

CASE REPORT ARTICLE

SYSTEMATIZATION OF NURSING ASSISTANCE APPLIED TO AN ELDERLY PERSON WITH SEPSIS\*

SISTEMATIZAÇÃO DA ASSISTÊNCIA DE ENFERMAGEM APLICADA AO IDOSO COM SEPSE  
SISTEMATIZACIÓN DE LA ASISTENCIA A LA ENFERMERÍA APLICADA A LOS ANCIANOS CON SEPSIS

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ABSTRACT

**Objective:** to describe the Systematization of Nursing Assistance, grounded in the Self-Care Theory, for a patient with sepsis. **Method:** this is a qualitative, descriptive, case-study type research, conducted in the sector of medical clinic of a high-complexity general hospital, by five students from the Nursing Course, respecting the ethical aspects in a patient with several diseases. The clinical history and other information of the patient were collected through search on the medical records. In order to improve the care provided to the patient through the Systematization of Nursing Assistance, the Self-Care Theory of Dorothea Orem was applied, which is divided into three inter-related theories. **Results:** as a result, there is the presentation of Nursing diagnoses, interventions from the perspective of the Self-Care Theory of Dorothea Orem and the Nursing prescription. **Conclusion:** in this sense, the interventions proposed by the Nursing care plan can be corroborated with the literature, concluding that the study met its goal and contributed to the academic training of those involved, reaffirming the role of Nursing as a science. **Descriptors:** Nursing; Sepsis; Nursing Theory; Self Care; Health of the Elderly; Nursing Process.

RESUMO

**Objetivo:** descrever a Sistematização da Assistência de Enfermagem, respaldada na Teoria do Autocuidado, a uma paciente com sepse. **Método:** trata-se de um estudo qualitativo, descritivo tipo estudo de caso, realizado no setor de clínica médica de um hospital geral de alta complexidade, por cinco discentes do Curso de Enfermagem, respeitando os aspectos éticos em uma paciente com várias enfermidades. Obtiveram-se a história clínica e a coleta de outras informações da paciente por meio de busca em prontuário. Aplicou-se, de modo a melhorar o cuidado prestado à paciente por meio da Sistematização da Assistência de Enfermagem, a Teoria do Autocuidado de Dorothea Orem, que se divide em três teorias inter-relacionadas. **Resultados:** apresentam-se, como resultados, os diagnósticos de Enfermagem, as intervenções sob a ótica da Teoria do Autocuidado de Dorothea Orem e a prescrição de Enfermagem. **Conclusão:** podem-se corroborar, deste feito, as intervenções propostas pelo plano assistencial de Enfermagem por meio da literatura, concluindo-se que o estudo atendeu ao seu objetivo e contribuiu para a formação acadêmica dos envolvidos, reafirmando o papel da Enfermagem como ciência. **Descritores:** Enfermagem; Sepse; Teoria da Enfermagem; Autocuidado; Saúde do Idoso; Processo de Enfermagem.

RESUMEN

**Objetivo:** describir la Sistematización de la Asistencia a la Enfermería, apoyada en la Teoría del Autocuidado, a un paciente con sepsis. **Método:** este es un estudio cualitativo, descriptivo, del tipo estudio de caso, realizado en el sector de clínica médica de un hospital general de alta complejidad, por cinco alumnos del curso de Enfermería, respetando los aspectos éticos, en un paciente con diversas enfermedades. Se obtuvieron el historial clínico y la recogida de información a través de la búsqueda en el prontuario de la paciente. Se ha aplicado, con el fin de mejorar la atención al paciente a través de la Sistematización de la Asistencia a la Enfermería, la Teoría del Autocuidado de Dorothea Orem, que se divide en tres teorías relacionadas entre sí. **Resultados:** se presentan, como resultado, diagnósticos de Enfermería, intervenciones desde la perspectiva de la Teoría del Autocuidado de Dorothea Orem y la prescripción de Enfermería. **Conclusión:** se pueden corroborar, con este hecho, las intervenciones propuestas por el plan de cuidados de Enfermería a través de la literatura, concluyendo que el estudio cumplió su objetivo y contribuyó a la formación académica de los participantes, reafirmando el papel de la Enfermería como ciencia. **Descriptor:** Enfermería; Sepsis; Teoría de Enfermería; Autocuidado; Salud del Anciano; Proceso de Enfermería.

