

RESEARCH

Nursing diagnoses in intensive care: cross-mapping and NANDA-I taxonomy

Diagnósticos de enfermagem em terapia intensiva: mapeamento cruzado e taxonomia da NANDA-I Diagnósticos de enfermería en terapia intensiva: mapeo cruzado y taxonomía de la NANDA-I

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ABSTRACT

Objective: to identify nursing diagnoses in intensive care unit (ICU) patients by means of a cross-mapping of terms contained in nursing records with the NANDA-I taxonomy. **Method:** an exploratory, descriptive study with a retrospective analysis of nursing records in 256 medical records of patients that were hospitalized in the general ICU of a hospital in the western border of the state of Rio Grande do Sul. Terms indicating conditions demanding nursing interventions were collected from the records; cross-mapping of these terms with the NANDA-I taxonomy diagnoses was performed and confirmed in a nursing focus group. Data were analyzed through descriptive statistics. **Results:** a total of 832 terms and expressions referring to 52 different diagnoses in 9 of the 13 domains of the NANDA-I taxonomy were identified. **Conclusion:** the present study enabled the identification of nursing diagnoses in patients hospitalized in ICUs, affecting care management, the training process of experts in the area, and information systems. **Key words:** Nursing; Nursing diagnosis; Nursing Process; Intensive Care Units; Classification.

RESUMO

Objetivo: identificar diagnósticos de enfermagem em pacientes hospitalizados em UTI por meio do mapeamento cruzado de termos contidos nas anotações de enfermagem, com a Taxonomia da NANDA-I. **Método:** estudo exploratório descritivo, mediante análise retrospectiva dos registros de enfermagem em 256 prontuários de pacientes que estiveram hospitalizados na UTI geral de um hospital da fronteira oeste do Rio Grande do Sul. Extraíram-se, dos registros, termos que indicavam condições que demandavam intervenções de enfermagem, realizou-se mapeamento cruzado dos mesmos com os diagnósticos da Taxonomia da NANDA-I e confirmação em grupo focal de enfermeiros. Analisaram-se os dados utilizando-se estatística descritiva. **Resultados:** identificaram-se 832 termos e expressões que se referiam a 52 diferentes diagnósticos em nove dos 13 domínios da Taxonomia da NANDA-I. **Conclusão:** este estudo permitiu identificar diagnósticos de enfermagem presentes em pacientes hospitalizados na UTI, trazendo implicações para gestão do cuidado, processo de formação de especialistas na área e sistemas de informação.

Descritores: Enfermagem; Diagnóstico de Enfermagem; Processos de Enfermagem; Unidades de Terapia Intensiva; Classificação.

RESUMEN

Objetivo: identificar diagnósticos de enfermería en pacientes hospitalizados en UTI mediante mapeo cruzado de términos incluidos en notas de enfermería con Taxonomía de la NANDA-I. **Método**: estudio exploratorio, descriptivo, mediante análisis retrospectivo de registros de enfermería en 256 historias clínicas de pacientes hospitalizados en UTI general de hospital

fronterizo del oeste de Rio Grande do Sul. Se extrajeron términos que indicaban condiciones demandando intervenciones de enfermería, se realizó mapeo cruzado de ellos con diagnósticos de Taxonomía de la NANDA-I y confirmación en grupo focal de enfermeros. Datos analizados aplicando estadística descriptiva. **Resultados**: se identificaron 832 términos y expresiones relativos a 52 diagnósticos diferentes en 9 de los 13 dominios de Taxonomía de la NANDA-I. **Conclusión**: fue posible identificar diagnósticos de enfermería presentes en pacientes internados en UTI, con implicancias en la gestión de cuidado, en el proceso de formación de especialistas en el área y en sistemas de información.

Palabras clave: Enfermería; Diagnóstico de Enfermería; Procesos de Enfermería; Unidades de Cuidados Intensivos; Clasificación.

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INTRODUCTION

Intensive care units (ICUs) are environments for hospitalization of patients in critical health conditions requiring specialized and continuous care⁽¹⁾. Therefore, nursing support in ICUs requires quick and accurate identification of individual health conditions by nurses because of patients' severity and instability and complexity of the required care. The health care provided by the nursing team must be organized to share knowledge and care strategies in order to promote the best outcomes to the patient along with other members of the team.

In this context, the use of the Nursing Process as a method to organize the clinical approach of the profession in ICUs favors the identification of patients' conditions that require nursing interventions and more appropriate therapeutic decisions to achieve outcomes within the nursing scope⁽²⁾.

