Defining And Classifying Nursing Interventions

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Consensus is emerging that classifications are needed for nursing diagnoses, interventions, and outcomes. These classifications will help to advance nursing knowledge by facilitating the clinical testing of nursing interventions. The purpose of this presentation is to overview the state of the science related to the classification of nursing interventions.

A classification of nursing interventions is needed for multiple reasons: 1) standardize the nomenclature about nursing treatments; 2) expand nursing knowledge about the links between diagnoses, treatments, and outcomes; 3) facilitate the development of nursing and health care information systems; 4) facilitate the teaching of decision-making to nursing students; 5) help determine the costs of services provided by nurses; 6) assist in planning for resources needed in nursing practice settings; 7) provide a language to communicate to others the unique function of nursing; and 8) articulate with the classification systems of other health providers.

Nursing interventions represent nurse actions or behaviors. This is different from nursing diagnoses and nursing outcomes, which represent the patient's actions or behaviors. Previous research about nurse behaviors has focused on two areas: job performance and patient classification.

The job performance studies which have attempted to provide valid and reliable instruments and criteria for the appraisal of nursing care include: the Phaneuf Nursing Audit (Wandelt & Phaneuf, 1972; Phaneuf, 1976), the Slater Nursing Competency Rating Scale (Wandelt & Stewart, 1975), the Quality Patient Care Scale (Qualpacs) (Wandelt & Ager, 1974), the Rush Medicus Methodology for Monitoring the Quality of Nursing Care (Haussmann, Hegyvary, Newman, & Bishop, 1974), and Schwirian's Six Dimension Scale of Nursing Performance (Schwirian, 1978, 1979). These instruments have been used both in studies of quality assurance and job performance and as examples for institutions to design performance appraisal programs. Several of the instruments have problems with inter-rater reliability and construct validity (Lang & Clinton, 1984; Ventura, Hageman, Slaker, & Fox, 1980). They contain intervention items mixed with a variety of other kinds of nurse behaviors and system outcomes.

Patient classification research has attempted to develop another set of instruments to quantify the amount of nursing care required by a patient. These instruments are in widespread use to assist in the allocation of nursing resources. Developed for the purpose of predicting staffing needs, patient classification, instruments have been used recently for defining the cost of nursing care. Two types of patient classification

instruments exist: prototype and factor evaluation (Abdellah & Levine, 1965). The factor type, features a list of critical indicators of direct care given. Examples include the well-known Rush-Medicus Classification Instrument (Jelinek, Haussman, Hegyvary, & Newman, 1974; Medicus Systems Corporation, 1987) and the GRASP, Grace-Reynolds Application and Study of PETO, system (Meyer, 1978).

Patient classification instruments, also known as nursing intensity measures, were developed for the purposes of resource allocation and productivity measurement. The nursing activity items included in these instruments are only a sample of all the activities that nurses perform. The items include some very concrete tasks mixed with more abstract actions. They include a variety of assessments, needs, diagnoses, and treatments. While the instruments in the areas of job performance and patient classification represent important background work for a classification of nursing interventions, they are not themselves adequate as a classification of nursing interventions.

Currently, nursing interventions are viewed as discrete actions, e.g., "Position the limb with sandbags." "Raise the head of the bed 30 degrees." "Explore the need for attention with the patient." There is little conceptualization of how these discrete actions fit together. The result is long wordy care, plans and information systems that list thousands of choices. There is also confusion about which actions are assessment, which intervention, and which evaluation. One list of actions is not the same as another, severely limiting the ability of nursing to demonstrate the effectiveness of nursing care.

Nursing textbooks and care planning guides, which are usually based on conceptual classifications of body systems, medical diagnoses, and more recently, nursing diagnoses, continue to address nursing interventions at the most discrete level. Typically, textbooks include long lists of nursing actions for each type of patient; the list in one book is not the same as the list in another even though the same patient condition is being discussed. For example, if we compare the suggested nursing interventions for the nursing diagnosis of Activity Intolerance in several books, we find big differences. For treatment of Activity Intolerance, Moorhouse, Geissler, & Doenges (1987) list six independent interventions (e.g. "Check vital signs before and immediately after activity.") and one collaborative intervention ("Follow graded cardiac rehabilitation and activity program."); McFarland and McFarlane (1989) list three goals with 24 interventions (e.g. "Assess the patient's past and present activity pattern." and "Engage immobile patient in passive exercise regimen."); and Carpenito (1989) lists eight major categories of interventions and 46 discrete activities (e.g., "Instruct person to practice controlled coughing four times a day." and "Discuss the need for annual immunizations (against flu, bacteria).")

The lists of interventions for any one condition are long partially because nursing has a brief history as a profession in the choosing of interventions and lacks information for decision-making. As a profession, nursing has failed to set priorities among interventions; nurses are taught and believe they should do everything possible. Practicing nurses make decisions of priority, but their decisions have not been systematically described or conceptualized as interventions. The lack of research in this area contributes to the problem of not knowing which intervention will work for which diagnosis in which patient context.

At the opposite extreme of the long lists of discrete nursing actions are classification schemas for nursing interventions composed of large categories. Examples (see Table 1) of these include: Henderson's (1961) compo-

nents of basic nursing, Verran's (1981; Cohen, Arnold, Brown, & Brooten, 1991) taxonomy of ambulatory care nursing, Benner's (1984) seven domains of nursing, the Joel classification (1985) adapted from the New Jersey Department of Health, the Omaha classification scheme for community health interventions (Visiting Nurse Association of Omaha, 1986), the National Council of State Board, study's categories of nurse activities (Kane, Kingsbury, Colton, & Estes, 1986), Bulechek and McCloskey's (1987) beginning taxonomy of nursing interventions, the minimum data set intervention lists (Werley & Lang, 1988) and Saba and colleagues (1991) intervention taxonomy for home health care.