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## INTRODUCTION

The Systematization of Nursing Assistance (SNA) is a care methodology performed by means of the Nursing Process. The SNA allows the nurse to deploy and execute the care, enabling the identification of basic human needs affected in patients hospitalized in specific units, minimizing complications.<sup>1</sup> In this sense, Nursing can provide the a professional, scientific, ethical care, with views to promotion, protection, prevention, rehabilitation and recovery of health.

In the Nursing field, some functions are nurse-specific - versed in paragraph I of article 8, which stands out in Law 7,498/86 by Decree 94,406/87, important for its development in the workplace - such as planning, systematization, coordination, implementation and evaluation of health care services.<sup>2</sup>

Therefore, the SNA can be understood as the practical application of a Nursing theory in the care with patients, bringing benefits to achieve care quality.<sup>3</sup> There is the management of the integral care with a patient, which, in turn, is part of the daily practice of Nursing professionals, thus requiring a technical instrument with conceptual bases, requiring greater knowledge of the Nursing science. The SNA is the practical method to solve patients' problems, dynamically providing the care, and is performed through five stages: Nursing History; diagnosis; planning; implementation and evaluation whose essence and specificity are geared to the integral and holistic care with human beings.<sup>1</sup>

In this way, the Systematization of Nursing Assistance was carried out for the care to an elderly patient with comorbidities and sepsis of cutaneous focus. The sepsis is caused by an uncontrolled systemic inflammatory response of the individual characterized by several clinical manifestations. It is a disease of infectious origin that can lead to dysfunction or failure of one or more organs or even death.<sup>4</sup>

Considering that sepsis is a set of severe manifestations of great relevance, high incidence, high mortality, morbidity and costs associated with the Unified Health System (UHS), the importance of applying the SNA to this patient was perceived, classifying specific Nursing diagnoses and, consequently, interventions with the knowledge-based planning, allowing achieving goals through the objective and integral care.<sup>5</sup>

Exact numbers are unknown, but, annually, there are approximately 17 million estimated cases of sepsis, around the world. This pathology is the main cause of death in non-cardiac Intensive Care Units (ICU), with high rates of mortality also in Brazil.<sup>6</sup> It is noteworthy that these data may be underestimated, because, not rarely, deaths are

attributed only to the underlying pathology and not to sepsis.<sup>6</sup>

Its etiology may arise from different infectious processes with different initial foci. In this case, it is especially important to identify the origin of the infection to think about the probable cause of a sepsis picture. In this way, Nursing occupies a privileged place for the care provided and possibility of prevention of outbreaks of infection of hospitalized patients. In the case of the patient of study, the sepsis had cutaneous focus caused by the bacterium *Staphylococcus epidermidis*, which occurs more frequently in immunocompromised patients and patients with chronic and debilitating diseases.<sup>5</sup> Once diagnosed the severe sepsis (or septic shock), behaviors focused on stabilizing the patient are a priority and should be taken immediately within the first few hours.<sup>4</sup>

This study was motivated by the severity of the case, considering the high probability of death, in addition to the difficulty in providing Nursing care due to worsening of the situation, use of various antibiotics and worsening of renal function.

Before all these considerations, there was the decision to develop the study, applying the Nursing process, based on Dorothea Orem's Self-care Theory, to a patient with sepsis, using the Nursing Diagnoses Taxonomy proposed by the North American Nursing Diagnosis Association (NANDA), thus establishing goals through the care plan outlined in order to improve the conditions of health and well-being of this patient, which is totally dependent for the care, which led to choosing Orem's theory as a basis for the systematization of assistance to this patient.

