Original Article

Using the International Classification for Nursing Practice in the care of women with mastectomy*

Uso da Classificação Internacional para as Práticas de Enfermagem na assistência a mulheres mastectomizadas

Uso de la Clasificación Internacional para las Prácticas de Enfermería en el cuidado a mujeres con mastectomía

Cândida Caniçali Primo[1], Franciéle Marabotti Costa Leite[1], Maria Helena Costa Amorim[2], Raquel Marchesini Sipioni[3], Shayane Helmer dos Santos[3]

ABSTRACT

Objective: To characterize the profile of women that underwent mastectomy and participated in a rehabilitation program, to identify the most common nursing diagnoses and interventions for each diagnosis, using the International Classification for Nursing Practice (ICNP), versión1.0. **Methods:** It was a descriptive study conducted in a referral hospital for Oncology in the city of Vitoria, ES. The sample consisted of 239 randomly selected records and the data was collected in May 2008; the research focused on the records of nursing visits to women with mastectomies. **Results:** Among the 239 participants, 64.8% were between 40 and 59 years, 55% were married, 48.2% finished the elementary school, 60.7% were from the metropolitan region of the ES state, and 34.3 % were housewives. The diagnoses recorded did not have exclusive relationship with breast cancer and may be found in clients with other health alterations. **Conclusion:** The ICNP uses practical methods for making the diagnosis and selection of interventions that facilitate the systematization of nursing care.
Keywords: Nursing diagnosis; Breast neoplasms; Nursing process; Mastectomy

RESUMO

Objetivo: Caracterizar o perfil de mulheres submetidas à mastectomia participantes de um Programa de Reabilitação; identificar os diagnósticos de enfermagem mais comuns e elaborar as intervenções para cada diagnóstico, utilizando a Classificação Internacional para as Práticas de Enfermagem - CIPE/versão1.0. **Métodos:** Estudo descritivo realizado em hospital de referência para Oncologia em Vitória – ES. A amostra abrangeu 239 prontuários sorteados aleatoriamente e os dados, coletados em maio de 2008, focaram os registros das consultas de enfermagem às mulheres mastectomizadas. **Resultados:** Dentre as 239 participantes**,** 64,8% tinham entre 40 e 59 anos, 55%, eram casadas, 48,2% cursaram o ensino fundamental incompleto, 60,7% eram da região metropolitana do Estado do ES e 34,3% exerciam atividades do lar. Os diagnósticos registrados não possuíam relação exclusiva com o câncer de mama e podem ser verificados em clientes com outras alterações de saúde. **Conclusão:** A CIPE utiliza métodos práticos para elaboração do diagnóstico e seleção das intervenções que facilitam a sistematização da assistência de enfermagem.
Descritores: Diagnóstico de enfermagem; Neoplasias mamárias; Processos de enfermagem; Mastectomia

RESUMEN

Objetivo: Caracterizar el perfil de las mujeres sometidas a mastectomía que participan de un programa de rehabilitación, con la finalidad de identificar los diagnósticos de enfermería más comunes y elaborar intervenciones para cada diagnóstico, utilizando la Clasificación Internacional para la Práctica de Enfermería (CIPE), versión1.0. **Métodos:** Se trata de un estudio descriptivo realizado en un hospital de referencia de Oncología en la ciudad de Vitoria, ES. La muestra consistió de 239 expedientes seleccionados al azar y los datos fueron recolectados en mayo de 2008, el estudio se concentró en los registros de consultas de enfermería para mujeres con mastectomía. **Resultados:** Entre las 239 participantes, 64.8% tenían entre 40 y 59 años, 55% estaban casadas, 48,2% terminaron la escuela primaria completa, 60,7% eran de la región metropolitana del estado de ES y 34,3 % ejercían las tareas del hogar. Los diagnósticos registrados no tenían relación exclusiva con el cáncer de mama y pueden ser verificados en clientes con otras alteraciones de salud. **Conclusión:** La CIPE utiliza métodos prácticos para hacer el diagnóstico y la selección de las intervenciones que facilitan la sistematización de los cuidados de enfermería.
Descriptores: Diagnóstico de enfermería; Neoplasias de la mama; Procesos de enfermería; Mastectomía

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** Study carried out at Universidade Federal do Espírito Santo.*

[1] Master in Collective Health. Professor at the Nursing Undergraduation course, Universidade Federal do Espírito Santo - UFES - Vitória (ES), Brazil.