Data collection is performed in the first stage of the Nursing Process and is an integral part of the diagnostic process⁽³⁾. Nursing diagnosis (ND) - the second stage of the Nursing Process - consists of making clinical decisions on the presence of a human response that requires nursing intervention; the assigned diagnosis is critical to define the care plan and expected outcomes^(2,4).

In this context, the special nursing languages, including the Nanda International Nursing Diagnoses (NANDA-I) taxonomy, play an important role, as they describe one of the phenomena of interest for the professional practice in a standardized way, pointing out possible areas of nursing contribution in the health care scenario.

In certain regions of the country, the use of standardized languages by nursing is still not common, possibly hindering the migration of manual records into computerized systems. In view of the Brazilian Health Informatics and Information Policy⁽⁵⁾, one of the challenges of nursing consists in producing information that is compatible with electronic record systems.

Classification systems with standardized languages represent a set of structured knowledge and concepts organized in a logic way based on similarities⁽⁶⁾. In this sense, the identification of ND profiles in populations can contribute to a better definition and understanding of nursing as a discipline.

Knowledge on the nursing diagnostic profile within a standardized language also contributes to subsidize actions related to care, management, more appropriate design, and continuing education. Naming the conditions of ICU patients requiring nursing interventions contributes to strengthen nurses' professional identity based on a clear view of the phenomena that are taken into account in the field of nursing.

Therefore, the aim of the present study was to identify nursing diagnoses in ICU patients through a cross-mapping of terms contained in nursing records with the NANDA-I taxonomy.

METHOD

Ethical aspects

The research proposal was approved by the Research Ethics Committee of the Federal University of São Paulo (UNIFESP).

Study design, setting, and period

This is a descriptive, exploratory study⁽⁷⁾ of document analysis performed in the ICU of a general hospital in the western border of the state of Rio Grande do Sul, Brazil, from October 2011 to April 2012. This institution does not use any ND standardized language. This period was defined due to the use of unknown data which, in intervals below six months, could hinder their identification⁽⁸⁻¹⁰⁾.

Population and sample

In the first stage, the sample consisted of nursing records contained in the medical charts of patients in the studied scenario within the aforementioned period. The non-probabilistic intentional sample consisted of a total of 256 medical charts of patients that were hospitalized in the ICU from October 2011 to April 2012. In the second stage, the sample consisted of five clinical nurses that worked in the research setting – and that represented the totality of nurses in the ICU that met the inclusion criteria: having clinical experience between 2 and 10 years in the care of critically ill patients, and having developed care activities in the ICU within the period of data collection.

Selection of nurses met the criteria⁽¹¹⁾ that correlate the time of clinical experience s with the levels of practical knowledge. These criteria were used to divide the nurses into five levels. The first level of knowledge characterizes nurses with clinical experience of up to six months as beginners; in this level nurses use protocols to determine their actions⁽¹¹⁾. The second level includes nurses with practical experience in concrete situations with significant elements. The third level includes nurses that have a sense of what is important in specific situations; they are able to interpret and analyze the patients' situation. The fourth level includes proficient nurses that are able to identify goals

and specificities of clinical situations and necessary interventions (as well as their redefinition whenever necessary) using previously acquired skills combined with practical experience and scientific knowledge⁽¹¹⁾. The fifth level of knowledge includes nurses with 5 years of experience in the domain area presenting intuitive judgment in decisionmaking processes in an accurate way; these nurses are characterized as experts⁽¹¹⁾. According to these criteria one nurse was classified as proficient and four nurses as experts⁽¹¹⁾.

Study protocol

The study was developed in three stages: 1) Identification of terms and expressions (compound terms) contained in nursing records of ICU patients indicating disorders, health conditions, life processes, motivation to increase well-being, and conditions of patient vulnerability requiring nursing interventions; 2) Cross-mapping of terms and expressions with the defining characteristics, related factors, risk factors, and labels of nursing diagnoses approved by the NANDA-I classification; 3) Mapping validation through focus group with clinical nurses that met the inclusion criteria.

In the first stage the information contained in the nursing records of each medical chart was transcribed in full and upon in-depth and comprehensive reading for identification of concepts, terms, and expressions; simple (words) and compound (group of words) terms were identified, expressing conditions demanding nursing actions. These terms were grouped by similarities and association considering their context and content relevance in the corpus of the analysis. The content was then standardized⁽¹²⁾.