Nevertheless, for this study, Nursing has fundamental importance in the diagnosis of sepsis, since the knowledge about the pathology is of extreme relevance, mainly in recognition of early signs and symptoms. Given the complexity of the case, there is need for the participation of all integrated actions of multidisciplinary teams and, above all, that the Nursing act in the implementation and monitoring of the management of the care with the sick being, in addition to guiding and training the Nursing staff for the prevention of infection, aiming to reduce the rates of deaths and complications.

## OBJECTIVE

- To describe the Systematization of Nursing Assistance, grounded in the Self-Care Theory, to a patient with sepsis.

## METHOD

This is a qualitative, descriptive, case-study type research, which seeks to understand and consider the complexity of the human being,<sup>7</sup> contributing to the approximation between theory

and practice. This study might subsidize the quality of health care through the application of the SNA, with emphasis on the person with cutaneous-focus sepsis from an infected decubitus injury.

Five Nursing undergraduate students from the State University of Feira de Santana, in Feira de Santana (BA) experienced the present study during the practical course load (120h) of the curricular component Adult and Elder Health Nursing II, in February 2020. The case study occurred in the sector of medical clinic of a high-complexity general hospital, which meets the spontaneous demand of the capital and inland of the state of Bahia.

The ethical aspects of Resolution n. 510/2016 of the National Health Council were respected concerning the bioethical principles: autonomy, beneficence, non-maleficence and justice. The study was approved by the Ethics Committee at the State University of Feira de Santana under protocol n. 3.706.976/2019.

The case study reported was a patient with sepsis of cutaneous focus, diabetic, hypertensive, with diagnosis of Alzheimer's disease, a fracture of the femur with conservative treatment, Jehovah's Witness.

The SNA was used with the patient with septic shock based on the following steps: 1) Nursing History: which is the collection of data of the patient and the search for basic information about the same by means of anamnesis and physical examination in order to define the care of the Nursing staff; 2) Nursing Diagnosis: the process of grouping and interpreting the collected data, promoting the survey of problems and the adequacy of the diagnoses that will guide the Nursing interventions; 3) Nursing Planning: in this step, the expected results and their respective actions necessary are determined; 4) Nursing Implementation: this is the step of implementation of intervention actions designed in the previous step; 5) Nursing Evaluation: this latest addresses the record of intervention actions and a reflective analysis on the effectiveness and results of these measures in order to improve the assistance.<sup>1</sup>

The clinical history and other information of the patient were collected through search on the medical records - checking information relevant to the case, such as laboratory tests, medical prescription and Nursing evolution, as well as other techniques for data collection, such as: interview with the family companion (considering that the patient had a low level of consciousness, could not communicate properly and had a diagnosis of Alzheimer's disease) and physical examination of the patient.

Therefore, Nursing services were provided to the patient in an individualized and humanized

way, considering her physical and psychological well-being. For this purpose, the Nursing diagnosis, the care planning and Nursing care were performed according to the NANDA Taxonomy I to list the Nursing diagnoses through the surveyed problems, favoring the outline of assistance and care plans for the patient studied, aiming to promote a better recovery of the same. In the last step, there was the evaluation process, which assesses the assistance provided and plans the correction of failures to which the process could be susceptible.

In order to improve the care provided through the SNA, Dorothea Orem's Self-Care Theory was applied, which is divided into three inter-related theories: 1) Self-Care Theory - addresses how and why people care for themselves; 2) Self-Care Deficit Theory - explains how the Nursing can help people who have difficulties in achieving the self-care; 3) Theory of Nursing Systems - describes that relations must be created and maintained to produce the Nursing as a science.<sup>8</sup>

This study will give a greater emphasis on the Self-Care Deficit Theory, since the patient presents numerous diseases and complications limit her self-care. The central idea of this theory is that the need for Nursing care and limitations are responsible for the complete or partial inability of a person to care for him/herself.<sup>9</sup> The focus of this theory is on Nursing care, according to the patient's limitations, stimulating the self-care whenever possible.