[2] Nursing Ph.D. Professor at the Nursing Undergraduation Course and of the Postgraduation program in Collective Health Care, Universidade Federal do Espírito Santo - UFES - Vitória (ES), Brazil.

[3] Nurse, educated at the Universidade Federal do Espírito Santo - UFES Vitória (ES), Brazil.

Corresponding Author: **Cândida Caniçali Primo**
R. João de Oliveira Soares, 241/701 - Jardim Camburi - Vitória - ES - Brazil
CEP. 29090-390 E-mail: candidaprimo@gmail.com

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INTRODUCTION

Currently, breast cancer is the type of cancer with the highest mortality rate among women, especially in developed countries, and its occurrence is increasing also in developing countries. This may be related to the current ways of living, in which we have an increasingly competitive world with people taking up habits that may be associated with several risk factors to develop a neoplasia, especially breast cancer[1].

Among the types of cancer, breast cancer is the most common and the second cause of death among western women, this can be easily proven by the high index of new cases identified every year. According to data of 2008, for example, in Brazil about 49,400 new cases of breast cancer were identified with an estimate risk of 51 cases for each 100 thousand women in Espírito Santo, the expected incidence of breast cancer is 45.85 cases in 100 thousand women and, for the capital city, Vitória, there is a higher incidence of new cases: 81.43 cases/ 100,000 women[2].

Additionally, breast cancer is a disease that involves genetic, environmental and personal factors among others which affect women regardless of their social classes, color, marital status, religion, among other factors[1]. For that reason, nursing professionals should perform a different type of care.

Nursing is a profession whose main objective is care, that is, to provide quality care to individuals that are experiencing a disease process to guarantee that they go through the process in the best possible way[3]. As it is known, women who have breast cancer have several of their basic needs changed, and nurses have the role to identify and help them change this picture.

To provide proper care, professionals should use their theoretical knowledge, associating it with the practice. This assumes knowledge on nursing theory to use the most adequate theoretical model to implement nursing processes to that individual[4].

There are several ways nursing processes can be dealt with. One of them, which is very promising, is to deal with the diagnoses and nursing interventions (stages of the nursing process), using the International Classification for the Nursing Practice (ICNP®), created by the International Council of Nurses (ICN) in 1989, so that nursing can make diagnoses uniform worldwide[5].

In 1996, the alpha version was created stating that ICNP® would provide a structure, in which the vocabulary and the existing classifications could be cross-mapped to compare nursing data collected through other classification systems. However, over the years, with the use of this classification system, it was seen that it needed to go through revisions to meet the goals previously mentioned. Thus, in 2005, the newest version of ICNP® was created, the Version 1.0, which came after versions Beta (1999) and Beta 2 (2001)[6].

The Beta version, published in 1999, provided an opportunity to expand the participation in the continuous development of ICNP®. But when nurses worked with this version, they recommended several changes, especially regarding the grammar, corrections, changes in codes, and corrections in the definitions, which lead to the creation of version Beta 2[7].

Version Beta 2 has a multi-axial focus that enables the combination of the concepts of the different axes, making the classification of nursing phenomena, actions and outcomes more detailed and robust. This version worked with a total of 16 axes in its structure, eight axes for the nursing phenomena classification structure and eight axes for the nursing actions classification structure which made the preparation of nursing diagnoses and interventions a long and hard working process[6].

Version 1.0 came to simplify the use of this diagnostic classification, because the model that, in version Beta 2, had eight axes, started to have seven axes and was used both for the preparation of diagnoses and for nursing actions. In this version the axes are: focus (care area, which is relevant for nursing), judgment (clinical opinion or determination related to the focus of nursing practice), means (way or method to perform an intervention), action (intentional process applied to a client), time (moment, period, instant, interval or duration of an occurrence), location (anatomical and spatial orientation of a diagnosis or interventions) and client (individual who receives a diagnosis or undergoes an intervention)[7].

The purpose of the nursing process is to identify the care needs of patients' health, establishing a treatment plan and complementing the nursing interventions that meet the basic human needs of patients/clients[3].

Because post-mastectomy women go through a disease process for a long period, and many of their basic human needs are changed, nursing care for these women must be effective in order to help them go through this process with the minimum amount of damage.

From these remarks, the present study aimed to characterize the profile of post-mastectomy women that took part in the *Programa de Reabilitação para Mulheres Mastectomizadas* (Rehabilitation Program for Post-Mastectomy Women - PREMMA), according to the following variables: age, education level, marital status, profession, place of living, identification of the most frequent nursing diagnoses, and to prepare the interventions in women attending the nursing appointment, using the International Classification for Nursing Practice (ICNP®) - version 1.0.

METHODS

Retrospective, descriptive study using a quantitative approach. The study was carried out at PREMMA, located in the outpatient clinic of the Hospital Santa Rita de Cássia, in the city of Vitória – ES.

The sample selected randomly, through a draw, 239 charts from a total of 625 which had the data collection instrument used in the nursing appointment. We have used 5% accuracy and a 95% confidence interval.

Data collection was carried out in May 2008. When charts were assessed, the terms attributed to nursing practice phenomena were identified and the nursing diagnoses were created, using ICNP® – version 1.0. To build nursing diagnoses in ICNP®, the exact concordance of the terms in natural language is considered (only word in the list of local terms with exact similarity to that present in version 1.0), as well as partial concordances (presence of synonyms and terms with related concepts).

To form diagnostic statements, outcomes and nursing interventions, the ICN recommends the use of the Seven-Axis Model of ICNP® version 1.0. To design a nursing diagnoses using ICNP® it is mandatory to use a term of the focus axis and a term of the judgment axis, and additional terms can be included according to the need of the focus/judgment axes and of other axes. To form the nursing interventions, through the ICNP® we must mandatorily use a term of the action axis and at least one target-term, that can be a term of any axis with the exception of the judgment axis[7]. At the end, a descriptive analysis of the data of the frequency table was carried out.

The study has been approved by the board of Hospital Santa Rita de Cássia and by the Research Ethics Committee of the Centro de Ciências da Saúde at Universidade Federal do Espírito Santo, under No 054/08.

RESULTS

Of the 239 charts assessed, we have observed that 55.2% of the patients were married, 18% were single, 16.3% were widows, 6.3% were divorced and 4.2% were in a different type of relationship.

Women's age ranged from 27 and 83 years old, mean age was 52 years old. It was seen that 64.8% of women were in the age group between 40 and 59 years old, as demonstrated by the data presented in Table 1.

As for the level of education, 48.2% of the women had incomplete elementary school, 17.2% had finished high school, 13% were illiterate, 12.6% had finished elementary school, 4.25% did not finish high school, 2.5% had finished university, and 2.1% had not finished university.

It was observed that 60.7% of the women from the sample that took part in the Program were from the Metropolitan Area of Espírito Santo, 6.3% live in Linhares Pole and 6.3% came from other states such as Minas Gerais, Bahia and Rondônia. The remaining women were from other micro regions of the state. To divide the place, we have used the State division according to micro regions of the Espírito Santo Economy and Planning Secretariat[8].

As for profession, 34.3% were housewives, 12.1% were maids, 10.6% were farmers, 7.9% were general service assistants, 7.5% were retired, 4.6% were seamstress, 3.8% were self-employed, and 19.2% had several other professions.

Table 1 – Sociodemographic profile of women seen in PREMMA/HSRC/AFECC. Vitória/ ES, May/ 2008.

Marital Profile	N	%
Status		
Married	132	55.2
Single	43	18
Widow	39	16.3
Divorced	15	6.3
Other type of relationship	10	4.2
Age group		
27 – 29 years	3	1.3
30 – 39 years	29	12.1
40 – 49 years	73	30.5
50 – 59 years	82	34.3
60 – 69 years	31	12.9
≥ 70 years	21	8.9
Education level		
Illiterate	31	13.0
Incomplete elementary education	115	48.2
Complete elementary education	30	12.6
Complete high school	41	17.2
Incomplete high school	11	4.25
Finished university	6	2.5
Did not finish university	5	2.1
Place of living		
Metropolitan Area	145	60.7
Linhares Pole	15	6.3
Colatina Pole	14	5.8
Central Serrana	13	5.4
North Coast	8	3.3
Southeast Serrana	8	3.3
Northwest 2	7	2.9
Northwest 1	5	2.2
Caparaó	4	1.7
Extreme North	3	1.3
Cachoeiro Pole	2	0.8
Other States	15	6.3
Profession		
Housewife	82	34.3
Farmer	29	12.1
Maid	25	10.6
General services assistant	19	7.9
Retired	18	7.5
Seamstress	11	4.6
Self-employed	9	3.8
Other professions	46	19.2

Table 2 – Nursing diagnoses of post-mastectomy women seen in PREMMA/ HSRC/ AFECC. Vitória/ ES, May/2008.

	Nursing Diagnoses	N	%
1	Lack of Exercise Pattern	178	74.5
2	Low Self Care at times	167	69.6
3	Impaired Psychological Well Being	167	69.6
4	Low School Knowledge	145	60.7
5	Impaired Eating Pattern	141	59.0
6	Impaired Fluid Intake	132	55.2
7	Impaired Sleep Pattern	109	45.6
8	Lack of Sexual Intercourse	100	41.8
9	High Blood Pressure	97	40.6
10	High Contraceptive Use	90	37.6
11	Actual and continuous Constipation	67	28.0
12	Impaired Sexual Intercourse	54	22.6
13	Interrupted Tobacco Abuse	38	15.9
14	Impaired Urination Pattern	37	15.5
15	Lack of School Knowledge	31	13.0
16	Absence of Pregnancy	27	11.3
17	Interrupted Alcohol Abuse	20	8.4
18	Actual Tobacco Abuse	13	5.4
19	Actual Alcohol Abuse	12	5.0
20	High Promiscuity	8	3.3

From the terms attributed to the nursing practice phenomena raised from the charts, 20 nursing diagnoses were created, those that presented a frequency higher than 50% were: lack of exercise pattern (74.5%), low self-care at times (69.6%), impaired psychological well-being (69.6%), low school knowledge (60.7%), impaired eating pattern (59%) and impaired fluid intake (55.2%), according to data from Table 2.

For the most frequent nursing diagnoses – percentage above 50% – some nursing interventions were prepared according to the Seven-Axes Model of the ICNP® version 1.0 and the instructional material prepared by the PREMMA(9) multidisciplinary team was used as a reference (Picture 1).

DISCUSSION

As for marital status, more than half of these women (55.2%) were married, this agrees with another study carried out by PREMMA, in 2004 that tried to identify the profile of the women that took part in the rehabilitation program[10].

Picture 1 – Relation between goals and interventions for the nursing diagnoses of post-mastectomy women seen in PREMMA/ HSRC/ AFECC. Vitória/ES, May/2008.

Diagnose	Interventions
Lack of Exercise Pattern	Explain the benefits of physical activity Encourage the practice of physical exercises Give alternatives to the practice of physical activities Assess the ability to practice a certain type of exercise Guide patients and family members regarding the exercises prescribed in each session Demonstrate how to practice the exercises Practice exercises twice a day, according to the instructional material Give instructional material to patients
Low Self-Care at times	Assess the ability to learn self-care Encourage self-care according to the patients' capacity Explain the importance of breast self-examination Teach the correct technique for breast self-examination Offer a routine of self-care activities Assist patients that are able to perform self-care Guide family and/or caregiver about the importance of encouraging self-care Give opportunities to learn again or adjust to self-care activities Supervise the activity that they can do alone with safety.
Impaired Psychological Well Being	Assess psychological status Foster socialization Offer a quiet environment Offer psychological support Offer leisure activities to reduce stress Encourage communication with the patient Offer information on the diagnosis, treatment and prognosis Guide patients regarding the use of relaxation techniques according to the instructional material Listen carefully Encourage positive thinking Encourage them to verbalize their feelings, perceptions and fears Encourage patients to identify stressful factors such as situations, events and personal interactions Support the decision making process Require a psychology service for evaluation

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Low School Knowledge	Assess the learning capacity Foster educational groups Make guide books with pictures and drawings Encourage participation in the interdisciplinary group Identify cultural questions that interfere in communication and/or learning Make communication according to the sociocultural aspects of patients Use clear and simple language
Impaired Eating Pattern	Explain the importance and benefits of adequate food intake Assess the patients' diet preferences Check patients' knowledge on their nutritional needs Encourage oral hygiene before and after meals Encourage the intake of healthy foods Guide the changes of diet habits Offer a positive reinforcement of the proper diet habits Guide eating slowly and chewing food well Teach how to fraction the diet into five to six daily meals Encourage complete use of food (stems, leaves, seeds and peels) Guide on the health risks caused by imbalanced nutrition Offer positive reinforcement of adequate diet habits Avoid drinking liquids during the meals Guide them on the use of whole food Teach the correct preparation of food Refer them to the dietician ward when necessary Guide patients and family members regarding the diet prescribed for diet education
Impaired Fluid Intake	Explain the importance and the benefits of adequate fluid intake Encourage frequent fluid intake Encourage the use of natural juices and vegetables Guide patients to monitor the characteristics of urinary elimination Watch out for dehydration Assess the characteristics of urinary elimination Guide for the health risks caused by low water intake Weight the patient

One of the risk factors for developing breast cancer is to be over 35, since it is a rare disease in women below this age. Its incidence is predominant in the age group from 40 to 60 years[2]. These data agree with the ones from the present study, since 64.8% of the women were in the age group between 40 and 59 years old. Additionally, the study on breast cancer: risk and predictive factors and prognosis showed that in Brazil mean age of the onset of breast cancer is 52 years old[1]. This data is similar to that found by the present study in which we have noticed that the mean age in this sample was 52 years old.

The predominant level of education in the sample was incomplete elementary school (48.2%), demonstrating low educational levels. This data is in agreement with the study carried out in 2004, in PREMMA that presented similar results[10].

As from where these women were from, most of them (60.7%) lived in the Metropolitan Area. However, we have noticed while we were taking the notes of the appointments that many of them reported the place they were staying rather than the place they really lived in. Additionally, the instrument of data collection does not have fields to differentiate between the place of living and the place they were currently living. Therefore, data regarding the where they came from may not be reliable.

Most women were housewives (34.3%), followed by maids (12.1%) and farmers (10.6%).These data show that this population is formed by women that have tasks mainly connected with family care. As a great part of women in stressful situations had family and financial problems, we think that the professions previously mentioned can contribute to the increase in the stress level of these women.

Although ICNP® has a proposal to unify the existing nursing classifications, fostering a language in nursing that can be made universal and, thus, it can lead to results that depict and support the nursing clinical practice. It is a relatively new classification, when compared to other diagnostic classifications such as NANDA and, additionally, not many nursing professionals know and use it correctly in our country. For that reason, a few studies that used it have been carried out, and we could not find studies on women with breast cancer within the area of women's health[11-12].

To consider the importance of ICNP® in the development of new care models, we have mentioned four studies. The first was carried out in a hospital from the public sector in the city of João Pessoa - PB, in the

care of individuals with leprosy being hospitalized and or in outpatient treatment, in which ICNP®- version Beta 2 was used to identify the nursing diagnoses for these patients[13]. Another study carried out in Campo Grande-MS, was developed in two regional health centers and nursing interventions were assessed for the most frequent diagnoses in gynecology based on ICNP®- version Beta 2[11]. Another study tried to identify and classify nursing actions with pregnant women with HIV, using version Beta 2 in São Paulo - SP[12]. The fourth study carried out searched for nursing language terms present in records of a neonatal ICU in the state of Paraíba and compared it to the terms of the present study in the model of ICNP® – version 1.0[5].

Using ICNP®, the analysis of the data obtained showed that 74.5% of the women presented the diagnosis lack of exercise pattern; this may have contributed to the development of breast cancer. As it is known, there are mechanisms by which physical activity becomes a protective factor against cancer. Among these mechanisms, we may highlight that physical activity can inhibit DNA oxidation, hindering the process of the onset of the neoplasia, it helps inhibiting the spread of cancer by the stimulation and function of NK (Natural Killer) cells and it decreases the additional secretion of insulin, which is a potential neoplasia promoter. Additionally, this practice tends to decrease body fat levels since obesity reduces the number of protein carriers which are responsible for fixing and transporting free estradiol, which contributes to the development of breast tumors[14].

About 69.6% of patients presented diagnosis of low self-care at times. This diagnosis is especially related to the performance of the breast self-examination (BSE) and Papa smear. These screenings are essential for the prevention of breast and cervical cancer respectively.

By performing monthly BSE, women start to get to know their anatomy better and can identify earlier tangible changes in their breast tissue[4]. Furthermore, women that do not practice BSE usually present significantly higher tumors compare to those that do it monthly or less than once a month, so there is a significant relationship between the primary tumor and the presence of metastatic axillary lymph nodes and the lower or no frequency of BSE performance. As for papa smear, periodical performance is an excellent opportunity for the performance of clinical breast examinations by health professionals and for the screening for cervical cancer[15].

The third most frequent diagnosis, impaired psychological well-being was present in 69.6% of the patients. Stressful situations that affect the psychological state of an individual can change their immunological response, significantly interfering in the mechanism of tumor suppression[4].

Additionally, studies confirm that the immunological system is closely connected with the neuroendocrine and autonomous systems, and the response to these stressful situations to the body can interact to start, weaken, encourage, or terminate an immune response and, also, they say that problems of the everyday life have more impact on health than more important events because they have an accumulative effect over the years[16-17]. This has been seen in the present study, because the stressful situations reported by the patients were especially connected with problems faced every day, such as family (alcoholism, drug use and family arguments) and financial problems.

We have identified that 60.7% of the women presented low school knowledge (complete and incomplete elementary school). These levels of education can be attributed to two factors: poor financial condition, and lack of access to education, because a great part of these women lived in rural areas as kids where education was really poor.

The facts can have a direct implication in the quality of self-care of these women, because low school knowledge and learning become factors that prevent correct performance of BSE, they also limit the search for health services when there is some kind of change. The statement agrees with a study which found out that the level of education influences the practice of BSE and that the group of women with better education and that knew BSE practices, performed it in a more effective way[18].

The standard diagnosis impaired eating pattern was present in 59% of the charts, demonstrating that most patients did not have a balanced diet; they took a great amount of fatty food. Estrogen is stored in the adipose tissue and the lipids ingested through the food increase pituitary prolactin, increasing the production of estrogen. As the development of some breast cancers is connected with high rates of estrogen, a diet rich in fat is a risk factor for the development of this type of cancer[4].

The diagnoses impaired fluid intake is present in 55.2% of the women that visited PREMMA. Through this finding, we saw that patients drank less than two liters of liquid a day. Water takes part in the excretion of metabolites in the body and thus, if fluid intake is deficient, individuals' nutrition is hampered with retention of metabolic wastes. As we know, part of the medications ingested are excreted by the urine and when there is not enough intake of fluid, the toxins that would be excreted stay longer in the body that is negatively exposed to them[19].

As it is a retrospective study based on chart data, there are some limitations. For example, the data collection instrument of the nursing appointment at PREMMA is incomplete since there were no

investigations on the items that best characterized patients' health dysfunctions, such as data on self-esteem, pain and movement of the limb ipisilateral to surgery, space for physical examination description, among others.

Because it is still not used by many health centers in Brazil and because PREMMA is a program in which students take part during their undergraduate studies and it is a rehabilitation center which is a reference in the country, it is suggested that allied to the changes in the instrument for consultation ICNP® should be used to systematize nursing care provided to these patients.

CONCLUSION

As for the profile of post-mastectomy women, it was observed in the present study that the mean age was 52 years old; most women were married, with incomplete high school, came from the Metropolitan area of Espírito Santo and were housewives.

The most frequent diagnoses were: lack of exercise pattern (74.5%), low self-care at times (69.6%), impaired psychological well-being (69.6%), low school knowledge (60.7%), impaired eating pattern (59%), and impaired fluid intake (5.2%). The nursing diagnoses found do not present an exclusive relationship with breast cancer and they can be found in clients with other health problems.

Building nursing diagnoses and interventions using ICNP® was a hard activity, because we did not master this referential and it was difficult to build nursing diagnoses in this study because ICNP® has short and simple definitions, however, sometimes they are not very clear, leaving room for questions and/or different interpretations of the axis focus. In the axis judgment, it was also difficult to understand the definitions because they were little explanatory at times.

The nursing process is an essential instrument to systematize care and it should be always used by nurses. Through the ICNP®, nurses share a specific language with the other health professionals, fostering their autonomy when they plan actions for patients' care. Therefore, this practice contributes to the proper development of nursing care planning. ICNP® uses practical methods to make diagnoses and interventions, facilitating the performance of the nursing process and encompassing aspects that are not approached by other existing diagnostic classifications.

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