados, verificou-se que dez prontuários conseguiram atingir 50% ou mais destes. **Conclusão:** Foi possível identificar os diagnósticos, as intervenções e os resultados de enfermagem, baseados nos riscos de hospitalização e prevenção secundária cardiovascular, além da prevenção de problemas potenciais, como infecções, lesões e conservação de órgãos-alvo.

**Descritores:** Enfermagem; Enfermagem Cardiovascular; Cuidados de Enfermagem; Insuficiência Cardíaca.

## RESUMEN

**Objetivo:** identificar aspectos de la atención de enfermería para personas con insuficiencia cardíaca crónica en hospital especializado en cardiología. **Método:** Estudio retrospectivo de análisis documental, en institución hospitalaria cardíaca, con 39 registros médicos de personas hospitalizadas con insuficiencia cardíaca entre 2010 y 2015, recolectando datos sociodemográficos y clínico-epidemiológicos y los elementos de la atención de enfermería, analizados con base en la frecuencia absoluta y pariente **Resultados:** Prevalencia de diagnósticos de enfermería *Riesgo de Infección* y *Estandar Respiratorio Ineficaz* e intervenciones como *Evaluar Perfusión Periférica*, *Posición en Fowler*, *Inspeccionar la piel* y *Cambiar de posición*. En los resultados de enfermería se encontró que solo 10 registros médicos podrían alcanzar el 50% o más. **Conclusión:** fue posible identificar diagnósticos de enfermería, intervenciones y resultados basados en los riesgos de hospitalización y prevención cardiovascular secundaria, así como la prevención de problemas potenciales como infecciones y lesiones y la conservación de los órganos objetivo.

**Descriptor:** Enfermería; Enfermería Cardiovascular; Atención de Enfermería; Insuficiencia Cardíaca.

## INTRODUCTION

Chronic heart failure is defined as a clinical syndrome, characterized by the loss of cardiac ejecting blood function, so that bodily needs are met<sup>1</sup>, presenting as clinical manifestations: reduced activity tolerance, dyspnea, tachycardia, nocturia and

lipothymia, as well as symptoms related to systemic and pulmonary congestions.<sup>2</sup>

The disease affects around 1.5% to 2% of the world population, which has increased in the last three decades, especially in people over 65 years of age<sup>2</sup>, with 2 million people diagnosed with the disease annually, at the same level

worldwide.<sup>3</sup> In Brazil, it is estimated that 6.4 million people live with this clinical condition. In addition, there has been an increase in morbidity and mortality in recent years, and this is the leading cause of hospitalizations of individuals over 65 due to cardiovascular disease, and the leading cause of death in 2003.<sup>3</sup>

It is also estimated that by the year 2025, Brazil will have the sixth largest elderly population in the world, with chronic heart failure accounting for the highest number of deaths from cardiovascular disease, exceeding 50% of the 5-year mortality rate after diagnosis.<sup>4</sup> Thus, specialized and multidisciplinary care directed to this population is essential, and nursing is the protagonist, with regard to health promotion and disease prevention actions, through care.

The Systematization of Nursing Care (SAE, acronym in Portuguese) is defined as a methodology by which nursing professionals improve the practice of care, so that there is a guarantee of quality of life for the assisted person and technical-scientific support to nurses, besides being an evidence-based system to guide the nursing exercise for care specific to each person, being responsible for the organization of nursing work, as to the method, staff and instruments.<sup>5</sup>

The Nursing Process (NP) is characterized by the most widespread

method in the SAE, consisting of five interrelated steps: data collection, nursing diagnosis, nursing planning, nursing implementation and evaluation, aiming at the care organization and planning for the person.<sup>6</sup>

The NP is also characterized as a fundamental apparatus in the work activity of nurses, whose essential role is closely linked to interventions related to self-care, therapy and education, based on Nursing Diagnoses (ND), which are clinical judgment of human responses regarding the client, the family and the community, related to their vital processes, current and/or potential health problems<sup>7</sup>, being identified to guide the most appropriate interventions, acting on the expected nursing outcomes.<sup>2, 8</sup>

The stages of the nursing process are based on nursing classification systems, in order to standardize the nursing language, such as NANDA International Inc. (NANDA-I), the Nursing Interventions Classification (NIC) and the Nursing Outcomes Classification (NOC).<sup>6</sup>

In this context, the literature points to the importance of using nursing classification systems, so that nursing care can be systematized, allowing the generation of indicators and documentation of the practice, as, applying such technologies, compatible with the legislation of the professional practice of

nursing, it is possible to identify the emerging demands, besides spreading and supporting the professional work of nurses. Therefore, this study aimed to identify the nursing care aspects provided to people with chronic heart failure in a cardiac specialty hospital.

