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RETROSPECTIVE CHART AUDIT ON PATIENT OUTCOMES RELATED TO  
NURSING DIAGNOSES IN A HOME HEALTH SETTING

*The University of Arizona*

M.S. 1985

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RETROSPECTIVE CHART AUDIT ON PATIENT OUTCOMES  
RELATED TO NURSING DIAGNOSES IN A HOME HEALTH SETTING

by  
Carol Ann Bryniarski

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A Thesis Submitted to the Faculty of the  
COLLEGE OF NURSING

In Partial Fulfillment of the Requirements  
For the Degree of

MASTER OF SCIENCE

In the Graduate College  
THE UNIVERSITY OF ARIZONA

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*March 12, 1985*  
Date

## DEDICATION

This thesis is one mere vestige of my travels, one of many journeys of new discovery about myself and the universe. Sparks of excitement, fear, and wonder continuously enter into me. In dedication to the freedom of questioning, the opportunity and joy of learning, and the experience of discovery about myself and of everyone and all things that have touched my life.

To: My sister, Diane Bryniarski Teichberg

My beautiful niece and nephew, Mirta and Alejandro

My physician and his wife, Dr. Arnold and Carol Hollander

Dearest friends, Josefina Blanco

Roderick Norrish

Nancy J. Stewart

and last, but not least, to all my wonderful and so very qualified staff.

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Sincere gratitude is also expressed to my superior, Silver Darmer, Assistant Director of the Pima County Health Department without whose persistent, yet well intended proddings, this study would not have been realized.

Lastly, deepest gratefulness is given to my parents for sacrificing in order to give me the opportunity for a college education.

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## ABSTRACT

A retrospective chart audit was conducted on the nursing records of 49 home health clients. The audit provided the basis for a descriptive study to identify those nursing diagnoses being utilized in a home health setting and to describe patient health outcomes related to the identified diagnoses.

A process-outcome type evaluation tool was developed to measure health outcomes. Measurement was obtained through the use of a scoring system which reflected directional changes in the client's health status throughout service provision.

A total of 137 patient outcomes were identified. Favorable outcomes were recorded in 102 cases (74.4%) versus unfavorable outcomes in 35 cases (25.6%). The nursing diagnosis, Skin Integrity, Impairment of: Actual had favorable outcomes in 16 (100%) of the cases. Least favorable results were obtained for Breathing Pattern, Ineffective with unfavorable outcomes in 5 cases (35.7%).

## CHAPTER 1

### INTRODUCTION

The health care delivery system in the United States is currently undergoing radical changes. Precipitated by uncontrolled, escalating health care costs which "between 1970 and 1980... jumped from \$47.7 billion to an estimated \$274.2 billion per year" (DeCrosta, 1984, p. 56), serious efforts for regulation, particularly at the federal and state levels, are being undertaken. The newly implemented Diagnostic Related Groups (DRG) program, a prospective payment system for reimbursement of acute care hospitalization, is one of the major efforts. Financially rewarding hospitals to decrease lengths of patients' hospital stays, the DRG system is forcing health care delivery to be provided outside of the institutional settings. This approach is both a site and cost shifting mechanism. The home health care industry is becoming a major link in operationalizing the shift of health care delivery from the hospital setting to the community.

DeCrosta (1984) indicated that since 1974, home care visits have increased 52 per cent from 8.1 million to 12.3 million with predictions of further increase to be at a faster rate within the next ten years. This booming trend in the home care industry is understandable in view of data offered by the National Association for Home Care.

The average Medicare Beneficiary stayed in a hospital for 10.5 days at an average annual Medicare cost of \$3,675. The average skilled nursing facility patient stayed for 30 days at an average annual Medicare cost of \$1,720... The ... home health client ... had 21 visits at an ... annual cost of \$819 (Christensen et al., 1984, p. 46).

The consequences of this cost shifting seem obvious. While hospitals are presently the victims of cost reduction efforts, reimbursement restrictions will be forthcoming for all alternative health care delivery systems of which home health care is just one. Furthermore, it seems inevitable that future criteria for health care reimbursement will also consider the affordability of individual health disciplines within each system. As such, it seems realistic that only those services which are identifiable, affordable, and produce positive client health care outcomes will meet conditions for reimbursement.

The implications of these cost reduction measures present considerable concern for the home care industry. Nursing represents the primary professional service provided for by home health care agencies. Recently, medicare denial rates for skilled nursing care are on the rise and fiscal intermediaries arbitrarily reimburse for skilled nursing care without clearly defined guidelines. The investigator, a nursing supervisor in a home health agency, identified the need to devise a method for defining those nursing care activities most frequently employed in the home care setting, and consequently, describing client health care outcomes associated with those activities. Relevant to defining nursing care activities was the availability of the current classification system of nursing diagnosis. This diagnostic classification system was initiated in the 1960's by

Abdellah, Beland, Martin, and Matheney (1961) and outlined "21 groups of common nursing problems" (Abdellah et al., 1961, p. 16). Subsequently, due to the advancements in high technology, management information systems, and computerization in the health field, the original list of 21 identified problems was sophisticated through four national conferences on nursing diagnoses from 1973 through 1980. Presently, the classification system consists of forty-two nationally accepted nursing diagnoses (Appendix A) which "describe clients' actual or potential health problems...which nurses by virtue of their education and experience are capable and licensed to treat'" (Gordon, 1982, p. 3).

Although the concept of nursing diagnosis is not new, its implementation within the profession is still not wide spread. While utilization of nursing diagnosis is being advocated, difficulties exist regarding its implementation into our present tightknitted, medically oriented, health care system. Home health care, predominantly a nursing service, offers an ideal situation for its implementation. Dalton (1979) stated,

A Home Health Agency provides an optimal climate and setting for the implementation of nursing diagnosis within the concept of the nursing process. In a Home Health Agency, nurses function more independently than in acute care settings, where medical and administrative priorities may take precedence (Dalton, 1979, p. 525).

Thus, capitalizing on the autonomy with which the home health nurse works, the investigator advocated the implementation of a nursing diagnosis system to assist in defining those nursing care activities employed in the home care setting. Concurrently, an evaluation tool

was designed to describe client health care outcomes associated with those nursing activities. As such, the identification of specific nursing activities and associated client health outcomes provides an opportunity to both identify the domain of nursing practice and study its affordability and cost effectiveness. Time and cost data base could be established for computing related service unit expenditures, both necessary conditions for the future of the nursing profession.

#### Statement of the Problem

The questions to be addressed in this study were developed to document those nursing diagnoses assigned by the nursing staff to forty-nine clients of a home health agency and to identify the client health out-comes associated with the seven most frequently utilized nursing diagnoses.

Of the forty-two nationally accepted nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnosis;

1. Which nursing diagnoses were used by the nursing staff to identify patient problems on the forty-nine clients' nursing records?
2. What were the seven most frequently used nursing diagnoses recorded on these forty-nine clients' nursing records?
3. Of the seven most frequently used nursing diagnoses identified, what were the associations between demographic characteristics, living arrangements, social supports, and discharge disposition?

4. What were the client health outcomes of the seven most frequently utilized nursing diagnoses as measured by:

Very Favorable: a resolution of the client's health care problem, i.e. the absence of signs and symptoms of disease/illness or unhealthful response to the disease/illness.

Favorable: a stabilization of the client's health care problem, i.e. the absence of signs and symptoms of disease/illness or unhealthful response to the disease/illness but with a potential for recurrence of the disease process.

Unchanged: no change in the direction of the client's health care status as that documented upon admission to that documented upon discharge.

Unfavorable: a presence of overt signs and symptoms of disease/illness, or unhealthful response to the disease/illness.

#### Purpose of the Study

There were three major purposes of this study that utilized clients' nursing records as the data source. One purpose of the study was to identify which of the forty-two nationally accepted nursing diagnoses were utilized by the nurses in a home health care setting.

Secondly, the seven most frequently employed nursing diagnoses were identified. The third purpose was to describe in qualitative terms, those client health care outcomes associated with the seven most frequently identified nursing diagnoses.

#### Significance of the Problem

The qualitative measurement of patient outcomes in a home health care setting has multiple implications for the nursing profession. One of the most obvious is in nursing practice itself. At the 1983 American Nurses' Association conference, "'New Knowledge for Nursing Practice'" (McCarty, 1984, p. 1), held in Denver, Peplau was quoted as indicating that "the question is no longer what nurses do, which in the past led to studies of nurses' activities, functions, and roles, but 'what do nurses fix, correct, restore, relieve and so on'" (McCarty, 1984, p. 1). The determination of those nursing diagnostic categories in which positive patient outcomes occur may lead to the identification of those areas of nursing practice in which intervention is successful. Similarly, unchanged or unsuccessful patient outcomes may indicate areas in which nursing practice is not successful. While multiple variables, predictable and unpredictable, influence patient outcomes, nursing diagnostic category trends can have predictive value. As such, the profession can begin to identify specific areas of successful practice and incorporate them as a part of the realm of nursing resulting in a multiplier effect. As the realm of nursing becomes more explicit, the science of nursing will become more precise resulting in clarification of professional identity.

With regard to nursing education, identifying successful and unsuccessful nursing interventions would make curriculum changes manifest. Questions pertaining to appropriate and adequate training for practitioners would be revealed. Considering the nursing diagnosis of "Ineffective Coping by the Patient's Caregiver due to Unexpressed Depression resulting in Physical Aggression toward the Patient," as an example, long range studies indicating unsuccessful patient outcomes in this category may point to education programs which are not preparing nurses effectively in dealing with coping mechanisms. Curriculum changes would obviously appear appropriate and necessary. Furthermore, by structuring the educational process in nursing diagnostic categories, preparation of the various classifications of nursing personnel would become more definitive. Diploma, associate degree, baccalaureate, and post-graduate students would be exposed to the same material but at well outlined levels. The higher on the educational ladder the practitioner advanced, the greater the depth of knowledge and skills obtained within each identified nursing diagnostic category. This would not only facilitate and elucidate career advancement, but would assist in outlining more explicitly nurse practice acts. Concerning nursing curriculum development, Sister Callista Roy wrote that,

The diagnostic classification system could provide the outline for the content of the curriculum. The taxonomy would organize the problems nurses encounter and would also contain references to the behavioral manifestations of these problems. A curriculum could be organized by arranging sets of these problems in logical sequence (Roy, 1975, p. 93).

The influence of nursing diagnosis on nursing research is considerable, particularly in reference to the enhancement of the

profession's development. Currently accepted nursing diagnostic categories provide a vast arena of researchable topics. The taxonomy which is structured in relation to nursing phenomena can more readily identify research areas directly related to nursing practice. Again, such research can only expand the realm of the profession and further augment the foundations of nursing science.

Ultimately, the advent of the classification system will allow for professional fiscal accountability. Identifying nursing interventions in each diagnostic category that produce positive patient outcomes will denote the successful prescriptive practice of the profession. As such, benefit/cost analysis can be applied to such interventions. A more equitable extension of patient care costs by discipline can be effected. Undoubtedly, total health care costs could be predictably lower. Joel (1984) commented on how nursing can become "fiscally successful" (p.1). While stressing high tech nursing as a key to this success, nursing in its entire field of practice must claim its financial price tag. While referring to the cost savings that the profession could generate, Joel indicated that "if you have data, you can prove that where incentives were generated, nursing generated them. Then capture some of those monies for the nursing budget rather than having them go back into the general budget of the institution" (p. 1). The data which must be collected is that of identifying nursing interventions which effect/produce positive health outcomes, ultimately the underlying purpose of the profession. Once identified, cost analysis of stated interventions could be correlated to service unit costs. As

such, nursing services not only could itemize service costs into the DRG system but into all levels of health care delivery systems.

In summary, the continued development and implementation of a nursing diagnostic classification system has tremendous implications and significance for the profession; its identity would become evident, its services reimburseable, health care costs savings obvious, and lastly, all nurses would be communicating in a common language, that of a well defined, documented science.

#### Conceptual Framework -- Nursing Process

The conceptual framework of the study is based upon that structured matrix of nursing practice identified as the nursing process. Figure 1, represents an illustrative model of the conceptual framework. "The nursing process is an orderly systematic manner of determining the client's problems, making plans to solve them, initiating the plan or assigning others to implement it, and evaluating the extent to which the plan was effective in resolving the problems identified" (Yura and Walsh, 1978, p. 20). Implicit is the direction of the process as deliberate and its terminating point as that of achieving specifically defined goals. The goals are developed jointly by the client and the nursing professional with a basic outcome of assisting the client in obtaining wellness or, in the event that that is impossible, maintaining the quality of life for as long as possible.