The aforementioned theory has an abstract concept, considering the limitations of the person cared for as a tool that provides subsidies for understanding the role of self-care and the role of the Nursing staff. It is known that this has important action regarding the guidelines (care) provided in the process of rehabilitation, treatment and/or cure.<sup>9</sup> In this way, the Nursing care plan is prepared based on the care pertinent to her health condition, since she was dependent for self-care.

Moreover, the case study was analyzed in accordance with the clinical guidelines on supplementary health, with an emphasis on the control of focus and antimicrobial treatment for sepsis<sup>10</sup> of the Brazilian Association of Intensive Medicine, in partnership with the Brazilian Society of Infectious Diseases and the Latin American Institute of Sepsis. In this way, some questions could be elucidated, evaluating, more clearly, some existing doubts.

## RESULTS

The Nursing process based on Dorothea Orem's Theory aims to determine the weaknesses of care in order to define the roles of the person cared for, his/her companions/relatives and of the nurse to meet the care demands.<sup>11</sup> Therefore, this study

was developed based on the main concepts of Orem's Theory and the pathology in highlight, sepsis, as described in figure 1, which was developed based on the Nursing process according to Orem's Self-Care Theory.

Female patient, 83 years old, diabetic, hypertensive and with a diagnosis of Alzheimer's disease was admitted, previously, in November 2019, due to a fracture of the left femur secondary to an own-height fall - which was not surgically treated by absence of surgical ceiling at the time (hyperglycemia) and denial of blood transfusion due to her religion (Jehovah's Witness) -, was discharged in December and continued to be followed-up by a home hospitalization staff through the UHS due to a sacral bedsore grade IV. She progressed, in February 2020, to low level of consciousness and fever, being taken to the hospital unit by the Urgency Mobile Call Service (SAMU); she was admitted to the red emergency room, where she evolved with hemodynamic instability (hypotension refractory to volume, HGT= 633 mg/dL). The patient was referred, two days later, after the improvement of the picture, to the Semi-Intensive Unit, where she was diagnosed, from the results of continuous laboratory tests, with acute renal failure, stage III; in the Nursing physical examination, patient restricted to bed, with low level of consciousness

and unstable hemodynamic status, on diet via NET, presenting with restlessness and pain faces, however, with difficulty to speak. The companion denies fever, nausea, vomiting or other complaints; the patient presents oliguria in collecting bag of the tube, with little brown-colored urine, and refers defecation absent for three days. In the physical examination, she presents disoriented in time and space, pale, afebrile, dyspneic and with tachycardia, hypochromic ocular and oral mucosae (++/4+); AC: BCNF in 2 T; decreased expandability, Cheyne Stokes breathing; pulmonary auscultation - murmur increased with the presence of wheezing; Globous abdomen, RHA + tympanic, pain on palpation; edema in SLLII (++++/4+), absent foot pulses and decreased muscle strength in all limbs; pain at movement in bed; HR: 120 bpm; P: 94 bpm; RR: 42 inc/min; T: 36.1°C; BP: 110x70 mm Hg.

In order to systemize the Nursing Assistance to the person with septic shock, eight priority Nursing problems were listed for the case and diagnoses, outlining the care plan based on Orem's Theory, listing the Nursing system and the method of aid involved in each action and the respective interventions necessary to achieve the goals (Figure 1).