## METHODS

Retrospective study of documentary analysis. It was carried out in a private hospital institution of cardiology reference, located in the southern region of the state of Ceará, called Cariri region.

Data collection took place from 2014 to 2016. The material included medical records of people admitted to the intensive care unit of the referred hospital, with a clinical diagnosis of chronic heart failure. The criterion for inclusion of medical records in the research was to have returned from the institution's evaluation and audit processes and refer to people with clinical diagnosis of chronic heart failure, with nurse assistance and who were hospitalized from 2010 to 2015. Medical records with illegible spelling to understand and obtain the necessary information were excluded.

We analyzed 7,848 medical records of people admitted to the intensive care unit in the referred period, being the material characterized by the medical records of

people with clinical diagnosis of chronic heart failure ( $n = 367$ ) and the sample, the records in which the SAE was performed ( $n = 39$ ), through the unit's instrument attached to the chart.

A research instrument was used to collect data with questions about the identification of sociodemographic and clinical-epidemiological data of hospitalized people and the elements that make up the systematization of nursing care, more precisely the Nursing Process, characterized by nursing diagnoses, nursing interventions and nursing outcomes achieved. Data was organized in Excel for Windows® spreadsheets.

For data collection, the medical records were first read in order to retrieve those that would be included in the research criteria. The second moment was the analysis of the unit's own instrument, used to record nursing care systematization.

This instrument, specific to the research site, was characterized by the presence of personal data, such as the person's name, bed number, medical diagnosis, the name of the nurse who performed the care, and the COREN registration number. As for the diagnoses, the first section of the instrument had three columns to identify the dates of care, followed by 15 nursing diagnoses with the possible related factors that the person could present, plus two empty spaces to

identify other diagnoses that the patient could present during the hospitalization period.

In the second section, there were three columns for recording the date of care, followed by 42 nursing interventions/actions and seven blanks for recording any intervention that was not present in the instrument. The third part contained a risk assessment for the development of pressure injury, which included multiple choice aspects and the affected side/limb, location, shape and pattern of the lesion, as well as perimeter and depth using Barbara Bates-Jensen and Waterlow scale score. The last assessment performed in this picture is the Glasgow coma scale.

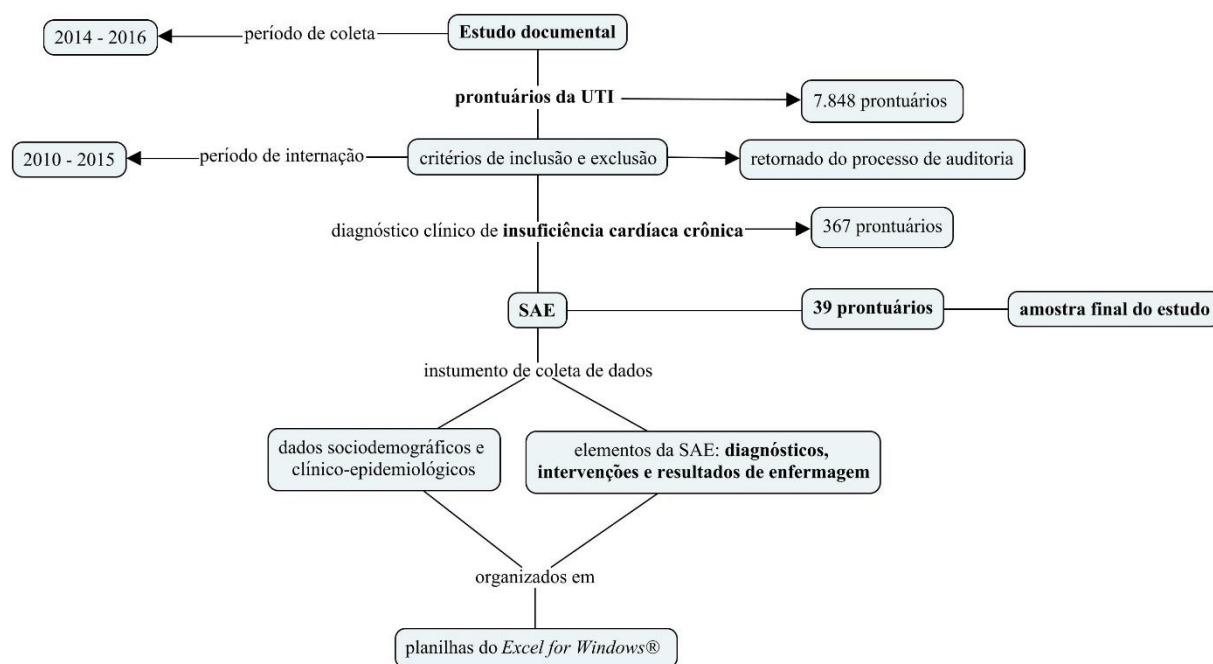
In the fourth section, the invasive procedures performed and the respective dates were recorded, containing: peripheral venous catheter, phlebotomy, *intracath*, tracheostomy, blood transfusion,