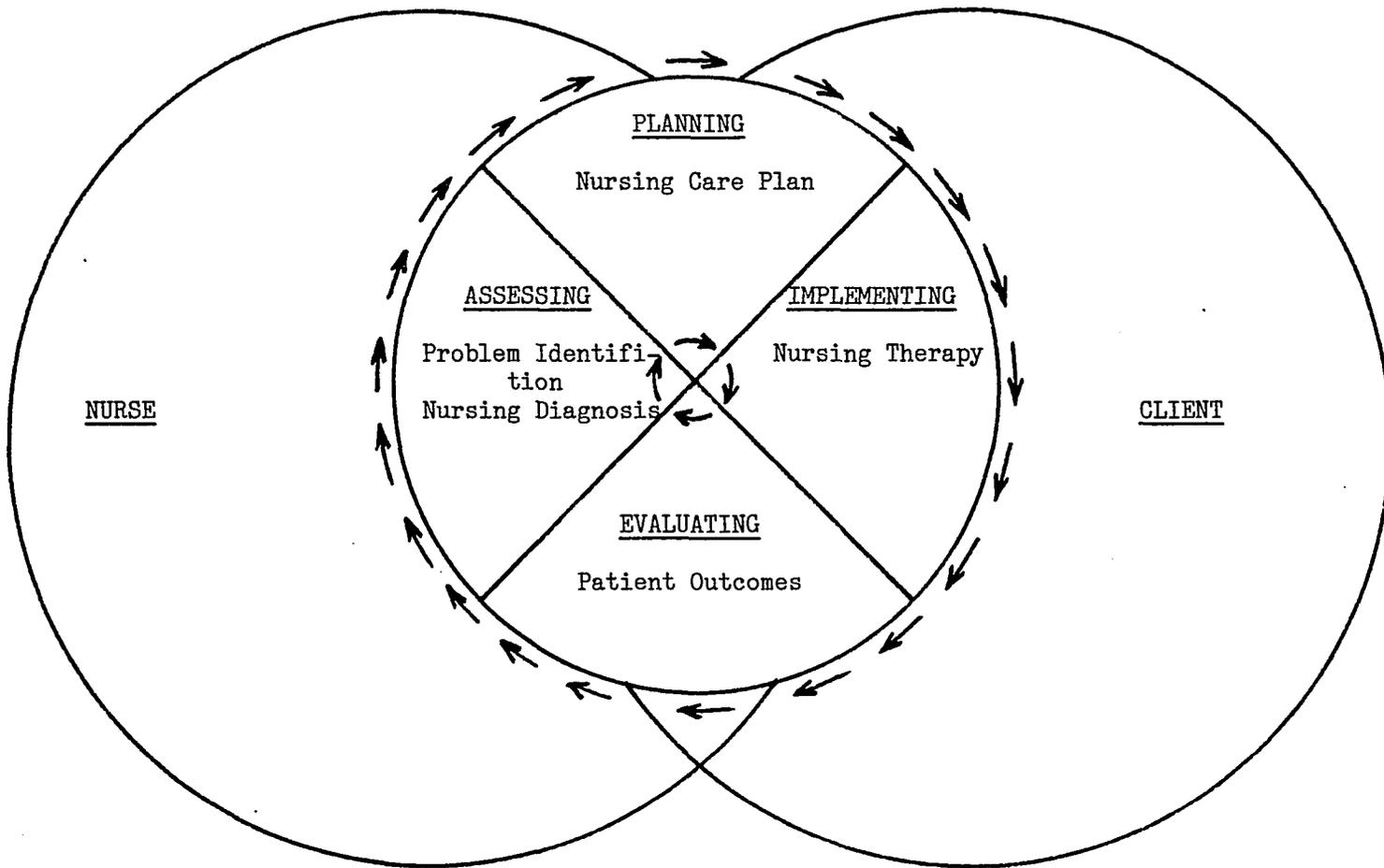


Figure 1. Conceptual Model of the Nursing Process

Modified From: Yura, H. and Walsh, M. "Analysis of the Components of the Nursing Process," The Nursing Process: Assessing, Planning, Implementing, Evaluating, 3rd Edition, Chapter Three, 1978, p. 93.

The process itself consists of four basic phases, each inter-related and mutually dependent: assessing, planning, implementing, and evaluating. Inherent to the successful employment of the nursing process are specific nursing skills identified as "intellectual, interpersonal, and technical" (Yura and Walsh, 1978, p. 93). The intellectual skills are those abilities of the nurse to identify client problems, analyze their origin/content, and design approaches of intervention which bring about successful solutions to the problems identified. Secondly, participation in a therapeutic relationship requires client trust. This is crucial to the success of the nursing process. The nurse must be capable of promoting positive interpersonal relationships not only with the client but with all individuals within the sphere of the client's environment. Lastly, the nurse must be adept at performing those procedures related to the actualization of the profession in order to induce behavioral changes or meet the biopsychosocial needs of the client.

#### Assessing

The first phase of the nursing process is that of assessing the patient. The initial nurse-client encounter is centered around an implied patient biopsychosocial problem. In order to intervene and implement solutions, the problem must first be identified, this being the first stage, i.e. assessment phase, of the nursing process. Basic steps are followed in order to gather data that will assist in problem identification. Such steps include interviewing and observing the patient with regard to physical, functional, psychosocial, and cultural-

economic status. Inherent to the interview process, is the taking of a health history, and fundamental to the observation process, is a physical examination for a review of systems. Additional data which complements the assessment is obtained from other resources such as the patient's medical record, interviewing the patient's family, and other members of the health care team with whom the patient has had contact. Once all the information has been collected, the nurse evaluates the data and identifies those areas that are problems for the patient. Problems are labeled in nursing diagnostic format. This format is used since it relates directly to the science of nursing. As Thomas and Coombs indicate, "nursing is seeking a scientific basis for practice. The process of diagnosing necessitates the use of scientific knowledge and requires the relationship and application of this knowledge to nursing. The actual diagnosis establishes a point of departure, a basis for nursing care" (Thomas and Coombs, 1983, p. 102).

### Planning

Once a patient's problems are categorized into the nursing diagnostic classification system, the second phase of the nursing process is initiated, i.e. planning. Planning directs the pathway for nursing intervention with the following four objectives:

1. Identify problems by priority.
2. Discriminate problems according to responsibility for resolution: be it the patient, family, or other health care intermediary in conjunction with the nurse or other support members.
3. Specify time frames for problem outcomes.

4. Transcribe the problems, plan of action, and expected outcomes onto the nursing care plan (Yura and Walsh, 1978).

Once the nursing care plan has been developed, the planning phase transitions into the operational phase or implementation.

#### Implementing

The third stage in the nursing process is the implementation of nursing interventions. "It is nursing therapy or nursing treatments, each of which is the giving of nursing care" (Marriner, 1983, p. 170). Guided by the nursing care plan, the nurse initiates a plan of action to resolve the identified problems. The implementation phase is a dynamic process in that: 1) participation by all concerned begins with resource activation to ameliorate or minimize problems; and 2) any new data is incorporated into the existing care plan and included in the process. As such, continuous assessing and evaluation of the appropriateness of the intervention proceeds with adjustments as indicated. When actions of participants or principals involved in the implementation process are finalized, outcomes are recorded on the nursing care plan. Documentation is essential to validate methods and results.

#### Evaluating

When considering attainment of patient outcomes (the ultimate goal of the nursing process), methodology for goal attainment analysis is crucial. This measurement, the evaluation process, is the final phase in the nursing process. "Evaluation is the natural intellectual activity completing the process phase because it indicates the degree

to which the nursing diagnosis and actions have been correct" (Yura and Walsh, 1978, p. 140).

Several mechanisms exist as tools for evaluating patient health care outcomes. Examples include the retrospective chart audit, concurrent chart auditing, and process analysis (performance appraisal of how activities are carried out by the health care professional). Nonetheless, each of these have their limitations as to accuracy and appropriateness. In the retrospective chart audit, it is assumed that the information documented by the health professional is inclusive and accurate. This assumption is not always realistic. Concurrent reviews are limiting in that they cannot be efficiently and effectively performed throughout the duration of the patient's treatment. Ultimately, process analysis requires established criteria for the performance of each nursing or professional activity. To date, this has not been attainable due to the vast nature of such a task. As such, the evaluation of patient health outcomes, while considered vital as a professional and ethical responsibility to the consumer, is an extremely complex and difficult process. Aside from the limitations of the mechanisms for evaluation, multiple variables influence patient health outcomes which may or may not be controlled by the health care provider. Hegyvary and Hausmann (1976) stated,

given the complexity of the patient care system, there are numerous variables that influence patient care outcomes. The performance of individual health professionals may have an impact, but rarely can individual performance be considered the sole determinant of outcomes (Hegyvary and Hausmann, 1976, p. 13).

The authors make further reference to the fact that studies thus far have lacked predictability regarding the outcomes of health care in relation to the input by the various health professionals. They suggest continuing research into the area specifically regarding the identification of outcomes relating to each individual health care provider (Hegyvary and Hausmann 1976). As such, the evaluation process is still at an embryonic stage of development. Nonetheless, as a professional responsibility, evaluation methods must continue to be explored in order that the ultimate goal of health care provision, that of quality assurance, is attained.

Summarizing, the nursing process is a systematic approach for operationalizing the practice of the nursing profession. Structurally an open system, it allows for the addition of new information at any time and for redirection of intervention techniques in the event patient's goals are not achieved. Its ultimate objective is to promote successful patient outcomes through quality nursing care.

## CHAPTER 2

### SELECTED LITERATURE REVIEW

This chapter is a selected review of the literature pertinent to the areas basic to the development of the study: nursing diagnosis and the evaluation process as it relates to client health care outcomes. Initially, nursing diagnosis is reviewed in terms of its historical development and to its relationship to nursing science and theory. Subsequently, the diagnostic classification is looked at in terms of the nursing process, its structural components, and questions concerning its implementation. The evaluation process is reviewed in reference to its initial application to the medical and nursing professions, basic structural format, and the different modalities for operationalizing the process. Ultimately, research studies were reviewed that addressed issues concerned with the utilization of nursing diagnoses in health care delivery systems with emphasis on home health care settings.

#### Historical Development of Nursing Diagnosis

Nursing literature has revealed attempts to gather clusters of nursing activities and develop relevant taxonomies as far back as the 1950's. Initially, such descriptions centered on identifying patient problems related to health disorders or conditions, i.e. hypertension,

diabetic ketoacidosis, cataracts, etc. By the 1960's, the first vestige of a classification system emerged through the efforts of Abdellah et al. (1961). Collaborating on a study supported by the National League for Nursing, the authors developed a typology comprised of "21 groups of common nursing problems" (p. 16). These problems were categorized in terms of patient outcome goals, for example, "to facilitate the maintenance of a supply of oxygen to all body cells" (p. 16). Coincidentally, as the profession was attempting to codify a language unique to its practice, high technology in clinical settings was emerging. "These two issues, one as old as nursing itself and the other a modern technological development, provided the incentive for the First National Conference to identify nursing diagnoses" (Gordon, 1982, p. 2).

The First National Conference on the Classification of Nursing Diagnoses was held in 1973 which inception is credited to Kristine Gebbie and Mary Ann Lavin, faculty members at the St. Louis University School of Nursing. The stimulus to convene the Conference was centered around "clinical issues" (Gordon, 1982, p. 2) as Gebbie and Lavin were concerned with the "need to identify the nurse's role in their ambulatory-care setting" (p. 2). Simultaneously, the nursing department associated with the ambulatory-care setting had been approached about including nursing data into the hospital's computer program. The question as to what data to include became the major issue. The need for identifying and categorizing nursing activities became vital to advances in the profession.

Consequently, since 1973, four national conferences on nursing diagnoses have been held. Constituents of the conferences included an array of nursing personnel representing all aspects of the profession: clinicians, educators, theorists, and researchers. Thirty nursing diagnostic categories were identified at the first Conference (Henderson, 1978). This list expanded to 42 at the Fourth National Conference which took place in 1980.

#### Nursing Diagnosis in Relation to Nursing Science and Theory

Nursing diagnosis as it relates to nursing science and theory has vital implications. Henderson stated, "The unorganized state of available nursing knowledge represents a problem that must be resolved in order for nursing to continue as a viable health profession" (Henderson, 1978, p. 75). The mere addition of a collection of nursing diagnostic categories to this knowledge would merely contribute to further ambiguity. However, if related to the existing body of knowledge, nursing diagnoses could be fundamental in developing both nursing theory and, subsequently, nursing science. Henderson, in replying to questions posed concerning the development of nursing diagnoses, stated,

Nursing science is that body of knowledge derived from and developed through the practice of nursing... A logical systematic approach to identifying and classifying diagnoses (statements that are related to or derived from nursing concepts) can contribute meaningfully to theory development in nursing and in turn to the science of nursing (Advances in Nursing Science, 1979, p. 96).

Henderson's belief that "nursing diagnosis can be viewed as the first step in the process of theory development" (Henderson, 1978, p. 77),

is shared by other prominent nursing theorists. Kritek (1979) emphasized that "the generation and classification of nursing diagnoses is an embryonic theory with significant potential for the nursing profession" (Kritek, 1979, p. 78).

Nursing diagnoses as related to theory development must be correlated. "A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena" (Kritek, 1978, p. 34). It is commonly acknowledged that nursing practice involves intervention with human responses reacting to phenomena which induce healthful or unhealthful situations. The intent of nursing diagnoses is to identify, define, and classify the realm of this phenomena. As such, it represents the first and rudimentary level (factor isolating) of the four levels of theory structure as identified by acclaimed theorists, Dickoff, James, and Wiendenbach (1968). "The labeling of phenomena in nursing diagnosis represents the factor isolating or naming theory and identifies the 'conceptual unities' relevant to the practice of nursing" (Henderson, 1978, p. 77).

Reversing the direction of nursing theory development to the factor isolating stage is perhaps the most important contribution that nursing diagnosis has introduced to the profession. A statement by Kritek elucidates this point, "Nursing efforts to develop nursing theory have moved to very sophisticated levels of theorizing while bypassing prior steps" (Kritek, 1978, p. 34). "Prior steps" refers to

the four levels of theory: factor-isolating, factor-relating, situation-relating, and situation producing, each of which is prerequisite for the next level (Dickoff, et al., 1968). Defining nursing at level four without actually clarifying what in reality nursing is and what nursing does has generated the all too common question among the public and other health professionals as to whether nursing is or is not a profession. As mentioned earlier, nursing diagnosis, as factor isolating theory, is the embryo for an eventual and future articulated, well-defined nursing science and nursing theory.

#### Nursing Diagnosis as Related to the Nursing Process

The nursing process has been identified as the "scientific model for nursing practice" (Purushotham, 1981, p. 46). The author further stated that, "Nursing diagnosis is an integral part of the nursing process, forming a link between the assessment and the planning and the intervention phase of the nursing process" (Purushotham, 1981, p. 47). Considering nursing diagnosis as the "vital end-product" (P. 47) of the assessment phase, successful nursing intervention is dependent upon accurate patient problem identification. Furthermore, as each individual diagnostic classification is researched and taxonomies are developed within each classification, standardized care plans can be developed relating to the individual categorized taxonomy. Thus, nursing diagnosis would not only aid in patient problem identification but also assist in setting up a specific care plan relating to the identified problem. Intervention modalities could be structured around nursing diagnoses once research in each category revealed those

approaches producing successful patient outcomes. As such, continual scientific development of nursing diagnoses has implications not only for the assessment phase of the nursing process but also for the planning, implementing, and intervention phase of the process.

