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MANAGING PATIENT CARE: A SUBSTANTIVE THEORY
OF CLINICAL DECISION MAKING IN HOME HEALTH CARE NURSING

by

Felicitas A. dela Cruz, MA, RN

A dissertation presented to the
FACULTY OF THE PHILIP Y. HAHN SCHOOL OF NURSING
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requirements for the degree
DOCTOR OF NURSING SCIENCE

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MANAGING PATIENT CARE: A SUBSTANTIVE THEORY
OF CLINICAL DECISION MAKING IN HOME HEALTH CARE NURSING

Abstract

Felicitas A. dela Cruz, MA, RN

This study investigates the phenomenon of clinical decision making, deriving a grounded substantive theory to explain how home health care nurses make patient care decisions. Despite the continuing shift of health care from acute care settings to the patient's home, little is known about home health care nurses' clinical decision making processes and the factors influencing them.

The study employs a field research design using grounded theory based on symbolic interactionism. Data collection at two Visiting Nurse Associations includes participant observation and open-ended interviews of 21 nurses, and document analysis of patients' records and home care nursing practice policies. The study uses the constant comparative technique for data analysis and incorporates measures to enhance its credibility, transferability, dependability, and confirmability.

Managing patient care emerged as the basic social process that explains home health care nurses' clinical decision making. This process has three components. First, it embodies the problem solving process with the phases of problem finding and problem management. Problem finding

consists of the cognitive processes and decisions of cue searching and inferring patient problems, while problem management consists of planning, intervening, and evaluating. Second, to manage patient care, home care nurses use three styles based on their approach to gathering and evaluating information--"skimming," "surveying," and "sleuthing." Third, interacting clinical and non-clinical factors influence patient care management: the nurse's education and experience, the patient's health-related attributes, the nurse-patient interaction, and the organizational, legal, and economic factors. With these three components, the emergent theory of managing patient care integrates elements of three cognitive theories--information processing, cognitive continuum, and skills acquisition--thus bridging the traditionally dichotomous rational and phenomenological perspectives underpinning clinical decision making.

The emergent theory raises issues critical to the teaching and improvement of clinical decision making among practicing and future home care nurses, in the context of the potential ethical dilemmas implied by the sometimes conflicting factors that influence patient care management. It serves as the springboard for extending the study to other clinical specialties, building a body of substantive theories that would lead to a formal theory of clinical decision making in nursing.

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DEDICATION

To my husband and best friend, Jerry Millman.

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PART ONE

INTRODUCTION AND METHOD

CHAPTER 1

THE PROBLEM

When the American Nurses' Association (1980) defined nursing as "the diagnosis and treatment of human responses to actual and potential health problems," (p. 9) it established clinical decision making as the cornerstone of nursing practice. In this context, clinical decision making refers to the cognitive processes involved in the formulation of the patient's problems (diagnosis) and the corollary selection of appropriate interventions to correct or alleviate the patient's problems (management).

The changes in the health care delivery system in the United States have compelled practicing nurses to exercise their clinical decision making functions in a variety of health care settings. Nowhere has this been more evident than in the delivery of nursing services in the patient's home. With the implementation of diagnosis-related groupings (DRGs) since 1983, patients are discharged earlier and sicker from hospitals. Thus, health care of patients has been extended into the home.

Registered nurses who are employed by home health care agencies exercise relative professional autonomy as they

practice nursing in the patient's home. These home health care nurses are away from their familiar and immediate support system for consultation when providing nursing services in the patient's home (Coombs, 1984). They are completely responsible for assessing the patient's physiological and mental status, environment, and psychosocial resources. The physician rarely sees the patient at home, relying heavily on the home health care nurses to assess the patient's physiological and psychosocial condition and to report changes (Schipske, 1984). Thus, the home health care nurses' diagnosis of the patient's problems directs and organizes the patient's care. Accordingly, the continuity and quality of nursing care hinge on the home health care nurses' expertise in clinical decision making.

In spite of the pivotal clinical decision making role of home health care nurses, very little is known about how they go about identifying and deciding what to do with their patient's problems. How do they obtain patient information? What types of information do they obtain and use? How do they arrive at the diagnosis of patient problems? How do they manage patient problems? What factors influence their clinical decision making? This study aims, therefore, to investigate the phenomenon of clinical decision making among home health care nurses and to derive from that investigation a conceptual understanding of the basic

psychosocial process used by home health care nurses in diagnosing and managing their patient's problems.

Significance of the Study

By discovering the basic psychosocial process used by home health care nurses in diagnosing and managing their patient's problems, the study will attempt to make explicit the nature of, and the factors that influence, clinical decision making in home health care nursing. As a result, a theory of clinical decision making in home health care nursing will emerge. This substantive theory can serve as the springboard for designing strategies to help prepare students and home health care nurses to become effective clinical decision makers, thereby fostering improved patient care.

Moreover, this substantive theory of clinical decision making in home health care nursing, as a process-oriented theory, can be further refined in other nursing specialties. By identifying and comparing the basic psychosocial processes used by registered nurses in diagnosing and managing patient's problems in other clinical specialties, multiple substantive theories can evolve (Chenitz & Swanson, 1984). These multiple substantive theories can then be compared through their basic psychosocial processes, thereby generating processes common among clinical specialties. Such process commonalities can serve as the basis for

formulating mid-range practice theories in nursing which can lead, with further abstraction, to the emergence of a unified formal theory of nursing practice. Such a formal theory of nursing practice can therefore serve as the basis for the explanation, control, and prediction of nursing practice.

Theoretical Perspective

This study primarily rests upon Blumer's (1969) symbolic interactionism for its theoretical framework. Symbolic interactionism, as a perspective focusing on human society as people engaged in living, emphasizes three main premises:

1. Human beings act toward things on the basis of the meanings these things have for them.
2. The meaning of such things arises from the social interaction that a human being has with others.
3. Human beings handle and modify the meaning of things through an interpretative process.

Based on these premises, symbolic interactionism mandates a research methodology grounded in the empirical social world (Blumer, 1969). This perspective advocates naturalistic inquiry; that is, it requires a direct examination of the empirical social world in its ongoing and natural setting instead of a simulation or an abstraction of such world. Accordingly, the precepts of symbolic

interactionism guide this investigation to an understanding of how home health care nurses diagnose and manage their patients' problems. Such understanding emerges not only from observing home health care nurses in their natural practice setting, but also by accepting the assumption that their diagnosis and management of patients' problems spring from their definitions and interpretations of patient care related situations and interactions.

CHAPTER 2

REVIEW OF LITERATURE

This chapter reviews the accumulated empirical knowledge and the conceptualization of clinical decision making in nursing. Following the guidelines set forth by Light and Pillemer (1984), this review of literature specifically seeks to answer four questions:

1. What are the methods of inquiry and findings of studies made in the past?
2. What are the gaps in the conceptualization of clinical decision making in nursing?
3. What is the nature of clinical decision making as proposed by theories undergirding previous studies in nursing?
4. How consistent are the theories in their predictions?

To answer these questions, a review of the literature on clinical nursing decision making has been undertaken. This review (Cooper, 1989) draws overall conclusions from previous studies in order to present the state of knowledge in the field of inquiry, and examines the theories explaining clinical decision making and compares them with regard to their consistency and the nature of their predictions.

Methods of Inquiry

Clinical decision making studies in nursing over a span of 26 years (1964 - 1990) were retrieved from the literature, representing both quantitative and qualitative methods of inquiry. The majority of these studies employ the quantitative approach. The quantitative methods of inquiry include non-experimental, methodological, experimental and quasi-experimental. The next section discusses the body of accumulated studies in terms of (a) research purpose, (b) sampling and study sites, (c) measures used, and (e) the psychometric properties of those measures.

Research Purpose

To date, non-experimental studies make up the bulk of the studies using quantitative research design. These quantitative non-experimental studies are primarily exploratory, descriptive, and correlational. The majority of these non-experimental studies focus on the outcomes rather than on the process of clinical decision making. The earliest non-experimental studies focus on the types of decisions resulting from clinical decision making. Accordingly, the purpose of the early exploratory and descriptive studies involves identifying the types of information used and responded to by nurses, their inferences of patients' needs and their nursing actions in

response to these needs (Hammond, 1964; Hammond, Kelly, Schneider, & Vancini, 1966a; 1966b; 1967; Kelly, 1964a; 1964b; Verhonick, Nichols, Glor, & McCarthy, 1968). Later studies concentrate on "how well" nursing students (DeBack, 1981; Matthews & Gaul, 1979) and registered nurses perform clinical decision making (Aspinall, 1976; 1979; del Bueno, 1983; McLaughlin, Cesa, Johnson, Lemons, Anderson, Larson, & Gibson, 1979). In general, these studies determine the relationship between educational level and experience (Davis, 1972; 1974; del Bueno, 1983; 1990; Frederickson & Mayer, 1977), personality (Koehne-Kaplan & Tilden, 1976), critical thinking ability (Matthews & Gaul, 1979), and cognitive style (Jackson & Gosnell-Moses, 1984) and clinical decision making performance. The few process-oriented studies focus on how registered nurses or student nurses perform clinical decision making by investigating their information-seeking (Hammond, Kelly, Castellan, Schneider, & Vancini, 1966), diagnostic (Gordon, 1980; Tanner, Padrick, Westfall, & Putzier, 1987) and planning (Corcoran, 1986a; 1986b) strategies.

The methodological studies, on the other hand, primarily endeavor to develop and validate measures of clinical decision making among nursing students (Broderick & Ammentorp, 1979; Dincher & Stidger, 1976; McIntyre, McDonald, Bailey, & Claus, 1972; Story, 1988) and practicing nurses (Farrand, Holzemer, & Schleutermann, 1982; Jacobs &

dela Cruz, 1990; McLaughlin, Carr, & Delucchi, 1980). The instruments developed to measure clinical decision making primarily use patient care simulations, ranging from written (Arnold, 1988; dela Cruz, 1988; Jacobs & dela Cruz, 1990) to video-tapes (Tanner et al., 1987; del Bueno, 1990), films (Story, 1988; Verhonick et al., 1968;), and computerized simulations (Arnold, 1990; Finke, Messner, Spruck, Gilman, Weiner, & Emerson, 1990; Henry, Le Breck, & Holzemer, 1989).

Experimental studies, on the whole, aim to determine the effects of certain teaching-learning strategies (Aspinall, 1979; Lewis & Tamblyn, 1987; Tanner, 1978) and the amounts and relevance of data (Cianfrani, 1984) on the clinical decision making ability of nursing students and practicing nurses. Thiele, Sloan, Baldwin, Hyde, and Strandquist (1986) employed a quasi-experimental pre-post design to determine the effects of teaching cue recognition on students' clinical decision making.

In contrast to quantitative methods of inquiry, qualitative research in clinical decision making research has emerged only during the '80s. Of the retrieved qualitative reports, several sought to explore and describe the practical knowledge acquisition and competencies of nurses as well as the role of intuition in clinical decision making (Benner, 1982; 1983; 1984; Benner & Wrubel, 1982; Benner & Tanner, 1987; Brykczynski, 1989; Rew, 1988a; 1988b). Two studies developed theories of clinical decision

making to describe the processes registered nurses employ in diagnosing and intervening in elderly abuse (Phillips & Rempusheski, 1985) and in cardiogenic shock (Pyles & Stern, 1983).

Sampling and Study Sites

The majority of published quantitative studies use non-probability sampling, followed by random sampling and purposive sampling while qualitative studies use theoretical sampling. The number of study subjects range from 5 to 322.

The published studies--both quantitative and qualitative--use a variety of study sites, with hospitals as the single most common site followed by community based clinics/ambulatory care settings, and schools of nursing. Home health care settings are the least studied site.

Measures of Clinical Decision Making

On the whole, among the quantitative studies, the most frequent measure of clinical decision making entails the use of patient care simulations, ranging in format from written to filmed patient care situations. Simulations remain the key method in the study of clinical decision making in nursing because they provide realistic variables for subject reactions, yet at the same time reduce the variability involved in actual performance studies with real patients (McLaughlin et al., 1980). However, recently, questions have been raised regarding the validity of simulations as

measures of clinical decision making (Holzemer, Resnick, & Slichter, 1986; McGuire, 1985). In particular, two pertinent concerns have been brought up: (a) that simulations do not really represent actual clinical decision making encounters but only approximate clinical encounters, and (b) that performance in a simulation is not congruent with performance in actual clinical decision situations.

Psychometric Properties of Measures

An examination of the psychometric properties of the quantitative measures show that only half of the reports indicate the use of reliability measures. Among the reliability measures are: (a) inter-rater reliability; (b) test-retest; (c) alpha coefficient; (d) a combination of split-reliability, test-retest, and Cronbach's alpha; and (e) Kuder-Richardson.

The majority of the studies reported the validity of their measures while several studies failed to mention any validity measure. The types of validity determined for the measures include: (a) content validity; (b) criterion or concurrent validity; and (c) construct validity. The qualitative study reports failed to mention any measures to establish the trustworthiness (Lincoln & Guba, 1985) of their data.

In sum, the quantitative method of inquiry using patient care simulations has been the primary and

traditional approach in the study of clinical decision making in nursing. However, the qualitative approach is being increasingly accepted as an alternative method of inquiry. On the whole, both approaches present limitations in the reliability and validity of their measures. Moreover, the more frequent use of non-random sampling in quantitative studies limits the generalizability of the study results. These weaknesses in the methods of inquiry restrict the extent to which research findings can be used to understand clinical decision making in nursing.

Study Findings

This section details the findings related to clinical decision making in nursing derived from the retrieved literature. The discussion emphasizes the findings on key clinical decision making variables related to: (a) the decision maker, (b) the clinical decision making task, (c) the context of clinical decision making, (d) the strategies used in clinical decision making, and (e) the outcomes of clinical decision making.

Decision-maker Variables

A number of studies focus on the relationship between selected decision maker variables and clinical decision making performance. The decision-maker variables refer to the characteristics that the individual clinician brings to

the task of diagnosing and managing the patient's problems (Tanner, 1983). It includes such characteristics as (a) educational level, (b) years of clinical experience, (c) cognitive style, (d) critical thinking ability, (e) attitudes and values, and (f) personality type.

