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Developing a subset of ICNP nursing diagnoses for medical and surgical hospital settings, informed by an Italian nursing conceptual model: a multicenter cross-sectional study

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Key words: International Classification for Nursing Practice, nursing classification, nursing conceptual model, medical and surgical settings, standardised nursing terminology.

Parole chiave: Classificazione Internazionale della Pratica Infermieristica, Classificazioni infermieristiche, modello concettuale infermieristico, Area Medica e Chirurgica, terminologia infermieristica standardizzata

Abstract

Background. *The International Classification for Nursing Practice (ICNP) is designed to facilitate the expression of nursing diagnoses, interventions and outcomes. The development of the ICNP subsets may support nurses by providing appropriate terms for documenting nursing care. This project aimed to develop a subset of ICNP nursing diagnoses oriented by an Italian Nursing Conceptual Model (MPI) to describe nursing clinical data in medical and surgical acute hospital wards.*

Study design. *A subset of ICNP nursing diagnoses was developed based on a literature review and on an expert consensus. A cross-sectional study was conducted in three Northern Italian hospitals to empirically test the subset in target settings.*

Methods. *In accordance with the guidelines adopted by the International Council of Nursing, the study followed the process for developing an ICNP subset. Twelve expert nurses from clinical settings and nursing education in surgical and medical care participated in a Delphi method to further validate the subset. A cross-mapping process has been implemented and the prevalence of diagnoses was described. Data were collected from healthcare documentation of admitted patients, including, retrospectively, nursing clinical data from the patients' admission date to the time of data collection.*

Results. *Documentation from 476 admitted patients was analysed: 228 were from surgical and 248 from medical wards. 24,142 nursing diagnoses were detected consulting retrospectively each documentation. A total number of 21,401 nursing diagnoses (88%) were fully mapped by the ICNP subset.*

Conclusions. *Results showed a high capability of ICNP terminology to describe nursing care in acute medical and surgical areas in Italian hospitals. The identified subset of ICNP diagnoses could be a valuable way to support a computerized documentation system for hospitals using MPI and ICNP. Results could be used to start revising nursing education programs in order to introduce this nursing standardized terminology combining it with the nursing conceptual model in use.*

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Abbreviations. ICNP: International Classification of Nursing Practice; MPI: Nursing Conceptual Model; ICN: International Council of Nursing; HER: Electronic Healthcare Record

Introduction

Nursing terminologies and classifications represent relevant tools for making the practice of nursing visible in complex, evolving healthcare settings (1). They allow nurses to rigorously document nursing clinical data with standardized language and to make measurable nursing diagnoses, outcomes, and interventions, as key elements in the description of nursing care (2).

The *International Classification for Nursing Practice* (ICNP), developed by the *International Council of Nurses* (ICN), has been defined as a unified language for nursing. It is a compositional terminology for nursing practice that facilitates developing and cross-mapping of local terms and existing terminologies (3, 4, 5). The ICNP has been accepted in 2009 by the World Health Organization (WHO) as part of the WHO Family of International Classifications (WHO-FIC) (6, 7). The last version of the terminology, published in 2015, includes approximately 4,000 concepts to describe nursing practice (8). Furthermore, 1,589 pre-coordinated statements of nursing diagnoses, outcomes, and interventions were included, facilitating the terminology's use in clinical, educational, and research settings. Such a wide range of terms, concepts and statements can be grouped in subsets, according to clinical areas, populations of interest, or adopted conceptual frameworks, in order to match specific characteristics of nursing in different clinical and sociocultural contexts (9). Thus, a subset of ICNP nursing diagnoses, interventions and outcomes, is a group of statements specifically developed for a nursing clinical or cultural setting (10). Subsets are defined as clinically relevant sets of concepts considering, but not limited to, nursing assessment findings, nursing diagnoses, nursing interventions, and patient outcomes. The subset contained a clear predominance of concepts useful for the target setting (11).

Furthermore, developing ICNP subsets could facilitate the terminology's implementation within healthcare documentation systems and the accessibility of prevalent nursing phenomena in the area of interest (12, 13). If the nursing documentation is not accurate and adequate, there is an obvious risk to patient safety and well-being, as well as to the continuity of nursing care (14).

In Italy, a working group has been established to translate and disseminate the terminology, and several studies have been carried out to test the ICNP around the country (15-17). Recently, an Italian ICNP Research and Development Center was established and accredited by the International Council of Nurses to promote the knowledge and the utilization of ICNP terminology (18).

The *Modello delle Prestazioni Infermieristiche* (MPI) is a nursing conceptual model developed by Cantarelli (19) at the end of the last century to provide a representation of nursing that could take into account cultural peculiarity of Italian nursing profession. It is based on the definition of 11 nursing needs intended to potentially describe the entire Italian nursing practice. These needs are defined as follows: breathing; nutrition and hydration; urinary and bowel elimination; personal hygiene; movement; resting and sleeping; maintaining cardiovascular function; safe environment; interacting in communication; therapeutic procedures; and diagnostic procedures (20). The MPI has been chosen by several healthcare organizations and universities, particularly in Lombardy region, to define nursing care and to orient nursing practice, education, and research (21, 22).

Previous studies evaluated the theoretical consistency of ICNP terms and pre-coordinated statements with the main MPI concepts (man-person, environment-society, health-illness, and nursing need) and with

nursing process phases as presented by this theory (23, 24). A second study group used the MPI and the ICNP together to measure nursing phenomena in Italy (25). However, no studies developed an ICNP subset of nursing diagnoses to support nursing process documentation in Italian medical and surgical hospital settings. Therefore, the aim of this study was to develop a subset of ICNP nursing diagnoses oriented by MPI to describe nursing clinical data in Italian acute medical and surgical hospital wards.

Methods

A review of the literature was conducted using the SUMSearch, DARE, MEDLINE, CINAHL, SCIRUS and SCOPUS databases. The following key words were mainly used: ICNP language, (language) AND (nurs*) AND (diagnoses), "NANDA" AND "ICNP", "Nursing Diagnosis/classification" [Majr] AND "ICNP", "Systematized Nomenclature of Medicine" [Majr] AND nursing [Mesh], "Vocabulary, Controlled" [Majr] AND "Nursing Diagnosis" [Majr], "ICNP", International Classification for Nursing Practice AND Nursing Diagnosis [Mesh], "ICNP" AND "subset", (MH "Nursing Models, Theoretical+") AND (MM "International Classification for Nursing Practice"), (MH "International Classification for Nursing Practice") AND (MH "Nursing Diagnosis"), (MH "International Classification for Nursing Practice") AND nursing education, (MH "Concept Mapping") AND (MH "Nursing Classification+"), "International Classification for Nursing Practice" AND "nursing conceptual model".

We searched for and combined with the Boolean operator "AND" all relevant subject headings, using the explosion function where needed, and keywords in titles and abstracts published in English. The titles and abstracts of the articles were screened by one investigator and selected for full-text review if relevant to the objectives. This literature review was performed to identify prevalent nursing diagnoses in medical and surgical settings, and studies using any kind of nursing terminology were considered if consistent with this clinical areas.

A subset of 162 ICNP nursing diagnoses was developed with ICNP terms based on the literature review we performed and following the recommendations of ICN for the development of nursing diagnoses (26). Then, according to the chosen theoretical framework (MPI), ICNP nursing diagnoses were organized into the following nursing needs: breathing; nutrition and hydration; urinary and bowel elimination; personal hygiene; movement; resting and sleeping; maintaining cardiovascular function; safe environment; interacting in communication; therapeutic procedures; and diagnostic procedures (27).

A Delphi methodology was used to validate the subset for its clinical applicability and its relevance for the Italian clinical practice. We performed this methodology to assure that nursing diagnoses included in the subset, - previously identified by the literature review and coming often from cultural context different from the Italian one - were considered as appropriate to describe Italian nursing practice. The anonymized data from both rounds of this process are available in a Delphi plain language summary. This method is highly valued for its ability to structure the consensus process (28, 29). Using this methodology, the identified 162 ICNP nursing diagnoses were subjected to a preliminary assessment by a panel of experts (n = 14). All communication between the experts and the researcher was via individual e-mail. The emails to the experts contained in-depth information about how the diagnoses were organized into the subset and specified that this study did not seek to identify best practices, but rather to identify nursing diagnoses useful to describe the

needs of medical and surgical patients when documenting nursing care (30). Inclusion criteria for the panel of experts were as follows: specialized education in surgical and medical care, more than two years of clinical experience in these clinical settings, experience in MPI use, and experience using electronic healthcare records (EHRs) in nursing documentation.

The expert group evaluated the subset, judging its relevance and applicability to Italian medical and surgical areas. Specifically, experts have argued about usefulness of nursing diagnoses in the Italian surgical and medical areas. The purpose was to obtain the experts' individual ratings and calculate a preliminary agreement from the mean score for each nursing diagnosis (31). Based on the mean score to one decimal place, the researchers determined the diagnoses' relevance and practical usefulness in documenting care in surgical and medical areas. The degree of usefulness has been shown on a 4-point Likert scale, as to whether the concepts were relevant and useful in documenting nursing care. A score of 1 was "not relevant or not useful," and 4 was "very relevant or very useful" (32). The experts reviewed and scored each included diagnosis and had the opportunity to propose revisions. The experts had two weeks to score them and suggest alternative formulations. A 90 percent content validity ratio was obtained. After this, an empirical cross-sectional study was planned to test the subset in the chosen clinical settings. This study's details are reported below.

Design

A cross-sectional observational study was conducted in three north Italian hospitals to empirically test the subset of ICNP nursing diagnoses in target settings with the following specific objectives: 1) to describe the prevalence of ICNP nursing diagnoses in Italian medical and surgical settings; and 2) to evaluate the effectiveness of the developed subset to cross-map nursing phenomena in Italian medical and surgical settings.

Sample and setting

A convenience sample of 476 patients, admitted to surgical and medical wards of the involved hospitals, was selected for the study. None of the involved hospitals used a standardised nursing terminology at the moment of data collection. All hospitalized patients at the moment of data collection were considered for inclusion in the study sample, avoiding any kind of selection. Only some patients were not included for the following reasons: unavailability of patients' health documentation because it was being used by health professionals; unavailability of patients for ongoing clinical procedures or surgical operations; discharge of patients planned on the same day of data collection.

Data collection

Nursing data from both computerized and paper-format patient records were used. The documents included patient history and current patient status, care plans, progress and discharge notes where available. Data were collected including retrospectively nursing clinical data from the admission date to the time of data collection. All retrieved nursing problems were cross-mapped with the pre-identified subset of ICNP diagnoses (33). An analysis of the content of the standard clinical data was conducted. Sentences were divided into the smallest meaningful unit of analysis to reach simple sentences.

Where the meaning of the natural language was not immediately clear, observations and interviews were performed, both with patients and health professionals, to assure the meaning of the natural terms used by nurses. Furthermore, patient history, current health status, planned or implemented interventions, or outcome were considered to be really sure about the meaning of the terms used by nurses to define nursing diagnoses in their

documentation (34). At this point, retrieved terms were cross-mapped using the ICNP browser (35). Thus, the terms used by nurses were compared with the terms included in the ICNP Version 2013, considering their definitions as provided by the terminology of the ICN. Two researchers cross-mapped those terms individually, basing on the ICN definitions, to assure the rigour of the process and all terms were cross-mapped into the ICNP nursing diagnoses on the basis of the agreement of the two researchers. Where doubts were still present, deep discussion of the local or ICNP meaning of terms were performed by researchers to reach an agreement about the best cross-mapping with the ICNP terminology. The context in which the term was written was used to determine its appropriate position in the nursing process (problems or diagnosis, interventions, outcomes or objectives). Only nursing diagnosis statements were considered in the study design.

Data analysis

Descriptive and inferential statistics were applied to describe and compare patients' demographic and epidemiological characteristics and nursing diagnoses in the surgical and medical areas. Microsoft Office Excel, version 2010, and IBM SPSS, version 20 statistical software, were used for data analyses.

Ethical aspects

Authorizations were obtained from the three hospitals' Institutional Review Boards and medical and nursing directors. The nursing coordinators, the nurses, the patients in the surgical and medical departments, and the panel of experts who assessed nursing needs and outcomes formulated by the ICNP for the Surgical and Medical areas, were adequately informed.

They received the explanatory letters defining characteristics of the multicenter cross-sectional study. The protection and confidentiality of the data were guaranteed according to applicable privacy laws (36).

Results

A total of 476 patients from surgical (n = 228) and medical (n = 248) units were included in the study. The main group of patients was between 73 and 83 years old (n = 164; 34.45%). Male patients were 58% in surgical (n = 133) and 48% in medical settings (n = 119). Female patients were 42% in surgical (n = 95) and 52% in medical settings (n = 129). The prevalence of the main medical diagnoses by consulting clinical documentation is reported in Table 1. The prevalent comorbidities concerned the cardiovascular, circulatory, and haematological functions (n = 141; 29.62%), metabolic and endocrine functions (n = 86; 18.07%), digestive and gastrointestinal functions (n= 70; 14.71%), and urinary and renal functions (n= 52; 10.92%) (37) (Table 2).

A total number of 24,142 ICNP nursing diagnoses were detected consulting retrospectively patients' documentation. The concurrent use of MPI and ICNP allowed the description of the prevalence of nursing needs in surgical and medical areas. The patients' needs for nutrition and hydration (n = 4,279 ICNP nursing diagnoses; 19.99%), personal hygiene (n = 3,204 ICNP nursing diagnoses; 14.97%), safe environment (n = 2,857 ICNP nursing diagnoses; 13.35%), maintaining cardiovascular function (n = 2,553 ICNP nursing diagnoses; 11.93%) were prevalent in both the surgical and medical areas. The three prevalent nursing diagnoses for each MPI nursing need are reported in Table 3.

Considering the whole number of ICNP diagnoses (n= 24,142), the prevalent ones were as follows: inability to perform personal hygiene, lack of knowledge of the therapeutic regime, impaired ability to dress and impaired sleep (Table 4). Out of these,

Table 1 - Medical diagnoses at the admission of the recruited patients by International Classification of Disease (ICD) Groups (n = 476).

Main medical diagnosis by ICD groups	p(x)%	f(x)	Surgical Area f(x)	Medical Area f(x)
Gastrointestinal function	26.05	124	103	21
Cardiovascular and hematological function	19.54	93	6	87
Respiratory function	17.86	85	8	77
Urinary and kidney function	14.50	69	55	14
Metabolic and endocrine function	8.40	40	16	24
Reproductive function	4.83	23	22	1
Immunological function	4.62	22	15	7
Neurological function	1.89	9	0	9
Skeletal muscle function	1.47	7	0	7
Tegumentaria function	0.84	4	3	1
Neurosensory function	0.00	0	0	0
		476	228	248

21,401 nursing diagnoses (88%) were fully mapped by the ICNP subset we developed.

Researchers composed 27 new ICNP nursing diagnoses because they were not included neither in the developed subset nor in the ICNP pre-coordinated diagnoses list (Table 5). The newly prevalent nursing diagnoses were: risk for dystonia; risk for transmission of infection; delayed surgical healing; lack of knowledge on how to manage simple dressings and risk for physical and psychological stress overload.

Discussion

We developed a subset of ICNP nursing diagnoses for the hospital medical and surgical wards using the MPI and the ICNP. Based on our results, this subset was very effective in describing nursing phenomena both in medical and surgical settings because the majority (about 90%) of phenomena were fully described. Also, 100% of them were described when more ICNP terms were used. This finding

Table 2 - Patients' comorbidities as collected through the medical records (n = 476)

Comorbidities by ICD Groups of diagnoses	p(x)%	f(x)	Surgical Area f(x)	Medical Area f(x)
Cardiovascular and hematological function	29.62	141	65	76
Metabolic and endocrine function	18.07	86	34	52
Gastrointestinal function	14.71	70	44	26
Urinary and kidney function	10.92	52	31	21
Respiratory function	8.61	41	9	32
Skeletal muscle function	5.67	27	11	16
Neurological function	4.62	22	8	14
Immunological function	3.78	18	9	9
Reproductive function	2.94	14	14	0
Tegumentaria function	0.84	4	3	1
Neurosensory function	0.21	1	0	1
		476	228	248

Table 3 - Prevalent ICNP nursing diagnoses according to Cantarelli's nursing needs.

MPI Nursing Needs	p(x)% of 476 patients	p(x)% of 24,142 ICNP diagnoses	Number of Nursing Diagnoses f(x)	Surgical Area f(x)	Medical Area f(x)
Breathing					
Impaired respiration	43.28	0.96	206	38	168
Lack of knowledge about breathing device	36.55	0.81	174	25	149
Functional dyspnea	29.83	0.66	142	19	123
Nutrition and hydration					
Lack of knowledge of dietary regime	98.32	2.19	468	220	248
Impaired nutritional status	97.90	2.18	466	221	245
Impaired ability to manage diet regime	97.90	2.18	466	219	247
Urinary and bowel elimination					
Impaired bowel defecation	97.48	2.17	464	221	243
Impaired urinary system process	96.64	2.15	460	225	235
Risk for constipation	57.77	1.28	275	140	135
Hygiene					
Inability to perform hygiene	100.00	2.22	476	228	248
Impaired ability to dress	99.37	2.21	473	228	245
Impaired ability to groom	98.95	2.20	471	227	244
Movement					
Activity intolerance	97.06	2.16	462	216	246
Impaired mobility	96.01	2.14	457	211	246
Asthenia	95.38	2.12	454	212	242
Resting and sleeping					
Sleep deprivation	99.37	2.21	473	228	245
Impaired sleep pattern	98.32	2.19	468	226	242
Lack of knowledge about sleep pattern	94.75	2.11	451	215	236
Maintaining cardiovascular function					
Impaired cardiovascular system	97.90	2.18	466	222	244
Altered blood pressure	97.06	2.16	462	223	239
Impaired fluid volume	95.38	2.12	454	212	242
Safe environment					
Inability to provide the microclimate	99.79	2.22	475	228	247
Impaired immune system process	99.16	2.21	472	224	248
Risk for infection	97.27	2.16	463	217	246
Interacting in communication					
Fatigue	93.91	2.09	447	217	230
Anxiety	69.96	1.56	333	207	126
Difficulty of acceptance the state of health	25.42	0.57	121	81	40
Therapeutic procedure					
Lack of knowledge of the therapeutic treatment	100.00	2.22	476	228	248
Diagnostic procedures					
Lack of knowledge of the diagnostic test	99.37	2.21	473	227	246
ICNP nursing diagnoses			11,948	5,605	6,343

Table 4 - Prevalent ICNP nursing diagnoses on the 24,142 nursing diagnoses detected retrospectively in the whole sample.

Prevalent ICNP Nursing Diagnoses	p(x)% of 24, 142 ICNP diagnoses	Number of Patients (n=476) f(x)	Surgical Area f(x)	Medical Area f(x)
Inability to perform hygiene	2.22	476	228	248
Lack of knowledge of treatment regime	2.22	476	228	248
Impaired ability to dress	2.21	473	228	245
Impaired sleep	2.21	473	228	245
Lack of knowledge of diagnostic test	2.21	473	227	246
Impaired immune system process	2.21	472	224	248
Impaired ability to groom	2.20	471	227	244
Lack of knowledge of dietary regime	2.19	468	220	248
Impaired sleep pattern	2.19	468	226	242
Impaired self toileting	2.18	467	222	245
Impaired nutritional status	2.18	466	221	245
Impaired ability to manage diet regime	2.18	466	219	247
Impaired cardiovascular system	2.18	466	222	244
Lack of knowledge about hygiene	2.17	465	217	248
Impaired bowel defecation	2.17	464	221	243
Risk for infection	2.16	463	217	246
Activity intolerance	2.16	462	216	246
Altered blood pressure	2.16	462	223	239
Impaired urinary system process	2.15	460	225	235
Impaired fluid balance	2.14	459	214	245
Impaired skin integrity	2.14	459	215	244
Lack of knowledge about safety measure	2.14	459	217	242
Impaired environmental safety	2.14	458	215	243
Impaired fluid intake	2.14	457	215	242
Impaired mobility	2.14	457	211	246
Asthenia	2.12	454	212	242

supports the effectiveness of the ICNP to document and to measure the Italian general surgical and medical nursing practice. Furthermore, the concurrent use of MPI and ICNP might enhance the effectiveness of both describing and measuring nursing practice in Italy. In fact, the theory allowed to group nursing diagnoses according to nursing needs, giving a culturally sensitive framework in the description of nursing practice and the approach to patients' care. The use of the ICNP allowed to describe specific clinical nursing problems of medical and surgical patients with a standardized and internationally recognized terminology. This fact addressed one of the main limitations in the use of MPI where the lack of a nursing standardized terminology makes it difficult for nurses to define nursing diagnoses and nursing outcomes (38).

This subset of ICNP diagnoses could represent a valuable support for building

Table 5 - Prevalence of the newly composed ICNP nursing diagnoses.

ICNP nursing diagnoses (ICN, 2012)	p(x)% of 476 patients	p(x)% of 24,142 ICNP diagnoses	Number of Nursing Diagnoses f(x)	Surgical Area f(x)	Medical Area f(x)
Risk for dystonia	89.08	15.47	424	190	234
Risk for transmission of infection	87.61	15.21	417	186	231
Delayed surgical healing	70.80	12.29	337	157	180
Lack of knowledge to manage simple dressings	59.87	10.40	285	137	148
Risk for physical and psychological stress overload	52.94	9.19	252	154	98
Difficulty to expel bronchial secretions	31.51	5.47	150	23	127
Tolerance about breathing device	29.41	5.11	140	9	131
Polipnoico breathing	26.68	4.63	127	8	119
Dyspeptic pain	22.90	3.98	109	63	46
Auto - negligence	21.85	3.79	104	19	85
Risk for situational low self - esteem	14.08	2.44	67	46	21
Risk for loneliness	9.45	1.64	45	5	40
Kussmaul breathing	8.19	1.42	39	10	29
Risk for contact isolation	8.19	1.42	39	12	27
Preoperative fasting	7.98	1.39	38	30	8
Hemineglect	7.98	1.39	38	6	32
Risk for dysreflexia	5.46	0.95	26	4	22
Ineffective coping	5.25	0.91	25	12	13
Risk for atrial tachycardia	3.36	0.51	16	5	11
Risk for breathing isolation	2.94	0.51	14	0	14
Risk for self - harm	2.94	0.51	14	0	14
Risk for hyperkinetic arrhythmia	2.10	0.36	10	3	7
Risk for sinus tachycardia	1.47	0.26	7	2	5
Risk for ventricular arrhythmia	1.47	0.26	7	3	4
Risk for atrial fibrillation	1.05	0.18	5	2	3
Risk for linguistic misunderstanding isolation	1.05	0.18	5	3	2
Risk for atrial flutter	0.21	0.04	1	0	1

a computerized documentation system for hospitals using MPI (39). The study results could help nurse academics in better describing all nursing diagnoses for the surgical and medical areas, particularly based on the MPI conceptual model. Educators could also consider using both this theoretical framework and this terminology to teach students the nursing process in academic settings (40).

Further research is needed to prospectively test the subset on a group of patients admitted to hospitals and to evaluate, from a qualitative point of view, the experience of nurses using the ICNP terminology. Improvements in the quality of documentation and patient outcomes should also be evaluated to support the introduction of the ICNP into these clinical settings (41).

Strengths and Study Limitations of the present experience

The subgroups' sample size, the convenience sampling, the impossibility of generalization beyond the study population, and the data collection ICNP subset tool on paper represent some research limitations. Another limitation is that the panel of experts in the Delphi method did not have the opportunity to reciprocally explain their opinions and clarify their statements orally. The subset was very extensive, and the time limit for feedback was short. A longer time frame for data collection might have improved the quality of the replies. Strong aspects of the study include the training for data collectors, the overall size of the study sample, the use of an explicit conceptual framework, and the use of an international standardized nursing terminology to describe accurately patients' nursing problems.