#### Structural Components of Nursing Diagnoses

The architectural framework of a nursing diagnosis has been generally accepted and is expressed in terms of the "PES format" (Price, 1980, p. 668). P refers to the "client's actual or potential health problem," (p. 668), E relates to the etiology of the problem, and S alludes to the signs and symptoms being exhibited (Price, 1980). In reference to the P, the forty-two nursing diagnoses accepted by the National Conference on the Classification of Nursing Diagnoses can be utilized to denote the client's potential or actual health problems. Etiology "is the identification of environmental, sociological, spiritual, psychological, physiological, and any other factors believed to be related to the health problem" (p. 668). A single health problem may have one etiology as well as several. Lastly, S, signs and symptoms, are those observable and measurable indicators of the identified health problem. A typical example of an accepted nursing diagnosis is as follows:

P: Alteration in Bowel Elimination: Constipation

E: Decreased activity level

S: Low roughage diet (Gordon, 1982, p. 78)

### Implementation of Nursing Diagnosis

While nursing diagnosis is congruous to the development of nursing theory and science and its structural format is expedient to the nursing process, its empirical application is the cause of considerable controversy and speculation. Some of the concern can be attributed to its newness or rudimentary stage of development. Questions arise as to how nursing can initiate a nursing diagnostic classification system when it is limited to some forty broad scoped diagnoses; when taxonomies are not yet clearly defined within each classification; when positive interventions per classification have not been scientifically proven; and when nursing professionals are not all appropriately nor adequately prepared to perform clinically at the level implied by nursing diagnoses. While all of these positions contain some element of truth, the more vital issues surrounding the implementation of using nursing diagnoses are those relating to the following:

- 1) Whether nurses can actually diagnose, and if so,
- 2) what is the relationship between medical diagnoses and nursing diagnoses, and lastly,
- 3) if nurses are able to diagnose, treatment is implied and under what jurisdiction and conditions can such treatment occur?

In reference to the concern of nurses diagnosing, Purushotham (1981) defends the position as follows:

The dictionary defines 'diagnosis' as the recognition and identification by examination and observation, and 'judgment' as arriving at a wise decision, discretion, discernment, and opinion. In the light of these definitions, since the

diagnostic process includes making wise decision, it becomes obvious that nurses do diagnose: (Purushotham, 1981, p. 46).

The author draws further parallels to the concern in stating:

One common objection to the term is that making a diagnosis is within the exclusive domain of the medical profession. In fact, however, diagnosis is one of the most crucial aspects of most of the professional and technical services in society today (p. 46).

Thus, if it is considered logical, appropriate, and acceptable that professional nurses can diagnose, what then becomes of the relationship between medical diagnoses and nursing diagnoses?

In her article "Nursing Diagnosis: Theory and Practice," Henderson (1978) alludes to this relationship as depicted in Figure 2. While the diagnostic process is similar in both models, the diagnostic statements differ.

The focus of clinical medicine is on the diagnosis and treatment of disease. The treatment is directed at the cause or etiology of the disease... The focus of clinical nursing may be conceptualized as the diagnosis and treatment of human response to intrapersonal, interpersonal, and environmental stressors (Henderson, 1978, pp. 82-83).

Thus, while the physician treats the pathophysiological aspects of the client's health problem, the nurse treats the client's responses to the health problem. An illustration may be the physician treating a pulmonary squamous cell carcinoma. According to the disease status, chemotherapy, radiation therapy, and/or surgical intervention may be indicated. Meanwhile, the nurse identifies and treats the client's response to the illness, be it anxiety/fear of the diagnosis, dietary problems, respiratory stressors, pain monitoring, and/or family coping patterns. As one may well appreciate, the physician-nurse relationship

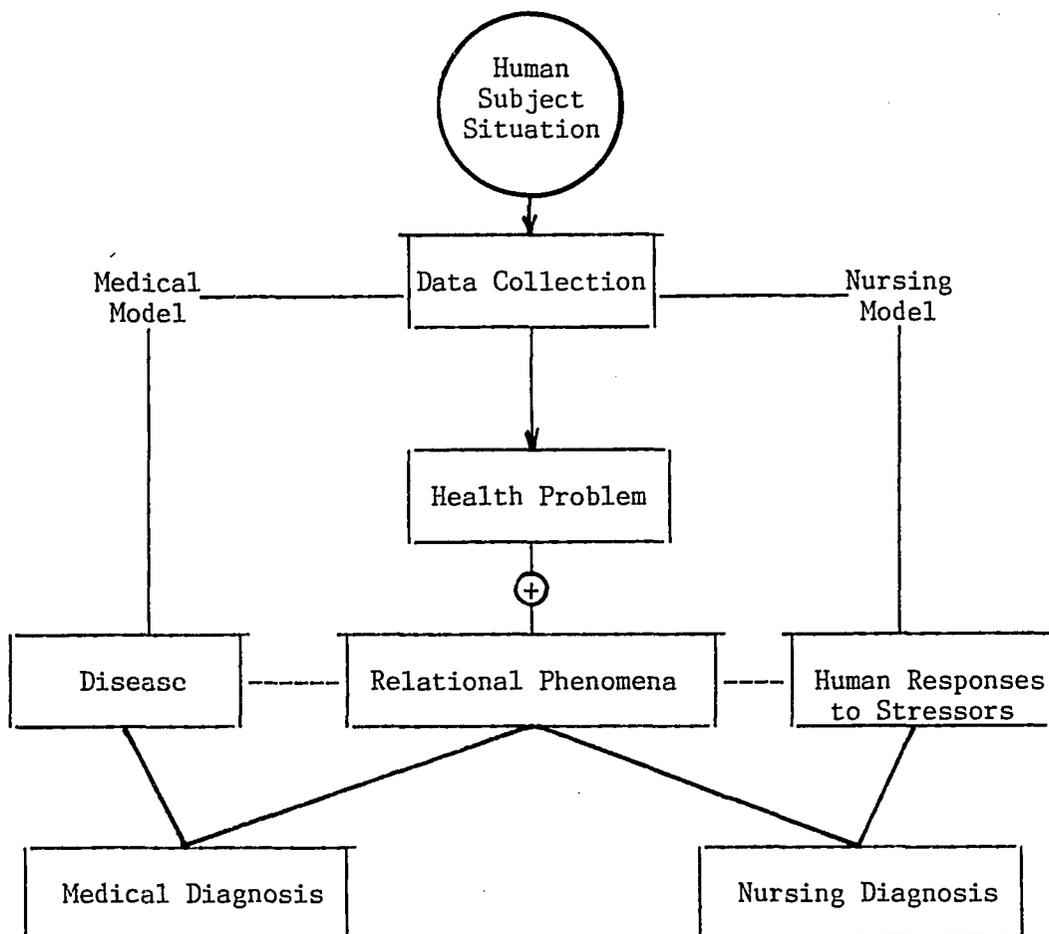


Figure 2. "The Diagnostic Process in Nursing and Medicine: A Comparison" (Henderson, 1978, p. 82).

is vital so that a comprehensive, holistic, coordinated health care plan for the client is provided. Furthermore, nursing diagnosis clearly defines the role or performance expected from the nursing professional, a situation less clear prior to the advent of the nursing diagnostic classification system.

A final consideration regarding the implementation of nursing diagnosis refers to the term "license to treat." Are nurses "licensed to treat" nursing diagnoses, and if so, under what constraints? As of 1983, "seventeen states include the term 'nursing diagnosis' in the definition of professional nursing practice or the definition of a registered nurse" (Rennicke, 1983, p. 1). Such legislation appears to clearly reflect the influence and impact nursing diagnosis has attained since the First National Conference in 1973. Many of these seventeen states have structured and utilized the same terminology in their nurse practice acts. New York State's practice act defines the practice of nursing as: "The practice of the profession of nursing as a registered professional nurse is defined as diagnosing and treating human responses to actual or potential health problems..." (Rennicke, 1983, p. 6). The law further delineates diagnosing and treating as:

1. 'Diagnosing' in the context of nursing practice means that identification of and discrimination between physical and psychosocial signs and symptoms essential to effective execution and management of the nursing regimen. Such diagnosis is distinct from a medical diagnosis.

2. 'Treating' means selection and performance of those therapeutic measures essential to the effective execution and management of the nursing regimen, and execution of any prescribed medical regimen (Rennicke, 1983, p. 6).

Thus, as illustrated, autonomy in the professional practice of nursing is emerging. Nursing diagnosis is playing an important role in this direction. Purushotham (1982) reflected the following:

One of the present day criteria for a professional person is that he is able to make independent judgments and to assume responsibility for his own actions. Nursing diagnosis, as part of the nursing process, provides the key to that professionalism which is demanded of today's professional (p. 46).

#### The Evaluation Process

Inevitably, when discussing patient outcomes, the process of evaluation of health care service provision must be addressed since it is this process by which outcomes are measured. While evaluation as a process is not a new concept, its formal entry into the health care system is fairly recent. In 1972, the Professional Standards Review Organization (PSRO) legislation (P.L. 92-603) mandated that physicians' groups be developed "to monitor the quality of medical care financed by federal funds such as Medicare" (Bloch, 1975, p. 256). Programs to monitor the quality of care took on the shibboleth of "quality assurance" programs with missions "to evaluate the appropriateness of care provided, the necessity of that care, and its quality" (Lanham, 1981, p. 14). The ultimate goal was to provide high quality medical care which was both cost effective and cost efficient. While basically physician oriented, P.L. 92-603 did not exclude the monitoring of services of allied health care providers and included regulations for their participation in the PSRO format. In reference to the nursing profession, Bloch eludes to the PSRO's as stimulating the profession to a more formal commitment in the evaluation process. "Today, the belief

that nursing practice must be evaluated seems to be almost as uncontroversial as motherhood and apple pie" (Bloch, 1975, p. 256).

#### Structural Format of Evaluations

The reknown expert in evaluation processes, Avedis Donabedian, identified three basic frameworks for evaluating patient care: structure, process, and outcome (Donabedian, 1966). Evaluations concerning structure consider the atmosphere of the health care setting involving not only the physical surroundings but operational ones as well, such as staffing ratios, supervisory methods, and patient/staff programs. Process evaluation studies the methods/practices by which health care is provided. Ultimately, outcome evaluations attempt to study the end-product or results of health care provision, i.e. changes in the health status of the patient.

#### Methods of Evaluations

As mentioned previously, there exists several mechanisms to perform patient care evaluations. Nonetheless, agreement as to the reliability and validity of tools used to evaluate patient care have been less than unanimous. Three basic evaluation formats exist: process, outcome, and process-outcome (Bloch, 1975). The process form of evaluation focuses on the method in which an activity is carried out, i.e. performance appraisal. This type of evaluation as applied to nursing would measure the nurse's ability to perform nursing care activities according to the art and science of the profession. On the other hand, outcome-type evaluation considers the results of the

performance specifically in relation to a patient's health care status. The intent of health care provision is to cure, rehabilitate, or palliate the patient's ill health status. An outcome evaluation attempts to measure the effectiveness of health care provision in terms of the final health care status of the client. Ultimately, process-outcome type evaluations are combinations of both the process and outcome methods. Essentially, a client may experience positive health outcomes independent of the interventions of the health care providers. Vice versa, professional competency does not guarantee positive end results. While both process and outcome evaluations are valuable tools, a combined process-outcome format is recommended as a comprehensive measurement of patient care. Bloch (1975) gives reference to process-outcome type evaluations as "potential for great impact on the quality of care" (p. 258), and though while still in embryonic stages of development, "The goal in nursing, then should be to work steadily and resolutely toward achievement of these steps" (p. 258).

#### Research Studies on Nursing Diagnosis

The literature reviewed tends to reflect contemporary modality trends. Nursing diagnosis is one such example. While its origins as a concept began with Abdellah's 21 identified nursing problems (Abdellah et al., 1961), its actual implementation correlates to the inception and subsequent meetings of the National Conference Group for Classification of Nursing Diagnoses. As such, documented studies on nursing diagnoses are fairly recent and reflect the two basic issues concerning its inauguration into the profession. These issues are: 1) studies of

the realm of patient problems for which nursing diagnoses could be ascribed, and 2) the development of nursing diagnostic taxonomies for the various specialities within the profession. A review of literature failed to identify any studies that addressed client health care outcomes associates with nursing diagnoses.

Three studies were reviewed all of which pertained to expansion and/or validity testing of existing nursing diagnoses. Mentioned studies included: The Omaha Study by Martin (1982), Kim et al., (1982), and McKeehan and Gordon (1982). The purpose of the Omaha Study (Martin, 1982) was to develop a classification system to identify patient health problems in the community health setting. An initial pilot study, designed at the Visiting Nurse Association of Omaha, consisted of 383 active cases (family units) as subjects for the project. Each case was visited by a nurse who assessed the family unit and identified/documentated each patient problem. After all the subjects' problems were identified, they were then categorized. "The resultant classification consisted of four categories with 49 problem names and accompanying descriptors (signs and symptoms) for each problem name" (Martin, 1982, p. 170). The four main categories were labelled as domains: environmental, psychosocial, physiological, and health behaviors. An example of the classification scheme follows: "Domain-Environmental; Problem name - 03. Safety hazards: A. residence; Descriptors - 01. structurally unsound, 02. inadequate heat" (Martin, 1982, p. 174). The developed classification system was field tested by three other community health agencies: Des Moines

Public Health Nursing Association, the Division of Public Health of the State of Delaware, and Dallas Visiting Nurse Association. After testing, descriptors were refined to attempt "mutual exclusivity" (p. 172) and some problems were redefined. Currently, all four agencies are using the system. While the study did not address the nationally accepted list of nursing diagnoses per se, it demonstrated the need for identifying and classifying patient problems into a nomenclature common to all nurses in a community health care setting.

The study by Kim et al., (1982) included 38 adult subjects hospitalized in two acute care settings for various cardiovascular illnesses. Twenty-two nurses (four clinical specialists and eighteen staff nurses) participated in identifying the nursing diagnoses of the subjects. "Twelve nursing diagnoses were identified more than 3 times by both members of 38 paired assessments of the same patients, consensual validity and reliability of these diagnoses were established" (Kim et al., p. 186). A comparison study was performed regarding the types of diagnoses identified by the clinical specialists and the staff nurses. The statistical analyses revealed no significant differences<sup>2</sup> ( $\chi^2(1) = 0.015, p = .09$ ) between the two groups of nurses. This inferred that both nursing groups were able to identify similar patient problems within the subject group and classify these problems into a similar diagnostic category. The implications concluded that a common language is existent within the profession.

McKeehan and Gordon's study (1982) consisted of 163 subjects of which 104 were obstetrical patients and the remaining 59 were

gynecological patients. All subjects were discharged from a hospital setting and referred for continued follow-up care from 1976 to 1978. "Problems recorded at discharge were transcribed as stated from continuing care records and compared with the accepted list of nursing diagnoses developed by the National Conference Group in 1973, 1975, and 1978" (McKeehan and Gordon, 1982, p. 192). Of the 567 diagnoses recorded 241 (43 percent) were identical to the accepted diagnostic categories. An interesting observation presented by the study was that 95 percent of the subjects were referred for follow-up to a local visiting nurse association. The authors indicated that the study fostered a "reciprocal interaction of education" (p. 194) between the hospital staff and the community health nurses. Nursing diagnoses introduced a taxonomy of common communication between the two groups since all pre- and postdischarge case conferences were discussed in nursing diagnostic format even though the community health agency was still using the medical diagnostic system.

In summary, the 3 studies discussed provide initial research attempts concerning the development of a classification system for the profession and reliability/validity testing of the initial list of the nationally accepted nursing diagnoses. Consensual validity appears evident in some instances. While outcome studies regarding client health outcomes exist for nursing activities defined in the classical clinical format, studies of client health outcomes relating to nursing diagnoses need to be forthcoming. Outcome studies in home health care agencies is a particular professional concern in view of Mundinger's

statement in her recent study on home health care. "Outcomes are not measured at all and quality evaluation is limited to quarterly meetings in the agency, as mandated in the regulations" (Mundinger, M., 1983, p. 128).

## CHAPTER 3

### METHODOLOGY

The topics addressed in this chapter include the research design, the setting, and the sample. Procedures implemented as pre-requisites for the study are explained including descriptions of tools used for the study, data collection methods, and statistics used for data analysis.

#### Research Design

A descriptive design was utilized for this study to: 1) identify those nursing diagnoses employed in a home health care setting, and 2) describe in qualitative terms, client health care outcomes for the seven most frequently utilized nursing diagnoses identified. The tool employed for measuring patient outcomes was developed by the investigator and its efficacy was based on face validity.

#### The Setting

A state licensed and medicare certified, non-profit, home health agency located in an urban southwestern city was the setting of the study. The Agency was one of two components within a division of the local county health department. A large home health aide-homemaker program comprised the second section of mentioned division. This

program although working in collaboration with the licensed Agency was operationally independent. Oral permission to perform the study was granted by the Agency's administrator.

As shown in Table 1, skilled nursing care was the predominant service provided. Occupational therapy services were recently initiated at the Agency, a rationale for the minimal amount of recorded visits. Nutritional services were also provided through another division in the health department, however, statistics as to the number of visits made were not available.

#### The Sample

The records of the first 60 clients discharged from the Agency between April through July 1984 were reviewed. Forty-nine records met the criteria for selection of the sample population which included the following:

1. Upon discharge each client's health care outcomes had been evaluated by a nurse using the "60 Day Evaluation/Utilization Review" tool,
2. Each client must have received no fewer than 3 visits from either a registered nurse or a licensed practical nurse,
3. Clients were 60 years of age or older,
4. The client's ethnicity was restricted to white anglo.

#### Human Subjects

Permission to perform the study was granted by the University of Arizona's College of Nursing Ethical review Sub-committee of the

Table 1. Number and Percent of Visits Provided  
According to Discipline by the Home  
Health Agency during July 1983  
Through June 1984

Discipline	Total Number of Visits	Percent of Total
Nursing	16,924	73.8
Physical Therapy	622	2.7
Occupational Therapy	63	.3
Medical Social Services	110	.6
Home Health Aide	5,185	22.6
Others	3	.0
Total	22,907	100.0

Research Committee and the Director of Research. The study was considered exempt from University review. (Appendix B)

Several procedural modifications concerning the Agency's practice modality had to be undertaken prior to the initiation of the study. Modifications included the following:

1. Converting the Agency's mode of practice from team nursing to primary care nursing.
2. Implementing the use of nursing diagnosis in place of medical diagnosis.
3. Incorporating a structured evaluation phase into the Agency's process format.

These modifications were essential to the implementation of the study. Initially, the transition from team to primary care nursing was made to enhance professional accountability (Purushotham, 1981). Such accountability would create an atmosphere more conducive to produce positive client health care outcomes. Secondly, the utilization of nursing diagnoses would more explicitly identify those patient problems that were within the nurse's area of practice that she was licensed to treat. As such, client outcomes could more reliably be associated to nursing interventions. And ultimately, a structured evaluation system would condition the nursing staff to this phase of the nursing process, one identified as difficult for nurses to operationalize (Dalton, 1979). Once accustomed to this phase, client outcomes could be assessed. Gordon (1979) supports this viewpoint stating "evaluation is designed to measure whether outcomes were attained and whether a

positive change in the problematic state of the client occurred" (Gordon, 1979, p. 491).

### Tools

The tools utilized in the study were the Demographic/Client Health Outcome Measurement Tool, and the "60 Day Evaluation/Utilization Review" tool. Both tools were developed by the investigator for this study.

#### Demographic/Client Health Outcome Measurement Tool

The Demographic/Client Health Outcome Measurement Tool (Appendix C) contained fourteen descriptive items. The first twelve items pertained to general information about the subjects and data related to service provision. The remaining two items addressed client health care problems ascribed in terms of nursing diagnoses and client health care outcomes, and the client's discharge disposition upon service termination.

The initial twelve items included the following: referral source, age, sex, marital status, length of stay on service, total number of visits received, total number of visits per discipline, living arrangements, total number of nursing diagnoses upon admission, available support systems, funding source/sources for service provision, and funding source allocated for each involved discipline.

Item thirteen addressed the nursing diagnoses assigned to each subject and a coded descriptor of the client's health care outcome per diagnosis. The diagnoses were limited to those seven identified

diagnoses most frequently utilized in the Agency. For each nursing diagnosis, an admitting score, expected outcome score, and discharge score were noted. These scores were derived from the "60 Day Evaluation/Utilization Review" tool. The final item of the tool addressed the discharge disposition of the client.

"60 Day Evaluation/Utilization Review" Tool. The "60 Day Evaluation/Utilization Review" tool consisted of two parts. The first part contained 14 items which related to the evaluation of the client's health problems (page 39). This part also reflected the scoring system used during the client's evaluation and contained an area for a narrative explanation of the client's health status substantiating issued scores. The following identifies the 14 items which also served as the document source from which information for the study was obtained.

1. Tabulated Admitting Scores: a combined total of individual scores.
2. Admission Date: date client started service.
3. Problem Number and Description: the number and patient problem expressed in nursing diagnostic format.
4. ADM: the admitting score issued each problem.
5. EOS: the expected outcome score issued each problem.
6. Last Eval.: score issued each problem during the last evaluation.
7. Present Eval.: present score issued each problem.

60 Day Evaluation/Utilization Review  
Discharge Summary

Page \_\_\_\_ of \_\_\_\_

Name: \_\_\_\_\_ N.R.# \_\_\_\_\_

Tabulated Admitting Scores

Readjusted Scores Due to New or Recurring Problems

R  A  E

R  A  E

Admission date: \_\_\_\_\_

Date of readjusted scores: \_\_\_\_\_

Problem Number & Description	Scores			Problem			Evaluation Comments	Date
	ADM	EOS	Last Eval	Pre-sent Eval	Cont Tx	Resol ved		

Totals: \_\_\_\_\_

See next pg. for problem continuation.

1) Evaluation/Utilization Review: Present status, summary of care provided, reason for discharge or continued treatment: Need for skilled services and homebound status.

2) Discharge Summary:

Peer review:

Utilization Review Committee \_\_\_\_\_  
Evaluating R.N.     P.H.N. Teamleader     Nursing Supervisor

Figure 3. 60 Day Evaluation/Utilization Review, Discharge Summary

8. Cont Tx: area checked to indicate nursing care is to continue.
9. Resolved: area checked to indicate problem resolved.
10. Evaluation Comments: a narrative describing the patient's present health status for each problem identified.
11. Date: date the current evaluation was performed.
12. Totals: an accumulative tally of all identified scores.
13. Readjusted Scores: score changes due to the addition of new problems or deletion of resolved problems.
14. Date of Readjusted Scores: date the scores were changed.

The second part of the tool which consisted of three items contained the following: 1) an area to summarize the evaluation in terms of the client's current health status, services provided, evaluation disposition, i.e. the reason for discharge or continuation of services, and documentation of the client's homebound status; 2) an area to identify the evaluation in terms of a "60 Day Evaluation/Utilization Review" or a discharge summary; and 3) an area for the signatures of the nurse performing the evaluation, her immediate supervisor, the public health nurse teamleader, and the nursing supervisor.

The tool was specifically designed to meet criteria for medicare certification. According to medicare regulations, each home health client who remains on service beyond a 60 day period must receive an evaluation by the qualifying discipline providing the service. Stated evaluation served to justify the need for continuation of services reimbursed under medicare funding. Since all clients were not funded by medicare nor remain on service beyond a 60 day period the

policy of the Agency is that the evaluation tool was to be utilized on all clients every 60 days and at the time of discharge from service.

#### The R.A.E. Scoring System

The scoring system, identified as the R.A.E. system, reflected pre-established criteria which were based on two factors: the first denoted the severity of the client's problems, and the second correlated the severity to visit frequency, an estimated frequency which contemplated the time necessary to produce a positive health outcome. Problem severity need not be demonstrated by overt disease signs and symptoms. The scoring system, R.A.E., was identified as such for simplification with; R referring to the requisite score, A to the totaled admitting scores, and E to the totaled expected outcome scores. The scoring system ranged from '4' to '0' with the higher score indicating greater risk for the client. Interpretation of each individual score follows:

A score of 4 implied: a high risk problem with a potential for institutionalization.

A score of 3 implied: a moderate to severe problem with overt signs and symptoms of disease requiring frequent home health visits (Verbally indicated as anywhere from daily to three times a week).

A score of 2 implied: a moderate problem with overt signs and symptoms of disease requiring periodic home health visits (verbally indicated as anywhere from one to three times a week).

A score of 1 implied: minimal, potential, or stabilized problem (verbally indicated as intermittent care, such as changing a foley catheter, or discharge to care of a significant other and/or self care).

The requisite score (R), was also tabulated for each client and represented two factors: the first being the total number of identified client problems (assigned nursing diagnoses) and the second, the score required (requisite) to discharge a client to self care or to the care of a significant other once health care outcomes were reached. For example, in order to be discharged from service, a score of one for each problem would be required (see score interpretations). If a patient had a total of five problems, then his (R) score would be 5 times 1 equaling 5. Since many home health clients have long term illnesses, irradiation of problems is not realistic. However, nursing intervention can stabilize a disease exacerbation. It would be unrealistic to predict a score of zero for many problems, but not presumptuous to predict a score of one. Final outcome scores were interpreted as follows:

Very Favorable: a score of 0

Favorable: a score of 1

Unchanged: an admitting score of 1 and a discharge score of 1

Unfavorable: a score of 2 to 4.

In summary, the devised scoring system (R.A.E.) along with the evaluation process were kept simplistic so as to be applicable to all clients receiving nursing services at the Agency and be operationally functional.

#### Data Collection Methods

Initially, the home health nursing records of the 49 subjects were reviewed to identify all the nursing diagnoses utilized in the

nursing care of each subject. Then, the seven most frequently employed nursing diagnoses were identified. Subsequently, a retrospective chart audit was performed on each of the subject's nursing records. Each of the forty-nine subjects had one or more of the seven most frequently used nursing diagnoses. Data extrapolated to obtain the demographic characteristics of the study was obtained from the nursing records which contained this information. Data concerning the evaluation of the subject's health outcomes per assigned nursing diagnosis was extracted from the subject's last "60 Day Evaluation/Utilization Review" tool form. The information on stated evaluation tool was collected as follows:

1. Upon admission for nursing services, each subject received a biopsychosocial assessment performed by a designated staff nurse. After identifying a health problem, the nurse documented each problem in nursing diagnostic format in the appropriate columns on the evaluation tool.
2. The nurse then assigned an admitting score (A) to each problem. This score would range from 4 to 1 depending on the acuity of the problem (refer to scoring system).
3. Along side each admitting score, the nurse placed an expected outcome score (EOS) from score ranges of 4 to 0 (refer to scoring system).
4. The nurse then tallied all the scores within the A and EOS columns, the sums of which would represent the total admitting and expected outcome scores of all the identified problems.

These scores were inserted along with the Requisite Score (R) in the area labelled "Tabulated Admitting Scores" (refer to scoring system for (R) score).

5. At intervals of 60 days, the primary care nurse re-evaluated each identified problem issuing a current score in the column labelled "present eval."
6. A check mark (✓) was placed in one of the subsequent columns, "Cont Tx" -- continue treatment or "Resolved," indicating that the problem was either resolved or that treatment should continue.
7. The nurse then completed the column "Evaluation Comments" documenting in narrative format nursing interventions employed and identifying measurable, objective data in relation to the client's response to treatment. Both process and outcome data were used to substantiate the score given to each problem.
8. All scores issued in the current evaluation were totaled, the sums of which were inserted in the columns along side the "totals" area.
9. The evaluation process was completed as the nurse documented in the second part of the evaluation form the following information: 1. a general summary of the present status of the client, 2. services which were provided, and 3. disposition of the client, i.e. either to continue services or discharge the client to another level of care. The area

labelled "Evaluation/Utilization Review" or "Discharge Summary" was circled indicating the evaluation disposition.

10. The completed evaluation was then reviewed by the nurse's clinical resource nurse, (the public health nurse teamleader), and the nursing supervisor. Each in turn offered comments or suggestions regarding interventions employed and/or observations concerning the client's response to treatment.

#### Analysis of Data

Frequency distribution statistics were used to address the study questions: 1) to identify those nursing diagnoses used by the nursing staff to document patient problems; 2) of those utilized, what were the seven most frequently used nursing diagnoses; 3) of the seven most frequently used nursing diagnoses identified, what were the associations between demographic characteristics, living arrangements, social supports, and discharge disposition of the clients; and 4) what were the client health outcomes of the seven most frequently used nursing diagnoses as measured by the terms very favorable, favorable, unchanged, and unfavorable.

## CHAPTER 4

### PRESENTATION OF THE DATA

This chapter presents the results of the statistical analyses of the data collected. Demographic characteristics and data supportive to the study's four questions are initially presented. Ultimately, the results of the study questions are described.

#### Demographic Characteristics of the Sample

The demographic characteristics of the 49 subjects were obtained from a retrospective audit on the nursing records of each client. The audit revealed the following data. Twenty-five of the subjects (51%) were female and 24 (49%) were male. The ages of the sample population ranged from 62 to 99 years of age with a mean age of 78 years. The mean age for the female group was 80.2 years while the mean age for the male group 75.7 years. Five females were in the age group 90-99 years. There were no males in this age group. The subjects sex and marital status according to age groups are shown in Table 2. The data revealed that 26 (53%) were widowed and 13 (26.5%) were married. Of those widowed, 9 (29.2%) were males and 19 (76%) were females.

Table 2. Sex and Marital Status by Age Groups of the Sample Population as Identified From the Record Review (N=49)

Age Groups	MALE Marital Status										FEMALE Marital Status									
	Single #	Single %	Married #	Married %	Widowed #	Widowed %	Div/Sep #	Div/Sep %	Total #	Total %	Single #	Single %	Married #	Married %	Widowed #	Widowed %	Div/Sep #	Div/Sep %	Total #	Total %
60-69	2	8.3	3	12.5	3	12.5	1	4.2	9	37.5	1	4.0	1	4.0	4	16.0	-	-	6	24.0
70-79	2	8.3	2	8.3	1	4.2	1	4.2	6	25.0	-	-	-	-	4	16.0	1	4.0	5	20.0
80-89	-	-	5	20.8	3	12.5	1	4.2	9	37.5	-	-	2	8.0	6	24.0	1	4.0	9	36.0
90-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	20.0	-	-	5	20.0
Total	4	16.6	10	41.6	7	29.2	3	12.6	24	100.0	1	4.0	3	12.0	19	76.0	2	8.0	25	100.0

### Living Arrangements

The living arrangements of the subjects were grouped into four basic categories; those living alone, those living with family members, those residing in boarding or supervisory care homes (custodial care), and an "other" category. The distributions within each category are displayed in Table 3. As illustrated, 20 (40.7%) of the subjects lived alone which was fairly equally distributed between eleven male subjects (22.4%) and nine female subjects (18.3%). Similarly, nearly equal percentages lived with family members: eleven males (22.4%) and ten females (20.4%). More females were living in boarding or supervisory care homes than males: five females (20%) versus one male (4.2%). Both males and females in this group were 80 years or older. The two subjects included in the "other" category had the following living arrangements: one lived with a friend, and the other resided with a live-in-housekeeper.

### Support Systems

An analysis of the support systems available to the subjects revealed that the majority had some form of supportive assistance. Only two subjects (4%) were without direct support systems; 40 subjects (81.6%) received supportive help from family members or friends, 3 (6.3%) were assisted by the caretakers of boarding homes or supervisory care homes and the remaining 4 (8.1%) had other types of support systems. The two subjects who had no direct supportive assistance were 65 and 69 years of age respectively.

Table 3. Sex and Living Arrangements by Age Groups of the Sample Population as Identified From the Record Review (N=49)

Age Groups	MALE Living Arrangements										FEMALE Living Arrangements									
	Alone		With Family		Custo- dial		Other		Total		Alone		With Family		Custo- dial		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
60-69	5	20.9	4	16.6	-	-	-	-	9	37.5	3	12.0	3	12.0	-	-	-	-	6	24.0
70-70	2	8.3	3	12.6	-	-	1	4.2	6	25.1	3	12.0	2	8.0	-	-	-	-	5	20.0
80-89	4	16.6	4	16.6	1	4.2	-	-	9	37.5	2	8.0	3	12.0	4	16.0	-	-	9	36.0
90-99	-	-	-	-	-	-	-	-	-	-	1	4.0	2	8.0	1	4.0	1	4.0	5	20.0
Total	11	45.8	11	45.8	1	4.2	1	4.2	24	100.0	9	36.0	10	40.0	5	20.0	1	4.0	25	100.0

### Characteristics Regarding Service Provision

According to the criteria for subject selection, each participant had to receive a minimum of three skilled nursing care visits. A total of 1161 visits were provided to the 49 subjects as noted in Table 4. Nursing services represented 85.3% of total service provision, and home health aide services were supportive to nursing services providing 12.3% of the total number of visits.

All forty-nine subjects (100%) received skilled nursing care. Nine subjects (18.3%) received home health aide services, three (6.1%) received physical therapy services, and two (4%) were visited by a medical social worker. The average length of stay on service in days was 130.7 with a range of 5 to 1139 and a median of 54.

### Discharge Disposition of the Sample Population

The final discharge disposition of the subjects was grouped into four categories: those discharged to self care or to the care of a significant other in the home environment; those discharged to the care of a hired attendant or to boarding/supervisory care homes (custodial); those discharged to nursing homes or to hospitals for nursing home placement (NHP); and an "other" category. The distributions within each category are displayed in Table 5. As illustrated, thirty-one subjects (63.2%) were discharged to self care or to the care of a significant other while eight subjects (16.3%) were discharged to hospitals for nursing home placement or directly into nursing homes. The four subjects included in the "other" category were discharged as follows: one was transferred to the local hospice for specialized

Table 4. Service Provided to the Subjects According to Health Discipline as Identified From the Record Review (N=49)

Discipline	No. of Visits	Range of Visits	Mean No. of Visits	Percent
Skilled Nursing Care	988	4-124	20.1	85.3
Home Health Aide	142	0-58	2.9	12.3
Physical Therapy	29	0-15	.6	2.4
Medical Social Worker	2	0-2	.04	.0
Total	1161			100.0

Table 5. Sex and Discharge Disposition by Age Groups of the Sample Population as Identified From the Record Review (N=49)

Age Group	MALE Discharge Disposition										FEMALE Discharge Disposition									
	Self Care or Care of Other		Custo- dial Care		To Hosp. and/or N.H.P.		Other		Total		Self Care or Care of Other		Custo- dial Care		To Hosp. and/or N.H.P.		Other		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
60-69	7	29.1	-	-	2	8.3	-	-	9	37.4	3	12.0	-	-	-	-	3	12.0	6	24.0
70-79	6	25.0	-	-	-	-	-	-	6	25.0	5	20.0	-	-	-	-	-	-	5	20.0
80-89	7	29.1	1	4.2	1	4.2	-	-	9	37.6	2	8.0	4	16.0	2	8.0	1	4.0	9	36.0
90-99	-	-	-	-	-	-	-	-	-	-	1	4.0	1	4.0	3	12.0	-	-	5	20.0
Total	20	83.2	1	4.2	3	12.6	-	-	24	100.0	11	44.0	5	20.0	5	20.0	4	16.0	25	100.0

home health care; one was transferred to services of a court appointed registered nurse; one was discharged due to non-compliance; and the last subject relocated in another city. The eight subjects whose final discharge disposition was that of nursing home placement had the following characteristics: three (12.6%) were males, two (8.3%) of which were between the ages of 60-69, and five (20%) were females, three (12%) of which were between the ages of 90-99 years.

#### Data Analyses Related to the Study Questions

This section addresses the four questions to be answered in the study. Data corresponding to each question is discussed separately after which the results for each question are presented.

#### Nursing Diagnosis

The first three questions of the study pertain to the utilization of nursing diagnoses in a home health setting. The following presents the analyses of the data collected.

Question #1. Of the forty-two nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnoses, which nursing diagnoses were used by the nursing staff in a home health agency to identify patient problems on the 49 clients' nursing records?

Initially, the nursing records of 49 subjects meeting the selection criteria were reviewed. The nursing diagnoses assigned to each subject were listed to identify which of the forty-two nationally accepted nursing diagnoses were utilized by the sample population.

Twenty-five nursing diagnoses listed (59.5%) were identical to the national list. The 49 subjects had a combined total of 224 patient problems to which the twenty-five nursing diagnoses were assigned. The mean number of nursing diagnoses per subject was 4.5. Frequency distribution statistics were applied to the twenty-five identified diagnoses.

Results for Question #1. Those nursing diagnoses which were used by the nursing staff to identify patient problems on the 49 clients' nursing records are presented, in descending order of frequency, in Table 6.

Question #2. Of the forty-two nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnoses, what were the seven most frequently used nursing diagnoses as recorded on these 49 clients' nursing records?

The frequency distributions applied to the 25 identified nursing diagnoses used in the Agency as indicated in the first study question, simultaneously identified the seven most frequently utilized nursing diagnoses in the Agency. All forty-nine subjects had one or more of the seven most frequently used diagnoses. The forty-nine subjects had a combined total of 137 patient problems to which the seven most frequently used nursing diagnoses were assigned. The male sample group had 73 (53.3%) of the assigned diagnosis with a mean of 3.3 diagnoses per subject. The female sample group had 64 (46.7%) of the assigned diagnoses with a mean of 4 diagnoses per subject.

Table 6. Identity and Frequency of Occurrence of Those Nursing Diagnoses Assigned to the Sample Population as Identified From the Record Review (N=49)

Nursing Diagnosis	Frequency	Percent
Cardiac Output, Alteration in: Decreased	39	17.4
Mobility, Impaired Physical	24	10.7
Self-Care Deficit	17	7.5
Skin Integrity, Impairment of: Actual	16	7.2
Breathing Pattern, Ineffective	14	6.3
Nutrition, Alteration in: Less than Body Requirements	14	6.3
Injury, Potential for	13	5.8
Knowledge Deficit (specify)	10	4.4
Urinary Elimination, Alteration in Patterns	10	4.4
Noncompliance (specify)	9	4.0
Coping, Ineffective Individual	9	4.0
Thought Processes: Alteration in	7	3.2
Bowel Elimination, Alteration in: Diarrhea	7	3.2
Bowel Elimination, Alteration in: Constipation	6	2.7
Gas Exchange, Impaired	5	2.2
Sensory-Perceptual Alteration (specify)	5	2.2
Skin Integrity, Impairment of: Potential	5	2.2
Comfort, Alteration in: Pain	4	1.7
Coping, Ineffective Family: Disabling	4	2.7
Bowel Elimination, Alteration in: Incontinence	1	.4
Communication, Impaired Verbal	1	.4
Fear	1	.4
Home Maintenance Management, Impaired	1	.4
Nutrition, Alterations in: More than Body Requirements	1	.4
Tissue Perfusion, Alteration In	1	.4
Total	224	100.0

The frequency distributions for the seven most frequently used nursing diagnoses by age group and by sex are illustrated in Tables 7 and 8. The three most frequently assigned nursing diagnoses in descending order of occurrence for the female sample population were: Cardiac Output, Alteration in: Decreased, 19 cases (29.6%); Mobility, Impaired Physical, 12 cases (18.7%); and Skin Integrity, Impairment of: Actual, 9 cases (14.1%). The three most frequently assigned nursing diagnoses in descending order of occurrence for the male population were: Cardiac Output, Alteration in: Decreased, 20 cases (27.5%); Mobility Impaired Physical, 11 cases (15.0%); and Self-Care Deficit, 10 cases (13.8%). Seventy-one percent of all assigned diagnosis occurred in the combined age groups of 60-69 and 80-89 years of age.

Results for Question #2. The seven most frequently used nursing diagnoses as recorded on the 49 clients' nursing records are presented in descending order of frequency. The occurrence of both the number of cases and corresponding percentage of each of the seven most frequently utilized nursing diagnoses are identified: Cardiac Output, Alteration in: Decreased (39 cases, 28.4%); Mobility, Impaired Physical, (24 cases, 17.6%); Self-Care Deficit (17 cases, 12.4%); Skin Integrity, Impairment of: Actual (16 cases, 11.6%); Breathing Pattern, Ineffective (14 cases, 10.3%); Nutrition, Alteration in: Less Than Body Requirements (14 cases, 10.3%); and Injury, Potential For (13 cases, 9.4%).

Table 7. Frequency Distribution of the Seven Most Frequently Used Nursing Diagnoses by Age Groups for the Female Subjects (N=25)

Age Group	Nursing Diagnosis														Total	
	C.O.P.		Mobil		Self-Care		Skin Int.		Breath.		Nutr.		Injury			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
60-69	6	9.3	3	4.6	1	1.6	4	6.3	3	4.6	-	-	2	3.2	19	29.6
70-79	2	3.2	3	4.6	-	-	3	4.6	-	-	3	4.6	-	-	11	17.0
80-89	6	9.3	4	6.3	5	7.8	1	1.5	1	1.5	3	4.6	2	3.2	22	34.4
90-99	5	7.8	2	3.2	1	1.6	1	1.5	1	1.5	-	-	2	3.2	12	19.0
Total	19	29.6	12	18.7	7	11.0	9	14.1	5	7.8	6	9.2	6	9.6	64	100.0

Table 8. Frequency Distribution of the Seven Most Frequently Used Nursing Diagnosis by Age Groups for the Male Subjects (N=24)

Age Group	Nursing Diagnosis														Total	
	C.O.P.		Mobil		Self-Care		Skin Int.		Breath.		Nutr.		Injury			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
60-69	6	8.3	2	2.7	5	6.9	1	1.3	3	4.2	2	2.7	3	4.2	22	30.3
70-79	6	8.3	4	5.4	-	-	1	1.3	4	5.4	2	2.7	-	-	17	23.1
80-89	8	10.9	5	6.9	5	6.9	5	6.9	2	2.7	5	6.9	4	5.4	34	46.6
90-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20	27.5	11	15.0	10	13.8	7	9.5	9	12.3	9	12.3	7	9.6	73	100.0

Question #3. Of the seven most frequently used nursing diagnoses identified, what were the associations between demographic characteristics, living arrangements, social supports and discharge disposition?

The nursing record of each subject was audited using the Demographic/Client Health Outcome Measurement tool (Appendix C) to obtain data concerning the demographic characteristics, living arrangement status, and social support structure of each subject. Data relating to each subject's discharge disposition was collected from the subject's final discharge summary on the "60 Day Evaluation/Utilization Review" tool (page 39). Frequency distributions were applied to the collected information.

Results for Question #3. The associations between demographic characteristics, living arrangements, social supports, and discharge disposition of the 49 subjects are presented in the following profile. The sex of the group was nearly equally distributed with 24 males (49%) and 25 females (57%). On the average, the female group was 5 years older than the male with a mean age of 80.2 years of age versus 75.7 years for the male population. The male subject was more likely to be married (41.6%) while the female widowed (76%). The female group was less likely to live alone (9 cases, 36%) versus the male population (11 cases, 45%), and was more frequently residing in a boarding or supervisory care home than the male group (5 cases, 20%) versus (1 case, 4.2%). Subjects living with family members were equally distributed: 10 females (40%) were living with their immediate family

and 11 males (45.5%) also lived with family members. The majority of the subjects had available support systems. Forty subjects (81.6%) received assistance from family members or friends. Only two subjects had no support systems.

Considering the discharge disposition of the sample group, the male population had more favorable outcomes with 20 (83.2%) discharged to self-care or to the care of a significant other in a home environment versus 11 (44%) for the female group. Ten females (40%) between the ages of 80-99 years were discharged either to nursing homes or boarding/supervisory care homes versus two males (8.3%) in the same age group.

#### Patient Health Outcomes

The last question of the study pertains to a description of the subjects' health outcomes in relation to each of the seven most frequently utilized nursing diagnoses. Data collection methods are described with subsequent analyses presented concerning the study question.

Question #4. What were the client health outcomes of the seven most frequently utilized nursing diagnoses as measured by: Very Favorable, Favorable, Unfavorable, and Unchanged?

At the time of admission to service, during the assessment phase of the nursing process, each of the subject's health problems were identified and assigned correlating nursing diagnoses. At this time, the nurse issued an admitting and expected outcome score for each identified problem as indicated by the R.A.E. scoring system (p. 41).

At the time of discharge, the nurse issued a discharge score for each of the subject's identified nursing diagnoses. The discharge scores were then correlated to coded outcome scores which had the following interpretations: A discharge score of 0 represented a Very Favorable Outcome; a discharge score of 1 was interpreted as a Favorable Outcome; an admitting score of 1 and a discharge score of 1 represented No Change in the subject's health outcome status for that particular nursing diagnosis; and discharge scores of 2 to 4 represented Unfavorable Outcomes. In order to facilitate computer calculations for data analysis, outcome scores were programmed as follows: a Very Favorable Outcome was scored as a 1, a Favorable Outcome was scored as a 2, a No Change Outcome received a score of 3, and an Unfavorable Outcome received a score of 4. As such, comparison of the mean discharge scores and mean outcome scores were interpreted considering the differences in the score values assigned to each.

The data presented in Table 9 represents the total mean score values (admitting score, expected outcome score, final discharge score, and correlating outcome score), of the 49 subjects for each of the seven most frequently used nursing diagnoses. The total mean admitting scores reflected the acuity levels upon admission of the seven diagnoses. The scores ranged from a 4 to a 1 with a score of 4 representing a high risk situation to the subject and a 1 a minimal risk. Acuity decreased as the scores decreased. The following lists

Table 9. Total Mean Scores for the Admitting, Expected Outcome, Discharge, and Outcome Scores for the Seven Most Frequent Nursing Diagnoses Identified From the Record Review (N=49)

Nursing Diagnosis	Mean Admitting Score	Mean Expected Outcome Score	Mean Discharge Score	Mean Outcome Score	Mode Outcome Score
Cardiac Output, Alteration in: Decreased	2.2	1.10	1.30	2.5	2.0
Mobility, Impaired Physical	2.4	1.25	1.33	2.6	2.0
Self-Care Deficit	2.3	1.05	1.00	2.1	2.0
Skin Integrity, Impairment of: Actual	2.1	.06	.25	1.2	1.0
Breathing Pattern Ineffective	2.5	1.07	1.42	2.5	2.0
Nutrition, Alteration in: Less than Body Requirements	2.0	.64	.85	2.1	1.0
Injury, Potential for	1.8	.92	1.07	2.3	2.0

in descending order of acuity, the admitting acuity levels of the assigned nursing diagnoses of the 49 subjects:

1. Breathing Pattern, Ineffective
2. Mobility, Impaired Physical
3. Self-Care Deficit
4. Cardiac Output, Alteration in: Decreased
5. Skin Integrity, Impairment of: Actual
6. Nutrition, Alteration in: Less Than Body Requirements
7. Injury, Potential For

The mean discharge scores reflected the direction of change of the subject's health status after intervention. The following lists in descending order of most favorable change to least favorable, subjects' health status levels upon discharge for the seven most frequently used nursing diagnoses:

1. Skin Integrity, Impairment of: Actual
2. Nutrition, Alteration in: Less Than Body Requirements
3. Self-Care Deficit
4. Injury, Potential For
5. Mobility, Impaired Physical
6. Cardiac Output, Alteration in: Decreased
7. Breathing Pattern, Ineffective

As indicated in Table 9, a very favorable change occurred between the mean admitting scores and discharge scores for the following nursing diagnoses: Skin Integrity, Impairment of: Actual with a mean admitting score of 2.1 and a mean discharge score of .25; and

Nutrition, Alteration in: Less Than Body Requirements with a mean admitting score of 2.0 and a mean discharge score of .85.

To interpret the final health outcome per nursing diagnosis, subjects' discharge scores for each assigned nursing diagnosis were correlated to the established outcome score code (p.42). Frequency distribution statistics were applied within each diagnostic category to tabulate the outcomes. The health outcomes were categorized into two groups: 1) those nursing diagnoses associated with favorable outcomes (combined Very Favorable and Favorable categories) and 2) those nursing diagnoses associated with Unfavorable outcomes.

Results of Question #4. The client health outcomes of the seven most frequently utilized nursing diagnoses are presented in Table 10. The following list identifies those nursing diagnoses with favorable outcomes in decreasing order of ranking according to the highest percent of favorable outcomes per nursing diagnosis to the lowest percent:

1. Skin Integrity, Impairment of: Actual
2. Self-Care Deficit
3. Nutrition, Alteration in: Less Than Body Requirements
4. Cardiac Output, Alteration in: Decreased
5. Injury, Potential For
6. Mobility, Impaired Physical
7. Breathing Pattern, Ineffective

Those outcomes per nursing diagnoses in the "unfavorable" category in decreasing order of frequency were:

Table 10. Patient Health Outcomes for Each of the Seven Most Frequent Nursing Diagnoses as Identified From the Record Review (N=49)

Nursing Diagnosis	Outcome	Outcome Frequency	Percent
Cardiac Output, Alteration in: Decreased	Very Favorable	3	7.6
	Favorable	24	61.6
	Unfavorable	12	30.8
Mobility, Impaired Physical	Very Favorable	1	4.2
	Favorable	15	62.5
	Unfavorable	8	33.3
Self-Care Deficit	Very Favorable	1	5.8
	Favorable	14	82.5
	Unfavorable	2	11.7
Skin Integrity, Impair- ment of: Actual	Very Favorable	12	75.0
	Favorable	4	25.0
	Unfavorable	0	--
Breathing Pattern, Ineffective	Very Favorable	2	14.3
	Favorable	7	50.0
	Unfavorable	5	35.7
Nutrition, Alteration in: Less than Body Requirements	Very Favorable	6	42.8
	Favorable	4	28.6
	Unfavorable	4	28.6
Injury, Potential for	Very Favorable	1	7.7
	Favorable	8	61.5
	Unfavorable	2	15.4
	Unchanged	2	15.4

1. Breathing Pattern, Ineffective
2. Mobility, Impaired Physical
3. Cardiac Output, Alteration In: Decreased
4. Nutrition, Alteration In: Less Than Body Requirements
5. Injury, Potential For
6. Self-Care Deficit

An analysis of the health outcomes for the 49 subjects by sex and age groups is illustrated on Table 11. A total of 102 outcomes (74.4%), combined male and female outcomes, were considered favorable. Thirty-five (25.6%) combined male and female outcomes were rated as unfavorable. The female population had fewer assigned nursing diagnoses, 64 versus 73 for the male population group. However, there were 18 (28.2%) instances in which outcomes were unfavorable for the female group versus 15 (20.4%) for the male subjects. Fifty-five (40%) of the total assigned nursing diagnoses (137) occurred in the age group of 80-89. The highest percent of Very Favorable outcomes 10 (13.6%) pertained to male subjects in the age ranges of 80-89. The age group, 60-69, combined male and female had 30 (21.9%) Very Favorable and Favorable outcomes. Meanwhile, the age group, 80-89, combined male and female, had a total of 43 (31.4%) combined Very Favorable and Favorable outcomes.

Nursing diagnoses for which outcomes were most favorable for the male subject population (combined Very Favorable and Favorable) were:

Table-11. Patient Health Outcome per Assigned Nursing Diagnosis by Sex and by Age Groups for the Seven Most Frequently Used Nursing Diagnoses as Identified by the Record Review (N=49)

Age Groups	MALE Health Outcomes								FEMALE Health Outcomes							
	Very Fav.		Fav.		Unfav.		Total		Very Fav.		Fav.		Unfav.		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
60-69	1	1.3	19	26.0	5	6.8	25	34.3	5	7.8	5	7.8	5	7.8	15	23.4
70-79	3	4.1	8	10.9	6	8.2	17	23.2	5	7.8	5	7.8	1	1.5	11	17.1
80-89	10	13.6	16	21.9	4	5.4	30	41.2	2	3.2	15	23.4	8	12.5	25	39.1
90-99	-	-	-	-	-	-	-	-	-	-	8	12.5	4	6.4	12	18.9
Total	14	19.1	43	59.2	15	20.4	73*	100.0	12	18.8	33	51.5	18	28.2	64**	100.0

\* One unchanged status of 1.3% was included in total but not on table.

\*\* One unchanged status of 1.5% was included in total but not on table.

1. Cardiac Output, Alteration in: Decreased; 16 cases (21.7%)
2. Self-Care Deficit; 10 cases (13.6%)
3. Mobility, Impaired Physical; 9 cases (12.2%)
4. Skin Integrity, Impairment of: Actual; 7 cases (9.4%)

Nursing diagnoses for which outcomes were most favorable for the female population group (combined Very Favorable and Favorable) were:

1. Cardiac Output, Alteration in: Decreased; 11 cases (17.1%)
2. Skin Integrity, Impairment of: Actual; 9 cases (14%)
3. Mobility, Impaired Physical; 7 cases (10.8%)

Unfavorable outcomes for the male group were most prevalent in nursing diagnostic categories:

1. Cardiac Output, Alteration in: Decreased; 4 cases (5.3%)
2. Nutrition, Alteration in: Less Than Body Requirements;  
3 cases (4%)
3. Breathing Pattern, Ineffective; 3 cases (4%)

Unfavorable outcomes for the female population were most prevalent in the nursing diagnostic categories:

1. Cardiac Output, Alteration in: Decreased; 8 cases (12.5%)
2. Mobility, Impaired Physical; 5 cases (7.8%)

The frequency distribution of the patient health outcome presented reflect considerably more favorable outcomes than unfavorable. Nonetheless, multiple variables need to be considered when discussing patient health outcomes. The acuity level of each identified problem is one such variable. Table 9 reflects the mean admitting acuity scores for each of the seven most frequently used

nursing diagnoses. The nursing diagnoses which had unfavorable outcomes related closely to those with higher mean admitting acuity scores. This would appear to reinforce the reliability of the scoring system, and furthermore, substantiated the predictive capabilities of the nurse in relation to estimating patient outcomes associated with nursing care.

A second important variable to consider when discussing patient health outcomes is the amount of service provided to the subjects. Nursing was the primary service provided to the 49 members of the sample population. Those cases for which outcomes were favorable (74.4%) received 507 skilled nursing care visits, while those cases in which outcomes were unfavorable, received 481 nursing visits. As such, those patient outcomes considered favorable, received only 2.6% more visits than for, outcomes considered unfavorable. This difference would seem negligible in causing any obvious effects on outcomes with regard to the quantity of service provision.

## CHAPTER 5

### DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter includes a discussion and interpretation of the findings of the study. Topics addressed relate to the utilization of nursing diagnoses in a home health care setting and patient health outcomes related to those nursing diagnoses. The findings of the study are then discussed in terms of implications for home health nursing and recommendations for future study are suggested. Ultimately, considerations regarding fiscal data associated with the services provided to the study's population group and fiscal trends in home health care are addressed. This discussion, although not an inclusive component of the study, is presented in view of its relevance to the topic under study.

#### Discussion and Interpretation of the Findings of the Study

This section represents a discussion and interpretation of the findings for each of the four questions addressed in the study. The initial three questions of the study were concerned with the utilization of nursing diagnoses in a home health setting. The findings for these three questions are addressed initially followed by the findings related to the ultimate questions concerning patient health outcomes associated with nursing diagnoses.

## Nursing Diagnosis

Question #1. Of the forty-two nationally accepted nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnosis, which nursing diagnoses were used by the nursing staff to identify patient problems on the forty-nine clients' nursing records?

Discussion of the Findings of Question #1. The study revealed that the forty-nine subjects had an accumulative total of 224 patient problems each identified in nursing diagnostic format. This represented a mean of 4.5 patient problems per subject. Twenty-five (Table 6) of the forty-two nationally accepted nursing diagnoses were utilized as patient problem identifiers in the home health setting in which the study took place. This represents 59.5% of the nationally accepted group. Those twenty-five diagnoses utilized were reflective of the profile of a typical home health client; that of a patient with a long term, chronic, debilitating illness. Along with the aging process, such chronic illnesses affect the client's self-care abilities associated with routine activities of daily living, normal body processes, and cognitive functioning capabilities. The nursing diagnoses identified in the study reflected such limitations, i.e.: Mobility, Impaired Physical; Self-Care Deficit; Injury, Potential for; Thought Processes, Alteration in; Urinary Elimination, Alteration in Patterns. Simultaneously, those nursing diagnoses utilized were

reflective of those medical diagnoses identified as chronic illnesses: cardiopulmonary diseases, peripheral vascular diseases, neuropathies, diabetes etc.

A consequential finding of the study illustrated that 17 (40.5%) of the 42 nationally accepted nursing diagnoses were not utilized to identify patient problems for this study's sample population. While some of the diagnoses would be less likely to pertain to the home health client (parenting), the remaining all seemed relevant to home health care. Examples of such include: Self-Concepts, Disturbance in; Sleep Pattern Disturbance; Spiritual Distress; Grieving, Dysfunctional; and Diversional Activity, Deficit. These diagnoses are clearly psychosocial in nature. The question arises as to whether home health nursing practice is more clinically oriented than psychosocially oriented, a concern that would need to be addressed.

The results of this study in reference to the utilization of nursing diagnoses as compared to the study by McKeehan and Gordon (1982) revealed the following. The researchers' study with a patient population (N=163) recorded that 43% of their identified nursing diagnoses were identical to the national list. The mean number of nursing diagnoses per client was 3.5. Differences relating to the number of diagnoses identified may be associated with the sample characteristics since in the researchers' study, the client population was restricted to a specific clinical area, that of obstetrical-gynecological nursing. Home health populations cross multiple

clinical specialties. Differences in the mean number of nursing diagnoses assigned per client in each study may well have been associated with the differences in the ages of the two groups. The mean age of the subjects in this study was 78 years of age. Fifty-five percent of the subjects in McKeehan and Gordons' study were 30 years of age or less. This age group is less likely to have chronic illnesses. Furthermore, as age increases, the frequency of occurrence of chronic illness increases.

Interpretation of the Findings of Question #1. The results of the study indicated that nursing diagnosis can be utilized in the home health care setting. Those twenty-five diagnoses utilized in the study, as identified by the record review, were reflective of the prototype of the home health client. Simultaneously, the patient problems identified correlated to those illnesses categorized in the medical model as chronic illnesses. As such, this lends support to the capability of using the nursing diagnostic classification system in place of the medical model. Ultimately, the study by McKeehan and Gordon (1982) supports the fact that nursing diagnosis has the potential for being a universal language common to the nursing profession since, as demonstrated, it can be utilized across the various nursing specialties.

Question #2. Of the forty-two nationally accepted nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnosis, what were the seven most frequently used

nursing diagnoses recorded on these forty-nine clients' nursing records?

Discussion of the Findings of Question #2. The seven most frequently utilized nursing diagnoses in the study as identified by the record review were as follows.

1. Cardiac Output, Alteration in: Decreased (39 cases, 28.4%)
2. Mobility, Impaired Physical (24 cases, 17.6%)
3. Self-Care Deficit (17 cases, 12.4%)
4. Skin Integrity, Impairment of: Actual (16 cases, 11.6%)
5. Breathing Pattern, Ineffective (14 cases, 10.3%)
6. Nutrition, Alteration in: Less Than Body Requirements (14 cases, 10.3%)
7. Injury, Potential For (13 cases, 9.4%)

The frequency of occurrence of these seven diagnoses represented 61.2% of the total utilization of the 25 diagnoses used in the study. The mean number of these seven diagnoses per client was 2.3. Considering the frequency of occurrence of these diagnoses according to sex, Cardiac Output, Alteration in: Decreased and Mobility, Impaired Physical were the first and second most frequently occurring diagnoses for both female and male subjects. Those diagnoses in which there were noticeable differences in occurrence frequencies between female and male subjects were Breathing Pattern, Ineffective, Self-Care Deficit, Nutrition, Alteration in: Less Than Body Requirements, and Skin Integrity, Impairment of: Actual. The male population had more frequent health problems than the female group in the following areas: breathing pattern alterations (9 cases versus 5 cases), deficits in

self-care (10 cases versus 7 cases), and alterations in nutrition (9 cases versus 6 cases). The female population displayed more frequent health problems relating to alterations in skin integrity (9 cases versus 7 cases).

Similarities existed between this study and those of Kim et al. (1982) and McKeehan and Gordon (1982) with reference to those nursing diagnoses utilized with most frequency. Of the seven most frequently employed nursing diagnoses in this study, Kim's study contained three: Cardiac Output; Alteration in, Decrease; Breathing Patterns; Ineffective; and Mobility Impairment. McKeehan and Gordon's study also contained three: Skin Integrity: Alteration in; Mobility Impairment; and Nutrition: Alteration in (less than Body Requirements).

Interpretation of the Findings of Question #2. The seven most frequently utilized nursing diagnoses in the study as recorded by the record review again were reflective of those patient problems associated with chronic, long term illnesses. The study by Kim et al. (1982) also involved patient populations which had a chronic illness, that of cardiovascular disease. In contrast, the study of McKeehan and Gordon involved population groups which had health problems associated with obstetrical-gynecological conditions. It could be assumed that these conditions were both acute and terminal in nature. As such, the findings in this study, those of Kim et al., and McKeehan and Gordon, reinforce the universality of the utilization of nursing diagnoses across nursing specialities and also suggest universality between acute, chronic, and terminal illnesses.

The interpretation of the findings of Question #2 also reinforces the fact that differences exist among illnesses prevalent among male and female populations. More male subjects in this study had problems associated with breathing disorders (Breathing Pattern, Ineffective). This could very well be correlated to the morbidity and mortality of lung disease which has been associated to smoking and, until recently, more prevalent in males than females. Furthermore, the male in Western society has been generally dependent upon the female to provide the necessities of daily activities, i.e. food preparation, housekeeping chores, laundry, shopping, etc. As such, the male population would be more apt to be less resourceful in providing daily self-care needs (Self-Care Deficit). On the other hand, the female with a life expectancy longer than the male is more prone to those health problems related to immobility and vascular diseases such as hip fractures, cerebral vascular accidents, and diabetes. Consequently, the female population as illustrated in the study, had more of a propensity toward alterations in skin integrity (Skin Integrity, Impairment of).

Question #3. Of the forty-two nationally accepted nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnosis, of the seven most frequently used nursing diagnoses identified (in the study), what were the associations between demographic characteristics, living arrangements, social supports, and discharge disposition?

Discussion of the Findings of Question #3. The findings indicated that certain demographic characteristics relating to the sample population were quite homogenous. The sex of the sample group was fairly equally distributed: 25 females versus 24 males. Only two subjects (4%) had no available support systems and 40 subjects (81.6%) received direct supportive assistance from family members or friends. Those characteristics demonstrating obvious differences were as follows. The female group was approximately 5 years older than the male population with mean ages of 80.2 years of age for the female group versus 75.7 years of age for the male subjects. Only 7 (29.2%) of the male population was widowed while 19 (76.0%) of the female subjects were widowed. The living arrangements between female and male groups were distinct. The female subject was more likely to reside in supervisory/custodial environments as age increased. Five female subjects (20%) eighty years of age or older were in such environments versus one (4.2%) of the male subjects in this same age group. Concerning the discharge disposition of the study's sample group, the male population fared more positively than the female group. Twenty (83.2%) of the male group were discharged from the home health services to self care versus eleven (44%) of the female population. A total of 10 female subjects (40%) were living in or discharged to either boarding/supervisory care home or nursing home while only 4 male subjects (16.8%) were living in or discharged to similar environments.

Interpretation of the Findings of Question #3. The interpretation of the findings of Question #3 clearly indicated that

those subjects benefiting most favorably from the home health services were the male population group. Certain demographic characteristics may have given the male population advantages over their counterparts. The male group was generally younger, continued to be a part of a conjugal relationship, and was more apt to be living in a home environment where quality of life and support systems are generally more prevalent than in institutional or custodial settings.

#### Health Care Outcomes

The final question in the study addressed the subjects' health care outcomes in relation to the seven most frequently assigned nursing diagnoses. The following discusses these findings and interprets the corresponding results.

Question #4. Of the forty-two nationally accepted nursing diagnoses accepted by the National Conference Group on the Classification of Nursing Diagnosis, what were the client health outcomes of the seven most frequently utilized nursing diagnoses as measured by Very Favorable, Favorable, Unchanged, and Unfavorable Outcomes?

Discussion of the Findings of Question #4. The subjects' health outcomes for each of the seven most frequently utilized nursing diagnoses revealed the following characteristics. Combining the Very Favorable and Favorable outcome categories, 102 (74.4%) of the subjects' health care outcomes were considered favorable. Thirty-five (25.6%) of the subject's outcomes fell in the unfavorable outcome category. While the female subjects had fewer assigned nursing

diagnoses (64 versus 73 for the male group) which indicated fewer patient problems, they demonstrated a slightly higher percentage of unfavorable outcomes than the male group. The findings of the study identified 18 (28.2%) unfavorable outcomes for the female population and 15 (20.4%) unfavorable outcomes for the male group. The male subjects in the age group 80 to 89 years of age had the highest percentage of favorable outcomes (10 cases, 13.6%).

The three nursing diagnoses for which outcomes were most favorable in descending order of ranking were: Skin Integrity, Impairment of: Actual; Nutrition, Alteration in: Less Than Body Requirements; and Self-Care Deficit. Skin Integrity, Impairment of: Actual (16 cases) had no recorded unfavorable outcomes. The three nursing diagnoses in descending order of ranking for which outcomes were unfavorable were: Breathing Pattern, Ineffective; Mobility, Impaired Physical; and Cardiac Output, Alteration In: Decreased. These diagnoses had the highest admitting acuity scores (Table 9).

The results of the patient outcomes as demonstrated by the study quite frankly surprised the investigator. The results appeared too good to be true. The study was purely descriptive and causal relationships affecting and influencing the outcomes were not investigated. Nonetheless, attempts to practice all components of the nursing process (patient problem assessment, care planning, comprehensive implementation and process-outcome evaluation) are being carried out at the study site. It is hoped that some of the positive

patient outcomes achieved were influenced by the quality of nursing service.

Interpretation of the Findings of Question #4. The first three patient health outcomes with the most favorable results, (Skin Integrity, Impairment of: Actual; Self-Care Deficit; and Nutrition, Alteration in: Less Than Body Requirements) were those for which, given favorable conditions, therapeutic interventions could produce positive outcomes. These conditions did not involve irreversible, pathological conditions obvious to chronic illnesses such as heart and lung disease or diabetes. Open wounds such as decubiti or post surgical incisions can respond favorably to treatment. Similarly, nutritional deficits can be corrected. Self-Care Deficits can be reduced by providing supportive care services to clients such as Homemaker-Home Health Aide services, Day Care activities, or other supportive services.

The three patient health outcomes with the least favorable results, (Breathing Pattern, Ineffective; Mobility, Impaired Physical; and Cardiac Output, Alteration In: Decreased) were those for which pathological conditions existed. Reversal of those conditions could not be expected. Most certainly, symptoms could be controlled, thus, improving emotional and functional well-being.

As indicated, the female population has a slightly higher percentage of unfavorable outcomes. Since the propensity for chronic illness increases with age, the female group, with a mean age approximately 5 years older than the male group, would be more prone

to illness. As demonstrated in Table 11, the female population had 12 identified health problems in the age group 90-99 years of age. Four (6.4%) of these identified problems had unfavorable health outcomes. On the other hand, there were no male subjects in this age group. The oldest male subject fell in the age ranges of 80 to 89 years of age.

The overall percentage of favorable outcomes, 102 (74.4%) versus unfavorable outcomes 35 (25.6%) might in some way be attributed to the utilization of nursing diagnoses. The subjects' unhealthful conditions were expressed in nursing diagnostic format versus medical or nursing problems. Nursing intervention was then directed on treating those patient health problems for which the nurse has been professionally trained. As such, intervention was more explicitly associated to the realm of nursing science and practice. This was one of the major contributions to the profession for which it was hoped that the utilization of nursing diagnoses would produce.

#### Implications of the Study's Findings and Recommendations

The following discussion addresses the implications of the study's findings and recommendations for future study. While the implications of the study are multiple, discussion will be directed toward the three basic issues addressed in the study; nursing diagnosis, the evaluation process, and patient health care outcomes.

#### Nursing Diagnosis

Steadfast efforts are being undertaken across the nursing profession to identify and categorize the phenomena with which it

works. It is clearly evident that unless this is done soon, the viability of the profession is at stake. Studies, such as the Omaha one (1982), indicate that rudimentary steps for categorizing phenomena in the community health care setting are occurring. The implementation of nursing diagnosis at the study site offers further experience and data for which the building blocks of patient problems identification and phenomena can be structured. The seven most frequently employed nursing diagnoses described in the study contribute to the identification of those patient related phenomena inherent to the community health nursing realm of practice.

The study also identified those nursing diagnoses for which patient health outcomes were favorable and those for which outcomes were unfavorable in one home health care setting. Such information has several important implications. As mentioned previously, time and cost analysis can be computed in relation to nursing activities associated with these outcomes. As such, service unit expenditures could be itemized, an essential marketing consideration for nursing services in view of the health care cost reduction trends. Another consideration is that the data provides ample query for nursing research regarding the identification of causal relationships between favorable and unfavorable outcomes associated with nursing diagnoses. Ultimately, as indicated in the study, a common language, that of nursing diagnosis, is emerging within the profession. This is an extremely valuable implication for the future development of the nursing profession in relation to its theory, science, and practice.

### The Evaluation Process

As a process, evaluation provides a mechanism for measuring the effectiveness, appropriateness and the quality of what we do. The nursing profession has been continuously called upon to demonstrate its professional accountability to these terms. Undoubtedly, while evaluation as a process is considerably complex, evaluation tools which measure nursing care activities are lacking. The development and utilization of the "60 Day Evaluation/Utilization Review" tool described in the study, offers a model or blue print from which other tools can be developed and utilized. Too often we professionals get bogged down in the minute details of being totally comprehensive, the results of which are the development of tools that are cumbersome and time consuming. These reasons support the fact that to date nurses actually do little to no evaluating in their assigned work area. While the "60 Day Evaluation/Utilization Review" tool is less than comprehensive, it is operational and has provided a means to summarize nursing performance and related patient responses to that performance, an accountability the profession must begin to address.

### Patient Health Care Outcomes

The ultimate responsibility of a profession is to provide quality and meaningful services to society. In health care delivery, service goals are directed toward a final outcome, that of providing positive health responses. Although multiple variables and barriers intercede and interfere with these goals, health professionals have both an ethical and fiscal responsibility to be accountable for these

services. The "60 Day Evaluation/Utilization Review" tool offers a mechanism to demonstrate nursing care accountability both in terms of quality and meaningfulness, and in terms of appropriateness. Structured around the nursing diagnostic format, problems are identified in relation to patient concerns and responses versus in terms of a nursing or medical problem. As such, services are patient centered not service oriented.

The findings of the study suggest the need for further study and research into those topics specifically addressed. The utilization of those nursing diagnoses identified appeared to be clinically oriented and restrictive, and subjects' health outcomes as indicated by the "60 Day Evaluation/Utilization Review" tool need to be validated. As such, the following recommendations are suggested:

1. Perform validity and reliability testing studies on the "60 Day Evaluation/Utilization Review" tool.
2. Conduct a longitudinal study on the original 49 subjects of the study to assess long range health outcomes.
3. Investigate those reasons for which 40.5% of the nationally accepted list of nursing diagnoses were not utilized in identifying patient problems.
4. Identify those nursing interventions which led to positive patient health outcomes in attempts to initiate calculation of service unit costs based upon positive patient health care outcomes.

5. Investigate those cases of the study in which subject outcomes were identified as unfavorable as a means of improving nursing service provision.

#### Fiscal Considerations Relating to the Study

This ultimate discussion, although not considered relevant to the study's purpose, is included in view of its interest to the investigator and relevance to the study. A major consideration in health care today is the exorbitant cost of this care. Data was collected from each subject's record to obtain information regarding fiscal implications and considerations with respect to the care provided. Forty-one cases (84%) were financed through a single funding source. Of these, medicare provided funding for 26 cases (63.4%), the Veterans' Administration funded 9 cases (21.9%), United Way funded 5 cases (12.1%), and the state's Department of Economic Security (DES) reimbursed for 1 case (2.4%). Combined funding was required for 8 cases due to restrictions imposed by the primary reimbursement source. Of these 8 cases, United Way was the secondary funding source for 5 cases (62.5%), DES funded 2 cases (25%), and the local county government supplemented funding for 1 case (12.5%).

The source of funding for each discipline providing care is presented in Table 12. For skilled nursing care, Medicare funded 373 visits representing 37.7% of the total visits with a mean of 10.9 visits per client, United Way reimbursed for 159 visits (16.0%), the Veterans' Administration provided funding for 360 nursing visits

Table 12. Funding Source Reimbursement for Service Visits  
Per Discipline (N=49)

Discipline	Reimbursement Source	Visits Reimbursed	Percent	Median	Mean	Mode
Nursing	Medicare	373	37.7	9.7	10.9	4
	United Way	159	16.0	12.0	14.4	7
	Veterans' Administration	360	36.4	45.0	51.4	9
	County	7	.7	7.0	7.0	7
	DES	66	6.6	8.0	16.5	4
	No charge visits (23)	--	2.3	--	--	--
Home Health Aide	Medicare	124	87.3	16.0	17.7	16
	Veterans'	10	7.0	10.0	10.0	10
	United Way	8	5.6	8.0	8.0	8
Physical Therapy	Medicare	20	68.8	10.0	10.0	5
	Veterans'	9	31.0	9.0	9.0	9
Medical Social Services	Medicare	2	100.0	1.0	1.0	1

(36.4%), and the local county government funded 7 visits (.7%). The remaining 23 visits (2.3%) of the total 988 nursing visits were non-reimbursable visits.

The 142 home health aide visits were reimbursed as follows: Medicare funded 124 visits (87.3%), the Veterans' Administration funded 10 visits (7%), and United Way funded 8 visits.

A total of 29 physical therapy visits were provided to clients. Medicare funded 20 visits (68.8%) of these visits and the Veterans' Administration funded the remaining 9 visits (31.0%). The two medical social service visits were funded by Medicare.

Cost reduction trends are occurring nationally in the health care industry. In view of these trends, considerations regarding the cost of home health care provision are essential. With regard to this study, the service costs were estimated at \$44,920. This interprets the service unit cost as \$38.00 per visit. Since the mean visit frequency per client was 20, the cost per patient was estimated to be \$928.00. These cost figures correlate closely to those identified by DeCrosta (1984). The Health Care Financing Administration (HCFA) is currently piloting studies to implement the DRG system into the home care industry. Furthermore, Medicare fiscal intermediaries for home health care are becoming more restrictive with evidences of increased denial rates for service reimbursement. In view of these facts and considering that Medicare funded 45% of the services rendered to the subjects in this study, future cost restrictions could have

considerable impact on patient health outcomes in the home care industry. Thus, it is even more imperative that service unit costs be contemplated in terms of service time relating to nursing interventions producing positive client health care outcomes. As such, indications can be given as to where health dollars are being spent and for what health outcomes, information vital to the future viability of all health care providers.

APPENDIX A

LIST OF NATIONALLY ACCEPTED NURSING DIAGNOSES (1980)

## LIST OF NATIONALLY ACCEPTED NURSING DIAGNOSES (1980)

Airway clearance, ineffective  
Bowel elimination, alteration in: constipation  
Bowel elimination, alteration in: diarrhea  
Bowel elimination, alteration in: incontinence  
Breathing pattern, ineffective  
Cardiac output, alteration in: decreased  
Comfort, alteration in: pain  
Communication, impaired verbal  
Coping, ineffective individual  
Coping, ineffective family: compromised  
Coping, ineffective family: disabling  
Coping, family: potential for growth  
Diversional activity, deficit  
Fear  
Fluid volume deficit, actual  
Fluid volume deficit, potential  
Gas exchange, impaired  
Grieving, anticipatory  
Grieving, dysfunctional  
Home maintenance management, impaired  
Injury, potential for: poisoning, potential for; suffocation,  
potential for; trauma, potential for  
Knowledge deficit (specify)  
Mobility, impaired physical  
Noncompliance (specify)  
Nutrition, alteration in: less than body requirements  
Nutrition, alteration in: more than body requirements  
Nutrition, alteration in: potential for more than body  
requirements  
Parenting, alteration in: actual  
Parenting, alteration in: potential  
Rape-trauma syndrome: rape trauma, compound reaction, silent  
reaction  
Self-care deficit (specify level): feeding, bathing/hygiene,  
dressing/grooming, toileting  
Self-concepts, disturbance in: body image, self-esteem, role  
performance, personal identity  
Sensory perceptual alteration: visual, auditory, kinesthetic,  
gustatory, tactile, and olfactory perceptions  
Sexual dysfunction  
Skin integrity, impairment of: actual  
Skin integrity, impairment of: potential  
Sleep pattern disturbance  
Spiritual distress (Distress of the human spirit)  
Thought processes, alteration in

Tissue perfusion, alteration in: cerebral, cardiopulmonary,  
renal, gastrointestinal, peripheral  
Urinary elimination, alteration in patterns  
Violence, potential for

Kim, M. and Moritz, D., Classification of Nursing Diagnoses Proceedings of the Third and Fourth National Conferences, New York, McGraw-Hill, 1982, Chapter 7, pp. 281-282.

APPENDIX B

THE UNIVERSITY OF ARIZONA COLLEGE OF NURSING  
MEMORANDUM:

HUMAN SUBJECTS REVIEW

## MEMORANDUM

TO: Carol Ann Bryniarski  
1010 S. Fordham Dr.  
Tucson, AZ 85710

FROM: Ada Sue Hinshaw, PhD, RN <sup>ASH</sup> Katherine Young, PhD, RN  
Director of Research Chairman, Research Committee

DATE: November 1, 1984

RE: Human Subjects Review: Retrospective Chart Audit on Patient  
Outcomes Related to Nursing Diagnoses in a Home Health  
Care Setting

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Subcommittee of the Research Committee and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research if you need access to it.

We wish you a valuable and stimulating experience with your research.

ASH/fp

APPENDIX C

DEMOGRAPHIC/CLIENT HEALTH OUTCOME MEASUREMENT TOOL

Demographic/Client Health Outcome  
Measurement Tool

Subject (medical record) \_\_\_\_\_  
Medical Record No. \_\_\_\_\_

- | <p>_____ 1.0 Referral Source</p> <p>_____ 2.0 Age</p> <p>_____ 3.0 Sex</p> <p>_____ 4.0 Marital status</p> <p>_____ 5.0 Length of stay in days</p> <p>_____ 6.0 No. of visits</p> <p>_____ 7.0 No. of nursing visits</p> <p>_____ 8.0 No. of visits by other disciplines</p> <p style="padding-left: 20px;">_____ 8.1 home health aide</p> <p style="padding-left: 20px;">_____ 8.2 physical therapy</p> <p style="padding-left: 20px;">_____ 8.3 occupational therapy</p> <p style="padding-left: 20px;">_____ 8.4 medical social worker</p> <p>_____ 9.0 Living arrangements</p> <p style="padding-left: 20px;">_____ 9.1 alone</p> <p style="padding-left: 20px;">_____ 9.2 immediate family</p> <p style="padding-left: 20px;">_____ 9.3 significant other</p> <p style="padding-left: 20px;">_____ 9.4 relative</p> <p style="padding-left: 20px;">_____ 9.5 other</p> <p>_____ 12.0 No. of nursing diagnoses on admission</p> <p>_____ 13.0 Health outcomes by nursing diagnosis</p> <table style="width: 100%; border-collapse: collapse; margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Dx.No.</th> <th style="text-align: left;">Adm.Score</th> <th style="text-align: left;">Eos</th> <th style="text-align: left;">Discharge Score</th> <th style="text-align: left;">Outcome</th> </tr> </thead> <tbody> <tr><td>13.1</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.2</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.3</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.4</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.5</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.6</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>13.7</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr> </tbody> </table> <p>_____ 14.0 Discharge disposition of the client</p> <p>_____ 14.1 to self care with medical follow up</p> <p>_____ 14.2 to care of significant other with medical follow up</p> <p>_____ 14.3 to another level of care</p> <p style="padding-left: 20px;">_____ 14.31 hospital</p> <p style="padding-left: 20px;">_____ 14.32 nursing home</p> <p style="padding-left: 20px;">_____ 14.33 skilled nursing facility</p> <p style="padding-left: 20px;">_____ 14.34 boarding home</p> <p style="padding-left: 20px;">_____ 14.35 other</p> <p>_____ 14.4 by Agency due to noncompliance</p> <p>_____ 14.5 Patient refused care</p> <p>_____ 14.6 other</p> | Dx.No.    | Adm.Score | Eos             | Discharge Score | Outcome | 13.1 | _____ | _____ | _____ | _____ | 13.2 | _____ | _____ | _____ | _____ | 13.3 | _____ | _____ | _____ | _____ | 13.4 | _____ | _____ | _____ | _____ | 13.5 | _____ | _____ | _____ | _____ | 13.6 | _____ | _____ | _____ | _____ | 13.7 | _____ | _____ | _____ | _____ | <p>10.0 Support System</p> <p style="padding-left: 20px;">10.1 without _____</p> <p style="padding-left: 20px;">10.2 immediate family _____</p> <p style="padding-left: 20px;">10.3 significant other _____</p> <p style="padding-left: 20px;">10.4 relative _____</p> <p style="padding-left: 20px;">10.5 other _____</p> <p>11.0 Funding Source</p> <p style="padding-left: 20px;">11.1 single source _____</p> <p style="padding-left: 20px;">11.2 description _____</p> <p style="padding-left: 20px;">11.3 multiple sources _____</p> <p style="padding-left: 40px;">11.31 first _____</p> <p style="padding-left: 40px;">11.32 second _____</p> <p style="padding-left: 40px;">11.33 third _____</p> <p style="padding-left: 20px;">11.4 No. of visits by</p> <p style="padding-left: 40px;">11.41 1st. source _____</p> <p style="padding-left: 40px;">11.42 2nd. source _____</p> <p style="padding-left: 40px;">11.43 3rd. source _____</p> |
|---|-----------|-----------|-----------------|-----------------|---------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|--|
| Dx.No.  | Adm.Score | Eos       | Discharge Score | Outcome         |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.1  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.2  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.3  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.4  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.5  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.6  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |
| 13.7  | _____     | _____     | _____           | _____           |         |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |      |       |       |       |       |  |

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