Educational level. Results of the studies investigating the influence of the level of education on clinical decision making have been inconsistent and equivocal. Several studies have established the positive relationship between level of education and clinical decision making performance. Specifically, the higher the nurses' educational attainment, the more relevant observations they make (Davis, 1972; 1974; Verhonick et al., 1968) and the more accurately they diagnose (Aspinall, 1976; del Bueno, 1983; Matthews & Gaul, 1979) and resolve patient problems (del Bueno, 1983).

In contrast to these studies, several studies show educational level to bear no influence on clinical decision making. In particular, Frederickson and Mayer (1977) found no significant difference in the clinical decision making of baccalaureate and associate degree students. Recently, in contrast to the results of her 1983 study, del Bueno (1990) found no definitive relationship between nurses' education and their ability to make clinical judgments. Furthermore, Westfall and her associates (Westfall, Tanner, Putzier, & Padrick, 1986) determined that educational preparation does

not influence the timing, comprehensiveness, efficiency and proficiency of hypotheses activation nor the number of activated hypotheses of patient problems. Similarly, Lenz, Wolfe, Shelley, and Madison, (1986) found no difference in the meaning assigned to hypothetical situations by nurses with graduate level preparation in the different clinical specialty areas of nursing and those with different entry-level education.

Years of clinical experience. Results of studies examining the relationship between years of experience and clinical decision making also are inconsistent. Some studies have shown that the more experienced the nurses, the better their ability to address (Broderick & Ammentorp, 1979) or activate significantly more complex inferences about patient problems (Westfall et al., 1986). Moreover, experienced registered nurses, in contrast to nursing students, tend to select different information units early in their information search but use less information in diagnosing patient problems (Broderick & Ammentorp, 1979). In contrast, however, the latest study of Del Bueno (1990) found no definitive evidence regarding the relationship between nurses' experience and their ability to make clinical judgments.

Several studies have found that there is a negative correlation between years of experience and clinical decision making performance. Davis (1972; 1974) found a

negative correlation between years of experience and the number of observations, actions, and reasons among nurses with different educational preparation. The decline in the number of observations, actions taken, and reasons given occurred in subjects with 3 to 35 years of clinical experience. In a similar vein, Aspinall (1976) found a decline in the diagnostic accuracy of nurses with more than 10 years of experience.

Intuitive ability. Several qualitative studies (Benner, 1984; Benner & Tanner, 1987; Benner & Wrubel, 1982; Brykczynski, 1989; Rew, 1988a; 1988b) suggested the role of intuition on clinical nursing decision making. Specifically, the investigators found that expert clinicians, with their wealth of clinical experience, possess an intuitive grasp of the context of patient care situations, enabling them to focus immediately on problems without going through the analytical process of decision making.

Cognitive style. Cognitive style refers to the characteristic manner in which individuals conceptually organize the environment, that is, the way individuals organize and process information (Jackson & Gosnell-Moses, 1984). Two types of cognitive styles appertain to clinical decision making: field-independent and field-dependent. Individuals with field-independent cognitive styles tend to be analytical and can impose structure in ambiguous

situations, while field-dependent individuals tend to be non-analytical and overlook subtle factors in non-structured situations. Research has shown that field independent student nurses can focus on the elements of a patient situation without being distracted by the environment. In effect, field independent nurses tend to have better analytical abilities and therefore can sort out relevant data so essential in clinical decision making (Kissinger & Munjas, 1982).

Critical thinking ability. Two studies examined the relationship between critical thinking and diagnostic nursing ability. Matthews and Gaul (1979) found no relationship between the ability of senior baccalaureate students to derive nursing diagnoses and their critical thinking ability. A similar study (Gordon, 1980) also showed no significant correlation between the nurses' inferential ability and their diagnostic accuracy and confidence. The results of these studies were ascribed to the insensitivity of the instruments used to measure the critical thinking ability that is developed among nurses at the undergraduate and graduate levels.

Attitudes and values. In a qualitative study, Phillips and Rempusheski (1985) discovered that practicing nurses consider their personal values and stereotypes when making clinical decisions related to the diagnosis and intervention in elderly abuse.

Personality type. In an exploratory study, Koehne-Kaplan and Tilden (1976) found no relationship between nursing students' personality type and their ability to learn the process of clinical judgment. Nursing students, who were either extroverts or introverts, did not vary in their scores in the simulations aimed at measuring their ability at making clinical judgments of patient situations.

In sum, nursing studies on clinical decision maker variables produced inconsistent findings. While some studies show that educational level and years of clinical experience positively influence the clinical decision making performance of practicing nurses and student nurses, others show contrary findings. Moreover, critical thinking, attitudes and values, and personality type indicate no significant influence on clinical decision making. Nevertheless, intuition and cognitive style have been shown to positively influence clinical decision making performance.

Task Variables

Evidence exists that certain characteristics of the clinical decision making task influence clinical decision making performance. Gordon (1980) and Cianfrani (1984) found that there is an inverse relationship between the amount of information available and the diagnostic accuracy of nurses. Baumann and Bourbonnaiss (1983) learned that

critical care nurses perceive clinical decision making itself as stress-producing and that the complexity of this stressful task increases with the occurrence of unexpected events such as the non-attendance of a physician during a cardiac arrest. Likewise, Corcoran (1986a; 1986b) found that task complexity influences the planning approaches of both expert and novice nurses. Similarly, Hughes and Young (1990) found that nurses made clinical decisions that agreed with those recommended by a normative decision model but that agreement significantly decreased as task complexity increased.

The Context of Clinical Decision Making

Prescott, Dennis, and Jacox (1987) found that certain characteristics of the environment where clinical decision making occurs either support or hinder the clinical decision making autonomy of practicing nurses. The investigators determined that primary nursing, small-sized patient care units, and intensive care and specialty units positively influence the nurses' clinical decision making. In contrast, team or functional nursing, general duty units, inadequate staffing, and a large number of non-nursing responsibility negatively influence clinical decision making. However, the type of hospital provides mixed influence, in that teaching hospitals offer greater autonomy to nurses but at the same time create situational restraints

on their decision making; community hospitals without very strong physician control may provide nurses more decisional authority, but varying medical practices may restrict nurses' decision making.

Strategies for Clinical Decision Making

A few studies have shown that practicing nurses and student nurses use information-seeking and hypothesis generation as strategies in diagnostic clinical decision making. The seminal program of studies of Hammond and associates (Hammond, 1964; 1966; Hammond et al., 1966; 1966a; 1966b; 1967; Kelly, 1964a; Kelly, 1964b) revealed that registered nurses use two types of information-seeking strategies: simultaneous scanning and successive scanning strategies. Simultaneous scanning involves the collection of facts followed by finding the hypothesis that fits the facts while successive scanning involves the use of hypothesis to guide the collection of facts (Hammond, 1966). Similarly, Gordon (1980) and Tanner and colleagues (Tanner et al., 1987) ascertained that practicing nurses and student nurses use hypothesis generation as an information-seeking strategy. Gordon (1980) in particular, found that many of the nurses, early in the diagnostic phase, employ multiple hypotheses but as they progress toward a diagnosis of the patient states, use predominantly a single hypothesis strategy. The studies, on the whole, showed that there is a

marked variability in the use of these information-seeking strategies--nurses use these strategies in their own individual way rather than in a regular, consistent and systematic pattern.

Outcomes of Clinical Decision Making

Although the clinical decision making outcomes vary among the studies, the outcomes can be categorized into two questions: (a) What are the results of the clinical decision making of practicing nurses and nursing students?, and (b) how well do they perform clinical decision making? The answers to these questions emerge from the phases of cue utilization, diagnosis, management, judgment revision, and probability prediction at which the decisions are made.

The findings of the retrieved studies on the outcomes of clinical decision making are as follows: (a) There is a variety in the numbers and types of cue utilization decisions made by nurses (Hammond et al., 1966a; Verhonick et al., 1968; Rausch & Rund, 1981; McLaughlin et al., 1979); (b) diagnostic accuracy among nurses seem to be limited (Aspinall, 1976; DeBack, 1981; del Bueno, 1983; Fredette & O'Neill, 1987; Fredette, 1988); (c) there is a variety of action decisions taken by nurses (Verhonick et al., 1968; Thompson & Sutton, 1985; Prescott et al., 1987; McLaughlin et al., 1979) although the responses may not necessarily be related to patient cues (Hammond et. al., 1966a), and (d)

nurses can accurately predict the probability of patient states and their corresponding cues (Hammond et al., 1967), the patient outcomes resulting from nursing actions (Grier, 1976), and the clinical impression and patient management (Rausch & Rund, 1981).

Summary

Taken as a whole, the review of literature shows that the knowledge about clinical decision making is still emerging, as indicated by the many equivocal and inconclusive study findings. The clinical decision making knowledge derived from the retrieved study reports is summarized as follows: (a) The relationship between educational level, years of experience, critical thinking, and attitudes and values and clinical decision making performance is mixed and inconsistent; (b) intuition and cognitive style seem to positively influence clinical decision making performance; (c) there seems to be an inverse relationship between the amount of information available and the diagnostic accuracy of nurses; (d) the nurses' agreement with the decisions recommended by a normative model of decision making decreases with an increase in the complexity of the decision task; (e) certain characteristics of the setting where clinical decision making occurs either support or hinder the clinical decision making autonomy of practicing nurses; (f) nurses use the

information-seeking strategies of simultaneous and successive scanning or multiple or single hypothesis in individualistic patterns rather than in a regular, consistent, and systematic manner; (g) diagnosis is the "weak link" in clinical decision making; and (h) nurses' probability estimates are congruent with the axioms of probability theory, but nurses are cautious and conservative in revising their judgments .

The inconclusive and mixed findings of previous studies can be attributed to the disparate nature of these studies. No theoretical perspective unifies or connects these past studies. Without a unifying theory, gaps in the conceptualization of clinical decision making in nursing exist. The next section addresses the gaps in the conceptualization of clinical decision making in nursing.

Gaps in Conceptualization

Although the research in clinical decision making in nursing started auspiciously during the mid-to-late-1960's with the publication of the reports of the seminal program of studies of Hammond and colleagues (Hammond, 1964; 1966; Hammond et al., 1966; 1966a; 1966b; 1967; Kelly, 1964a; 1964b), no definite program of studies appeared until the mid-1980's with the study program of Benner and her associates (Benner, 1982; 1983; 1984; Benner & Wrubel, 1982; Benner & Tanner, 1987). In between these times, a series of

separate studies using different theoretical perspectives was undertaken and published. This lack of continuity in the development of a program of studies in clinical decision making research inevitably gives rise to gaps in the clinical decision making knowledge in nursing.

A fundamental gap in the conceptualization of clinical decision making in nursing emerges from the lack of clarification regarding the concept in past studies. Specifically, previous studies lack a clear and precise definition of the term "clinical decision making" to differentiate it from the associated terms of problem solving, clinical diagnosis, clinical reasoning, and nursing process. Likewise, many earlier studies fail to articulate any theoretical underpinning. In effect, the degree of ambiguity of the concept in the studies has contributed to the absence of a consensus regarding the meaning and nature of clinical decision making in nursing.

Another lacuna in the existing conceptualization base involves the lack of a unified theoretical model since the first studies appeared in 1964. This lack of a unified theoretical model accounts for the dearth of valid and reliable measures of clinical decision making and the many equivocal and inconclusive study findings.

Theoretical Perspectives in Clinical Nursing Decision Making

Presently, two major but contrasting theoretical perspectives, as identified by Tanner (1987a), have emerged from the literature on clinical nursing decision making: the rational and phenomenological perspectives. The rational perspective contends that clinical decision making is derived from a reasonable and logical sequence of cognitive processes that can be explicitly analyzed into its component parts (Hammond et al., 1966a; 1966b; 1967; Holzemer, 1986; Tanner et al., 1987). This theoretical perspective undergirds the quantitative studies focusing on clinical decision making in nursing. Quantitative research, by its very nature, aims at verifying theories. The theories of clinical decision making in nursing derived from the rational perspective include decision theory and the information processing theory.

Decision Theory

Decision theory is a normative or prescriptive theory. As such, it establishes how a clinician should make a clinical decision based on mathematical analysis (Albert, 1978; Tanner, 1987b). The uncertain and probabilistic nature of clinical decision making lends itself to the mathematical approaches of the Bayesian theorem, the "lens" model, and the utility model. The seminal studies of

Hammond and his associates (Hammond et al., 1966a, 1966b, 1967) used the Bayesian theorem and the "lens" model in their investigations. The studies of Grier (1976) and Hughes and Young (1990) used the utility model as the underpinning perspective.

Bayes' theorem is a statistical model which specifies the optimal means of revising the probability of a diagnosis upon acquisition of new information (Hammond et al., 1967; Hammond, McClelland, & Mumpower, 1980). When revising a diagnosis in the presence of new information, Bayes' theorem takes into account the prior probability of the diagnosis without a cue, the probability of a cue with a given diagnosis, and the probability of a cue without a diagnosis (Tanner, 1983; 1987b). Thus, Bayes' theorem combines all these probabilities in its prescription of diagnostic revision in the presence of new evidence.

The "lens" model focuses on the interrelationship between two systems--that of the environment and that of the human mind (Hammond, 1964; Hogarth, 1987). The relationship between these two systems is mediated through cues which are probabilistic. Thus, the critical element becomes the congruence between the mind's interpretation of the cues with the real state of the environment. Consequently, the accuracy of a clinical diagnosis depends on the correlation between the clinician's interpretation of the patient cues and the actual state of the patient.

Another approach within decision theory is the utility model. This model associates a clinical decision with a set of possible outcomes, and each outcome, in turn, is associated with a probabilistic occurrence and an expected value. Therefore, the optimal decision is the action that has the highest expected value (Tanner, 1983).

The primary limitation of decision theory and its mathematical models involves its use in actual clinical decision making. As shown by the seminal study of Hammond and colleagues (Hammond et al., 1967), nurses do not follow the prescriptions of the mathematical models although their probability estimates are congruent with the probability theories. In other words, nurses' revision of their judgments do not follow the normative model.

The Information Processing Theory

The next theory, the information processing theory, compares the mind to the computer (Newell & Simon, 1972; Simon, 1979). However, unlike the computer which can access information in its original form, the human mind, as an information processing system, has memory limitations. In contrast to the computer, the human mind accesses stored information through a process of association and reconstruction of past events (Hogarth, 1987).

The information processing theory conceptualizes the diagnostic phase of clinical decision making into five

cognitive steps (Elstein, Shulman, & Sprafka, 1978): (a) cue utilization, (b) hypothesis generation, (c) hypothesis-driven information gathering, (d) hypothesis evaluation, and (e) derivation of a diagnosis. Thus, the steps appear to be similar to, if not identical with, the hypothetico-deductive process of the scientific method (McGuire, 1985).

Among the rational perspectives, information processing currently dominates as the perspective guiding most of the studies in clinical decision making in nursing (Arnold, 1988; Corcoran, 1986a; 1986b; Tanner et al., 1987). It is ironic that this is the dominant perspective in nursing because the information processing theory as applied to clinical decision making was derived from studies of physicians and medical students. Since nursing claims to be different from, yet related to medicine in its professional goals, there is incompatibility with the exclusive use of a physician model to study the processes of clinical decision making in nursing. Nursing's focus on the whole individual requires a broader perspective in the study of clinical nursing decision making.

As a perspective, the information processing theory, alone, provides a very narrow framework for conceptualizing clinical decision making in nursing. The limitations of the information processing theory as a perspective arise from its assumptions that the studies fail to articulate: (a)

that clinical decision making tasks are homogeneous, (b) that the same general cognitive processes apply to all clinical problems, and (c) that these processes are variants of the hypothetico-deductive model reflective of the scientific method (Berner, 1984).

The validity of such assumptions is questionable because of the evident variation in the characteristics of clinical decision situations. In real life, clinical decision situations vary; they are not homogeneous. Clinical decision situations range from the simple to the complex--from the structured to the unstructured. Well-structured decision situations depict recurrent and routine situations, and the decision maker possesses the detailed knowledge and methods to respond routinely to these tasks. On the other hand, poorly structured decision situations arise from complex, novel, uncertain and ambiguous situations, and the knowledge and methods to respond to these situations emerge during the process of decision making (Mintzberg, Raisinghani, & Theoret, 1976).

Another limitation of the information processing theory is its failure to account for the context in which clinical decision making occurs. Although there is support for the influence of the context or setting where clinical decision making occurs (Prescott et al., 1987), the information processing theory fails to consider this a crucial variable in the conceptualization of clinical decision making.

The information processing theory uses predominantly simulations in the study of clinical decision making. However, simulations do not represent actual clinical decision making encounters but only suggest them; they fail to mirror reality. Consequently, the information derived from simulations can only approximate the actual performance of a nurse in a clinical context.

The information processing theory also misses the consideration of a crucial factor that helps shape clinical decision making--the decision maker. The theory does not consider the characteristics of the decision maker, such as cognitive style (Kissinger & Munjas, 1982) and intuition (Benner, 1984; Benner & Tanner, 1987; Pyles & Stern, 1983; Rew, 1988a; 1988b;) both of which have been found to positively influence clinical decision making.

Another limitation of the information processing theory is its emphasis on a linear mode of thinking. Research on nurses' clinical decision making processes, however, has shown that their clinical decision making may not follow this mode of thinking (Holzemer, 1986); the cognitive processes may occur in different sequences, or several stages may be skipped altogether (Frederickson & Mayer, 1977; dela Cruz, 1988). Such variations in the findings serve as anomalies that suggest the need to reconceptualize clinical decision making in nursing with a different perspective.

The Phenomenological Perspective

In contrast to the rational perspective, the phenomenological perspective emphasizes the "nursing gestalt" (Pyles & Stern, 1983), that is, a holistic view of clinical decision making rather than an analytical breakdown of its components. Thus, as a perspective guiding research, the phenomenological perspective seeks to understand clinical decision making from the nurses' point of view and experience. Such understanding, therefore, emerges not from preexisting theories but from a direct observation and description of nurses' actual clinical decision making in the context of their practice settings.

As the newest theoretical perspective undergirding a very meager number of nursing studies, the phenomenological perspective has succeeded in revealing some of the key factors involved in clinical decision making. These factors include not only the characteristics of the decision maker such as intuition (Benner, 1984; Benner & Wrubel, 1982; Benner & Tanner, 1987; Brykczynski, 1989; Rew 1988a; 1988b), or personal values and stereotypes (Phillips & Rempusheski, 1985), but also patient-related factors such as environment, finances, and care-giver's resources (Phillips & Rempusheski, 1985). Moreover, it has shown that the knowledge used in clinical decision making is embedded in practice and is derived from experiences with similar and dissimilar situations (Benner, 1983; Benner, 1984).

Consequently, the phenomenological perspective asserts that a rational, analytic approach to clinical decision making characterizes the novice rather than the expert clinician.

Summary

Currently, the rational and phenomenological perspectives support studies in clinical nursing decision making, with the rational perspective as the dominant buttress. The rational perspective supports quantitative approaches to the study of clinical decision making. On the other hand, the phenomenological perspective, with its emphasis on a holistic approach endorses qualitative methods of research.

At present, the rational and phenomenological perspectives seem to foster mutual exclusiveness. Each perspective has a certain validity, but neither by itself accurately reflects clinical decision making. There is a need to span the channel created by the attitudes of mutual exclusiveness fostered by the rational and phenomenological perspectives.

A means to span these mutually exclusive attitudes is through the generation of a unified or formal theory of clinical decision making in nursing. Such a theory specifies its underlying assumptions, defines and classifies its central concepts, formulates its propositions on the relationships of these concepts, and articulates its

hypotheses for testing (Jacox, 1974; Tilden, 1985). Thus, a formal theory provides the context for the development, implementation, and interpretation of study findings.

Nevertheless, this formal theory should be derived inductively from the empirical world rather than deductively from predetermined theories. This grounding in the empirical world is essential because, taken as a whole, results of quantitative studies fail to correspond with the predictions of predetermined theories. This lack of correspondence arises because by explaining phenomena solely through the measurement of variables--by reducing data to their least common denominator--quantitative research belies the complexity and diversity of the real world (Swanson & Chenitz, 1982). An inductively-derived formal theory, in contrast, brings out the complexity and diversity of the real everyday world.

The generation of a unified or formal theory of clinical decision making can be achieved through the use of grounded theory research methodology. As a method of research, one of its greatest contributions is the generation of theory grounded in the empirical world. Though grounded theory traces its roots from the phenomenological perspective, it complements other research approaches (Chenitz & Swanson, 1986) through its two modes: the discovery mode and the emergent fit mode (Artinian, 1986). The discovery mode results in a substantive theory

of a domain of inquiry, and the emergent fit mode allows the reformulation or refinement of the substantive theory.

The generation of a unified or formal theory requires a foundational body of substantive theories (Chenitz & Swanson, 1984; Hutchinson, 1986). This study represents an initial contribution to that body of substantive theories of clinical decision making across clinical nursing specialties. It seeks to identify the basic psychosocial process used by home health care nurses in the diagnosis and management of their patients' problems.

CHAPTER 3

METHODOLOGY

This study employs a field research design using grounded theory methodology (Glaser & Strauss, 1967; Glaser, 1978; Strauss, 1987; Strauss & Corbin, 1990). In contrast to quantitative research methods, grounded theory, as a qualitative (field) research method, seeks to identify basic social-psychological processes and to generate testable theory about these processes rather than to verify a preexisting theory (Hutchinson, 1986). Grounded theory methodology uses the constant comparative technique which requires concurrent data collection and analysis. In this study, data collection methods include participant observation with interviews and document analysis. The combination of these methods ensures data density and triangulation (Denzin, 1978; Patton, 1980; Sandelowski, 1986).

Sample

The sample consisted of a total of 21 female registered nurses employed at two Visiting Nurse Associations (VNAs) in Los Angeles County. The key informants consisted of a core of home health care nurses: seven case managers, one field nurse, and two on-call nurses. All of them satisfied the

following initial criteria: (a) active and direct involvement in the care of patients referred and admitted to the home health agency; (b) a minimum educational preparation of diploma or associate degree in nursing; and (c) employment in a home health care agency that provides skilled nursing and supportive services.

In this study, case managers are registered nurses responsible for a caseload of 25 to 30 patients in a specific geographic area served by the home health agency. Specifically, the case managers carry out the following functions for a caseload of patients: (a) comprehensive health assessment of patients including their physical, psychological, social, and environmental status and functional ability as well as social support and financial resources; (b) formulation and implementation of a plan of care incorporating interdisciplinary health services; (c) coordination of the interdisciplinary health care providers and all payment sources involved in the reimbursement of health care services; and (d) evaluation of the outcomes of care to ensure quality, quantity, timeliness, effectiveness, and appropriateness of all services. To carry out these functions, case managers have a nursing team which includes field nurses, on-call nurses, licensed vocational nurses, and home health aides. The case managers delegate aspects of the patients' plan of care to the nursing team members. In particular, case managers may delegate to the field

nurses or on-call nurses the formulation or implementation of the plan of care of specifically assigned patients. While the case managers carry their caseload of patients for a long period of time, patients assigned to the field nurses or on-call nurses and other members of the nursing team may change from day to day (C. Lee, personal communication, January 20, 1991). In this study, the term "home health care nurses" refers collectively to this core sample of 10 key informants.

After the initial data collection and analysis consistent with grounded theory methodology, theoretical sampling led to additional key informants: one "intake" nurse (responsible for receiving and processing patient referral to the home health agency), one nurse-coordinator, five nurse-supervisors, two nurse-directors, and two nurse-executives.

Table 1 details the characteristics of the final sample. The ages of the sample ranged from 25 to 67 years. The ethnic background of the majority of the sample was Caucasian with one Asian and one Latino. The basic nursing educational background varied from diploma, associate degree, to a baccalaureate degree in nursing, with five of the nurses starting out as nurses' aides. The educational attainment ranged from a diploma in nursing to a master's degree. The work time spent per week varied from 20 to 40

Table 1

Characteristics of Sample

RN* Informant	Age	Marital Status	Ethnicity	Basic Nursing Education	Highest Degree	Current Position	Work Time/ Week	Total yrs in home Health Nursing	Pre-home Health Clinical Specialty***
1	37	Married	Caucasian	Diploma	Diploma	Case Manager	40	6	IV Nursing
2	35	Married	Caucasian	BSN	BSN	Case Manager	32	3	Medical-Surgical
3	33	Single	Asian	BSN	BSN	Case Manager	32	2 months	Mental Health
4	25	Married	Caucasian	BSN	BSN	Case Manager	40	1.25	Medical-Surgical
5	36	Married	Latino	AA**	AA	Case Manager	40	13	Medical-Surgical
6	48	Married	Caucasian	Diploma	Diploma	Field Nurse	24	4.5	Psychiatric Nurs.
7	36	Single	Caucasian	AA**	AA	Intake Nurse	40	2	Medical-Surgical
8	40	Widowed	Caucasian	Diploma	Diploma	Case Manager	40	8	Critical Care
9	41	Married	Caucasian	BSN**	BSN	Case Manager	24	9	Medical-Surgical
10	47	Single	Caucasian	BSN**	BSN	Evening On-Call	20	6 months	Critical Care
11	35	Married	Caucasian	BSN**	BSN	Weekend On-Call	24	2.5	Geriatrics
12	36	Married	Caucasian	BSN	BSN	Supervisor	24	6	Medical-Surgical
13	28	Married	Caucasian	BSN	BSN	Supervisor	40	6.5	Medical-Surgical
14	47	Married	Caucasian	BSN	BSN	Supervisor	40	7	IV Nursing
15	57	Married	Caucasian	AA	MSN	Director	40	17	Medical-Surgical
16	59	Divorced	Caucasian	Diploma	MS	Executive	40	35	Medical-Surgical
17	42	Married	Caucasian	AA	AA	Coordinator	40	3	Oncology
18	67	Widowed	Caucasian	BSN	BSN	Executive	40	22	Medical-Surgical
19	40	Married	Caucasian	BSN	BSN	Supervisor	40	5	Medical-Surgical
20	40	Married	Caucasian	BSN	MS	Director	40	5	Medical-Surgical
21	47	Single	Caucasian	BSN	BSN	Supervisor	24	13	Medical-Surgical

* All female registered nurses.

** Started nursing career as an aide.

*** With the most years of experience.

hours per week. The total number of years in home health nursing ranged from two months to 35 years. The majority were most experienced in medical-surgical nursing prior to their entry into home health care nursing.

Procedure

Method of gaining entry into the home health care agencies. Initial entry into the home health agencies (VNAs) was obtained by seeking the support, sponsorship, and approval of the VNA nurse-executives who are the professional colleagues of the investigator. The investigator met with each VNA nurse-executive to explain the purpose and method of the study. Since there were no formal institutional review boards in place in these agencies, the approval of each nurse-executive was also obtained during this meeting. In appreciation, the investigator offered to provide an hour or two of continuing education class for the nursing staff of each VNA after the completion of the study.

After both VNA nurse-executives approved the study, the investigator arranged to meet with their respective registered nursing staff during one of their monthly meetings. At this meeting, the investigator discussed the purpose of the project and asked for the nurses' voluntary participation. Also, the promise of confidentiality and anonymity was professed following the guidelines of Lofland

and Lofland (1984) by assuring the nursing staff that no informant's name will be used in the research report. The nursing staff at each VNA expressed their enthusiasm to participate in the study.

Recruitment. After this meeting, the executive-director of each VNA linked the investigator with a nursing supervisor who assisted in selecting and arranging for the observation and interview of the core sample of home health care nurses. Through this supervisor, the investigator worked out a schedule convenient to the home health agency and the core sample of home health care nurses. Although the supervisor confirmed the schedule with the participating home health care nurses, the investigator also contacted each home health care nurse the day before the scheduled observation and interview. During this contact, the investigator and the home health nurse arranged to meet at a specific time at the home health agency. At the start of the scheduled day, the investigator presented each participating home health care nurse with a consent form for perusal and signature. (See Appendix B for a copy of the consent form).

Method of gaining entry into the patient's home. The home health care nurse first called the patient to schedule the home visit. The home health care nurse, as the key informant, asked permission from the patient for a graduate student nurse to observe the home visit. Granting

permission was entirely the patient's voluntary choice. The investigator, unlike a regular student nurse, only observed the home visit and did not provide any nursing care.

Currently, the majority of Medicare-certified and state-certified home health agencies affiliating with Schools of Nursing provide the clinical experiences of nursing students. Thus, home health care nurses in these agencies frequently bring along a nursing student during their home visits after obtaining the verbal consent of the patients. This method of gaining entry into patients' home is in keeping with the current practice used by home health agencies and Schools of Nursing (C. Lee, personal communication, February 15, 1990).

Data Collection

Data collection consisted of a combination of participant observation with open-ended interviewing and document analysis. Participant observation with open-ended interviewing focused on how the seven case managers, one field nurse, and two on-call nurses made clinical decisions about their patients.

The investigator rode with each of these home health care nurses, thus accompanying them in their home visits and interviewing them en-route to and in-between home visits. In general, the investigator spent a whole work shift with each of the 10 home health care nurses. Six of the 10 home health care nurses were reinterviewed between 1 1/2 to 2

hours each, at a later date. The investigator observed the home health care nurses at different work-shifts, totalling 37 home visits. Of the 37 home visits, 24 were observed during the regular work days during the week, nine during week-ends, and four on an evening shift.

The 37 home visits were distributed into three types of home visits: nine first (evaluation) home visits, 25 follow-up (routine) home visits, and three PRN home visits. The first (evaluation) home visit refers to the first time the home health care nurse goes to the patient's home and obtains a comprehensive data base. After the first home visit, subsequent home visits are planned and scheduled. These planned, scheduled home visits are known as follow-up or routine visits. The PRN home visit pertains to any needed home visit that is extra and unscheduled. A situation requiring a PRN visit, for example, is a patient or caregiver notifying the home health agency of a leaking Foley catheter.

In the patients' homes, the observations concentrated on the interactions between and among the home health care nurse, the patient and caregiver. In the home health agency, the observations focused on what the home health nurses did in relation to their patients including their patient-related interactions with colleagues, health team members and other relevant individuals. Field notes were written at the earliest possible time after field

observations. The open-ended interview involved the use of preliminary questions and probes (Appendix C). In tandem with each open-ended interview, the investigator observed the informant's nonverbal forms of communications such as body movements, gestures, body-orientation, facial expressions, timing, physiologic signs, reaction pacing, and implicit verbal indicators (Guba & Lincoln, 1981). The open-ended interviews were tape-recorded and transcribed for data verification and analysis.

Following theoretical sampling, additional data was obtained from one "intake" nurse, one nurse-coordinator, five nurse-supervisors, two nurse-directors, and two nurse-executives of the two VNAs. Each of these additional key informants signed the informed consent document.

The investigator observed and interviewed the intake nurse on two half-days as she received patient referrals in one of the home health agencies. The nurse-coordinator, supervisors, directors, and executives were interviewed each for 1 to 1 1/2 hours. They were interviewed to clarify information obtained from the original core sample and to obtain their perceptions of the factors that influence the clinical decision making of the home health care nurses. These interviews were also tape-recorded and transcribed. In all, the observation and interview of the 21 registered nurses yielded more than 110 hours of field notes and taped material.

Complementing participant observation with open-ended interviewing was the analysis of selected documents that relate to home health care nursing practice. Such documents included the observed patients' records and official practice policies and regulations subscribed to by the home health care nurses and their employing agencies. The patients' records were examined to obtain the following types of data: the referral (intake) information, the nurses' documentation of the observed home visit, the plan of care, and the physician's prescribed treatment regimen. The official documents examined included: (a) the Regulation of Nursing Practice in California (California Nurses Association, 1986); (b) federal regulations as specified in the Conditions of Participation for Home health Agencies (Federal Register, 1989); (c) state regulations governing home health agency licensure as specified by Title 22, Chapter 6 (California Health and Safety Code and California Administrative Code, 1979); (d) state home health review guidelines as promulgated by the California Medical Review Inc. (1989); (e) Comparative Matrix of Home Care Regulations and Accreditation Standards (California Association for Home Health Services at Home, 1990); and (f) the organizational procedures and orientation manuals of each of the home health agencies. These documents were examined primarily to gain clarification and support of the information gathered from the core and theoretical sample.

Data Analysis

Data was analyzed using the constant comparative technique (Glaser & Strauss, 1967; Glaser, 1978; Strauss, 1987; Strauss & Corbin, 1990). Thus, data-grounded categories were formulated and compared again and again to each other until they became mutually exclusive. Likewise, incidents were compared with incidents, incidents with categories, categories with categories, categories with constructs, and constructs with constructs (Hutchinson, 1986). Such continuous reexamination and comparison were integral to deriving a theory grounded in the data.

The grounded theory approach employs a triad of analytic operations that move back and forth: data collecting, coding, and memoing (Strauss, 1987). In other words, data collecting leads to coding and to memoing; either can direct further data collection or coding or memoing or a return to previously collected data.

Collected data was coded to produce categories (concepts) that reflected the data (Strauss, 1987). Coding encompassed open coding, axial coding, and selective coding. Open coding involved developing the initial list of in-vivo or substantive categories from a line by line analysis of the data. Axial coding required the intense analysis of each category according to the dimensions of conditions, strategies, tactics, and consequences, thereby delineating the relationships between and among categories. Lastly,

selective coding demanded the systematic clustering of related categories to a key or core category. This core category or core variable served to explain the patterns or processes of clinical decision making emerging from the data. In this study, managing patient care emerged as the core category. It provided the central construct of the generated theory, meeting the requirement of succinctness (parsimony) in a theory.

Memos were written throughout data collection and coding. The process of memoing documented and continuously linked the methodological and theoretical ideas and insights about the data, codes, categories, and relationships of categories (Strauss, 1987).

During the ongoing data analysis, the investigator also simultaneously reviewed the literature (Chenitz, 1986). During the early phases of data analysis, review of the literature served as a source of data to verify and elaborate categories. Towards the end of data analysis, the investigator returned to the literature to support the emergent theory (Hutchinson, 1986). At this point, the emergent theory was placed in the context of existing clinical decision making theories and research (Chenitz, 1986).

Reliability and Validity of the Study

Because quantitative research differs from qualitative research in its goals and methods, conventional quantitative

criteria of internal validity, external validity, reliability, and objectivity for evaluating the rigor of a scientific study are inappropriate for qualitative studies (Lincoln & Guba, 1985; Sandelowski, 1986). Thus, an alternative set of criteria to establish the rigor or trustworthiness of this qualitative study is used. These criteria, as set forth by Lincoln and Guba (1985), consist of credibility (in place of internal validity), transferability (in place of external validity), dependability (in place of reliability), and confirmability (in place of objectivity).

Credibility. Credibility refers to the believability of the findings. For a qualitative study to be credible, its descriptions or interpretations of human experience show congruence with or fidelity to people's life experiences (Sandelowski, 1986). To assure credibility of this study, some techniques suggested by Lincoln & Guba (1985) were undertaken: prolonged engagement, persistent observation, peer debriefing, triangulation, and member checks.

Participant observation with open-ended interviewing allowed prolonged engagement and persistent observation of the key informants. Peer debriefing was achieved by a three-member panel of colleagues periodically examining the data coding and analysis. Such examination uncovered the investigator's biases as well as clarified the investigator's interpretations (Lincoln & Guba, 1985). The

three-member panel of colleagues was made up of registered nurses with at least a master's degree in nursing and with experience in doing qualitative research.

Triangulation (Denzin, 1978; Lincoln & Guba, 1985; Patton, 1980; Sandelowski, 1986) was accomplished by using several data sources. These data sources came from participant observation with open-ended interviewing of a variety of registered nurses in home health care nursing and the analysis of documents related to the delivery of health care services in the patients' homes. Moreover, the emerging results of the study were compared concurrently with related empirical studies and professional articles (Mishel & Murdaugh, 1987).

Finally, member checks were instituted by providing the key informants with the observations and open-ended interviews as soon as possible following the observation and interview session. The informants were asked to react to the fidelity of the field notes and interview transcripts, and their corrections were incorporated. Such an informal member check was followed by a more formal member check when the study report was available. Prior to the final writing of the study results, the investigator submitted the draft of the emergent theory to three key informants for their review. Feedback from these key informants reinforced the validity of the study findings and interpretations.

According to these key informants:

- The paper would be wonderful reading for nurses who think they might like to try home health but know nothing about it. It gives a wonderful overview of what it's all about as well as some "tricks of the trade". The excerpts from the interviews give it a personal touch.
- It's very accurate!
- Very in-depth on factors that influence decision-making. I hadn't given some of these much thought recently--good reminder and review!
- It's all very readable and personalized and spiced with excerpts from real cases and scenarios.
- The factors influencing the clinical decision making of home health care nurses are so true.

These comments of the key informants provide tangible support for the credibility of the study findings and the emergent theory of managing patient care in home health care nursing.

To bring about an additional formal member check, the investigator presented part of the findings of the study at a national home health care conference held at the University of Virginia on November 11-13, 1990. Specifically, the findings on cue searching strategies used by home health care nurses were presented to an audience of 26 home health care nurses. In this presentation, the investigator received validation of the findings with such audience comments as: "That's what we do to gather information;" "There is a ring of truth to your findings;" "Your elevating our day-to-day activities to a theoretical

level provides us credibility within the health care professions." These comments verified the meaningfulness of the findings and interpretations and thus serve as "the most crucial technique for establishing credibility" (Lincoln & Guba, 1985, p. 314).

Transferability. Transferability refers to the degree of "fittingness," or suitability, of the findings into contexts outside the study situation (Lincoln & Guba, 1985). This criterion does not require that the investigator provide the statements about the transferability of the findings beyond the study context. It requires that the investigator provide the "thick description" of information to enable others to make judgments of transferability possible. In this study, the theoretical sampling that provided a wide range of information should satisfy this criterion.

Dependability and confirmability. Dependability refers to the accounting of the process of the inquiry while confirmability refers to the accounting of the products of the inquiry (Lincoln & Guba, 1985). To satisfy these two criteria, the investigator created an audit trail as set forth by Halpern (1983). The audit trail consisted of the (a) study proposal, (b) raw data, (c) data reduction and analysis products (categories), (d) data reconstruction and synthesis products (working drafts of the emerging theoretical framework), (e) process notes, and (f) study

outcome--a substantive theory of clinical decision making in home care nursing.

To operationalize the auditing process, the investigator adopted a two-pronged approach. First, the dissertation research committee members were consulted throughout the life of the study, from the development of the research proposal to the completion of the study. During the simultaneous data collection and data analysis, the investigator intermittently met and shared with the dissertation research committee chair the raw data, the data categories, process notes, and working drafts of the emerging theoretical framework. In addition, the investigator met twice with the second member of the committee member to obtain guidance in data coding and analysis and to share the initial process notes and the emerging theoretical framework. All three members of the dissertation research committee were consulted when additional informants were needed to satisfy theoretical sampling. All three members reviewed the substantive theory that emerged from the study.

In addition, the investigator engaged an inquiry auditor to perform a supplementary audit. The inquiry auditor determined (a) the appropriateness of inquiry decisions and methods, and (b) the substantiation of the findings and interpretation in data. As a result of the audit, the inquiry auditor provided a letter (Appendix D)

attesting to the dependability and confirmability of the study (Lincoln & Guba, 1985).

The inquiry auditor of the study satisfies certain requirements recommended by Lincoln & Guba (1985). The auditor has (a) experience in the role of an auditor in qualitative studies using the grounded theory, (b) peer status of the investigator, (c) involvement early in the study, and (d) trustworthy and valid judgments.

PART TWO

FINDINGS

CHAPTER 4

MANAGING PATIENT CARE: THE PROBLEM FINDING PROCESSES AND STRATEGIES OF HOME HEALTH CARE NURSES

The emergent data-grounded theoretical framework that explains the clinical decision making of home health care nurses consists of three components: (a) the phases of their clinical decision making, (b) their clinical decision making styles, and (c) the factors influencing their decision making. The ensuing four chapters will address each of these components.

In this study, *managing patient care* emerged as the basic social process of clinical decision making in home health care nursing. Managing patient care involves two phases: problem finding and problem management (see Figure 1). Problem finding consists of the cognitive processes and decisions of cue searching and inferring while problem management consists of planning, intervening, and evaluating. Though problem finding and problem management will be described as sequential phases, in reality, the differentiation between the phases is blurred. A home health care nurse engaged in clinical decision making may be at both phases simultaneously depending on the process operating in her thinking while confronting clinical

Figure 1. Managing patient care: Phases and processes.

information, for the cognitive processes are iterative, cyclical, interactive and interdependent. This chapter presents the data-grounded processes and strategies that describe home health care nurses' problem finding (see Table 2).

Problem Finding

Problem finding consists of the processes and decisions of cue searching and inferring. Cue searching refers to the gathering of information about the patient. Cues or clues pertain to the information about the patient that come from a variety of sources. The cues or clues may originate from any point during a health-caregiver's encounter with the patient and the family. Thus, cues or clues may come from the patient interview, the physical examination as well as the reports of health-caregivers. Inferring refers to formulating impressions, hunches, hypotheses, judgments, medical diagnosis, nursing diagnosis, and conclusions about the patient based on the cues gathered.

Although the problem finding phase occurs throughout the duration of the patient's care under the home care agency, the intensity of this phase occurs during the referral and the first home visit. In home health care nursing, the referral of a patient to the home health care agency serves as the initial stimulus for the problem

Table 2

Managing Patient Care*: Problem Finding, Processes/
Decisions and Strategies

Phase	Processes/ Decisions	Strategies
Problem Finding	Cue Searching	<p>During referral:</p> <ul style="list-style-type: none"> • reviewing referral form • soliciting information <p>During home visits:</p> <ul style="list-style-type: none"> • social talking • scanning • moving about • exploratory questioning • focused questioning • review of patient's records • networking • telephone screening
	Inferring	<ul style="list-style-type: none"> • Hypothetico-deductive reasoning • Forward reasoning • Backward reasoning • "Gut feelings" or "sixth sense"

*Basic social process.

finding phase of clinical decision making. To receive health care services in the home, a patient must be referred to the home health care agency. A major referral source is the hospital discharge planner. A home health care "intake" nurse responsible for receiving referrals to the home health care agency describes the discharge planner as a referral source:

We usually get patients from the hospital. The discharge planner sees the patient that's had a heart attack--they have several new medications, they've had a CVA and can't get around. You know, they're taking them out of the hospital more quickly these days and they feel that the patient needs more follow-up and more monitoring of their vital signs and instructions on their medications, because they're not doing as much discharge planning as they would like. So they talk to the physician and the physician says, 'Okay, home care is appropriate.' And the hospitals will call with the referral.

Currently, the majority of referrals come from hospital discharge planners.

Other referral sources include the physician, the patient, or members of the patient's family and support network. According to the intake nurse:

... doctors will also initiate it [the referral] if the patient goes to his office and after their meeting the doctor's saying, 'I don't think the patient's following the medications; for some reason the dig[oxin] level is inappropriate; the patient doesn't seem to be taking it; or the home situation is unsafe ...'

Sometimes, we get a neighbor calling us and saying, 'My neighbor is having this problem, and this problem and we don't know what to do with them.' Or the patient will call or a family member will call, you know. 'We need help, we

don't know what we need, we don't know what's allowable to us.' And we say, 'Okay, who is the patient? What's the problem? Who is the patient's doctor?' Then we have to call the doctor and tell them that we've had these people call and would it be okay if we got out and evaluate the home situation.

Thus, patients are referred to the home care agency formally or informally. Formal referrals come from hospital discharge planners and physicians while informal referrals come from the patient or members of the patient's family and support network. Informal referrals become formalized with a physician's certifying the need for home health care services. The referring individuals send their referrals to the home health care agency by phone, postal mail, or electronic mail (FAX).

After the patient is admitted to the agency, the patient is assigned to a home health care nurse. The home health care nurse, in turn, schedules the first visit to the patient's home. This first home visit serves as the backdrop for the problem finding phase. The first home visit provides the home health care nurses the opportunity to meet the patients in the context of their homes, family, support network, and community. The referral and the first home visit serve as the fertile grounds for the nurses' cue searching. However, here the simultaneity of problem finding and problem management emerges, for as the intake nurse searches for initial broad cues regarding the

patient's condition, the seeds of patient problem management are sown in the directional and informational forms the visiting nurse uses for her first home visit.

Cue searching

Cue searching pertains to the methodical process of gathering information about the patient. It starts as soon as the patient referral reaches the home health care agency. The cue searching strategy depends on how the intake nurse gets the referral. When asked what she does upon receiving referrals from hospital discharge planners, the intake nurse replied:

Hopefully, they give us a phone number to call
.... We look over what it [the referral] says and
fill out our forms accordingly. We have to make
sure we can read the patient's address and phone
number. We have to make sure we can read the
doctor's name.

The home health intake nurse therefore starts the initial cue searching prior to her first visit to the patient. Document analysis of the home care agency's intake data form reveals the types of needed data: patient's bio-social data, medical problems, insurance coverage, referral source, and the doctor's prescription of care and other pertinent information. As observed, should the referral miss any admission information required by the agency, the nurse inevitably contacts the referring discharge planner by phone to obtain the necessary information.

Informal referrals, however, require a different strategy--that of soliciting information. According to the intake nurse:

The discharge planners have it [the information] in front of them and know things.... Sometimes we solicit if the patient calls us and we don't have a direct order [for home care]. We have to solicit from the doctor; we have to have someone to order, we have to ... get all the pertinent information, you know: Medicare number, any insurance coverage; we [have] to get the address, what the problems are. Then from there we look at the problems. Okay, they've got atherosclerotic heart disease; they've had a recent MI; meds mismanagement is a good diagnosis to [warrant going] out in the home. Sometimes, it's to start antibiotic therapy in the home. Is there something specific about this patient you want us to address? or can we just go and see how they're managing in their home environment? see if they understand their disease processes? see if they understand their medications so that we may be able to help under Medicare guidelines?

Thus, the intake nurse solicits the required admission information and the problems that led to the patient's referral to the home health care agency from the referring physician. The strategy of soliciting information, however, affords the intake nurse the opportunity to recommend a specific nursing care plan for the physician to ratify. As the intake nurse further explains:

Usually, the doctor says 'home evaluation' or 'the patient under home care'.... Sometimes ... it's something specific like 'IV antibiotics ... visiting nurse to administer or instruct administration of antibiotic every 8 hours' or how often. So if there is something specific, we get that and write that in. But if it is not specific ... we look at the diagnosis and the problems. And we will write up something like: 'visiting nurse to assess' or 'nurse to instruct ... on cardio-respiratory status, signs of distress,

medication management, signs of digoxin toxicity;' whatever may be pertinent to the diagnosis. Then we always throw in something like: nurse to assess for other needs, you know. If there's a bad vision problem and the home is cluttered and the patient may trip, what kind of safety measures we can look for. So we want the nurse to make a general home environment [assessment].

In other words, with informal referrals the intake nurse directly solicits from the physician not only the patient's admission data but also the certification of the self- or family-referred patient's need for home care and the prescribed program of home care. The prescribed program of home care incorporates both the doctor's orders and the intake nurse's suggestions to be implemented by the home health care nurses in the patient's home. At the time of referral, the scope of the prescribed program of home care is highly varied: it may range from the home health care nurse administering therapeutic procedures and treatments, assessing the patient's home environment and medication management, to the teaching of the patient and caregiver the different aspects of the illness and its treatment. Hence, the physician's home care prescription may range from specific to broad orders.

An item noted during the document analysis of the agency admission form is a space labeled "pertinent information." When queried about what kinds of information may be considered pertinent, the intake nurse responded as follows:

Usually ... the referral source will give us the [pertinent] information.... Anything that doesn't fit any other category goes down there [to the pertinent information item] where it is recorded.... Pertinent information can be a recent lab report; can be the patient has been receiving physical therapy in the hospital.... It can be dogs in the home; call ahead of time so they can put them away, you know. Anything the nurse may need to know: the home situation--maybe that the family has been noted to have some clashing ... or the patient has been excessively aggressive toward the nurse, or the patient may [be] HIV positive and they don't want to know or the family doesn't know yet; somebody doesn't know. Anything that has to do with the diagnosis, ... with the nurse's safety in the home; [anything that] has to do about the referral.

The pertinent information therefore covers a wide range of information that the source of referral and the intake nurse perceive as relevant for the home health care nurse to know prior to the first home visit. A home health care nurse related the importance of the intake data:

It tells me where I'm going to; it tells me why I'm there, [and] for what purpose.

To this home health care nurse, the intake data guides her through the first home visit. However, this initially gathered information provides a meager data base. Detailed cue searching that leads to clinical decision making begins with the first home visit. As one home care nurse remarked:

... there's so little information for me to go by into the patient's home the first time. Most of the information I get is from what the patient tells [me].

Another nurse reinforced this role of the patient in the information gathering process:

The patient is your good main referral source of information. They're the ones that will let you know really.

These statements suggest the first home visit's potential for providing a broad information base about the patient. To obtain this broad information base during the first home visit, home health care nurses employ a variety of cue searching strategies: social talking, scanning, moving about, exploratory questioning, and focused questioning.

Social talking. To the home health care nurse, social talking serves as the initial strategy to set the stage for cue searching in the patient's home. It lays the groundwork for entry into the patient's home. It begins with the home health care nurse's phone call to the patient prior to the actual visit to confirm the time of the home visit. A home health care nurse aptly describes "social talking" upon entry into the patient's home:

... shaking their hands and greeting them and introducing yourself and that should be something you do with every family you go to.

Field observation notes on each observed home visit reveal that the home health care nurses start the nurse-patient encounter with such customary social amenities which serve as the springboard for the nurse to establish rapport and create a context for a caring and helping relationship. In addition, social talking may also entail speaking the patient's language. As a home health care nurse explained:

When I come into the home, a lot of patients will respect you more if you speak their language,

Spanish for example ... you have better communication with that patient, they're able to tell you exactly what's wrong with them and not having to be interpreted by somebody else.

In other words, social talking through the medium of a common language facilitates the gathering of information from the patient or family, as the patient may then open-up more readily to the nurse than if the patient fears a language barrier. In addition to social talking, home health care nurses use the indirect cue searching strategies of scanning and moving about.

Scanning. Scanning refers to the immediate focusing of attention to the features of the situation that are most obvious and identifiable as soon as the home health care nurse steps inside the patient's home (Murdach, 1987). A home health care nurse described how she simultaneously carried out scanning while social talking with a patient:

You're assessing them really visually from head to toe ... and you're looking at the surroundings. If it's been a patient you've seen for a long time, you know, some things you don't really look at twice; but like this gentleman ... I'm still grasping all his surroundings to see how he's doing at home.

In the above example, the nurse combined social talking and scanning to determine how her patient is getting along or not getting along in his own home. Together, social talking and scanning complement each other with the physical surroundings providing subtle clues for consideration such as personal clutter: does it provide any impediment to the patient's getting around? The focus of scanning largely

constitutes an awareness of safety factors. In effect, the combined strategies provide more cues towards the understanding of the patient situation, given the limited acquaintance of the nurse with the patient.

Moving about. Moving about involves the covert use of a nursing activity, such as handwashing, to obtain information about the patient's home environment and living conditions. As a nurse expressed:

I like being able to move about. You know, when I wash my hands ... that's a chance for me to look around and see other aspects of the home.

Thus, the nurse puts into use a routine nursing activity in order to obtain information about the patient's home. The routine handwashing provides a legitimate and effective vehicle for determining the general cleanliness and safety of a patient's home.

After establishing the initial rapport with the patient and caregiver, the home health care nurses proceed to obtain the patient's health history. In obtaining the health history, the nurses use the strategy of routine exploratory questioning and focused questioning.

Routine exploratory questioning. This strategy corresponds to the routine history-taking systems-review. The areas that the home health care nurses explore with their patients and caregivers using agency assessment forms guarantee that a standardized, broad-based patient information is gathered. Therefore, a core of information

for each admitted patient becomes available as a broad data base for clinical decision making. The cue searching strategy of routine exploratory questioning is supported by studies done on medical students (Gale, 1982; Gale & Marsden, 1983) and practicing physicians (Kassirer & Gorry, 1978).

During the observed first home visits, the home health care nurses routinely interviewed the patient and caregiver. A home health care nurse identified the core patient information obtained through exploration:

... we always do the CVP [cardiovascular-pulmonary] assessment. I always do the level of activity, home safety, level of pain assessment. I want to know if they're getting around okay. I want to know if they're able to take care of themselves or if there's somebody else. If I don't know the details, then I want to know the meds they're taking right then, how are they taking them. I want to know if they're eating and with certain patients they need to be weighed. But if I don't always have time to weigh them right then, I want to know if they're eating; are they drinking? are their bowels moving? And I'm hoping all the answers to those questions are yes. Oh, of course, if they have a wound or incision, that has to be checked. If they're on chemotherapy, checking for side effects ... for all our patients, we check on their meds, their diet, skin, pain, safety ... fever ... breath sounds are important. That's basically it for everybody.

In short, the routine exploratory questioning generates the baseline information about the patient. Field notes and patient record analysis of the home health care nurses' first home visit indicate that the exploratory questioning covers a wide spectrum of information: functional abilities

of daily living, over-the-counter and prescribed medications, support network, financial resources, mental and psychosocial status of the patient, and the availability and capability of the caregiver to carry out the care of the patient in the home.

In conjunction with exploratory questioning, the home health care nurses perform exploratory physical examination that includes a general survey of the patient, the measurement of vital signs, auscultation of the heart and lung sounds, and inspection and palpation of the lower extremities for pulses, skin lesions and edema. The nurses checklist and fill in the appropriate sections of the assessment forms. The physical examination augments the information gathered in exploratory questioning.

Focused questioning. Along with exploratory questioning, home care nurses also use focused questioning to expand the patient information. For example, to verify the admission data obtained by the intake nurse, the home health care nurse during each first home visit was observed to verify the patient's insurance coverage by asking to see the insurance card. Focused questioning is also used to amplify a finding uncovered during exploratory questioning. For example, in a 79-year old female patient referred to the home health care agency for follow-up care of gastrointestinal bleeding, the nurse found out that the patient lives alone but has a paid homemaker. The nurse was

observed to zero in on who is this homemaker, what times and how often she comes to the patient's home, the source of payment, and the chores the person performs for the patient. Focused questioning as a cue searching strategy is supported by the studies of Gale and Marsden (1983) and Kassirer and Gorry (1978).

Focused questioning also entails a corollary focused physical examination. For example, during the first home visit of a 61 year old male patient referred for tracheostomy follow-up care, the home health care nurse examined the patency of the tracheostomy tube and the status of the tracheostomy wound. The wound status provided another cue. Such focused examination provided a baseline measurement for subsequent follow-up home visits.

In sum, a goal of the home health care nurse's first visit to the patient's home entails the gathering of cues or information about the patient. A home health care nurse provides a succinct description of the information gathering slated for the first home visit:

You take the history, you check the patient, then you write up the care plan and call the doctor for more specific orders. So [the first home visit] usually takes a little longer.

Based on the data obtained during the first home visit, home health care nurses formulate the patient's nursing plan of care. By formulating the patient's nursing plan of care, the home health care nurse becomes a primary clinical decision maker for the delivery of health services to the

patient's home, keeping the physician informed by telephone and through consultation.

During many occasions, however, nurses visit other patients who do not belong to their regular patient case load and whom they may see for the first and only time. During such home visits, the nurses carry out the home care patient's predetermined care plan. These occasions arise due to a variety of reasons: the patient's regular home health care nurse's off-duty status, the lack of adequate nursing personnel, the regular nurse's turn for a week-end or evening tour of duty, or the immediate need to respond to a patient or caregiver's call for assistance. In these situations, not only do the home health care nurses use the previous strategies but also additional cue searching strategies. These include review of the patient's records, networking with the regular nurse and telephone screening of the patient.

Review of patient's records. Just as in the first home visit, a key strategy is the review of the patient's records, especially the most recent nursing notes. A home care nurse describes this strategy as follows:

What I do if they call me and tell me I'm taking a patient I have never seen or know nothing about, I ask them to pull the chart and I want to read the last nursing notes and get the vital signs. Any medications that were in the initial evaluation that I might be suspecting, for example if their diagnosis is congestive heart failure, I want to find out if they're on new meds or if this congestive heart failure is a first attack or second or what.... Also, does this person live

alone? does he have a wife? does he have a caretaker that comes in at 10:00 A.M. and that's the time you have to make the visit because prior to 10:00 A.M., the patient can't get up and open the door himself. So all these things are important. So they pull out the chart and give me the information.... I get a better idea about going into the home.

In short, the patient's records serve as a key source of information to a substitute nurse.

Networking. In addition to the record review, nurses engage in networking among themselves and their nursing supervisors to find out more about these temporary patients.

As a home care nurse explains:

Sometimes, if the [regular] nurse is there in the office by chance, I get to talk to her.... Usually, the supervisor ... because ... she gets the intakes ... if the eval[uation] is current, she might have the eval[uation] on her desk so she'll just read everything off to me or go pull the chart.

In other words, several individuals in the home health care agency serve as repositories of patient information by virtue of their previous contact with the patient or by virtue of their position. However, such review of the patient's records and networking may not be feasible during week-end tours of duty. A home health care nurse describes her reaction to the lack of information during week-end calls:

I don't like to go into the home not knowing anything. That's kinda scary sometimes. And that happens when you're on call on the weekends. You get a call from a patient you don't know anything about other than such a nurse came to see me two days ago and I'm having problems.... I try to get as much information as I can over the phone.

However, as in the first home visit, the home care nurse finds the patient to be the most valuable source of information, and again, the home care nurse uses focused questioning to zero in on the patient's current situation.

Telephone screening. Another strategy used by home health care nurses facing these situations is "phone screening." A home care nurse narrated an instance when she used this strategy:

I got a call once from a granddaughter who was frantic over the phone: 'My grandfather needs you.' I said, 'What's exactly wrong?' 'Well, just come over, he needs you.' And I said, 'Tell me what's wrong,' because this way if something really is wrong I tell her to hang up and call 911. And she said, 'Well, he's in the wheelchair ... and there's a bunch of ants all over his bed and I don't know what to do.' That was her call, not that the patient needed to be seen, but because she was there taking care of the grandpa for the first time, she didn't know how to cope with this.... You judge it on the phone, you just screen them.

In this instance, through phone screening using an open-ended tell-me-what's-exactly-wrong-approach, the home health care nurse established that there was not a life-or-death situation that warranted a week-end home visit to the patient. As a very experienced home health care nurse, this nurse drew upon her years of practical experience to ask the appropriate focused questions to determine if her intervention was necessary.

In summary, home health care nurses use several strategies in searching for patient cues or information during the patient referral and home visits. The strategies

during the referral of the patient to the home care agency include reviewing the referral form and soliciting information. During visits to the patients' homes, in addition to reviewing the patients' records, the home care nurses employ social talking, exploratory and focused questioning, networking among nurse-colleagues, and telephone screening. Moreover, nurses employ the indirect means of scanning and moving about to gather information about the patient's environment.

As a result of the varied cue searching strategies, home health care nurses gather a variety of cues. These cues, similar to the findings of Martin and Scheet (1989), include administrative, physiological, psychosocial, environmental, and health-behavior data. Administrative data refer to the cues searched for to fulfill legal, statutory, and organizational requirements such as patient demographics and certification of insurance coverage. Physiological data refer to such cues as signs and symptoms of illness, previous medical problems, treatment, and functional activities of daily living. Psychosocial data focus on the patient's social and caregiving support network. Environmental data refer to the physical surroundings of the patient's home. Finally, health-behavior refers to eating and sleeping habits, use of alcohol, exercise, and medication intake.

Inferring

Based on the cues searched and gathered, home health care nurses arrive at certain inferences about the patient. Inferences refer to the home health care nurse's impressions, hunches, hypotheses, judgments, medical diagnosis, nursing diagnosis, and conclusions about the patient.

As in cue searching, home health care nurses employ a variety of strategies to arrive at their inferences. Four reasoning strategies surfaced in the study: hypothetico-deductive reasoning (Elstein et al., 1978), forward reasoning (Patel & Groen, 1986), backward reasoning (Patel & Groen, 1986), and "gut feelings" or "sixth sense" (Benner, 1984; Benner & Tanner, 1987; Dreyfus & Dreyfus, 1986; Rew, 1988a; Rew, 1988b; Pyles & Stern, 1983).

Hypothetico-deductive reasoning. A home health care nurse illustrates the first strategy--hypothetico-deductive reasoning--when she detected fever in one of her long-term patients with severe arthritis requiring a weekly injection of methotrexate. Immediately, the nurse pursued this finding by asking the patient, "Do you have any cough or urinary symptoms?" This question reflects two medical conditions that the nurse hypothesized and deduced early in the nurse-patient encounter as possible causes of the patient's low-grade fever: upper respiratory tract infection or urinary tract infection. By asking the question without

delay, the nurse focused her inquiry to ruling in or ruling out these two conditions. A basis for one of the hypotheses, as explained by the nurse, was that the patient has had previous intermittent urinary tract infections associated with the prolonged use of anti-rheumatoid drugs. As it turned out, the patient admitted having urinary frequency and stronger urine odor for the past two days, findings that greatly increase the probability of urinary tract infection.

Forward reasoning. The second reasoning strategy is called forward reasoning (Patel & Groen, 1986) or theory-driven reasoning (Aschcraft, 1989). A home health care nurses illustrated this reasoning strategy when she explained her inference as to the cause of urine leakage in a bed-bound patient:

... I thought this gentleman has a prolonged use of an indwelling catheter. In many of these patients with prolonged use of in-dwelling catheters, somehow, there are some changes in the bladder that brings about urine leakage. If you notice, I not only used 10 cc of sterile water to fill the new catheter balloon but I added another 10 cc more.... I have found out that if I don't do this the leakage will continue, but with this additional water, the leakage stops. This extra sterile water stops the leakage, somehow.

In arriving at her inference, this home health care nurse employs a reasoning strategy that involves the linking of three components: (a) the statement of the problem, (b) the declarative (theoretical) knowledge about the problem and (c) the procedural knowledge associated with the problem.

In the above example, the prolonged use of an indwelling catheter represents the problem; the changes in the bladder after the prolonged use of an indwelling catheter indicates theoretical knowledge derived from experience, and the additional use of 10 cc of water to fill the catheter balloon describes the experience-based procedural knowledge.

Backward reasoning. The third reasoning strategy is called backward reasoning (Patel & Groen, 1986) or data-driven reasoning (Aschcraft, 1989). This type of reasoning highlights the information obtained as the basis for the inference. A nurse exhibits this type of reasoning when she inferred a patient's problem as edema on both lower legs. The nurse based her inference on the findings she observed during the physical examination of the patient. No abstract theory or principle underlies the reasoning process; instead, acquired information drives the nurse's reasoning. The presence of the edema on both lower legs serves as the basis of the reasoning and leads to a statement of the patient's problem.

"Gut feelings" or "sixth sense." In contrast to the theory or data driven inferences, feelings or sensations may trigger the inferences of nurses. These are expressed as "gut feelings" or "sixth sense." As such, the inferences of nurses occur instantaneously and rapidly and contain a strong sense of accuracy. A nurse described how her gut feelings ruled out drug abuse in an angry and hostile

teenager diagnosed with Burkitt's lymphoma who had a regime of hyperalimentation at home:

... it's just a feeling--a gut feeling [that the patient is not on drugs]. I just think [the patient] is too angry and too hostile. I think those are genuine feelings and if she was on drugs, I feel she wouldn't be as angry. The drugs would cover up a lot of her anger. She wouldn't be as good in her technique with that Hickman. I mean that's one thing; she'd be very sloppy with it.

In this vignette, the nurse's gut feelings focused on two striking and contrasting behaviors that served as the basis for inference: the teenager's anger and hostility and then the meticulousness in cleaning the Hickman catheter. From the nurse's experience, these behaviors stand in marked contrast with the behaviors of patients with drug abuse.

In this instance, the nurse perceived certain dissimilarities from a pattern of behaviors as the basis for her inference. The ostensibly intuitive bias is verified by experience. The nurse's focusing on the patient's pronounced behaviors corresponds to the sense of salience explicated in the studies of Dreyfus and Dreyfus (1986) and Benner and Tanner (1987).

Another example, of a suspicion that something is not quite right, was verified when a nurse suspected alcoholism as the patient's problem at the end of the first home visit. As is routine in an initial home visit, the nurse went over and checklisted the agency nursing assessment forms. Except for cigarette smoking, no other cue associated with alcohol

abuse surfaced from the history. While listening to the patient's heart and lung sounds, however, the nurse smelled his breath and thought that it wasn't just Scope [a brand of mouthwash] that she smelled. The nurse explained how she arrived at her diagnosis in this manner:

He went to wash his mouth out before we got there. Even with that you could tell that he'd been drinking ... that's how he acts also. He's pleasant and all. He doesn't want people snooping around.... The weight loss, the COPD--he's got COPD--and usually that goes along with smoking and alcohol.... He just looks like he's undernourished, that it's a chronic thing ... I just think that he's had a history of drinking.... It's pretty obvious that's been his pattern. I don't know about his friend that he stays with; sometimes it's also a pattern where the friend also drinks. It's a pattern, too, where they have a lot of friends, but suddenly there is no family in the picture.... But my feeling is that he has had health problems in the past, with smoking and drinking; although he didn't mention the drinking, he mentioned the smoking. But, I feel he's got both.

In this vignette, the nurse, from the moment she entered and scanned the patient in his environment, perceived a pattern of features that characterize alcoholics, in spite of the absence of a history of alcohol intake. When asked how she inferred that the patient is an alcoholic, the nurse offered this explanation:

... well, I worked in neuro for a long time. So we would see a lot of patients that had neurological problems because of their drinking; not only from drinking but maybe they fell and hit their heads or other problems; or other falls or things that they've hurt themselves and developed neurological problems ...

In arriving at her inference, the home health care nurse credits her previous clinical experience with alcoholic patients. Through her experience, she recognized the behavior patterns exhibited by alcoholics in spite of the absence of a history of alcohol intake. This inferential process has been termed pattern recognition by Dreyfus and Dreyfus (1986) and has been confirmed by the studies of Benner and her associates (Benner, 1984; Benner & Tanner, 1987).

Nevertheless, the home health care nurse proceeded to support her suspicion of the possible diagnosis of alcoholism by enumerating the specific behaviors to explain her inference. The second home visit validated the nurse's diagnosis of alcoholism as the patient was found inebriated. In other words, this sort of suspicion triggered by gut feelings requires data for their validation.

In summary, home health care nurses use reasoning strategies to arrive at their inferences. Four reasoning strategies emerge from the data: (a) early hypotheses generation and deductive reasoning; (b) forward reasoning or theory-driven reasoning as when the home health care nurse links her statement of the patient's problem with her theoretical and procedural knowledge, (b) backward or data-driven reasoning as when the nurse highlights specific information obtained during cue searching as the basis for the inference, and (c) gut feelings or sixth sense directing

the home health care nurse's inference and being validated by specific data. Subjectively directed reasoning requires data to legitimize the subjectively-derived inferences. Hence, there is a complementary or dependent relationship between subjectively-derived and objectively-derived inferences.

In this study, home health care nurses arrived at a variety of inferences using these different reasoning strategies. A major inference of home health care nurses focuses on their patients' eligibility for home health care services. A home health care nurse underscored the importance of this decision after her first visit to a patient undergoing dialysis three times a week but who was previously referred to and refused admission by another home health care agency:

... it's a little bit complicated because there was another nursing service that's been there. It looks like they have refused to see her ... under Medicare guidelines, you're not supposed to see a patient on dialysis unless the problem is not related to the dialysis because the monies for dialysis patients are given to the physician who contracts out the care.... This patient ... her problem being a GI bleed, that's at least her diagnosis to us, ... is not dialysis related. Therefore, we can go in [to provide home health care services]. And I think I can document well enough that she's homebound because she's so weak that she can hardly sit on the couch. So I do not see my homebound documentation as a problem at all in her case. Yes, she has to get out to dialysis, but she uses a wheelchair and I'm sure she just kinda hangs in there, you know. She's not really very mobile at all.

As explained in this vignette, the continued delivery of health care services to the patient's home hinges on the nurse's inference about the eligibility of the patient for home health care services. Thus, home health care nurses document the homebound status of their patients after each home visit until the time of discharge from the home health care agency. The home health care nurse has the opportunity and means for extending health care services to a patient, provided she infers the legitimate need.

Another inference centers on delineating the patients' specific nursing diagnostic problems. After their first home visits, the home health care nurses checklist the specific health problems of their patients using the agency's nursing care plans. Along with the specific nursing interventions and goals, the agency's nursing care plan form lists a range of nursing diagnostic problems:

self-care deficit, altered cardiac status, altered nutritional/fluid balance, altered bowel elimination, knowledge deficit regarding disease process, and altered/decreased activity.

This listing of the patient's possible health related problems encompasses both the patient's functional and physiological status. A home health care nurse explains the use of the checklist:

Home health has so much paperwork that in order to help eliminate some of that paperwork in longhand writing and thinking [a checklist is used]. This way, you can still individualize it because we have blank spaces but it makes it easier to check it off and then this is typed and that becomes our physician's orders.

Recognizing the need to individualize patient care, the agency forms provide spaces for certain nursing problems unique to the individual patient not included in the agency forms.

The perceptions of the patient's emotional state and financial state constitute another inference. A nurse describes after the first home visit her impressions of the patient's emotional state and financial state when she referred a patient admitted for back rehabilitation to a social worker:

She [the patient] told me ... in passing that her husband had died last month ... and she might be going through grieving right now where she would need some support groups when she gets on her feet again. Also, the financial situation--I don't know what her financial situation is right now. Possibly, she might be eligible for other services that at this point in time, we don't know about. So, I would put in a social worker for community resources, for coping support and financial assessment.

In this instance, the nurse acted on her hunches that the patient might be grieving and in anticipation of this and possible financial problems, referred the patient to a social worker.

Furthermore, inferences may delineate the possible contributory cause of a patient's nursing diagnostic problem. For example, a home health nurse articulated the possible cause of a patient's noncompliance to medications:

The husband has a very negative attitude towards medicine, especially doctors. I'm not sure how, what his feeling is on nurses, but he feels that they're being taken and it could be partially true

from what he says. So that's one thing we're battling against so far as medications and compliance.

In this instance, the husband's negative attitude towards physicians contributes to the patient's noncompliance with the prescribed medications.

Additionally, inferences may emerge from the nurse's focus on the characteristics of the patient's home environment. A home health care nurse described in writing a patient's home environment after the first home visit: "Lives alone in small cluttered home.... Requires assistance ..." Based on this perception, the nurse inferred that help is necessary and thus recommended and obtained the services of a home health aide for the patient's personal care while recuperating from a back injury.

Although the physician provides the working medical diagnosis of patients referred to home health agencies, home health care nurses may observe additional medical conditions unidentified by the attending physician, and those observations may lead to additional medical diagnosis. A nurse recalls a diabetic, elderly, female patient with renal failure who was readmitted to the hospital for a clotted arterio-venous (AV) fistula and was referred to the home health agency for follow-up:

[The patient] had a clotted AV fistula ... so we're mainly to see her to assess ... the renal status which is not a coverable type of thing [by Medicare]. So in other words, on my first visit

for what we're supposed to be seeing her for ... we probably wouldn't have gone back except for doing the physical assessment. She had stage 3 necrotic ulcers on her heels ... [she] just got out of the hospital and nobody had noticed the ulcers ... she had surgery and the complete physical [examination] in the hospital and had been there a couple of days.... And we wouldn't have gone back if we hadn't found those ulcers.

In this instance, the nurse's diagnosis of the presence of stage 3 necrotic ulcers on the patient's heels led to a regimen of wound care in the patient's home.

A common inference during home visits, especially PRN visits, relates to determining the cause of malfunctioning technological devices used in the home care of patients. For example, continuous intravenous feeding or drug administration is now very common in the home, as is the prolonged use of indwelling catheters among bed-bound, chronically ill patients. Thus, home health care nurses receive calls from caregivers requesting them to determine and manage the cause of malfunctioning technological devices.

To sum up, through the use of four reasoning strategies, home health care nurses arrive at several types of inferences. Although the majority of the inferences are formulated at the end of the first home visit, inferences occur throughout the follow-up and PRN home visits.

The inferences of home health care nurses are multifaceted. These inferential decisions include hunches, conclusions, and clinical judgments relating to (a) the

patient's eligibility for home health care services; (b) the patient's functional and physiological status; (c) the emotional and financial impact of the illness and treatment on the patient, caregiver, and family; (d) the factors contributing to the health status and the impact of illness and treatment; (e) the nature of the patient's home environment; (f) the patient's additional medical conditions; and (g) the cause of malfunctioning technological devices. Thus, the home health care nurses' inferences reflect a multiaxial or multidimensional view of the patient's illness and treatment experience, indicating the broad approach that home health care nurses take in managing their patient's care.

CHAPTER 5

MANAGING PATIENT CARE: PROBLEM MANAGEMENT PROCESSES AND STRATEGIES OF HOME HEALTH CARE NURSES

In home health care nursing, problem management occurs predominantly after the first (evaluation) visit to the patient's home. During the first visit to the patient's home, a home health care nurse gathers data that serve as the data base for managing the inferred patient problems. In managing patients' home health care, the nurses carry out three interrelated processes and decisions: planning, intervening, and evaluating. This chapter presents the data-grounded processes and strategies that home health care nurses employ in managing their patients' problems (see Table 3).

Planning

In home health care nursing, the written nursing plan of care embodies the planning of the patient's health care in the home. This nursing plan of care details the way a nurse conceptualizes how the health care of the patient while at home will be carried out. A home health care coordinator describes the nature of the process of planning the care of the home health care patient:

Table 3

Managing Patient Care*: Problem Management Processes/
Decisions and Strategies

Phase	Processes/ Decisions	Strategies
Problem Management	Planning	<ul style="list-style-type: none"> • Linking the patient's problems with specific interventions and goals • Creating a "calendar of care" • Making arrangements for home care services
	Intervening	<ul style="list-style-type: none"> • Creating a caring and helping relationship • Health teaching • Performing procedures • Providing options • Orchestrating home care services • Advocating for patients • Empowering patients • Directing patients
	Evaluating	<ul style="list-style-type: none"> • Monitoring

*Basic social process.

... care planning is so vital and I think that was when I really found that nursing care plans were what I was taught ... in school. In the hospital, it was almost done simply to meet JCAH[O]. You did a care plan because you had to do a care plan. In home care, the care plan becomes what the nurse is doing out there. We actually write a plan of care and follow that detail by detail. And that we write the care plan and the doctor signs it and it becomes the medical treatment plan as well as our nursing care plan ... a part of care planning [is] knowing what goals are going to be appropriate for a client. To standardize a goal just doesn't work at home because every person is different and you have to look at what is logically going to be achieved with a person.... And so the goals have to be individualized according to what is logical and realistic with each individual.

In other words, the plan of care written by the home health care nurse documents a deliberate scheme to map out the overall health care plan for the patient. As a product of deliberate thought, the plan of care incorporates an individualistic approach to the patient.

In home health care nursing, the plan of care focuses on the patient's problems. A home health care coordinator underscored this focus when she said:

We're looking at the [patient's] problems and why we're there [in the patient's home]. We don't focus in on the positive ... we focus in on the negative: what are the problems? what needs to be done to resolve the problems? That is the only way either Medicare or even a third party payor is going to reimburse for our services.

In short, the plan of care is problem-centered and tailored to assure reimbursement of the services delivered to patients' homes. The coordinator or supervisor's principal function apart from assigning cases is to ensure that the nurses' plans of care are reimbursable.

An overall plan of care as employed by home health care nurses includes three separate strategies derived from the assessment of the patient. These are (a) linking the inferred patient's problem with the specific interventions and goals, (b) creating a calendar of care, and (c) making arrangements for supplemental home services.

Linking the problem with interventions and goals. In the planning of the patient's health care in the home, home health care nurses employ the strategy of linking the inferred patient's problems with specific interventions and goals. To facilitate care planning, the design of agency nursing care plan forms enables nurses to checklist the patient's nursing diagnostic problems, the interventions, and the intervention goals. In addition, the form also provides space for detailing the individualized approach to a patient's problems. The example below shows part of a care plan for a home care patient with an infected aortic graft requiring wound care:

Problem:

Skin integrity impairment

Interventions:

Skilled assessment of:
wound

Perform/implement:

weekly measurement of wound
wound care BID
pack with NS 2X2 (use Q tip to insert)
cover with 3 X 3 and secure with tape

Instruct/supervise:

patient/caregiver in wound care
signs and symptoms of infection

Goal:

Wound will heal without complication

In the above entry, the nurse checklisted the specific problem, the skilled assessment of the wound, the instructions on wound care and signs and symptoms of infection, and the goal of wound healing. The frequency of wound measurement and wound care, and the method of packing and covering the wound indicate measures particular to the individual patient. This entry established a predetermined and coherent set of interventions aimed at healing the patient's wound.

Creating a "calendar of care." To operationalize their formulated care plans, the home health care nurses create a "calendar of care" based on the needs of the patient and the number of reimbursable home visits and health services. The calendar of care spans the entire projected time the patient's care is under the auspices of the home health care agency. The example below shows a partial calendar designed by a nurse for a patient with cardiac arrhythmias who has been newly diagnosed with adult-onset diabetes. A goal of the plan of care was to teach the patient specific aspects of diabetic and cardiac regime:

March 29: Instruct on schedule of medications
Assess cardiopulmonary status

April 2: Assess cardiopulmonary status
Instruct on:
hypo/hyperglycemia, purpose of
Lanoxin, pulse monitoring

April 5: Assess cardiopulmonary status
Instruct on: 1500 ADA diet, nitro-patch
purpose and side effects

These entries show the specific topics for health teaching during each scheduled home visit. Thus, the calendar of care depicts the predetermined schedule of home visits along with the content of each visit. A home health care nurse described the function of the calendar of care as follows:

We now have those calendars of care ... we're doing what's on the calendar of care for that patient. That's a guideline as to what we're supposed to cover on that particular visit.

In other words, the calendar of care specifies the activities projected for each scheduled nursing visit to the patient's home. In effect, the calendar of care serves as nursing care guidelines for the home health care nurses and as a basis for continuity of care. However, the calendar of care and its content can be changed. As one home health care nurse observed:

Those visits can easily change after the second visit. Any [scheduled] visits after the initial evaluation and the frequencies can be changed.... If you went into the house and took the first ten minutes and reviewed what was done on the last nursing visit, and you kinda suspect that the patient didn't understand and maybe you want to go through that whole teaching again. And maybe not teach, for example, side effects of lanoxin till the next visit because they didn't know signs and symptoms of hypertension very well yet. So you want to continue more on that. So it just depends; every patient is very different. There might be something new that occurred that day.... So every visit is different. These schedules, these projected visits and this plan of care that you've already worked up on the evaluation [visit] will not always continue the same.

In other words, the calendar of care changes according to the circumstances in which the home health care nurse finds the patient during the next visit.

Making arrangements for supplemental home services.

Planning the home health care of the patient may also entail making arrangements for the services of the home health care interdisciplinary team. This strategy is similar to the findings of Corbin and Strauss (1990) on the care of couples at home, with one or both partners with chronic illness.

Since many of the home health care patients are definitely bed-bound, they require services other than nursing.

Depending on the specific nursing and medical problems of the patient, the home health care nurse mobilizes the services of the home health aide, the social worker, the physical therapist, occupational therapist, or the speech therapist, to name a few. For example, a nurse arranged for the services of a home health aide, a social worker, and a physical therapist in planning the care of a patient referred for back rehabilitation. After conferring with the patient and caregiver, the home health care nurse recapitulates her planning decisions to them:

I'll make arrangements for [the home health aide]
... to help with the bath.... Also, I will try to
ask PT to come and visit her [the patient].
Perhaps, they could start her into an exercise
program to strengthen her back and also to check
on what special things she needs for her bed to
make it easier for her to move about. And then,
I'd like the social worker to come here and talk
to [both of] you.

In this instance, making the arrangements for the services of the home health aide, the physical therapist, and the social worker comprised part of the home health care plan of

the patient. The mobilization of the services of these members of the home health care team also assures the delivery of services that the patient needs. In effect, the plan of care uses the resources of the home health agency to enable the patient to receive the needed expertise, with the home health care nurse orchestrating the delivery of such services.

Though the planning of the patient's care takes place after the first home visit, the data obtained during this time may bring about equivocation in the nurse. For example, a home health care nurse expressed strong reservations about the plan of care she had formulated for a patient after the first home visit. This patient was a 79 year-old, elderly, female patient who lived alone, but claimed she has a paid caregiver who was not present during the home visit. The home health care nurse expressed her reservations as follows:

... I don't know; it's hard to tell. She's a lady who lives alone and it just sounds like she doesn't really have any outside support. She says she doesn't have any family. I think the only person she has is this caregiver.... I just would like to see her ... my goal would be to meet with this other person and the other person might be able to fill me on more details that I wasn't able to find out today.

In this instance, the absence of the caregiver during the first home visit triggered the nurse's reservations about the plan of care she had formulated for the patient. Given the nurse's feelings of uncertainty about the caregiver, the

nurse therefore included in the care plan a goal to meet with the caregiver. Thus, she planned for further cue searching; she planned a second home visit to coincide with the caregiver's schedule in the patient's home. As it turned out, the patient withheld the information that the caregiver had not been around for several days, requiring the placement of the patient in a nursing home.

In this study, the planning of the home care of patients was comprised of formulating a written blueprint of action to resolve the patients' nursing and medical problems. This blueprint of action links a predetermined and coherent set of nursing activities and goals to resolve the patients' problems. In addition, the blueprint details the specific ways the plan of care can be executed by the nurses' calendaring the care and making arrangements for the patients to use the health services available through the home health care agency.

Intervening

In contrast to hospital nursing, in home health nursing, nurses visit patients in their homes to carry out the plan of care. As visitors, home health care nurses are guests in the patients' homes. Yet, as home health care agency employees, they have the responsibility to implement the plan of care through interventions executed in the patients' homes. Nurses employ several intervention strategies in the patients' homes: (a) creating a caring and

helping relationship, (b) health teaching, (c) performing procedures, (d) providing options, (e) orchestrating home health care services, (e) advocating for patients, (f) empowering patients, and (g) directing patients.

Creating a caring and helping relationship. To be able to intervene in the patient's home, home health care nurses lay the groundwork to foster the patient's cooperation and participation during their first contact with the patient. As one home health nurse said: "You have to have a friend-type relationship with them where they would like to talk to you." In essence, establishing this "friend-type relationship" translates to a strategy of creating a caring and helping relationship that will foster patient cooperation.

Field and interview notes during the nurses' home visits reveal several communicating methods to encourage a caring and helping relationship. One nurse described her approach to an elderly person of Mexican descent:

When I speak to an older person who is of Mexican descent, all my words [indicate] respect [for] an older person. That I know because when I was growing up that's the way I was taught with my grandparents and parents. There's a different way in Spanish of saying your words [when addressing an elderly person].

In this instance, the use of the Spanish language with its distinct deferential elements for the elderly serves to indicate a tangible manifestation of the nurse's caring and helping behavior. By using Spanish, the nurse showed her

sensitivity to the patient's cultural nuances and awareness of the patient's context of care. This intervention strategy, use of a common language, simultaneously facilitates cue searching.

Another method used by a home health care nurse to create a caring and helping relationship involves alerting the patient and caregiver about changes in the schedule of home visits. With the patient's health status gradually showing stabilization, a nurse alerted the patient and caregiver about changes in the home visits: "Now, I'm coming this week and next week. After that, depending on what happens, we may come every other week." By alerting the patient and caregiver, the nurse prepared them for the gradual decrease in the frequency of home visits eventually terminating in the discharge of the patient from the home health agency's care. The gradual decrease in the frequency of home visits allowed the patient and caregiver to adjust to and learn about their increasing home care responsibility with the nurse still available as a back-up.

Similarly, another nurse created a caring and helping relationship by affirming a patient's progressive improvement: "You are doing fantastic. Look at you, you're walking ... you couldn't have done half of that last week!" The affirmation is based on specific and concrete data that the patient and caregiver can relate to.

These instances show that home health care nurses create and maintain a helping and caring relationship using a variety of communication skills to facilitate management of patient problems. Moreover, as shown in the field notes and interview transcripts, the nurses created and maintained a caring and helping relationship with the patient and caregiver when they (a) engaged them in social talking or chit-chatting; (b) allowed them to verbalize their concerns, feelings, and reactions; (c) shared health information with them; (d) empathized with them; (e) advised, explained, and reassured the patient and caregiver, and (f) teased and bantered with them.

Health teaching. Central to home health care nursing is the strategy of health teaching. As a home health care nurse-coordinator succinctly said: "Ninety-nine percent of the work we do in the home is teaching." Hence, teaching serves as the bedrock of home health care nursing.

In carrying out the teaching strategy, home health care nurses employ several methods. A primary method they use involves verbal explanation. For example, when a patient's daughter asked the home health care nurse about the warning signs of hypokalemia as a result of a diuretic, the nurse answered:

... the general weakness she [the patient] had felt, vomiting, abdominal cramping, the headache, and changes in stool. These are the most common signs for a sudden drop. If she's taking a well-balanced diet--even though it's bland--and if she's taking her potassium supplement, she shouldn't have any severe problems.

From what she's telling me, the reason she went to the hospital is the water pill--you're losing an excess amount of water rapidly at one time and at that time, you also lose potassium from the body.

In this case, the nurse answered the question by verbally explaining the warning signs of hypokalemia. In this study, home health care nurses responded to the questions of patients and caregivers about medications primarily by verbally explaining their purposes, dosage, frequency, side effects, the signs and symptoms of complications, and the measures to avoid or prevent side effects and complications.

Another teaching method makes use of illustrations and diagrams. To enable a chronic lung patient to understand why he is having difficulty breathing, the home health care nurse explained gas exchange with an anatomical diagram of the broncho-pulmonary tree. With this diagram, she supplemented her explanation of the significance of the crackles auscultated over the patient's lungs and the need to remove the mucus by drinking adequate amount of fluids.

In addition, home health care nurses employ handouts appropriate to the teaching needs of the patient. A nurse provided a Mexican patient referred for high blood pressure with a handout of dietary instructions in Spanish to help him understand his dietary modifications.

In the patient's home, home health care nurses teach by demonstrating and doing procedures with the patient. Again, with the COPD patient, the nurse not only

demonstrated but also performed with the patient purse-lip breathing and walking aimed at energy conservation. Before the end of the home visit, the patient successfully executed both purse-lip breathing and energy-conserving walking.

Home health care nurses also teach by reinforcing patients and caregivers on health habits and practices. For example, in the patient with the prolonged use of an indwelling catheter, the nurse reinforced the caregiver's practice of giving the patient six to eight glasses of water per day when she affirmed the clarity of the patient's urine resulting from the proper intake of fluid.

Likewise, teaching occurs by coaching patients when they run into snags when performing technical procedures. For example, a 76 year-old, female patient with metastatic cancer was referred primarily for the home health care nurse to assess the patient's and caregiver's ability to do Hickman catheter flushes and site care. The patient and the daughter were taught the procedure before the patient's hospital discharge. When the nurse called on the morning of the first home visit, she found out that the patient had performed the procedure the previous evening, but it had proved to be nerve-racking for the patient. During the first home visit, the patient followed appropriately the protocol step-by-step which included the washing of the hands before the procedure, the wiping of the Hickman catheter cap with betadine, and the alcohol swabbing of the

heparin vial prior to attaching a needle and syringe to the vial. However, after filling the syringe with 5 cc air as the initial step to withdrawing the heparin solution for flushing the catheter, the patient expressed confusion as to how to proceed. The interaction below illustrates how the nurse coached the patient along the procedure:

Patient: This is where I was befuddled last night. (She fills the syringe with 5 cc air, lifts the heparin vial from the bathroom counter with one hand, and with the other hand inserts the syringe and needle into the heparin vial).

Nurse: If you want to, you can leave the bottle on the counter and stick it with the needle to let the air in. You're doing okay.

Patient: (She follows the nurse's suggestion). This is the nervous part.

Nurse: That's okay. You're in. You will be pushing the plunger to put the air in.

In this interaction, the nurse coached the patient by giving her simple directions and allowing the patient to execute the procedure. At the same time, the nurse reaffirmed the patient's ability prior to this part of the procedure by saying, "You're doing okay" and also accepting the patient's nervousness. The patient finished the cleaning and flushing procedure remarkably well.

Performing procedures. Home health care nurses perform specific technical procedures as another form of intervention. In this study, the most common procedures nurses performed included wound care and administering injections. These procedures occur not only during the

week-day but also on evening or week-end home visits. As one home health care nurse remarked:

... usually the week-end patients are people that need to be seen everyday, you know ... they can't wait until Monday. So a lot of times they're just dressing changes or injections or IV medications. They're a little bit different, just in the type of patients that you see--that they require daily care.

.... Sometimes, they're more acute type thing where it's a post-operative infection and they need the daily dressing changes or several times a day. Or AIDS patients that are getting medications on a daily basis.

Thus, when patients who are still in the acute phase of their illness are sent home, the home health care nurses perform the procedures that would ordinarily be done were the patients still in the hospital.

Providing options. Given the multidimensional aspects of a home care patient's problems, home health care nurses use the strategy of providing options to the patient and caregiver. A home health nurse described how she presented options to a patient with an end-stage chronic lung disease:

On my first visit to him, I gave him the idea that he may want to move into this area, [nearer to his daughter]. I gave him three options: a board and care or condo by himself or get into a three-and-one situation. They do have these situations like Christians ... where you rent these condos and you're independent and you get around by yourself. And when you get to the point where you can't maintain yourself in that situation, you go into a board and care situation where you have a studio-type apartment and you get your meals in the main dining room. If you can't maintain yourself there, you can go into a nursing home. You know, I let him know what his options were.

In short, when presenting options to the patient and family caregiver, the home health care nurse provides them information regarding alternative courses of action. In general, these options involve not only the use of available agency resources but also of community resources.

Orchestrating home care services. Once the patient and caregiver or family choose the option they want, home health care nurses find themselves orchestrating the implementation of the option. For example, homebound and chronically ill patients commonly choose the option of using the multidisciplinary services available in a home health care agency. These may include the services of the home health aide, social worker, occupational therapist, physical therapist, speech therapist, or enterostomal therapist, to name a few. To orchestrate the delivery of these services, the home health care nurse initially confers with the physician and obtains his orders for these services. Thereafter, the nurse arranges for the needed services and monitors their delivery and outcomes. The study of Cloonan (1989/1990) supports the orchestration of home health care services as a strategy undertaken by home health care nurses in coordinating the patient's care in the home.

Advocating for patients. Another strategy involves the home health care nurses advocating for the patient. Nurses use this strategy most particularly in dealing with the economic issues of home care nursing. Munding's (1983)

findings on how nurses implement Medicare home care policy support the advocacy activities undertaken by the home care nurses in this study.

Because of the prevailing cost containment policies of third-party payors, the number of refundable visits and services have been greatly limited for home care patients. Nevertheless, home health care nurses are not deterred from "working the system" to make it responsive to the needs of patients. As one home health care nurse stated:

You know, many of these patients have given their dues. Thus, I try to see to it that they can get as much back from Medicare and MediCal. I feel that it is my role to see to it that they can use part of what they have invested in.

In this instance, the home health care nurse advocates for the patients by seeing to it that they avail themselves of the benefits offered by Medicare and MediCal. Such advocacy is clearly illustrated when a home health care nurse "stretched" the number of reimbursable home visits to a patient with chronic obstructive pulmonary disease (COPD). This COPD patient, who lived alone in his home in the desert and whose condition worsened, had to move and live with his daughter in the city. The nurse made arrangements for the patient to receive rehabilitation treatment in a nationally recognized rehabilitation center. The patient, however, while in his state of respiratory decompensation showed no motivation to pursue rehabilitation. To bid for time and to provide continuing care and monitoring for the patient as

well as to enlist the assistance of the family to motivate the patient, the nurse "stretched" Medicare's allowable number of visits to the maximum. As it turned out, this "stretching" paid off; the patient eventually was persuaded to obtain rehabilitation and later was able to live independently in his own home.

Empowering patients. Home health care nurses also use another strategy--that of empowering the patient (Kjervik, 1990). A nurse used this strategy with a hypertensive, elderly woman who was hospitalized for hypokalemia secondary to diuretic intake. Although the patient became aware of the signs and symptoms of hypokalemia, she did not report them to the physician because she never thought she could ask the physician questions. The nurse narrated the events leading to her empowering the patient:

In talking to her and the "chit-chatting" we had ... [I found out that] she was having a lot of angry feelings against the physician as to why he didn't care for her properly. 'Why didn't he do this for me, he's a doctor, he should know.' And I told her, '... yes ... he should know; but why didn't you report it? Why didn't you go back to the doctor and tell him the signs and symptoms that you were having? Why didn't you tell him that you were having this or that or that?.... No, you're at fault also like him. You should have sought assistance for the problems you're having'.... You have to be your own advocate; there's nobody else who'll do it for you.

The nurse empowered this patient by getting her to ventilate her anger yet simultaneously getting her to acknowledge her responsibility for her own health. Moreover, the nurse emphasized the legitimacy of the patient's asking the

physician questions and speaking on her own behalf. The nurse further provided the patient the information about the diuretic's action, side effects, signs and symptoms of complications, and preventive actions and measures. The sequence of interventions led to an empowerment of this elderly patient. At the time the patient was discharged from the home health agency, the nurse had this to say:

With her, you showed her what was wrong, how to get better and how to resolve the problem and how to work with it. In the future, there will be no problems like that [for her] anymore.

In short, empowering this patient involved getting her to accept her role in caring for herself, providing her with the necessary information about her problem and the means to resolve it.

Directing patients. Home health care nurses also exercise a directive strategy when intervening in certain situations. For example, a nurse used this strategy in managing a 76-year old male patient who lived alone, with severe and progressive degenerative arthritis of the spine. At the time of the first home visit, the patient was dehydrated, malnourished, and weak. The nurse describes the general attitude of this patient:

He was like, 'No, I don't want to eat; no, I don't want a bath; no, I don't want to turn; no, I don't want to get out of bed; no, I don't want to do anything.'

In this instance, the patient would not initiate anything for his own self-care. Because he refused placement in a

convalescent home, the nurse arranged for the services of a home health aide to help the patient in his activities of daily living. Yet, he refused to cooperate with the home health aide. Thus, the nurse adopted a more directive approach in intervening with this patient. As the nurse recalls:

As I say, everybody is different; it depends on the client.... I was more direct and blunt with him. But he had the type of personality where he stagnated; he put things off--a procrastinator With him, you had to tell him what to do. 'And this is how we're gonna do it. Because this is how it's gonna be done if you want to stay home; and if you want to stay home, this is what you're gonna do.' With him you had to set goals and limits for him; and you have to take him by the hand and do them.

By being directive, the nurse countered the patient's passivity. The strategy worked out successfully with the patient. After a month, the nurse discharged the patient hydrated, better nourished, and stronger, with an engaging sense of humor. Two weeks before the patient's discharge, to maintain the patient's recovery, the nurse arranged for the services of a homemaker paid for by the patient's son.

In summary, nurses use a variety of intervention strategies. These strategies include (a) maintaining a caring and helping relationship, (b) patient teaching, (c) performing nursing procedures, (d) advocating for the patient, (e) providing options, (f) orchestrating arrangements for home health care services, (f) empowering

the patient, and (g) taking a directive stance suited to a patient's reluctance to cooperate with the plan of care.

Evaluating

Evaluating the care of the home health care patient is an integral component of each home visit. It begins during the first visit with its cue-searching strategies to establish the baseline data of the patient's problems and continues with the follow-up and PRN home visits. It culminates in the discharge of the patient from the home care agency. The on-going evaluation results from several levels of monitoring.

In this study, monitoring emerged at several patient-oriented levels. For example, a home health care nurse illustrates the first level of monitoring when she expressed the purpose of the second home visit to a 70 year-old male patient with cardiac myopathy:

... I'm going to check to see his meds, because I wrote up a med schedule for her [the wife-caregiver] that was easier for her to review instead of her reading on a daily basis the container labels. So I wrote all the meds out for her and gave her a time schedule for each of them and how many tablets at each time. And I want to see if she's been following that and if she has any problems with it and revise it in anyway.

Thus, the nurse monitored how well the medication schedule she mapped out suited the caregiver in order to facilitate the timely administration of the required medications. This instance illustrates monitoring the effectiveness of a

method employed as a means to reach an objective or goal of the plan of care.

The next level of monitoring concentrates on a broader aspect of the patient's care--the achievement of the objectives formulated after the first home visit. This level of monitoring focuses on the changes in the patient's problem found on admission. For example, wound healing was an objective for a 58 year-old male patient admitted with an open wound at the right temporo-parietal-occipital area. To monitor the achievement of the objective, the home health care nurse measured the wound weekly and observed and compared specific characteristics of the wound status during each follow-up home visit. While cleaning the wound during a follow-up visit, the nurse remarked: "The wound looks the same to me. It's clean and granulating, which is good." In other words, the cues gathered during home visits are compared not only serially but also with the initial cues that served as the basis for the patient's problems. The comparison of these cues establishes, therefore, any changes in the status of the patient's problems--that is, whether they are being resolved or not. In this illustration, the nurse noted the same characteristics of the wound as a basis for comparison--its cleanliness and granulation. The end point of this comparison is an inference, a judgment, as to the significance of the observed wound characteristics. By implication, the observed characteristics point to the

healing of the wound, indicating a gradual achievement of the objective set out for the care of the patient.

Monitoring may also uncover developing patient problems. For example, on a follow-up visit, a nurse discovered the presence of yeast infection on a cancer patient. While inspecting the patient's buccal mucosa, the nurse found the ubiquitous reddened mucosa with the white lesions pathognomonic of Candidiasis. Such finding led the nurse to inform the physician and obtain a prescription for Mycostatin. In this instance, the iterative cycle of clinical decision making and its phases are repeated, illustrating the interaction and interdependence of the clinical decision making processes.

The next level involves the monitoring of the broader goal or outcome of the patient's plan of care. A home health care nurse narrates how the overall goal for a patient to maintain his independence at his own home has been reached in an elderly, male patient with decompensated chronic obstructive pulmonary disease:

Prior to his [the patient's] hospitalization, he lived independently in the desert. He strongly wishes to return to the desert.... I have been able to refer him to Casa Colina for rehabilitation.... With Casa Colina ... he's a changed man ... he feels he can stay independent longer..... His daughter says that he wants to move close to her and Casa Colina ... he feels that he has a new lease on life.

The nurse used the patient's acute phase of respiratory decompensation after his hospital discharge to provide time to convince him of the need for rehabilitation and the

changes necessary in his attitude towards it. