

# Nursing diagnoses for clients hospitalized in an infectious disease clinic\*

DIAGNÓSTICOS DE ENFERMAGEM PARA CLIENTES HOSPITALIZADOS EM UMA CLÍNICA DE DOENÇAS INFECTOCONTAGIOSAS

DIAGNÓSTICOS DE ENFERMERÍA PARA PACIENTES HOSPITALIZADOS EN UNA CLÍNICA DE ENFERMEDADES INFECTOCONTAGIOSAS

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## ABSTRACT

The aim of this exploratory descriptive study was to create nursing diagnosis statements for hospitalized clients based on the Database of Special Nursing Language Terms of the Infectious Diseases Clinic of a teaching hospital and on the ICNP®. Further, we aimed to validate the diagnosis statements with the participation of clinical nurses and nursing teachers who worked at the clinic. Eighty-eight nursing diagnosis statements were constructed. However, only those that achieved a correlation index (CI)  $\geq 0.80$ , as determined by the experts participating in the study, were validated, resulting in seventy diagnosis statements. The study results showed that the aims were achieved, and the statements will facilitate communication processes among nursing professionals. Furthermore, they will ensure that care is guided by methodological principles, thus providing client care with greater resolvability power.

## DESCRIPTORS

Nursing diagnostics  
Nursing process  
Communicable diseases  
Classification

## RESUMO

Estudo exploratório-descritivo desenvolvido com o objetivo de criar, a partir do Banco de Termos da Linguagem Especial de Enfermagem da clínica de doenças infectocontagiosas de um hospital-escola e na CIPE®, afirmativas de diagnósticos de enfermagem para clientes hospitalizados e validá-las com a participação de enfermeiras assistenciais e docentes de enfermagem que atuam na referida clínica. Foram construídas 88 afirmativas de diagnósticos de enfermagem; no entanto, somente foram validadas aquelas que alcançaram um índice de concordância  $\geq 0,80$  entre os peritos participantes do estudo, o que resultou em 70 afirmativas diagnósticas. Os resultados do estudo evidenciam que os objetivos foram alcançados, uma vez que tais afirmativas, construídas a partir de termos da realidade da clínica, facilitarão o processo de comunicação entre os profissionais da área de enfermagem. Além disso, viabilizam uma assistência pautada em princípios metodológicos, proporcionando assistência de maior resolutividade para o cliente.

## DESCRITORES

Diagnóstico de enfermagem  
Processos de enfermagem  
Doenças transmissíveis  
Classificação

## RESUMEN

Estudio exploratorio-descriptivo, objetivando crear, a partir del Banco de Términos del Lenguaje Especial de Enfermería de la clínica de enfermedades infectocontagiosas de un hospital escuela y en la CIPE®, declaraciones de diagnósticos de enfermería para pacientes hospitalizados y validarlas con la participación de enfermeras asistenciales y docentes de enfermería actuantes en la referida clínica. Fueron construidas 88 declaraciones de diagnóstico de enfermería; sin embargo, sólo fueron validadas aquellas que alcanzaron un índice de concordancia  $\geq 0,80$  entre los peritos participantes del estudio, resultando un total de 70 declaraciones de diagnósticos. Los resultados del estudio expresan que fueron alcanzados los objetivos, toda vez que tales declaraciones, construidas según terminología de la realidad de la clínica, facilitarán el proceso de comunicación entre los profesionales del área de enfermería. Además, posibilitan una atención pautada en principios metodológicos, proporcionando atención más resolutiva para el paciente.

## DESCRIPTORES

Diagnóstico de enfermería  
Procesos de enfermería  
Enfermedades transmisibles  
Clasificación