| Nursing Problems   | Nursing Diagnoses  | Care Plan (based on Orem's Theory)  | Interventions  |
|--|--|---|--|
| <p>Cheyne Stokes breath;<br/>- Dyspnea;<br/>- Decreased expandability;<br/>- Presence of wheezing on pulmonary auscultation.</p> | <p><b>Ineffective Pattern</b><br/><i>Evidenced by:</i> abnormal respiratory pattern<br/><i>Related to:</i> fatigue</p> <p><b>Impaired gas exchange</b><br/><i>Evidenced by:</i> abnormal respiratory pattern<br/><i>Related to:</i> imbalanced ventilation-perfusion ratio.</p>        | <p><b>A) Goal:</b> restore physiological respiratory pattern.<br/><b>B) Nursing system involved:</b> totally compensatory.<br/><b>C) Aid method:</b> act or do for the other.</p> | <ul style="list-style-type: none"> <li>- Monitor SSVV; mainly RR and O2 sat;</li> <li>- Monitor lung sounds;</li> <li>- Position the patient to minimize respiratory effort;</li> <li>- Monitor the respiratory and oxygenation status;</li> <li>- Install oxygen therapy according to medical prescription;</li> <li>- Monitor the oxygen flow.</li> </ul>  |
| <p>Slow capillary filling (TEC&gt; 2sec);<br/>-Tachycardia.<br/>- Pallor<br/>- Low level of consciousness</p>                    | <p><b>Frail Elderly Syndrome</b><br/><i>Evidenced by:</i> decreased cardiac output<br/><i>Related to:</i> immobility and intolerance to activity.<br/><b>Decreased Cardiac Output</b><br/><i>Evidenced by:</i> tachycardia; oliguria.<br/><i>Related to:</i> change in heart rate.</p> | <p><b>A) Goal:</b> reestablish normocardia.<br/><b>B) Nursing system involved:</b> totally compensatory.<br/><b>C) Aid method:</b> act or do for the other.</p>                   | <ul style="list-style-type: none"> <li>- Offer real information on diagnosis, treatment and prognosis;</li> <li>- Listen to heart sounds;</li> <li>- Monitor laboratory values of electrolytes that may increase the risk of arrhythmias (potassium);</li> <li>- Monitor rhythm, heart rate and blood pressure;</li> <li>- Listen to the lungs for crackles or other adventitious sounds;</li> <li>- Obtain ECG whenever there is chest pain;</li> <li>- Water monitoring (Water Balance);</li> <li>- Monitor neurological status (application of the Glasgow scale).</li> </ul> |
| <p>- Edema in SLLII (++++ / 4+);<br/>Decreased peripheral pulses.<br/>-Renal impairment.</p>                                     | <p><b>Excessive liquid volume</b><br/><i>Related to:</i> impaired regulatory mechanism.<br/><i>Evidenced by:</i> edema; respiratory noise; adventitious</p>  | <p><b>A) Goal:</b> restore water balance.<br/><b>B) Nursing system involved:</b> totally compensatory.<br/><b>C) Aid method:</b> act or do for</p>                                | <ul style="list-style-type: none"> <li>- Monitor intake and elimination;</li> <li>- Monitor serum albumin and total protein levels;</li> <li>- Monitor blood pressure,</li> </ul>  |