monolumen or double lumen, delayed bladder catheter, nasogastric/ nasoenteral catheter, right or left thoracic drainage, *Shiley/Tenkoff* catheter, drain and central venous catheter. In the fifth and last section of the instrument, there was a blank space for nursing notes, in which the nurses of the unit recorded aspects about the diagnoses solved and the results achieved.

The diagnoses and interventions adopted in the institution's instrument were based on NANDA-International<sup>9</sup> and the NANDA-I, NIC and NOC link book.<sup>10</sup>

Data presented in the results were organized in tables, based on the execution of the steps described in the study and analyzed according to absolute and relative frequency, and the complete description of the method performed in the present study was detailed according to the flowchart presented in Figure 1.

**Figure 1** – Flowchart of the description of the method of the present study. Crato, Ceará, Brazil, 2019.



The Research Ethics Committee (REC) approved the study, with favorable protocol 902,871.

The signature of the term of depositary for non-biological materials, by the responsible for the sector, was made after detailing the research, which clarified the guarantee of confidentiality, respect for confidentiality, privacy, preservation of identity and autonomy, as well as the right

to withdraw the authorization for the study at any stage of this.

## RESULTS

The study sample was characterized based on the socio-demographic profile (gender, age, color, marital status and occupation), according to Table 1, presenting as the most prevalent female, white, over 60 years old, with partner and retired.

**Table 1** – Socio-demographic profile of people hospitalized with chronic heart failure, in the period from 2010 to 2015 (n=39). Crato, Ceará, Brazil, 2019.

VARIABLE		n	%
Sex	Feminine	22	56
	Male	17	44
Color	White	30	77
	Not white	5	13
	No informed	4	10
Age (years)	<60	2	5
	≥60	36	92
	No informed	1	3
Marital status	Married	18	46
	Not married	17	44
	No informed	4	10
Occupation	Paid activity	3	7.7
	Not paid activity	2	5.1
	Retired people	26	66.6
	No informed	8	20.6

Source: authors.

In the analyzed documents, the percentage of completion of the SAE was very low, depersonalizing the nursing care, regarding work organization, documentation and planning. It is emphasized that, at the study site, the assistance had been implemented only in the intensive care unit.

Based on the analysis of the medical records, it was possible to list the aspects

that characterized the nursing work, from the nursing process, such as the identified nursing diagnoses, interventions and nursing outcomes for each hospitalized person, with health priority in question.

Table 2 shows the frequency of use of the 17 nursing diagnoses found in the medical records related to people with chronic heart failure.

**Table 2** – Most prevalent nursing diagnoses in people with chronic heart failure, in the period from 2010 to 2015 (n=39). Crato, Ceará, Brazil, 2019.

NURSING DIAGNOSES	N	%
Risk of infection	31	13.2
Ineffective breathing pattern	29	12.4
Self-care deficit	26	11.1
Decreased cardiac output	22	9.4
Impaired bed mobility	22	9.4
Anxiety	20	8.6
Impaired skin integrity	14	6
Imbalanced nutrition: higher/less than the body needs		

	13	5.5
Ineffective airway clearance	11	4.7
Poor/ excessive fluid volume	11	4.7
Sleep pattern disorder	8	3.4
Aspiration risk	8	3.4
Acute pain	6	2.6
Constipation/Diarrhea	4	1.7
Impaired urinary elimination	4	1.7
Constipation	3	1.3
Insomnia	2	0.9

Source: authors

N= absolute frequency; %= percentage frequency

It is noteworthy that the diagnostic concepts Fluid volume, Unbalanced nutrition and Constipation or Diarrhea did not present precise quantity of occurrences, as they were arranged in the instrument of implementation of the assistance in the same character, not specifying to the

professionals if they were deficient, excessive, larger or positive or negative, thus not allowing to know the real diagnosis, in these specific cases.

Based on Table 3, there are 13 nursing interventions verified in the studied sample, by frequency.

**Table 3** - Most prevalent nursing interventions in people with chronic heart failure, in the period from 2010 to 2015 (n=39). Crato, Ceará, Brazil, 2019.

NURSING INTERVENTIONS	n	%
Evaluate peripheral perfusion	30	76.9
Position in Fowler	29	74.3
Inspect skin	28	71.8
Make change of position	27	69.2
Perform intimate/ oral hygiene	27	69.2
Record consciousness level changes	26	66.6
Assist in stimulating self-care	24	61.5
Maintain Humidifier Water Level	24	61.5
Evaluate arrhythmia, jugular stasis, cold skin	23	58.9
Monitor neurological state	23	58.9
Offer comfort and anxiety reduction	23	58.9
Record breathing pattern	23	58.9
Record PA variations	20	51.3

Source: own preparation

N= absolute frequency; %= percentage frequency

Regarding the achievement of results, through the application of the SAE, 10 of the 39 medical records that contained the SAE record were able to achieve the results

related to the diagnoses solved, and the average of 50% of nursing outcomes resolved by medical record. In addition, it was revealed that 13 of the 39 SAE records



did not provide any information regarding the recording of nursing outcomes.

This fact demonstrates the importance of the systematization of care, in order to generate indicators that provide information on the improvement of identified human needs through nursing diagnoses and better care planning.

It is noteworthy that the analysis of the results in the instrument occurred by indicating the resolvability of the diagnoses identified through wrist annotations, in a specific framework of the instrument, following the example of *Nursing Outcomes Classification* (NOC).

## DISCUSSION

Nursing care in intensive cardiovascular care, supported by the use of classification systems, such as NANDA-International, NIC and NOC, makes qualified care through standardization of language, constituting a source of planning, rationale and improvement for Nursing<sup>11</sup>, given the fact that it is an environment that requires readiness, as well as clinical reasoning and critical thinking, in order to promote the best care available to the assisted person.

In the present study, some nursing diagnoses were characterized by the prevalence, such as Risk of infection, Ineffective respiratory pattern, Decreased cardiac output, Impaired bed mobility,

which are highlighted in research on cardiac revascularization<sup>12</sup>, stating that nurses should intensify surveillance in environments that require more critical care due to the fact that the procedures performed are more likely to develop target organ complications and systemically. That is, such diagnoses are related to the risks arising from hospitalization and secondary cardiovascular prevention.

The nursing diagnosis Deficit in self-care was evidenced in studies dealing with critical cardiovascular care<sup>13-14</sup>, also highlighting that self-care is impaired in different aspects, such as bathing, hygiene and food, which competes for greater dependence on nursing care, demanding individualized vision based on the degree of dependence of each person. Thus, for these diagnoses to be improved and, consequently, solved, it is urgent to work based on nursing interventions, organized and based on the real and/ or potential needs of individuals.

Regarding the most prevalent nursing interventions, peripheral perfusion should be evaluated to prevent thromboembolism and to monitor respiratory function<sup>15</sup>, being a vital function in the care of the caregiver.

We also highlight that interventions such as Fowler's Positioning, Inspecting the skin and Making decubitus changes, which are focused on preventing aspiration, injury and infection while maintaining the

physical integrity of the caregiver, i.e. in the safety, preventing potential health risks, which converges with the literature<sup>7</sup> that states that the quality of care in the intensive care unit is attributed to patient-centered care, and other aspects such as humanization, comprehensiveness and patient safety.

Nursing outcomes are characterized as essential aspects of the NP evaluation stage, determining whether the diagnoses have been resolved, improved or worsened, thus deciding on the continuity, change or cessation of terminated interventions, acting on the basis of evidence. provided by the patient's own condition during data collection.<sup>16</sup>

The present study had limitations regarding the analysis of results, which directly harms not only the study analysis, but also the qualified and systematic work of nursing. Thus, it is essential that nursing rigorously use classification systems, both to identify nursing diagnoses and for nursing interventions and outcomes, making care complete and cyclical.

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## CONCLUSION

Nursing diagnoses, interventions and outcomes were identified as care provided to people with chronic heart failure in a cardiology specialty hospital. Diagnoses based on risks of hospitalization and secondary cardiovascular prevention and interventions aimed at preventing potential problems such as infections and injuries, as well as preserving the stability of target organs such as heart and lung, were highlighted. Thus, it is noted the work of nursing around risk and disease prevention actions, in several positive factors to the practice of nurses and in the clinical picture of individuals with chronic cardiovascular disease.

We highlight the relevance of the use of classification systems to guide and standardize the language used in nursing work, which offers rigor to the practice and supports the scientific construction of the profession.

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