

A Comparison of NANDA and CCC used in Hospital-based Home Health Care

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Introduction

The major purpose of this investigative study was to determine what nursing diagnoses classification system should be used in Korea to code the problems of patients being served by home health care agencies. To accomplish this, the North American Nursing Diagnosis Association (NANDA) Nursing Diagnoses Taxonomy I and the Clinical Care Classification(CCC) of Nursing Diagnoses were selected to determine the type and frequency of problems of patients being served by a hospital-based home health care service. Patient problems were abstracted from charts and determined to whether be (a) addressed by both, (b) not described by either, or (c) addressed by one or the other classification systems.

Because of changes in the medical services environment, such as the increase in the elderly population, changes in disease patterns, and lack of hospital beds, the need for home health care nursing has emerged as a new setting where

nursing services could be provided in Korea(Kim 2006; Ryu 2007; Ryu Park & Kim 2007). Even though the number of patients in Korea needing home health care services was increasing, there was no information on the major nursing problems of these patients since such information was not systematically recorded, coded, nor collected. As a result, there was a need to identify the major nursing problems of the home health care patients using a standardized nursing diagnoses classification system.

Even though many studies in Korea have verified the effectiveness of using the NANDA Nursing Diagnoses Lists or Taxonomy I to label and code patient problems, neither were widely used in Korea health care settings(Choi et al., 1997). However, in those instances where they were used, the NANDA Nursing Diagnoses List of labels was used to describe nursing problems of acute care patients and it was questionable as to whether NANDA could be used for describing problems of the home health care patients. On the other hand, the CCC was specifically developed for coding and classifying nursing diagnoses of home health care patients.

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Thus, to determine the appropriate nursing diagnoses classification system for nursing problems of home health patients being served by hospital-based home health care in Korea, it was important to study and compare the applicability of NANDA Taxonomy I and the CCC to the home health setting. It was determined that research was needed to evaluate the two classifications in order to determine which one should be recommended for the home health settings in Korea.

Overview of NANDA and CCC

NANDA Taxonomy I and CCC were selected for this study because these two classifications could be used to code and classify patient problems and/or nursing diagnoses when documenting care of home health patients. They each have a different structure, are classified by a different framework, and are coded differently. NANDA and CCC classifications are both recognized by the American Nurses Association as appropriate for documenting nursing practice in computer-based systems. They are indexed in CINAHL and integrated in the Metathesaurus of the Unified Medical Language System (UMLS) of the National Library of Medicine in the US, used as the basis of the International Classification of Nursing Practice (ICNP) developed by the International Council of Nursing (ICN). They have been integrated into SNOMED as a nursing diagnosis domain. They both have been translated into many different languages. Each are described below by their major characteristics.

NANDA Background

In 1973 a group of expert nurses met in St. Louis, MO and established the Task Force of the National Conference Group on the Classification of Nursing Diagnoses. This group began to make a formal effort to identify, develop, and classify nursing diagnostic terminology as labels and met biannually (NANDA 1991). In 1982 the group was renamed the North American Nursing Diagnosis Association (NANDA). Nursing diagnoses were listed alphabetically until 1986 when the NANDA Taxonomy I was endorsed for development and testing. During this period the nursing diagnosis labels were submitted to NANDA and systematically reviewed by the Diagnosis Review Committee for consistency with the established criteria for a nursing diagnosis. The List of Nursing Diagnoses has increased from 37 approved in 1973 to 172 in 2005 (NANDA, 2005). The members of the Diagnosis Review Committee are able to vote for accepting the diagnoses for development, approving them for clinical testing, and listing those approved. The development of nursing diagnoses is still undergoing investigation in clinical settings, because a dynamic nursing language is necessary to express the richness and change in nursing practice.

A nursing diagnosis is the naming and classifying of patient problems as a result of critical thinking, analysis, creativity, and accuracy. The purpose of a nursing diagnosis is to increase the visibility of nursing's contribution to patient care by continuing to develop, refine, and classify the phenomena of concern to nurses. A nursing diagnosis as defined by NANDA is "A clinical judgment about individual, family, or community responses to actual or potential health problems/life processes. A nursing diagnosis provides the

basis for selection of nursing interventions to achieve outcomes for which the nurse is accountable (approved 9th conference 1990)" (NANDA, 2005, p.277).