\*Extracted from the conclusion of course work "Diagnósticos, resultados e intervenções de enfermagem para clientes hospitalizados na Clínica de Doenças Infectocontagiosas do Hospital Universitário Lauro Wanderley, da UFPB", Center of Health Sciences of the Federal University of the Paraíba, 2010. <sup>1</sup>Registered nurse. MSc. in Nursing from the Postgraduate Program of the Federal University of Paraíba. Assistant Professor of the Federal University of Campina Grande. Campina Grande, PB, Brazil. lidilandrade@hotmail.com <sup>2</sup>Registered nurse. PhD in Nursing. Associate Professor of the Department of Public Health and Psychiatric Nursing. Professor of the Postgraduate Nursing Program of the Center for Health Sciences of the Federal University of Paraíba. CNPq Researcher. Director of the Center for Research and Development for the International Classification for Nursing Practice (ICNP®) of the Postgraduate Nursing Program of the Federal University of Paraíba. João Pessoa, PB, Brazil. miriam@ccs.ufpb.br <sup>3</sup>PhD student of the Postgraduate Nursing Program of the Ribeirão Preto College of Nursing of the University of São Paulo. Registered nurse of the Infectious Disease Clinic of the Lauro Wanderley University Hospital of the Federal University of Paraíba. João Pessoa, PB, Brazil. enf.elimoreirafreire@gmail.com <sup>4</sup>Registered nurse. MSc. in Nursing from the Postgraduate Program of the Federal University of Paraíba. Manager of the Epidemiological Monitoring of the Municipal Health Secretariat of João Pessoa. João Pessoa, PB, Brazil. renatavnobrega@gmail.com

## INTRODUCTION

New technologies resulting from industrialization have greatly influenced the improvement and reorganization of healthcare quality. They have progressively contributed to solutions for complicated problems, often reverting serious situations or disease risks into improved health by streamlining the decision process and providing security for client care<sup>(1)</sup>. Importantly, nursing has progressed with advances that underlie the empirical knowledge corresponding to the various services of the profession. The effort behind these achievements stemmed from the pursuit of professional autonomy, as evidenced by the development of a body of knowledge that has given nursing the status of a science<sup>(2)</sup>. This was realized through the development of theoretical models and the creation of a systematic scientific method specific to nursing. This method supports the care practice and enables the organization of care so that clients receive quality care in the shortest time and with maximum efficiency<sup>(3-4)</sup>.

This scientific method is called the Nursing Process. It was introduced in Brazil through the theory of Wanda Horta and was conceptualized as a *dynamic of the systematized and interrelated actions aimed at caring for the human being*<sup>(5)</sup>. It consists of a range of scientific reasoning, which helps nurses to organize, systematize and conceptualize the nursing practice<sup>(6)</sup>. The standardization of language is a problem still faced by the Nursing Process, especially with regards to the development of a common vocabulary for classifying, naming and defining diagnoses, outcomes and nursing interventions. Standardization will create the possibility of an international dialogue, even for differing cultural, social and health contexts<sup>(7)</sup>.

Given the problems in the literature and in our daily lives and considering that nursing professionals carry out the majority of client care, it is necessary to highlight that the activities performed by the nursing team are not adequately documented. This documentation should include the reporting of data collection, analysis using clinical judgment, the planning of actions and the implementation of these actions, followed by evaluations to verify whether or not the expected results were achieved. Among the elements cited, nursing diagnoses should be highlighted, as they are proof of the ability of the nurse to identify problems that are subject to nursing interventions by means of diagnostic reasoning.

As a result of the unrest in the scientific nursing community, several studies have already been developed in support of a universal parameter to encourage communication by language standardization in the professional practice. However, there is insufficient scientific data re-

lated to nursing care for patients with infectious diseases. Therefore, it is of fundamental importance that studies are designed to demonstrate the autonomy of the nursing professional to effectively evaluate and perform patient care with the appropriate practices.

A study was previously carried out in this clinic to construct a Database of Special Nursing Language Terms for infectious disease clinics, and they identified 327 terms. A total of 205 were included in the International Classification for Nursing Practice (ICNP<sup>®</sup>) Version 1.0<sup>(8)</sup>, and 122 terms were not included. This classification system enabled the standardization of a global language by considering the cultures and particularities of each region when defining the technical terms<sup>(9)</sup>. Given the present situation, we investigated the possibility of preparing nursing diagnosis statements for patients hospitalized in this clinic from the constructed database and from the ICNP<sup>®</sup> Version 1.0.

This study aimed to develop nursing diagnosis statements for hospitalized patients based on the Database of Special Nursing Language Terms of the Infectious Disease Clinic and the ICNP<sup>®</sup> Version 1.0. Furthermore, this study aimed to validate the diagnosis statements with the participation of clinical nurses and nursing teachers who work in the clinic.

## METHOD

The methodological approach to conduct the research was exploratory and descriptive. The project was submitted to and approved by the Scientific Committee of the Department of Public Health and Psychiatric Nursing and the Research Ethics Committee of the Lauro Wanderley University Hospital (HULW) of the Federal University of Paraíba under protocol No. 361/10. The study was

conducted in the infectious disease clinic of a teaching hospital in which the clientele came from the state capital, the cities of the interior of Paraíba State and the surrounding municipalities of other states. The primary reasons for hospitalizations were diseases, such as viral hepatitis, dengue fever, measles, meningitis, tetanus and tuberculosis.