|  |   |   |   |
|--|---|---|---|
| <p><b>Oliguria.</b></p>                                      | <p>(wheezing); oliguria.</p>  | <p>the other.</p>   | <p>heart rate and respiratory status;<br/>                 - Monitor for the presence of distended veins in the neck, noises in the lungs and peripheral edema;<br/>                 - Restrict and determine fluid intake, as appropriate;<br/>                 - Perform dialysis, as prescribed, noting the patient's reactions;<br/>                 - Assess the location and extent of edema;<br/>                 - Check the diet with the nutritionist: hyposodium and hypoprotein.</p>  |
| <p><b>Pain on movement and palpation of the abdomen.</b></p> | <p><b>Acute pain</b><br/> <u>Evidenced by:</u> expressive behavior; facial expression of pain; changes in the physiological parameter; protective gestures.<br/> <u>Related to:</u> harmful biological agent.</p> | <p><b>A) Goal:</b> pain relief.<br/> <b>B) Nursing system involved:</b> totally compensatory.<br/> <b>C) Aid method:</b> act or do for the other.</p>   | <p>- Check the medical prescription regarding the medication, dosage and frequency of the analgesic;<br/>                 - Implementation of non-pharmacological measures;<br/>                 - Institute and modify pain control measures based on the patient's response;<br/>                 - Position the patient to facilitate comfort;<br/>                 - Check, on the pain scale, the pain intensity;<br/>                 - Check which factors relieve or precipitate the pain;<br/>                 - Music therapy for pain relief.</p>  |
| <p><b>Grade IV UP infected in the sacral region.</b></p>     | <p><b>Impaired tissue integrity</b><br/> <u>Related to:</u> mechanical factor; impaired mobility; peripheral neuropathy.<br/> <u>Evidenced by:</u> injured tissue.</p>  | <p><b>A) Goal:</b> restore the integrity of the skin; promote proper healing<br/> <b>B) Nursing system involved:</b> totally compensatory; support-education.<br/> <b>C) Aid method:</b> act or do for the other; teach.</p>      | <p>- Promote a 2-2 hour change of position and teach the companion how to make this change;<br/>                 - Continue consultation services with stoma nurse as needed;<br/>                 - Perform PU dressing in the sacral region, grade IV, with aseptic technique, with the necessary coverings during the progress of wound healing;<br/>                 - Observe and record the characteristics of the covering and the wound, as well as its edges, documenting the location, size and aspect of the lesion;<br/>                 - Keep the patient clean, dry and comfortable.</p>                   |
| <p><b>Insufficient muscle strength in SSLII.</b></p>         | <p><b>Impaired physical mobility</b><br/> <u>Evidenced by:</u> reduction in gross motor skills.<br/> <u>Related to:</u> decreased muscle strength.</p>  | <p><b>A) Goal:</b> improve muscle conditioning through stimuli.<br/> <b>B) Nursing system involved:</b> totally compensatory; support-education.<br/> <b>C) Aid method:</b> act or do for the other; guide and direct; teach.</p> | <p>- Establish a routine of self-care activities that involves the patient and companion, teaching both how to perform these activities;<br/>                 - Perform and teach the patient and the companion exercises to stimulate motor function;<br/>                 - Provide assistance until the patient is fully capable of assuming self-care;<br/>                 - Provide oral hygiene before meals and guide the companion on how to do it;<br/>                 - Bath in bed;<br/>                 - Monitor nail cleanliness;<br/>                 - Monitor the integrity of the patient's skin.</p> |

Figure 1. Nursing diagnoses and interventions based on Dorothea Orem's Nursing process. Feira de Santana (BA), Brazil, 2020.

## DISCUSSION

The Nursing scientific context unveils that there are several taxonomies for diagnoses in this area, however, one of the most accepted taxonomy and accepted by the American Nursing Association (ANA) is the taxonomy of classification of Nursing diagnoses by NANDA, recognize in the literature by numerous Nursing researchers as a vital tool in the development of the Nursing prescription according to the needs of each patient.<sup>12</sup>

The selection of Nursing diagnoses has a fundamental role in drawing up the care plan because these are the foundation for the ripening and the choice of Nursing interventions necessary to achieve the goals outlined by the care plan.<sup>13</sup> However, to list these diagnoses, nurses must have a thorough clinical judgment through their practical and theoretical knowledge and their perceptions in the patient care in order to offer the best assistance that can be provided.<sup>12</sup>

To do this, international and national studies have proved the linearity between the NANDA Nursing diagnoses and the construction of the Nursing process according to Orem's Self-Care Deficit Theory in the most different pathologies, such as the care with diabetic patients, seizures, cancer, with kidney diseases on peritoneal dialysis, as well as the women in the pregnancy-puerperal cycle.<sup>11-12, 14-16</sup>

In the case of the patient studied, the worsening of the grade-IV PU triggered cutaneous-focus sepsis, with complications, such as stage III Acute Renal Failure (ARF), altered prothrombin and thrombocytopenia due to metabolic disorders caused by sepsis. A literature review corroborates these findings, which shows that some hypotheses have been presented to elucidate the origin of sepsis, explaining the relations established between the microorganism and the host, generating inflammatory processes and other changes such as the processes of coagulation and fibrinolysis.<sup>5</sup>

Moreover, these changes are important to combat infection, but there must be a balance not to generate organic dysfunctions, such as vasodilation, hypotension, myocardial depression and altered microcirculation, leading to an increase in capillary permeability, interstitial edema, thrombosis and cellular alterations, leading to apoptosis and cytopathic hypoxia.<sup>6,4</sup>

In the case study, changes such as tachycardia, dyspnea, leukocytosis, with increased number of rod cells and systemic hypoperfusion, leading to cardiac, pulmonary, renal and neurological disorders. In addition to these findings, there are other manifestations of sepsis, depending on the focus, such as: fever or hypothermia; systemic hypermetabolism; high consumption of oxygen;

metabolic acidosis and hyperdynamic circulatory state, which may lead to the already cited disorders and others (gastrointestinal, liver, hematologic and metabolic).<sup>6,4</sup>

With all these changes, three requirements/actions recommended in Orem's Self-care Theory are involved: *universal care*, as it is linked to the maintenance of life; *development care*, the need to adapt to physical changes and the *health deviation*, as they represent the conditions of illness.<sup>8</sup> In this way, the articulation of this theory with the Nursing process is observed.

The priority given to the selected Nursing diagnoses (Ineffective Respiratory Pattern and Impaired Gas Exchange; Frail Elderly Syndrome; Decreased Cardiac Output; Excessive Volume of Liquids; Acute Pain and Impaired Physical Mobility) has a direct relationship with the pathophysiology of sepsis, with the last two related to diagnosis of the femoral neck fracture.<sup>6,12</sup> The aim of Nursing interventions described for these diagnoses, in this case study, is to overcome the self-care deficits, introducing totally compensatory measures, primarily using the aid method from acting or doing for the other, since the patient is totally dependent for care.<sup>8</sup>

One of the most important interventions in relation to respiratory diagnoses is the implementation and monitoring of the effectiveness of the therapy prescribed by the medical professional and installed by Nursing. The efficacy of using oxygen in the installation of an ineffective respiratory pattern was demonstrated in a study conducted in Sweden with patients who perceived their health as positive, despite using oxygen, considering the improvement of the respiratory pattern.<sup>17</sup> The author proved, regarding Orem's theory and its applicability in individuals whose respiratory pattern is impaired, that, when there is respiratory *health deviation* associated with immobility, the inability of the individual to self-care is determined.<sup>18</sup> In this sense, Nursing has a fundamental role in identifying the different care levels, which is of great usefulness for an effective rehabilitation process and for the restoration of a physiological respiratory pattern, the goal outlined for the case study.

This study evidences, regarding signs and symptoms for the diagnosis of Decreased Cardiac Output and Frail Elderly Syndrome (second selected diagnosis regarding the degree of priority), tachycardia, oliguria and low level of consciousness due to overload of cardiac muscle and the need for interventions. The study, corroborating these findings, list, as key interventions most common in ICU and emergency, the monitoring of vital signs and level of consciousness, with the application of Glasgow's

scale and water balance, and the completion of laboratory tests in order to minimize the risk of arrhythmias.<sup>19</sup> In this sense, patients become dependent for the self-care, requiring that the team use the aid method of “acting or doing for the other”.