Conclusions

To our knowledge, this study was the first to investigate prevalent ICNP nursing diagnoses in surgical and medical acute hospital patients. The high number and typology of detected nursing diagnoses suggest the presence of highly complex nursing care. Nursing care was not only oriented to solve acute problems (as impaired blood pressure or impaired respiration) but showed also a relevant need for patients' education to adequate self-care behaviours (42), concerning for example the lack of knowledge about medications, the lack of knowledge about diagnostic tests or the inability to address activities of daily living (as personal hygiene or nutrition). Results confirmed also the strong capability of ICNP terminology to describe nursing care in the acute medical and surgical areas in Italian hospitals. Using a limited number of ICNP diagnoses, it was possible to describe a high percentage of nursing problems reported by nurses at the point of care.

The total number of diagnoses could be further decreased, considering the specificity of nursing practice in different specialist wards both in medical and in surgical settings. The newly composed ICNP diagnoses should be submitted to the ICNP validation process and, if confirmed as adequate nursing diagnosis statements, they could represent a valuable contribution to the development of the terminology (43).

Overall, this study's results provide a subset of empirically tested ICNP nursing diagnoses that could be useful to improve patients' healthcare documentation, patients' safety and the quality of nursing care. Finally, this subset could be considered in nursing education programs to allow the introduction of this terminology according with the nursing conceptual model in use.

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Riassunto

Sviluppo di un subset di diagnosi infermieristiche ICNP orientato da un modello concettuale italiano per l'ambito ospedaliero medico e chirurgico: uno studio trasversale multicentrico

Introduzione. L'*International Classification for Nursing Practice* (ICNP) è progettato per favorire la formula-

zione di diagnosi infermieristiche, interventi infermieristici e risultati dell'assistenza infermieristica. Lo sviluppo di un subset di diagnosi, interventi e risultati ICNP potrebbe sostenere gli infermieri fornendo i termini appropriati per documentare l'assistenza infermieristica in modo accurato e completo nei contesti clinici. Questo progetto ha avuto lo scopo di sviluppare un subset di diagnosi infermieristiche ICNP orientate da un modello concettuale infermieristico italiano (MPI) per descrivere l'assistenza infermieristica nei reparti ospedalieri medici e chirurgici.

Disegno dello studio. Un subset di diagnosi infermieristiche ICNP è stato sviluppato sulla base di una revisione della letteratura ed un consenso tra esperti. Uno studio trasversale è stato condotto in tre ospedali del Nord Italia per testare empiricamente il subset.

Metodi. Lo studio ha seguito il processo per lo sviluppo di un subset ICNP **i**n accordo con le linee guida proposte dall'*International Council of Nurses*. Dodici infermieri esperti hanno partecipato al metodo Delphi per validare ulteriormente il subset identificato sulla base della revisione della letteratura. Un processo di cross-mapping è stato attuato per identificare le diagnosi infermieristiche e successivamente è stata descritta la prevalenza delle diagnosi infermieristiche rilevate. I dati sono stati raccolti dalla documentazione sanitaria dei pazienti ricoverati, in modo retrospettivo, a partire dalla data di ricovero al momento della raccolta dei dati.

Risultati. È stata analizzata la documentazione di 476 pazienti ricoverati: 228 provenivano dai reparti di chirurgia e 248 da quelli medici. 24.142 diagnosi infermieristiche sono state rilevate consultando retrospettivamente la documentazione. Un numero totale di 21,401 diagnosi infermieristiche (88%) è stato descritto attraverso il subset ICNP.

Conclusioni. I risultati hanno mostrato un'elevata capacità della terminologia ICNP di descrivere l'assistenza infermieristica nelle aree mediche e chirurgiche negli ospedali italiani. Il subset così identificato di diagnosi infermieristiche ICNP potrebbe contribuire allo sviluppo di un sistema di documentazione informatizzato, specie per gli ospedali che impiegano il MPI.

I risultati possono contribuire anche alla revisione dei programmi di insegnamento al fine di introdurre questa terminologia infermieristica standardizzata unitamente al modello concettuale in uso.

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