Most of these schemas contain only broad categories which are not clinically useful. Three of the above schemas (Omaha, Bulechek and McCloskey, and Saba) plus one other (Sigma Theta Tau, 1987) do contain clinically useful intervention labels but are incomplete. As example, Omaha (1986) lists 59 interventions (called target activities by Omaha) such as Bladder Care, Cast Care, Exercises, and Skin Care. A close look at the Omaha list reveals inconsistency (for example, the same list includes the items of Anatomy/physiology, Nutritionist, and Supplies). The Sigma Theta Tau (1987) list entitled nursing care/interventions is included as part of its classification of nursing research. There are 23 interventions listed including Advocacy, Anesthesia, Drug Administration, and Feeding. A few labels such as Caring and Wellness/ health promotion are too abstract to be clinically useful. Bulechek and McCloskey (1987) list 34 interventions including Relaxation Training, Music Therapy, Presence, Bathing, and Cultural Brokerage. Some of the intervention concepts are more abstract than others and the list, like the others, is incomplete. The most comprehensive of the four works that contain clinically useful intervention concepts is the home health care taxonomy reported by Saba and colleagues (1991). This list has 160 clinically useful intervention labels at two levels of abstraction, e.g. Bowel Care which has listed under it, Bowel Training, Disimpaction, and Enema. Each of the interventions is further modified by one of four nursing actions: assess, direct care, teaching, and manage. No definitions of terms are included, however. The Saba classification was constructed for the purpose of coding the discrete nursing actions recorded in a patient's record. In summary, each of these four classifications are helpful beginnings in our efforts to define and validate nursing interventions, but none are comprehensive.

There are also other conceptual frameworks that relate to nursing diagnosis, for example, NANDA's Taxonomy I (McLane, 1987), Gordon's (1982) functional health patterns, and the Omaha classification of nursing diagnoses (Simmons, 1980). Each of these is widely used and the Omaha classification has been validated in three research studies (Martin, 1989). These are classifications, however, of the patient conditions that nurses diagnose. A classification of nursing interventions needs to focus on the identification and ordering of the treatment actions of nurses.

For the past few years, Susan Grobe at the University of Texas at Austin, has using informatics analysis methods to examine nursing treatment terms (Grobe, 1990,

1991). Grobe is developing a vocabulary of nursing intervention statements as a means to establish and validate vocabularies and classifications for use with automated systems. She emphasizes that she is not developing a standardized list of interventions; rather she is studying the language that nurses use.

The efforts to define nursing interventions as standardized clinically useful concepts can be seen in a few textbooks. The earliest of these were ones by Bulechek and McCloskey in 1985 and by Snyder in 1985, each defining the interventions as concepts and presenting the research base for a few dozen interventions that nurses perform independently. Both of these are in press for a second edition and the Bulechek and McCloskey second edition will include 44 interventions performed both independently and collaboratively with physicians.

The review of existing intervention terminologies and classifications demonstrates that we have thousands of very discrete action statements and a number of very conceptual large categories, but little descriptive language in between these two extremes. The need is for the development of clinically useful intervention concept labels that are more abstract than the very discrete action statements but less abstract and more useful than the large categories.

In this vein, a research team at the University of Iowa (McCloskey, Bulechek, et. al. 1990;) is working to construct and validate a taxonomy of nursing interventions to be used by all nurses independent of setting. The first phase of the research, a classification of interventions, will be published in spring of 1992 (Iowa Intervention Project, 1992). It consists of nearly 340 intervention concept labels listed alphabetically ranging from Activity Therapy and Airway Management to Values Clarification and Wound Care. Each intervention label has a definition, activities that a nurse does to carry out the intervention, and references. This work represents the development of interventions as concepts each requiring a series of discrete actions to implement. The team is now working to determine the relationships among the interventions and it is hoped that in another few years a second edition of the classification will be ready. The next edition will include revisions according to the suggestions of users and a taxonomic structure that groups interventions according to their similarities and differences.

The Iowa classification of nursing interventions does not prescribe treatments. Nurses choose an intervention for a particular patient depending upon the: 1. desired patient outcomes, 2) characteristics of the nursing diagnosis, 3) research base for the intervention, 4) feasibility for doing the intervention, 5) acceptability to the patient, 6) capability of the nurse (Bulechek & McCloskey, 1992). It is helpful to view the existing and emerging classifications of nursing diagnoses, interventions, and outcomes as vertical structures composed of nursing knowledge (see Figure 1). These represent the unique body of knowledge that has been elusive for so long in nursing. The horizontal structures are the linkages between the vertical classifications and represent the nurse's clinical decision making. The Iowa intervention research team believes that what is needed are standardized clinically useful classifications of diagnoses, interventions, and outcomes that can be computerized and used by clinicians to document the care that they give. The relationships among diagnoses, interventions, and outcomes will be determined through the study of actual patient care using the data bases that these classifications generate.

Patient outcomes serve as the criteria against which to judge the success of a nursing intervention. The task for nursing is to define which patient outcomes are sensitive to nursing care; to identify for each patient the expected

and attainable results of nursing care. The progress in the construction of a classification of nursing interventions illustrates the need for a similar classification of nursing sensitive patient outcomes. Some of the issues encountered in the intervention work as well as the methodology and conceptualization may be helpful in the development of a standardized language for outcomes.

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