The International Council of Nurses recommends adopting the following guidelines to construct nursing diagnoses and outcomes: the compulsory inclusion of a term of the *Focus* axis and a term of the *Judgment* axis and additional terms as needed. For the composition of the nursing diagnosis statements in this study, the Database of Special Nursing Language Terms of the Infectious Disease Clinic was used. After construction, the nursing diagnosis statements were submitted to a process of content validation. For this, an instrument was designed with

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nursing diagnosis statements for the clients hospitalized in the infectious disease clinic. A collaboration of ten nurses and three nursing teachers working at the clinic was requested. These professionals were included in the validation given their experience and specialties in the clinic. Their task was to evaluate whether the proposed statements were applicable to the area of infectious diseases and whether they used them effectively in the evaluation of hospitalized patients. In cases of disagreement regarding the statements, suggestions for improvement were requested from the professionals.

For the data analysis, the instruments were numbered, and the variables were coded and entered into an Excel for Windows database. The data were analyzed using descriptive statistics. The nursing diagnosis statements were considered validated when they achieved a correlation index (CI)  $\geq 0.80$  as determined by the experts participating in the study.

## RESULTS

Based on the terms in the Focus axis of the Database of Special Language Terms of the Infectious Diseases Clinic and the ICNP<sup>®</sup> Version 1. 0, 88 diagnosis statements were prepared and submitted for validation. Of the 88, 81 were validated and considered applicable to infectious diseases based on a CI score  $\geq 0.80$ . The seven invalidated nursing diagnosis statements were interrupted breastfeeding, decreased appetite, excessive crying, increased food intake, menstruation absent, interrupted menstruation and excessive nutrition.

In this stage, terms such as sleep and rest were also unified. Other unified terms were those considered as a single diagnosis or that presented different names while representing the same meaning, as few of the study participants perceived this synonymy. Among the synonymous statements, the following were highlighted: increased volume of fluid (or edema of limbs/generalized), decreased liquid volume (or dehydration), impaired swallowing (or dysphagia), elevated intestinal elimination (or diarrhea), reduced intestinal elimination (or constipation), spontaneous urinary elimination (or spontaneous micturition), bodily hygiene self-care deficit (or impaired body hygiene) and decreased skin hydration (or dry skin).

After the validation and unification of synonymous diagnoses, 70 statements were established and classified according to the Basic Human Needs of Horta. These statements were subdivided into *psychobiological* (oxygenation and vascular regulation, hydration and electrolyte regulation, nutrition and nutritional regulation, elimination, sleep and rest, mobility, body mechanics and motility, sexuality, body care, skin and mucosal integrity, thermal regulation, and pain perception), *psychosocial* (safety, communication, learning and acceptance, orientation in time and space, and attention) and *psychospiritual* (religion or philosophy of life) as shown in Table 1.

**Table 1** - Distribution of the nursing diagnoses constructed from the Database of Special Nursing Language Terms of the Infectious Disease Clinic of HULW/UFPB and from the ICNP<sup>®</sup> according to the Basic Human Needs - João Pessoa, 2010.

| BASIC HUMAN NEEDS                            |        |
|--|--------|
| Psychobiological needs                       | CI (%) |
| Nursing diagnoses                            |        |
| <b>Oxygenation and vascular regulation</b>   |        |
| Dyspnea                                      | 1.0    |
| Bleeding                                     | 1.0    |
| Increased heart rate                         | 0.91   |
| Decreased heart rate                         | 0.91   |
| Increased pulse rate                         | 0.91   |
| Decreased pulse rate                         | 0.91   |
| Increased respiratory rate                   | 1.0    |
| Decreased respiratory rate                   | 1.0    |
| Hemorrhage                                   | 1.0    |
| Ineffective breathing pattern                | 1.0    |
| Insufficient tissue perfusion                | 1.0    |
| Increased blood pressure                     | 1.0    |
| Decreased blood pressure                     | 1.0    |
| Risk of hemorrhage                           | 1.0    |
| <b>Hydration and electrolyte regulation</b>  |        |
| Increased fluid intake                       | 0.91   |
| Decreased fluid intake                       | 0.82   |
| Increased fluid volume                       | 1.0    |
| Decreased fluid volume                       | 0.91   |
| Risk of decreased fluid volume               | 1.0    |
| Risk of increased fluid volume               | 1.0    |
| <b>Nutrition and nutritional regulation</b>  |        |
| Increased appetite                           | 0.82   |
| Feeding self-care deficit                    | 1.0    |
| Impaired swallowing                          | 1.0    |
| Decreased food intake                        | 0.91   |
| Insufficient nutrition                       | 0.91   |
| Excessive body weight                        | 0.91   |
| Reduced body weight                          | 0.91   |
| <b>Bodily Care</b>                           |        |
| Self-care preserved                          | 0.82   |
| Bathing and dressing self-care deficit       | 1.0    |
| Bodily hygiene self-care deficit             | 1.0    |
| Impaired oral cavity hygiene                 | 1.0    |
| <b>Elimination</b>                           |        |
| Increased intestinal elimination             | 1.0    |
| Decreased intestinal elimination             | 1.0    |
| Impaired intestinal elimination              | 1.0    |
| Increased urinary elimination                | 1.0    |
| Spontaneous urinary elimination              | 0.91   |
| Reduced urinary elimination                  | 1.0    |
| Impaired urinary elimination                 | 0.91   |
| Expectoration (specify)                      | 0.91   |
| Vomiting                                     | 1.0    |
| Dysuria                                      | 1.0    |
| <b>Sleep and rest</b>                        |        |
| Impaired sleep and rest                      | 1.0    |
| Preserved sleep and rest                     | 0.91   |
| <b>Mobility, body mechanics and motility</b> |        |
| Impaired mobility                            | 1.0    |
| Decreased movement                           | 0.91   |
| Impaired movement                            | 1.0    |
| <b>Sexuality</b>                             |        |
| Risk of altered sexuality                    | 0.82   |
| Altered sexuality                            | 0.82   |
| <b>Mucocutaneous integrity</b>               |        |
| Decreased turgor                             | 1.0    |
| Decreased skin hydration                     | 1.0    |

|  |      |
|--|------|
| Impaired skin integrity                        | 1.0  |
| Traumatic wound                                | 0.91 |
| Pressure ulcer (location)                      | 1.0  |
| <b>Thermoregulation</b>                        |      |
| Increased body temperature                     | 1.0  |
| Decreased body temperature                     | 1.0  |
| Excessive Sweating                             | 1.0  |
| <b>Pain perception</b>                         |      |
| Acute pain                                     | 1.0  |
| Chronic Pain                                   | 1.0  |
| Cutaneous pain                                 | 0.91 |
| Musculoskeletal pain                           | 0.91 |
| <b>Psychosocial needs</b>                      |      |
| <b>Nursing diagnoses</b>                       |      |
| <b>IC (%)</b>                                  |      |
| <b>Security</b>                                |      |
| Deficient immunization                         | 0.91 |
| Risk of transmitting infection                 | 1.0  |
| Risk of secondary infection                    | 1.0  |
| <b>Communication</b>                           |      |
| Impaired communication                         | 0.91 |
| Reduced communication                          | 0.91 |
| <b>Learning and acceptance</b>                 |      |
| Low health knowledge                           | 1.0  |
| Impaired acceptance of the therapeutic regimen | 1.0  |
| <b>Orientation in time and space</b>           |      |
| Reduced level of consciousness                 | 1.0  |
| <b>Attention</b>                               |      |
| Constant crying                                | 0.82 |
| <b>Psychospiritual needs</b>                   |      |
| <b>Nursing diagnoses</b>                       |      |
| <b>CI (%)</b>                                  |      |
| <b>Religion or life philosophy</b>             |      |
| Spiritual distress                             | 0.91 |

## DISCUSSION

Infectious disease control remains a challenge because it requires interrupting the epidemiological chain of human disease causing agents. The interventions are based on the nursing diagnosis, which is the responsibility of the nurse, and they are constructed based on data from the nursing history, the physical examination and laboratory results. Thus, the nursing professional should recognize the responses of the patient in order to provide care for their basic human needs<sup>(5)</sup>. In this discussion, the focus is only on the diagnoses that obtained a CI equal to 1.0 during the validation process. Several normality parameters of human development will be discussed, with attention to the profile of the clientele of the infectious disease clinic.

*Psychobiological* and *psychosocial* needs are common to all living beings, whereas *psychospiritual* needs are unique to humans<sup>(5)</sup>. Included in psychobiological needs is oxygenation, which is the movement of air into and out of the lung in order to replenish oxygen and remove carbon dioxide from the airways. When this process is impaired, *ineffective breathing pattern* is diagnosed, which is conceptualized as inhalation or exhalation that does not provide adequate ventilation<sup>(10)</sup>.

The respiratory rate is determined by inhalation and exhalation: the first is an active process in which the respi-

ratory center sends impulses to contract the diaphragm. In contrast, the second process involves relaxation of the diaphragm, during which the abdominal organs return to their normal position<sup>(11)</sup>. Thus, the diagnosis of *increased respiratory rate* is determined by breaths per minute (bpm) above normal parameters, i.e., over twenty breaths per minute in adults<sup>(11-12)</sup>. The parameters in other phases of development are infants = 30-40 bpm, preschool children = 20-25 bpm, school children = 18-24 bpm and adolescents = 12-20 bpm<sup>(13)</sup>. The diagnosis of *decreased respiratory rate* is determined by the number of bpm below normal limits. The diagnosis of *dyspnea* is defined as the forced entry and exit of air from the lungs with increasing discomfort and effort<sup>(14)</sup>.

For vascular regulation, the diagnosis of *insufficient tissue perfusion* is characterized by insufficient blood circulation through peripheral tissues at the capillary level<sup>(12)</sup>. Blood pressure corresponds to the force exerted on the walls of the arteries during ventricular systoles and diastoles and can be affected by cardiac output, distension of the arteries, blood volume, velocity and viscosity<sup>(15)</sup>. The diagnoses *increased blood pressure and decreased blood pressure* are characterized by the pressure exerted by the circulating blood on the walls of the vessels of the systemic circulation, lungs and heart, and 120/80 mmHg is considered normal in adults<sup>(11-12)</sup>. The parameters in other phases of development are 0-3 months = 75/50 mmHg, 3-9 months = 85/65 mmHg, 9-12 months = 90/70 mmHg, 1-3 years = 90/65 mmHg, 3-9 years = 95/60 mmHg, 9-11 years = 100/60 mmHg, 11-13 years = 105/65 mmHg and 13-14 years = 110/70 mmHg<sup>(13)</sup>.

Other diagnoses seen in the clinic are *risk of hemorrhage, hemorrhage and bleeding*, which are primarily seen in clients with dengue hemorrhagic fever. These patients have symptoms of thrombocytopenia and bleeding as evidenced by one or more of the following signs: positive tourniquet test, petechiae, bruising and bleeding of the mucous membranes<sup>(16)</sup>.

For hydration and electrolyte regulation, it was observed that increasing the liquid nutrient and water supply could result in a *risk of increased fluid volume* or *increased fluid volume* due to the infusion of intravenous fluids, sodium retention, failures in regulatory mechanisms or venous stasis. In the infectious disease clinic, the diagnosis of *increased fluid volume* is primarily seen in the form of edema. *Edema of the limbs* is observed as a condition of excessive accumulation of fluid in the tissue spaces, and it is commonly seen in poisonous animal bite victims, usually by the genus *Bothrops*. This is characterized by inflammation at the site of the bite and can extend to the entire affected area<sup>(16)</sup>. Edema in other areas, particularly the face, is often a complication of pertussis in lactating infants who are prone to severe forms of the disease<sup>(17)</sup>. There is a diagnosis of *generalized edema* (or anasarca) that results from fluid accumulation in cell tissues and in body cavities<sup>(18)</sup>. The reduction of fluid supple-

ments can trigger risk factors for the loss of body fluids and electrolytes, highlighting the diagnosis of the *risk of decreased fluid volume*. This is a relevant nursing diagnosis since water is needed for growth, normal functioning and the maintenance of life.

For nutrition and nutritional regulation, a decrease or absence of appetite is very common as a result of either physiological or nerve causes. It is manifested by the *feeding self-care deficit* diagnosis, in which the client presents an impaired ability to perform activities related to feeding<sup>(19)</sup>, or the *impaired swallowing* (or dysphagia) diagnosis, in which the clients exhibit difficulty in the passage of fluids and decomposed food via muscle movement from the mouth to the stomach<sup>(12)</sup>.

For elimination needs, the elimination of waste in the urine is dependent on the kidneys, ureters, bladder and urethra. The diagnoses found here characterize alterations in the volume and quantity of urine, such as *increased urinary elimination*, which is defined as micturition greater than four to six times daily and with urine output exceeding the values of 1000 to 2000 ml in 24 hours, and *reduced urinary elimination*, which is characterized by reduced urination according to the parameters cited. The diagnosis of *dysuria*, defined as pain and difficulty in urination, both at the beginning and at the end, is primarily found in clients with urinary tract infections<sup>(18)</sup>.

Intestinal elimination consists of undigested food, inorganic materials, water and bacteria, with light or dark brownish color due to the cleavage of bile by intestinal bacteria. However, many conditions can alter the appearance and coloration of the stool, including the use of medications or the consumption of certain foods<sup>(15)</sup>. Hepatocellular problems also generate the diagnosis of *impaired intestinal elimination*. Other changes in bowel habits can be represented by the diagnosis of *increased intestinal elimination* (or diarrhea), which is the passage of fecal material with an increased frequency of excretion and increased intestinal sounds<sup>(12)</sup>. *Reduced intestinal elimination* (or constipation) is characterized by decreased elimination of fecal material over the long term or by difficulty in evacuating<sup>(18)</sup>. Among other nursing diagnoses related to the elimination needs, vomiting is highlighted, and this is defined as the expulsion of transformed food or gastric contents from the mouth or their return to the mouth<sup>(12)</sup>.

Sleep and rest facilitate cellular growth and the repair of aging body tissues. It is known that blood pressure and metabolic, cardiac and respiratory rates reduce to baseline levels during sleep, favoring the normal biological functions of the body<sup>(19)</sup>. However, there are untreated conditions that cause disruptions in normal sleep and rest patterns, and these can generate three situations: insomnia, abnormal movements or sensations during sleep or waking up during the night and excessive daytime sleepiness. This nursing diagnosis for these is *impaired sleep and rest*<sup>(11)</sup>.

Body mechanics involve a set of activities of the musculoskeletal and nervous systems in order to maintain balance, posture and body alignment. Appropriate use of body mechanics reduces the risk of damage to the musculoskeletal system<sup>(11)</sup>. Damage can cause *impaired movement*, which is a limitation of the musculoskeletal system that impairs movement<sup>(12)</sup>. The diagnosis of *impaired mobility* expresses difficulty in walking<sup>(18)</sup>.

Bodily care involves activities that provide comfort, safety and well-being to the individual. There are clients with certain types of cognitive and motor limitations, and the nurse must identify these and intervene to provide hygiene practices. It is important to communicate in order to promote a more therapeutic relationship<sup>(11)</sup>. The client may present the following nursing diagnoses: *bathing and dressing self-care deficit and hygiene self-care deficit* (or impaired body hygiene). The first is represented by the impaired ability to perform activities, such as bathing and dressing appropriately, and the second, by the inability to maintain a continuous hygiene standard or to keep the body clean and odorless<sup>(14,19)</sup>.

Oral cavity hygiene consists of maintaining mucosal integrity, monitoring for fungal infections, primarily in immunocompromised clients, and examining dentition, which is responsible for food mastication. However, difficulties can arise due to *impaired oral cavity hygiene*, leading to inflammation or infection, which can cause a loss or softening of the teeth<sup>(11)</sup>.

The skin is the main protective barrier against disease-causing organisms. It also protects against trauma, especially in the palm and sole. It is richly innervated, which makes it sensitive to temperature, pain and pressure. Furthermore, the skin regulates temperature by radiation, conduction and convection of heat, and it is able to synthesize vitamin D upon exposure to ultraviolet radiation<sup>(15)</sup>.

The diagnosis of *impaired skin integrity* characterizes the state of alteration of the external surface of the body<sup>(14)</sup>. This can be seen in chickenpox and herpes zoster by the appearance of a maculopapular rash that assumes a vesicular appearance. The eruptions develop into pustules and scabs. It is important to evaluate the thermal, painful and tactile sensitivities of disorders due to dermatoneurological impairment<sup>(20)</sup>. The diagnosis of *pressure ulcer* represents an area of injury due to prolonged and intense pressure, which affects cellular metabolism by reducing or obstructing the blood flow and resulting in tissue ischemia<sup>(11)</sup>.

Skin also undergoes modifications due to aging. The primary nursing diagnoses associated with these changes are *decreased turgor* and *decreased skin hydration* (or dry skin), in which dryness, wrinkles and pigmentation are highlighted. Drying occurs due to decreases in sweat and sebaceous glands, and wrinkling is due to thinning of the epidermis and dermis, which promotes the appearance of wrinkles and decreased turgor. The appearance of pigmentation results from exposure to sunlight without the

use of protection<sup>(15)</sup>. However, a decrease in skin turgor during old age is normal, unlike a decrease in turgor due to electrolyte disturbances, such as dehydration.

Thermal regulation corresponds to the balance between the heat lost and the heat produced. It is controlled by physiological and behavioral mechanisms<sup>(15)</sup>. Changes in temperature occur due to failures in heat loss and production. Therefore, *increased body temperature* is observed when body heat increases relative to body metabolism. During the day, there is a slight increase in body temperature compared to during sleep or rest. The reverse occurs in *decreased body temperature*<sup>(12)</sup>. Sweating is a process in which the body loses heat through evaporation. This can increase during emotional or mental stress situations or when exercising. Excess sweating can cause drying of the skin and mucous membranes as well as itching. This is evidenced by the diagnosis of *excessive sweating*, which reflects the loss of too much water through the evaporation of moisture on the skin surface<sup>(12)</sup>.

Pain perception is an unpleasant sensory and emotional experience. It is the most common reason for seeking healthcare. Thus, nurses must comprehend the pathophysiology of pain, its physiological and psychological consequences and the methods used to treat it<sup>(15)</sup>. Pain can be classified by its duration and location. Thus, diagnoses of *acute pain* reflect increased sensory perception of body parts over a short time interval or of sudden onset, and this is interpreted by reports of pain, facial expressions of pain, altered muscle tone, self-protective behavior, reduced attention span, altered perception of time, withdrawal from social contact, impaired thought processes, distracted behavior, agitation, and loss of appetite. The diagnosis of *chronic pain* is conceptualized in the same way, but it takes place over a longer time period<sup>(12)</sup>.

For psychosocial needs, safety in the hospital, community or home decreases the incidence of health problems and injuries, reduces the duration of treatment and gives the client a feeling of well-being<sup>(11)</sup>. In this context, the diagnosis of *risk of transmission of infection* is emphasized. This is the risk of transmitting or triggering the invasion of pathogenic microorganisms that reproduce and multiply, causing disease due to local cellular injury, secretion of toxins or antigen-antibody reactions<sup>(12)</sup>. The diagnosis *risk of secondary infection* reflects the possibility of contracting another infection during or at the end of the treatment for a primary infection.

Health education is important for preventing and promoting health, as it brings awareness to the client

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and their family members regarding their health dysfunction, the use of drugs or the performance of procedures. In cases of *low health knowledge*, translated as the inadequate understanding of their pathological condition or how to deal with health problems, education may facilitate adherence to the treatment plan. Education could also improve cases of *impaired acceptance of the therapeutic regimen*, which considers difficulties in adhering to the pharmacological or non-pharmacological treatment plan. The lack of adherence to the therapeutic regimen has been the subject of various studies. Among the most important factors are the complex therapeutic regimens of long duration, side effects, financial restrictions, forgetfulness and self-treatment habits, such as purchasing medicine without a medical prescription<sup>(15)</sup>.

The neurological system is responsible for maintaining consciousness and controlling memory, thought processes, sensations, emotions and voluntary movements<sup>(19)</sup>. The client can present a *reduced level of consciousness*, represented by significantly reduced mental response capabilities<sup>(12)</sup>. Such cases are seen primarily during bacterial meningitis, where the bacteria are distributed throughout the central nervous system and the walls of the cerebral venous sinuses, and they eventually penetrate the dura mater to reach the subarachnoid space. If the body does not develop defense mechanisms, the infection spreads, causing neurological alterations<sup>(20)</sup>.

## CONCLUSIONS

The results of this study are clinically relevant, and the creation of diagnostic nomenclature will facilitate communication between nursing professionals. Importantly, the statements were constructed from clinical terms used in an infectious disease clinic, enabling the use of methodological principles, improved scientific visualization by the professionals and providing care with greater resolute power for the client.

One of the major challenges encountered throughout this study was synthesizing a cohesive list of diagnoses for clients of different age groups. Another difficulty was relating the clinical aspects of different infectious diseases using tools such as clinical reasoning, academic experience and technical and scientific knowledge and subsequently grouping the signs and symptoms to create the diagnoses.

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