Taxonomy I

The NANDA Taxonomy I begins at an abstract level which is then further divided into six levels, the most abstract level being the structural framework of human response patterns. This framework consists of nine human response patterns: choosing, communicating, exchanging, feeling, knowing, moving, perceiving, relating, and valuing. Each nursing diagnostic label uses a verb clause, is classified by nine Human Response Patterns, and is coded using a six digit binary code (NANDA 1996). Currently NANDA has Taxonomy II, which is a multiaxial framework with 13 domains, 47 classes and 172 diagnoses(NANDA 2005).

CCC Background

The Clinical Care Classification(CCC) System was developed by Saba and colleagues at the Georgetown University School of Nursing from 1988 to 1991 as a by-product of the Home Care Project conducted to predict the level of demand for nursing and other health care services of Medicare patients(65 years of age and older) who needed home health care. This federally funded project was initially designed to predict resource requirements, and measure outcomes(Saba 1992a).

The study collected data from the records of 8,967 patients recently discharged from 646 home health agencies for an entire episode of home

health care. Data were collected as narrative statements focusing on patient problems and/or nursing diagnoses as well as on nursing services. Approximately 42,000 statements represented the patient problems and 72,000 represented nursing services. These two sets of narrative statements were used to develop the CCC System with its two classifications - nursing diagnoses and nursing interventions. Once the data were coded the analysis was further refined from which the framework of 20 care components were empirically developed to classify the nursing diagnoses and nursing(Saba 1992b). These components are: activity, bowel elimination, cardiac, cognitive, coping, fluid volume, health behavior, medication, metabolic, nutritional, physical regulation, respiratory, role relationship, safety, self-care, self-concept, sensory, skin integrity, tissue perfusion, and urinary elimination. The components are also categorized by the four health patterns of health behavioral, functional, physiological and psychological(Saba 1995).

The CCC of Nursing Diagnoses consists of 146 terms(50 major categories and 96 subcategories) representing patient problems. These 146 nursing diagnoses are further enhanced by three modifiers: improved, stabilized, and deteriorated that identify the expected goals and/or actual outcomes of care. At the time of the development, the CCC included most of the nursing diagnostic labels from NANDA Taxonomy I but expanded the list with over 50 new terms making it more encompassing. Further, the NANDA terms were altered to be easier to understand by converting the nursing diagnosis verb clauses to noun phrases. For example, 'impaired tissue integrity' was converted to 'tissue integrity impairment'. Each nursing diagnostic term is structured as a noun phrase, is

classified by the 20 Care Components, and is coded using five alphanumeric codes based on the Tenth Revision of the International Classification of Diseases(ICD-10).

Comparison of the two Classifications

The NANDA and CCC have 77 identical nursing diagnoses labels. NANDA has 20 nursing

diagnoses not found in CCC, while CCC has 20 nursing diagnoses labels not included in NANDA. In addition, the remaining NANDA and CCC have similar diagnoses labels, with broader or narrower labels; for example, ‘cardiac output alteration’ in CCC and ‘decreased cardiac output’ in NANDA. The NANDA primarily includes nursing diagnoses that can be used in acute nursing care settings; whereas, the CCC includes more nursing diagnoses pertinent to home health care.

< Table 1 > A list of 20 terms included in CCC not in NANDA

Gastrointestinal Alteration	Fecal Impaction
Fluid Volume Excess Risk	Skin Incision
Endocrine Alteration	Disuse Syndrome
Body Nutrition Deficit Risk	Medication Risk
Infection Unspecified	Poly-pharmacy
Renal Alteration	Cerebral Alteration
Musculoskeletal Alteration	Health-Seeking Behavior Alteration
Blood Pressure Alteration	Dying Process
Immunologic Alteration	Activities of Daily Living(ADLs) Alteration
Cardiovascular Alteration	Instrumental Activities of Daily Living(IADLs) Alteration

< Table 2 > A list of 20 terms included in NANDA not in CCC

Risk for Peripheral Neurovascular Dysfunction	Risk for Disorganized Infant Behavior
Impaired Environmental Interpretation Syndrome	Risk for Altered Parent/Infant/ Child Attachment
Decreased Adaptive Capacity: Intracranial	Potential for Enhanced Organized Infant Behavior
Energy Field Disturbance	Effective Breast Feeding
Impaired Tissue Integrity	Family Coping: Potential for Growth
Ineffective Management of Therapeutic Regimen(Family)	Effective Management of Therapeutic Regimen(Individual)
Ineffective Management of Therapeutic Regimen(Community)	Potential for Enhanced Community Coping
Relocation Stress Syndrome	Health Seeking Behavior(Specify)
Risk for Loneliness	Potential for Enhanced Spiritual Well-being
Disorganized Infant Behavior	Altered Protection