In relation to the diagnosis of Excessive Volume of Liquids, the case study highlights the expected outcome of restoring the water balance by the following proposals: monitor ingestion and elimination; restrict liquid ingestion, with hemodialysis therapy and/or use of diuretic medications and assessment of edema, as well as blood pressure, heart rate and respiratory status. A study carried out in southern Brazil mentioned, to patients victims of trauma, that circulatory disorders that may be caused by, among other factors, fractures and immobilization and that, due to the prolonged time of immobilization, there arises the edema, decreasing the tissue movement, which explains the excessive volume of liquids in the patient in question, with interventions that corroborate the case study.<sup>20</sup>

Concerning the diagnosis of Acute Pain, aiming to achieve pain relief, the following types of care were prescribed: check the medical prescription; implement non-pharmacological measures (such as positioning and music therapy), as well as the application of the pain scale and factors that relieve and precipitate the same. A study that lists Nursing interventions for patients with various aches add other interventions with good efficacy for the relief of pain complaints, such as: determine the impact of the experience of pain on the quality of life (for example, sleep, appetite, activity, cognition, mood, relationships); analyze the cultural influences on the response to pain and teach the use of new non-pharmacological techniques, such as hypnosis, relaxation and music therapy.<sup>21</sup> Another study adds the pain as the fifth vital sign and establishes effective measures for controlling pain and consequently improving the quality of life.<sup>22</sup>

In the care plan directed to the diagnosis of Excessive Volume of Liquids and Acute Pain, the Nursing system is the fully compensatory, in which the aid method is “acting or doing for the other”.<sup>8</sup> In this way, the Nursing staff executes directly all interventions proposed.

From the diagnosis of Impaired Physical Mobility, the main interventions used by nurses in rehabilitation are listed. Furthermore, it is important to emphasize that this is one of the few diagnoses raised whose Nursing system and the aid method are based on the support-education system, understanding that the family should participate actively in the care and can, if taught, perform activities that assist in the improvement of the muscle conditioning by means of certain stimuli.<sup>8,20</sup>

In respect to the Nursing diagnosis of Impaired Tissue Integrity related to immobility, evidenced by injured tissue - which resulted in clinical complications and led the patient to sepsis, the following interventions were listed: change of decubitus; completion of dressing as progression of healing and observation and record of the characteristics of the wound. In addition to these interventions, another study describes that the fight against the appearance of the lesions requires daily inspection of the skin with a planning of interventions that promote the improvement of the wound so that the nurse can act in the maintenance of incapacity for self-care. The work of the Nursing staff, in this context, occurs through the aid method from “acting and doing for the other”, and by means of the teaching method, seeking to insert the companion in the health-disease process to teach him how to perform decubitus changes.<sup>23</sup> In this way, the Orem's Theory is interwoven as a foundation for the construction of the Nursing process in this case study.

## CONCLUSION

Primarily the study unveiled the importance of the role of Nursing through the SNA, performing the Nursing diagnosis, care and assistance plan, as well as the importance of using Dorothea Orem's Theory, because it supports the practice of nurses upon characterizing the Nursing process that is part of the SNA.

In this sense, the care provided to the patient was qualified, since she is completely incapable of performing self-care due to her clinical condition. With it, there emerged the magnitude of the role of the Nursing staff, which is to intervene in the activities for the self-care that cannot be achieved by the patient due to the inefficiencies generated by health deviations, performing the care for her, since she is totally dependent on such attention.

Another aid method that could be used in the case study is teaching, through health education, since the nurse may instruct the companion to perform care with the patient, such as, for example, the change of decubitus, which will prevent the emergence of new pressure injuries. In this case, the patient needs attention in the three requirements of care from Dorothea Orem's Theory, both universal as development and health deviations, assigning, thus, the Nursing care planning to the problem presented, in a systematic and integral manner, through the totally compensatory Nursing system.

Therefore, since the collection of patient's data until the construction of this work, this was of extreme importance for Nursing, because, in this way, the interlocution between SNA and Nursing Theory is seen, being able to analyze the

need and the magnitude of the work of the multiprofessional team.

## CONTRIBUTIONS

It is informed that all authors contributed equally in the design of the research project, collection, analysis and discussion of data, as well as in the writing and critical review of the content with intellectual contribution and in the approval of the final version of the study.

## CONFLICT OF INTERESTS

Nothing to declare.

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