The following information was collected for the characterization of patients hospitalized in the ICU: gender, age, ethnic group, medical diagnosis, length of stay, educational level, profession, marital status, type of hospitalization (health insurance or private), and origin. The nursing records of each medical chart were transcribed to a standardized digital instrument created by the researchers and arranged in alphabetical order in electronic spreadsheets for fragmentation in terms and exclusion of repetitions. The instrument used to collect data from medical charts consisted of the variables: type of health insurance, number of registration and record of the patient in the institution, name of the patient, date of birth, age, gender, marital status, religion, profession, educational level, ethnic group, city of origin, date of admittance and discharge (or death), list of problems, and nursing records. Each instrument was identified by a number according to the sequence of data collection.

A cross-mapping of the terms identified in the nursing records with the defining characteristics (DCs) and related and risk factors of the diagnoses approved by the NANDA-I classification was performed in the second stage.

Mapping is defined as the process of explaining or expressing something through the use of words with equal or similar meaning used to compare non-standardized nursing data with standardized languages⁽⁶⁾. This method enables comparisons that can be assessed among terms of different nursing languages to determine their semantic equivalence⁽⁸⁾. The rules for cross-mapping used in this study were: 1) mapping using the context of NANDA-I nursing diagnoses classification; 2) seeking to ensure the meaning of the terms and expressions contained in the nursing records; 3) comparing the standardized terms and expressions to the diagnostic focuses; 4) correlating standardized terms and expressions that refer to diagnostic focuses present in the diagnostic concepts; 5) comparing and linking standardized terms and expressions with the diagnostic concepts, defining characteristics, and related and risk factors of the diagnostic focuses); 6) identifying and describing possible nursing diagnostic concepts; and 7) mapping the possible nursing diagnoses in the NANDA-I domains and classes⁽⁶⁾.

Cross-mapping enabled the identification of corresponding terms and expressions used in nursing records with the terms used in the NANDA-I classification. Disorders, health conditions, life processes, motivation to increase well-being, and conditions of vulnerability were presented by patients.

In the third stage, these results were validated through a focus group meeting⁽¹³⁾ involving five nurses. This technique enables data collection and qualitative assessment to determine the opinion of a group on a given subject⁽¹³⁾.

Four focus group meetings were conducted to reach consensus. During the meetings the nurses were asked whether they agreed, confirmed, and could remove or add information related to the terms and expressions, diagnostic nursing labels, DCs, and related and risk factors. Therefore, lists containing the database of each patient and a copy of the NANDA-I 2012-2014 classification book were provided to enable the analysis.

Analysis of results

Data were analyzed by means of descriptive statistics (absolute and percentage frequencies).

RESULTS

Among the 256 records, 135 (52.7%) of the patients were women. Ages ranged between 15 and 96 years; 136 patients (53.1%) were aged over 60 years. Mean age was 58.95 years (\pm SD 18.77) and median was 60.5 years.

The analysis of the nursing records identified 1,118 terms indicating conditions requiring nursing interventions: disorders, health conditions, life processes, motivation to increase well-being, and conditions of vulnerability were presented by patients. After exclusion of repetitions a total of 832 terms and expressions were collected to create the database of this study. The cross-mapping identified 52 different nursing diagnostic labels as shown in Table 1 with an average of 4.6 diagnoses per patient distributed into 9 of the 13 domains of the NANDA-I taxonomy, with emphasis on the domains safety/ protection, perception/cognition, elimination and change, and activity/rest.

The ND Disturbed sensory perception: visual and kinesthetic was removed from the taxonomy of NANDA-I edition 2012-2014. However, it is described in this edition with a review indication suggesting the development of studies to enhance its level of evidence.

No diagnostic labels were identified in the domains 6 – Self-perception, 8 – Sexuality, 10 – Life principles, and 13 – Growth/development. However, the nurses participating in the focus group emphasized the need of the following diagnoses: Situational low self-esteem (00120), Domain 6 - Self-perception and Readiness for enhanced religiosity (00171), and Domain 10 – Life principles.

Other unmapped diagnoses that were identified by the nurses of the focus group include: Ineffective health maintenance (00099) and Ineffective self-health management (00078), Domain 1 – Health promotion; Powerlessness (00125), and Adult

failure to thrive (00101), Domain 9 – Coping/stress tolerance; Risk for falls (00155), Domain 11 – Safety and protection; and Chronic pain (00133) and Domain 12 – Comfort.

Thirty-nine (75%) nursing diagnostic labels identified are actual diagnoses and thirteen (25%) are risk diagnoses. Considering the domains, the most recurrent diagnoses were: Acute pain (n = 146, 57.25%), Risk for infection (n = 121, 47.45%), Impaired gas exchange (n = 103, 40.39%), Decreased cardiac output (n = 98, 38.43%), Acute confusion (n = 35, 13.67%), Deficient fluid volume (n = 26, 10.15%), and Anxiety (n = 22, 8.59%).

Table 2 presents the DCs and related and risk factors of the most frequent nursing diagnostic labels identified in the mapping.

Table 1 –	Distribution of nursing diagnostic labels identified in patients hospitalized in an intensive care unit (N=256) ac-
	cording to the domains of NANDA-I taxonomy, Uruguaiana, Rio Grande do Sul, Brazil, October 2011 to April 2012

Domain	NANDA-I Nursing diagnostic labels and codes	f (%)
1. Health promotion	Ineffective protection (00043)	1 (0.39)
2. Nutrition	Deficient fluid volume (00027)	26 (10.15)
	Risk for unstable blood glucose level (00179)	12 (4.68)
	Excess fluid volume (00026)	8 (3.12)
	Risk for electrolyte imbalance (00195)	7 (2.73)
	Impaired swallowing (00103)	6 (2.34)
	Imbalanced nutrition: less than body requirements (00163)	3 (1.17)
	Imbalanced nutrition: more than body requirements (00001)	1 (0.39)
	Risk for deficient fluid volume (00028)	1 (0.39)
	Risk for imbalanced fluid volume (00025)	1 (0.39)
3. Elimination and exchange	Impaired gas exchange (00030)	103 (40.23)
	Diarrhea (00013)	17 (6.64)
	Impaired urinary elimination (00016)	4 (1.56)
	Constipation (00011)	3 (1.17)
	Dysfunctional gastrointestinal motility (00196)	2 (0.78)
4. Activity/rest	Decreased cardiac output (00029)	98 (38.28)
	Ineffective breathing pattern (00032)	52 (20.31)
	Impaired bed mobility (00091)	24 (9.37)
	Ineffective peripheral tissue perfusion (00204)	21 (8.20)
	Impaired physical mobility (00085)	17 (6.64)
	Risk for ineffective cerebral tissue perfusion (00201)	8 (3.12)
	Disturbed sleep pattern (000198)	5 (1.95)
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To be continued

	Fatigue (00093)	2(1 17)
	Insomnia (00095)	3 (1.17)
	Risk for decreased cardiac tissue perfusion (00200)	2 (0.78) 1 (0.39)
	Risk for ineffective gastrointestinal perfusion (00202)	1 (0.39)
	Kisk for menecuve gastronnesunar perfusion (00202)	1 (0.39)
5. Perception/cognition	Acute confusion (00128)	35 (13.67)
	Impaired verbal communication (00051)	21 (8.20)
	Risk for acute confusion (00173)	20 (7.81)
	Unilateral neglect (00123)	14 (5.46)
	Disturbed sensory perception: visual and kinesthetic (00122)*	1 (0.39)
	Chronic confusion (00129)	1 (0.39)
	Impaired memory (00131)	1 (0.39)
7. Role/relationships	Dysfunctional family processes (00063)	1 (0.39)
	Anxiety (00146)	22 (8.59)
9. Coping/stress tolerance	Decreased intracranial adaptive capacity (00049)	13 (5.07)
	Grieving (00136)	2 (0.78)
11. Safety/protection	Risk for infection (00004)	121 (47.26)
	Ineffective airway clearance (00031)	75 (29.29)
	Impaired tissue integrity (00044)	64 (25)
	Hyperthermia (00007)	46 (17.96)
	Risk for bleeding (00206)	34 (13.28)
	Hypothermia (00006)	15 (5.85)
	Impaired skin integrity (00046)	14 (5.46)
	Ineffective thermoregulation (00008)	13 (5.07)
	Risk for shock (00205)	8 (3.12)
	Impaired oral mucous membrane (00045)	6 (2.34)
	Risk for impaired skin integrity (00047)	2 (0.78)
	Risk for suicide (00150)	1 (0.39)
12. Confort	Acute pain (00132)	146 (57.03)
	Nausea (00134)	14 (5.46)
	Impaired comfort (00214)	1 (0.39)

Note: * This diagnosis is presented in the edition 2012-2014 of the NANDA-I taxonomy for review.

DISCUSSION

The analysis of nursing records contained in the 256 medical charts of patients hospitalized in the ICU found 52 different diagnostic labels. While other studies simply analyze records to identify diagnoses in certain populations, this study conducted a validation of the diagnoses with nurses of the sector that were able to add information to the records, consequently increasing the reliability of the results.

In the domain Nutrition, the ND identified as the most recurrent was Deficient fluid volume. This diagnosis occurs in situations of hypovolemia, body-fluid depletion, trauma, and gastrointestinal bleeding due to ulcers and surgeries⁽¹⁴⁾; these situations are common in patients hospitalized in ICUs. A Table 2 -Distribution of defining characteristics and related and risk factors of the most frequent nursing diagnostic labels
identified in patients hospitalized in an intensive care unit (N=256) according to the NANDA-I domains . Uru-
guaiana, Rio Grande do Sul, Brazil, October 2011 to April 2012

Domain/Diagnosis	Defining characteristics	f(%)	Related or risk factors	f(%)
D2/ Deficient fluid	Decrease in venous filling	21 (8.20)	Failure in regulatory mechanisms	18 (7.03)
volume (00027)	Decrease in blood pressure	20 (7.81)	Active loss of fluid volume	13 (5.07)
	Increase in pulse rate	14 (5.46)		
D3/ Impaired gas exchange (00030)	Agitation	37 (14.45)	Changes in alveolar-capillary membrane	49 (19.14)
	Abnormal skin color (pale, dusky)	33 (12.89)	Imbalanced ventilation-perfusion	28 (10.93)
	Tachycardia	14 (5.46)		
	Abnormal breathing (change in rate, frequency, depth)	14 (5.46)		
D4/ Decreased cardiac	Variations in pressure reading	79 (30.85)	Altered heart rate	69 (27.95)
output (00029)	Tachycardia	48 (18.75)	Altered afterload	29 (11.32)
	Bradycardia	37 (14.45)	Altered stroke volume	21 (8.20)
	Cold, clammy skin	37 (14.45)	Altered contractility	12 (4.68)
D5/ Acute confusion (00128)	Fluctuation in cognition-level of consciousness	35 (13.67)	Dementia	30 (11.71)
	Agitation	07 (2.73)	Age \geq 60 years	06 (2.34)
	Increased discomfort	04 (1.56)	Alteration in sleep-wake cycle	05 (1.95)
	Fluctuation in psychomotor activity	02 (0.78)		
D9/ Anxiety (00146)	Anxious	17 (6.64)	Altered health condition	12 (4.68)
	Agitation	08 (3.12)	Threat to health condition	12 (4.68)
	Increased breathing	05 (1.95)		
	Nervous	04 (1.56)		
	Insomnia	04 (1.56)		
D11/ Risk for infection (00004)			Invasive procedures	122 (47.65)
			Inappropriate primary defenses	16 (6.25)
D12/ Acute pain	Verbal report of pain	117 (45.70)	Harmful agents (biological,	142 (55.46)
(00132)	Observed evidence of pain	59 (23.04)	chemical, physical psychological)	(33.10)
	Altered blood pressure	51 (19.92)		
	Expressive behavior	44 (17.18)		

study⁽¹⁵⁾ identified the ND Deficient fluid volume in patients victims of trauma; the identified DCs were: increase in pulse rate, decrease in blood pressure, decrease in venous filling; and one of the related factors was active loss of fluid volume (bleeding), a result also identified in the present study.

In the domain Elimination and exchange, the presence of the diagnostic label Impaired gas exchange was identified, which was related to the presence of secretions in the airways and hindered proper gas exchanges to the use of ventilatory support and complications such as pulmonary edema and respiratory failure. This diagnosis was also identified in another study with patients hospitalized in ICUs⁽¹⁶⁻¹⁷⁾ with respiratory disorders. The DCs evidenced in these studies include shortness of breath on mild exertion and altered arterial blood gas (70%); also, during the physical examination abnormal breathing was observed by alteredrate or depth, and tachycardia. Related factors found for this diagnosis include⁽¹⁶⁾ ventilation-perfusion imbalance (100%) and alveolar-capillary membrane changes (89%); these results are similar to the results found in the present study.

In the domain Activity/rest, the most frequent ND was Decreased cardiac output, with Variations in pressure reading as the most frequent DC and Altered heart rate as the related factor. In a study⁽¹⁸⁾ conducted with 51 patients hospitalized in an ICU the ND Decreased cardiac output was identified in 45 (88.24%) patients; related factors identified include: altered contractility and rate, altered preload and afterload, and altered heart rate. The ND Decreased cardiac output is associated with impaired myocardial function, which is related to the presence of cardiovascular problems that lead to alterations in the cardiac output⁽¹⁹⁾. These results were similar to the results found in the present study, as cardiovascular problems (35.9%) were the most frequent problem according to the nursing notes of the studied patients.

In the domain Perception/cognition the most frequent ND was Acute confusion. In this study, this diagnosis was identified in patients presenting clinical conditions such as stroke, traumatic brain injury, and intracranial bleeding. This ND has already been identified in patients victims of trauma⁽¹⁵⁾ with evidence indicating occurrence of great magnitude in populations above 60 years old^(15,20).