Literature Review

Nursing Diagnoses Research in Korea

Since 1980 nursing diagnoses-related research using NANDA had been carried out in Korea. The uses of the NANDA Nursing Diagnoses Lists were taught in nursing education and a great deal of effort had gone in to incorporating them in inpatient clinical settings. The research topics on NANDA Nursing Diagnoses Lists ranged from identifying the most common nursing diagnoses (Park et al., 2001), to identifying the defining characteristics of nursing diagnoses(Choi et al., 1997), to clinical application of nursing diagnoses (Moon & Kim, 2001), to the effect of nursing diagnoses use (Park & Park, 2001), to nursing care-specific tool development(So & Cho, 2002; Hwangbo & Yang, 2003), and to the investigation of the validity of the Korean version of NANDA Nursing Diagnoses Lists(Lee et al., 1998; Park et al., 1999).

Despite these numerous research reports describing the effects, the practical, and scientific approaches to nursing diagnoses, NANDA Nursing Diagnoses Lists were still not able to be adequately applied in the clinical settings in Korea. The major reason for this problem was that the NANDA was developed in the United States which has a different medical and cultural environment. They were then used without prior investigation as to applicability, thereby resulting in inconsistent use(So & Cho, 2002).

Study Methods

This research study investigated the frequency and appropriateness of nursing problems in

hospital-based home health care patients using the NANDA and CCC. The data were collected from all of 249 patients who were served by a hospital-based home health care service in Seoul from June 1, 2004 to July 31, 2004.

The NANDA 1997-1998 was translated and tested for validity of Korean nomenclature by Lee et al. (1998), and the CCC developed by Saba and translated and tested for validity of Korean nomenclature by Park et al. (1999) were used in this study. Both NANDA and CCC were translated into Korean by a group of bilingual nurse scholars and back-translated into English by another group of bilingual nurse scholars. If there was any difference between original labels and back-translated labels of the two classification systems, Korean labels were modified until there was complete agreement between original English labels and back-translated labels. Korean labels were validated by 20 nurse scholars.

A survey form developed by the authors was used to collect the data. Patients' charts written by the home health care nurses were reviewed to extract what nursing problems and diagnoses are and place them on a survey form developed by the authors. Nursing problems or nursing diagnoses were not explicitly described in the patient record; the nursing diagnoses were inferred from nursing assessments or nursing interventions by the authors. This process was validated by the team of home care nurses who cared the patients. Nursing diagnoses were then matched to NANDA and CCC. When a nursing diagnosis was made, a term from the level having the least abstract term was chosen first, but, if there were no appropriate terms, one from the next higher level was chosen. If there were no appropriate terms in either NANDA or CCC, the patient's problem was categorized as "other".

The survey data were imported into the Microsoft Excel, statistical spreadsheet software and summary statistics on home health care patients' characteristics such as sex, age, visit cycle, number of visits, service time per visit, reason for home care service termination, condition at end of service; and their nursing diagnoses were calculated.

Results

Home Health Care Patients Characteristics

Table 3 shows the characteristics of 249 patients in this study. Seventy-six percent of the patients were female, and the mean age was 48 years (range 15 -88 years). Twenty-eight of the patients were over 60 years old. The mean home care episode was 14.9 days. Forty-four percent of the patients were discharged after only one visit whereas 7% continued for more than 10 visits. Two thirds of visits lasted an average of 30-60 minutes. Major reasons for ending home health care were resolution of the medical problem (70%), hospital admission(10%), or death of the client(4%), refusal(3%), and moved to another district(2%). More than half of the patients(55%) were recovered at the end of service. Another one quarter(23%), were stabilized and only 4% had deteriorated.

Table 4 shows medical diagnoses of home health care patients based on the Korean Diagnosis Related Group(KCD-10). The most frequent medical diagnosis group was pregnancy, childbirth, and puerperium with 69 patients(28%) having any one of these conditions; the second most frequent medical diagnosis was malignant

neoplasms with 64 patients(26%); and the third was benign neoplasms with 33 patients(13.3). Total number of nursing diagnoses found in the group of 249 patients was 463.

NANDA Analysis

Table 5 shows a list of nursing diagnoses of home health care patients captured with the NANDA. Of the 128 NANDA nursing diagnoses, 37 labels(28.9%) were used. The most frequent nursing diagnosis was knowledge deficit, followed by risk for infection, altered growth and development, altered nutrition, pain, impaired skin integrity, risk for skin integrity, constipation, and anxiety. Each of the remaining nursing diagnosis represented less than 1%. Of the total 463 nursing problems, 403(87%) were described by NANDA, but the remaining 60 problems could not be captured with NANDA. More than half of the remaining 60 nursing diagnoses were in the categories nausea and vomiting.

CCC Analysis

Table 6 shows nursing diagnoses of home health care patients captured with the CCC. Of the total 463 nursing problems of the study patients, 427(92%) were captured by the CCC nursing diagnoses. Thirty-six problems in the categories of nausea and vomiting could not be captured with the CCC. Of the 146 CCC Nursing Diagnoses, 52 labels were used to describe nursing problems of the home health care patients in the study(Table 6). About 55% were in three categories: knowledge deficit(24.8%), infection risk(21.8%), and growth and development alteration(8.2%).

< Table 3 > Characteristics of the home health care patients

(n=249)

Characteristics	Category	Number	Percentage(%)
Sex	Male	59	23.7
	Female	190	76.3
Age	Under 20	3	1.2
	20-29	37	14.9
	30-39	62	24.9
	40-49	42	16.9
	50-59	27	10.8
	60-69	39	15.7
	70-79	31	12.4
	Over 80	8	3.2
Visit cycle	1 day	110	44.2
	2 days-1 wk.	42	16.9
	1 wk -1 mo.	61	24.5
	1 mo. -3 mo.	27	10.8
	3 mo.-6 mo.	7	2.8
	Over 6 mo.	2	0.8
Number of visits	1	110	44.2
	2-5	89	35.7
	5-10	30	12.0
	10-30	18	7.2
	30- or more	2	0.8
Service time per visit	within 30 min.	47	18.9
	30-60 min.	167	67.1
	60-90 min.	28	11.2
	over 90	5	2.0
	unknown	2	0.8
Reason for terminating home health care service	Resolution to medical problem	174	69.9
	Admission	26	10.4
	Patient death	11	4.4
	Denial of Service	8	3.2
	Moving to other district	5	2.0
	Other	7	2.8
	Unknown	18	7.2
Condition at end of service	Improved	137	55.0
	Stabilized	69	22.7
	Deteriorated	11	4.4
	Others	4	1.6
	No prospect	3	1.2
	Unknown	25	10.1

< Table 4 > Medical diagnoses of home health care patients

(n=249)

Medical Diagnosis	Frequency	Percentage(%)
Pregnancy, Childbirth, and Puerperium	69	27.7
Malignant Neoplasms	64	25.7
Benign Neoplasms	33	13.3
Diseases of Genitourinary System	19	7.6
Diseases of the Blood and Blood-forming Organs and Certain Disorders involving the Immune Mechanism	17	6.8
Diseases of the Musculoskeletal System and Connective Tissue	14	5.6
Injury, Poisoning and certain Other Consequence of External Cause	14	5.6
Endocrine, Nutritional and Metabolic Disease	9	3.6
Diseases of the Nervous System	4	1.6
Mental and Behavioral Disorders	2	0.8
Diseases of the Circulatory System	2	0.8
Diseases of the Respiratory System	1	0.4
Diseases of the Digestive System	1	0.4
Total	249	100.0

< Table 5 > Nursing diagnoses captured and not captured with the NANDA

Pattern	Nursing Diagnosis	Frequency	Percentage(%)
Exchanging	Altered nutrition: less than body requirements	24	5.2
	Risk for infection	101	21.8
	Hyperthermia	4	0.9
	Constipation	5	1.1
	Diarrhea	12	2.6
	Bowel incontinence	1	0.2
	Altered urinary elimination	1	0.2
	Urinary retention	1	0.2
	Altered tissue perfusion (Specify): Renal, Cerebral, Cardiopulmonary, Gastrointestinal, Peripheral	1	0.2
	Fluid volume excess	7	1.5
	Risk for fluid volume deficit	2	0.4
	Ineffective airway clearance	1	0.2
	Ineffective breathing pattern	4	0.9
	Risk for injury	1	0.2
	Altered protection	2	0.4
	Altered oral mucous membrane	1	0.2
	Impaired skin integrity	16	3.5
	Risk for impaired skin integrity	6	1.3

< Table 5 > Nursing diagnoses captured and not captured with the NANDA (continued)

Pattern	Nursing Diagnosis	Frequency	Percentage(%)
Relating	Social isolation	1	0.2
Moving	Fatigue	1	0.2
	Sleep pattern disturbance	1	0.2
	Impaired swallowing	1	0.2
	Ineffective breastfeeding	2	0.4
	Altered growth and development	38	8.2
Perceiving	Body image disturbance	4	0.9
	Situational low self-esteem	1	0.2
	Sensory/perceptual alterations (Specify): Visual, Auditory, Kinesthetic, Tactile, Olfactory)	3	0.6
	Hopelessness	3	0.6
	Powerlessness	1	0.2
Knowing	Knowledge deficit (specify)	115	24.8
	Altered thought processes	1	0.2
Feeling	Pain	22	4.8
	Chronic pain	10	2.2
	Anticipatory grieving	1	0.2
	Dysfunctional grieving	2	0.4
	Anxiety	5	1.1
	Fear	1	0.2
Not captured	Nausea, Vomiting	34	7.3
	Anorexia	2	0.4
	Blood Pressure Alteration	2	0.4
	Dying Process	3	0.6
	Endocrine Alteration	3	0.6
	Body Nutrition Deficit Risk	14	3.0
	Infection Unspecified	1	0.2
	Disuse Syndrome	1	0.2
Total		463	100.0

< Table 6 > Nursing diagnoses captured and not captured with the CCC

Component	CCC of Nursing Diagnoses	Frequency	Percentage(%)
Activity	Fatigue	1	0.2
	Sleep Pattern Disturbance	1	0.2
Bowel Elimination	Bowel Incontinence	1	0.2
	Constipation	5	1.1
	Diarrhea	12	2.6
Cardiac	Blood Pressure Alteration	2	0.4
Cognitive	Knowledge Deficit	62	13.4
	Knowledge Deficit of Diagnostic Test	1	0.2
	Knowledge Deficit of Dietary Regimen	4	0.9
	Knowledge Deficit of Disease Process	2	0.4
	Knowledge Deficit of Medication Regimen	5	1.1
	Knowledge Deficit of Therapeutic Regimen	41	8.9
	Thought Process Alteration	1	0.2
Coping	Dying Process	3	0.6
Fluid Volume	Fluid Volume Deficit Risk	2	0.2
	Fluid Volume Excess	7	1.5
Health Behavior	Growth and Development Alteration	38	8.2
Metabolic	Endocrine Alteration	3	0.6
	Immunologic Alteration	2	0.4
Nutritional	Body Nutrition Deficit	24	5.2
	Body Nutrition Deficit Risk	14	3.0
Physical Regulation	Hyperthermia	4	0.9
	Infection Risk	101	21.8
	Infection Unspecified	1	0.2
Respiratory	Airway Clearance Impairment	1	0.2
	Respiration Alteration	4	0.9
Role Relationship	Grieving	2	0.4
	Anticipatory Grieving	1	0.2
	Social Isolation	1	0.2
Safety	Injury Risk	1	0.2
	Disuse Syndrome	1	0.2

< Table 6 > Nursing diagnoses captured and not captured with the CCC (continued)

Component	CCC of Nursing Diagnoses	Frequency	Percentage(%)
Self-Care	Breastfeeding Impairment	2	0.4
	Swallowing Impairment	1	0.2
Self Concept	Anxiety	5	1.1
	Fear	1	0.2
	Hopelessness	3	0.6
	Powerlessness	1	0.2
	Body Image Disturbance	4	0.9
	Situational Self-Esteem Disturbance	1	0.2
Sensory	Sensory Perceptual Alteration	1	0.2
	Auditory Alteration	1	0.2
	Kinesthetic Alteration	1	0.2
	Acute Pain	2	0.4
	Chronic Pain	10	2.2
	Unspecified Pain	20	4.4
Skin Integrity	Skin Integrity Alteration	10	2.2
	Oral Mucous Membranes Impairment	1	0.2
	Skin Integrity Impairment	6	1.3
	Skin Integrity Impairment Risk	6	1.3
Tissue Perfusion	Tissue Perfusion Alteration	1	0.2
Urinary Elimination	Renal Alteration	1	0.2
	Urinary Retention	1	0.2
Not Captured	Nausea, Vomiting	34	7.3
	Anorexia	2	0.4
Total		463	100.0

Discussion

Of the total 463 nursing problems 427 problems of home health care patients could be classified with the CCC system; however 403 problems could be classified with the NANDA. The CCC was able to classify the additional 24 nursing problems that were not captured by NANDA. They were blood pressure alteration, dying process, endocrine alteration, body nutrition deficit risk, infection unspecified, and disuse syndrome. Nausea, vomiting and anorexia were not captured either NANDA or CCC.

This discrepancy is probably the result of the fact that the CCC was specifically developed for coding and classifying nursing diagnoses and interventions of home health care patients. Further, the CCC 20 care components are more detailed and their meanings considerably clearer than 11 human response patterns of the NANDA Taxonomy I. The CCC 20 care components are at label level of NANDA. This makes the users classify nursing diagnoses more easily with the CCC. According to Holzmer et al. (1997) the 20 care components have found to be the most clinically relevant assessment classes, best predictors of home health care resource requirements, and most appropriate for classifying care. The nursing problems that could not be directly placed in NANDA could be somehow included and classified as related elements of nursing diagnosis in NANDA, but the complicated procedure to classify these problems into the six levels that extend from human response patterns to the sub-categories of related elements, is not easy for Korean nurses.

However, recent work of NANDA Taxonomy II with domains, classes, diagnostic concepts and

nursing diagnoses will alleviate this problem (NANDA, 2001). Taxonomy II was designed to be multiaxial in its form, thereby substantially improving the flexibility of the nomenclature and allowing for easy addition and modifications. Patient problems not captured by NANDA Taxonomy I 1997-1998 could be captured with NANDA Taxonomy I 1999-2000 and Taxonomy II. For example, nausea can be captured by NANDA Taxonomy I 1999-2000 and Taxonomy II.

One of the barriers in using the NANDA nursing diagnoses labels was that since it was developed in the United States, it has different socio-cultural characteristics that were not necessarily applicable to the health care environment of Korea. Energy field disturbance, relocation stress syndrome, and nursing diagnoses on the health promotion are examples. The CCC, even though it has been developed in the United States too, appeared to fit very well with the system of hospital-based home health care in Korea.

Recommendations

1. The home health care patients in this study were young and required only short-term nursing care as the main purpose of this acute hospital-based home health care was to increase the turnover rate of the hospital beds. Thus, we suggest another study with a more varied home health care client population to investigate the usefulness of the CCC system.
2. The retrospective method of recording nursing diagnoses based on a patient's record limits the confirmable diagnoses. Further, it is difficult to

make a definitive comparison of the applicability of the two classifications systems based on only the data collected in this study, therefore prospective research on the NANDA and CCC classification systems should be conducted during actual home health care visits in order to recommend which system to use.

3. This study investigated only the use of nursing diagnoses classifications. Further research should also include classification of nursing interventions.
4. We would like to suggest replicating this research using the NANDA Taxonomy II and the newest version of CCC.

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Abstract

A Comparison of NANDA and CCC used in Hospital-based Home Health Care

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Background: Recent changes in the medical environment have increased the need for the home health care nursing in Korea. Even though the number of home health care patients is increasing, the major nursing problems have not been identified due to lack of a standardized nursing diagnosis.

Aim: An investigative study was conducted to determine the frequency and appropriateness of nursing problems in hospital-based home health care patients in Korea using two internationally standardized nursing diagnosis classification systems.

Methods: Nursing records of 249 hospital-based home health care patients were reviewed and nursing problems were identified using the North American Nursing Diagnosis Association Nursing Diagnosis Taxonomy I (NANDA) and the Clinical Care Classification of Nursing Diagnoses (CCC).

Findings: Out of 463 nursing problems, 403 nursing problems were described using the NANDA whereas 427 nursing problems were described using the CCC. Nursing diagnoses not captured by the NANDA classification include nausea/vomiting, anorexia, risk for nutrition deficit, decreased blood pressure, dying process, blood sugar impairment, infection unspecified, and disuse syndrome. Nursing diagnoses not captured by the CCC include nausea/vomiting and anorexia.

Conclusions: In describing nursing problems of home health care patients, it was found that the CCC was able to represent more diagnoses than the NANDA.

Keywords: Nursing Diagnoses, North American Nursing Diagnoses (NANDA),
Clinical Care Classification (CCC), Home Health Care

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