In the domain Coping/stress tolerance, the ND Anxiety was the most frequent. This diagnosis makes up the human responses of coping. A study⁽⁹⁾ found that patients hospitalized in ICUs experience stressful situations, such as fear of dying because of the environment that inflicts tension and contributes to increase anxiety. A study⁽²¹⁾ to validate the DCs of the ND Anxiety in patients with chronic heart failure identified DCs similar to those found in this study, including discomfort and insomnia.

In the domain Safety/protection, the ND Risk for infection was identified; the most frequent risk factor was Invasive procedures. Predisposing factors for the occurrence of this ND were related to venous access puncture, use of orotracheal tube, mechanical ventilation therapy, use of tracheostomy, use of drains, surgical incisions, insertion of gastric and vesical probes, and skin lesions with skin breakdown and tissue destruction. Risk for infection in elderly patients is associated with physiological changes of aging, particularly in the immune system, and delay in the tissue healing process⁽²²⁾. Considering that length of stay may expose patients to invasive diagnostic exams and procedures, these factors contribute to a high risk for infections⁽²²⁾.

The presence of the ND Risk for infection was identified in patients who were using mechanical ventilation, orotracheal tube, tracheostomy, and airways suction. These situations increase the risk for infection as patients in such circumstances do not have normal upper airway defenses ⁽²³⁾.

Acute pain was identified as the most frequent ND in the domain Comfort. The DCs and related factors were the same described in other research^(19,24). Verbal report of pain was pointed out as the main DC identified by nurses in the studied ICU to indicate the existence of pain. Verbal response may be spontaneous or requested and may refer to sensory, emotional, or cognitive aspects to characterize the painful experience, being characterized as gold-standard to the assessment of this symptom^(2,25).

In the domains Health promotion and Roles/relationships, the identified diagnoses presented lower frequency. In addition, no diagnoses were mapped in the domains Self-perception, Sexuality, and Life principles. A study performed in an ICU in the southern region of Brazil⁽²⁶⁾ found no psychosocial or psychospiritual needs approached by nurses, although the authors expected such results considering the severity and imminent risk to life of the ICU. This would prioritize psychobiological needs and the consensus to know that there are altered psychosocial needs such as social isolation and communication problems in the context of ICUs.

In the present study, the nurses confirmed, through the focus group, the presence of disorders in the domains Selfperception and Life principles, although there were no records in the medical records pointing out the identification of diagnoses in these domains. Thus, it is worth noting the importance of registering its presence⁽²⁷⁾. For the domain Sexuality, there was no identification of diagnoses. These findings are believed to be related to health specificities of patients hospitalized in the studied ICU, in which the human response Sexuality may not be prioritized.

Knowing the diagnostic profile in light of a standardized nursing language assists in the organization of management and care nursing actions. As the NDs, DCs, and related and risk factors identified in the studied ICU converge to data found in the literature it is possible to visualize the set of phenomena to which the attention of the profession is focused in the context of intensive therapy and for the resolution or prevention of which interventions must be planned. Aware of the interventions to be implemented, nurses may, in advance, plan direct care activities, identify the workforce needed to implement them, and understand the needs of qualification/ improvement of the team. Knowing the diagnoses enable the creation of assessment protocols to reduce the number of incomplete records that may contribute to failures in health care; and this may also assist in the qualification of health care⁽²⁸⁾.

CONCLUSION

This study enabled the identification of clinical situations requiring nursing interventions and the verification of their equivalence with 52 NANDA-I nursing diagnostic labels. Considering the domains, the most recurrent diagnoses were: Acute pain, Risk for infection, Impaired gas exchange, Decreased cardiac output, Acute confusion, Deficient fluid volume, and Anxiety.

In the clinical practice, the identified ND can subsidize the development of a nursing data collection instrument for patients hospitalized in intensive care units. They favor the investment of professionals in seeking evidence-based interventions to discuss necessary actions in order to meet the actual health needs of patients; moreover, they can favor the prescription of computerized institutional nursing. The identified profile can contribute to strengthen the professional identity and clarify the scope of nursing in ICUs.

REFERENCES

- Brasil. Ministério da Saúde. Gabinete do Ministro. Portaria nº 551/GM, de 13 de abril de 2005. Requisitos Comuns para Unidades de Terapia Intensiva de Adultos do Mercosul. In: Brasil. Ministério da Saúde [Internet]. Brasília; 2005[cited 2014 Dec 22]; Available from: http://dtr2001. saude.gov.br/sas/PORTARIAS/Port2005/GM/GM-551.htm
- 2. Herdman TH. Diagnósticos de enfermagem da NANDA Internacional: definições e classificação 2012-2014. 2 ed. Porto Alegre: Artmed; 2013.
- Santos N, Veiga P, Andrade R. Importância da anamnese e do e Importância da anamnese e do exame físico para o cuidado do enfermeiro. Rev Bras Enferm [Internet]. 2011[cited 2014 Dec 22];64(2):355-8. Available from: www.scielo.br/pdf/reben/v64n2/a21v64n2.pdf
- Cruz DALM, Pimenta CAM. Evidence-based practice applied to diagnostic reasoning. Rev Latino-Am Enfermagem [Internet]. 2005[cited 2014 Dec 22];13(3):415-22. Available from: http://www.scielo.br/pdf/rlae/v13n3/ v13n3a17.pdf
- Brasil. Ministério da Saúde. Secretaria Executiva. Política Nacional de Informação e Informática em Saúde: proposta versão 2.0 (Inclui deliberações da 12ª. Conferência Nacional de Saúde). Brasília (DF): Departamento de Informação e Informática do SUS [Internet]. 2004[cited 2014 Dec 22]; Available from: http://bvsms.saude.gov.br/bvs/ publicacoes/PoliticaInformacaoSaude29 03 2004.pdf
- Carvalho EC, Cruz DALM, Herdman TH. Contribuição das linguagens padronizadas para a produção do conhecimento, raciocínio clínico e prática clínica da Enfermagem. Rev Bras Enferm [Internet]. 2013[cited 2014 Dec 22];66(esp):134-41. Available from: http://www.scielo.br/scielo.php?script = sci_ar ttext&pid = \$0034-716720130007000177
- Almeida DV, Oliveira KF, Oliveira JF, Nélia LPNF, Filgueira VSA. Diagnósticos de enfermagem mais frequentes em pacientes internados na Unidade de Terapia Intensiva Coronariana. Rev Arq Med Hosp Fac Cienc Med Santa Casa São Paulo [Internet]. [cited 2014 Dec 22];58:64-9. Available from: http://www.fcmsantacasasp.edu.br/images/Arquivos_ medicos/2013/58 2/03-AO52.pdf
- Moorhead S, Delaney C. Mapping nursing intervention data into the nursing interventions classification (NIC): process and rules. Nurs Diagn [Internet]. 1997[cited 2014 Dec 14];8(4):137-44. Available from: http://www.ncbi. nlm.nih.gov/pubmed/9624991
- Oliveira MF, Freitas MC. Frequent nursing diagnoses and interventions for women under critical care. Rev Bras Enferm [Internet]. 2009[cited 2015 Jan 02];62(3):343-8. Available from: http://www.scielo.br/pdf/reben/v62n3/02.pdf
- Lucena AF, Gutiérrez MGR, Echer IC, Barros ALBL. Nursing Interventions in the Clinical. Practice of an Intensive Care Unit. Rev Latino-Am Enfermagem [Internet].

2010[cited 2015 Apr 26];18(5):873-80. Available from: http://www.scielo.br/pdf/rlae/v18n5/06.pdf

- 11. Benner PE. Expertise in nursing practice: caring, clinical judgment & ethics. In: Benner P, Tanner CA, Chesla CA. 2 ed. New York: Springer Publishing Company; 1992.
- Pavel S, Nolet D. Manual de terminologia. Ministério de Obras Públicas e Serviços Governamentais do Canadá, catálogo nº S53-28, 2002[Internet]. Canadá: Translation Bureau; 2002. [cited 2013 Mar 22]; Available from: http:// www.translationbureau.gc.ca
- Michel JLM, Barros ALBL. A utilização da entrevista em grupo focal para validação de conteúdo de um instrumento de coleta de dados de enfermagem. Acta Paul Enferm. 2000;13(2):138-42.
- Sallum AMC, Santos JLF, Lima FD. Diagnósticos de enfermagem em vítimas fatais decorrentes de trauma no cenário da emergência. Rev Latino-Am Enfermagem [Internet]. [cited 2015 Apr 22];20(1):[08 telas]. Available from: http:// www.redalyc.org/pdf/2814/281421971002.pdf
- Cyrillo RMZ, Napoleão AA, Pace AE, Chianca TC, Carvalho EC, Dalri MCB. Nursing intervention in deficit fluid volume situation's in trauma's victims. Rev Enferm UFPE [Internet]. 2009[cited 2014 Dec 23];3(4):1-11. Available from: http:// www.revista.ufpe.br/revistaenfermagem/index.php/revista/ article/viewArticle/86
- Barbosa PMK, Guimarães AA, Santos VC, Anjos KF. Troca de gases prejudicada: intervenções de enfermagem. C&D Revista Eletrônica da Fainor [Internet]. 2009[cited 2014 Dec 22];2(1):33-45. Available from: http://srv02. fainor.com.br/revista/index.php/memorias/article/ viewFile/60/44
- Aquino RD, Fonseca SM, Lourenço EPL, Leite AL, Bettencourt ARC. Mapeamento dos diagnósticos de enfermagem em uma unidade de pneumologia. Acta Paul Enferm [Internet]. 2011[cited 2014 Dec 22];24(2):192-8. Available from: http://www.scielo.br/pdf/ape/v24n2/06.pdf
- Melo EM, Albuquerque MP. Diagnósticos de enfermagem prevalentes na unidade de terapia intensiva de um hospital público. Rev Enferm UFPE [Internet]. 2012[cited 2014 Dec 22];6(6):1361-8. Available from: http://www.revista.ufpe.br/ revistaenfermagem/index.php/revista/article/viewFile/2514/ pdf_1242
- Pivoto FL, Lunardi Filho WD, Santos SSC, Almeida MA, Silveira RS. Diagnósticos de enfermagem em pacientes no período pós-operatório de cirurgias cardíacas. Acta Paul Enferm [Internet]. 2010[cited 2014 Dec 22];23(5):665-70. Available from: http://www.scielo.br/pdf/ape/v23n5/13.pdf
- Pereira AH, Diogo RC. S. Análise do raciocínio clínico do graduando em e enfermagem na aplicação da Sistematização da Assistência de Enfermagem. J Health Sci Inst[Internet]. 2012[cited 2014 Dec 22];30(4):349-53. Available from:

http://www.unip.br/comunicacao/publicacoes/ics/ed icoes/2012/04_out-dez/V30_n4_2012_p349a353.pdf

- 21. Cavalcanti ACD, Pereira JMV, Santos ROM, Vieira GCA, Santana RF, Correia DMS et al. Estudio de observación de validación clínica del diagnóstico de enfermería ansiedad en pacientes con insuficiencia cardiaca crónica. Enferm Glob [Internet]. 2013[cited 2014 Dec 22];12(30):28-40. Available from: http://scielo.isciii.es/pdf/eg/v12n30/clinica3.pdf
- 22. Sakano LM, Yoshitome AY. [Diagnosis and nursing interventions on elderly inpatients]. Acta Paul Enferm [Internet]. 2007[cited 2014 Dec 22];20(4):495-8. Available from: http://www.scielo.br/pdf/ape/v20n4/17.pdf
- Martins JJ, Maestri E, Dogenski D, Nascimento ERP, Silva RM, Gama FO. Necessidade de aspiração de secreção endotraqueal: critérios utilizados por uma equipe de enfermagem de uma unidade de terapia intensiva. Cienc Cuid Saude [Internet]. 2008[cited 2014 Dec 22];7(4):517-22. Available from: http://www.periodicos.uem.br/ojs/index. php/CiencCuidSaude/article/view/6660
- 24. Carneiro TM, Silva IAS. Diagnósticos de enfermagem para o paciente com necrólise epidérmica tóxica: estudo

de caso. Rev Bras Enferm [Internet]. 2012[cited 2014 Dec 22];65(1):72-6. Available from: https://repositorio.ufba.br/ri/bitstream/ri/15754/1/Taize%20Muritiba%20Carneiro.pdf

- McCaffery M, Ferrell BR, Pasero C. Nurses' personal opinions about patients' pain and their effect on recorded assessments and titration of opioid doses. Pain Manag Nurs. 2000;1(3):79-87.
- 26. Lucena AF, Barros ALBL. Nursing Diagnoses in a Brazilian Intensive Care Unit. Int J Nurs Terminol Classif. 2006;17(3):139-46.
- 27. Chianca TCM, Lima APS, Salgado PO. Diagnósticos de enfermagem identificados em pacientes internados em Unidade de Terapia Intensiva Adulto. Rev Esc Enferm USP [Internet]. 2012 [cited 2014 Dec 22];46(5):1102-8. Available from: http://www.scielo.br/pdf/reeusp/v46n5/10.pdf
- Brasil. Ministério da Saúde. Gabinete do Ministro. Portaria nº 529/GM, de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). In: Brasil. Ministério da Saúde [Internet]. 2013[cited 2014 Dec 22]; Available from: http://www.cvs.saude.sp.gov.br/up/U_PT-M S-GM-529_010413.pdf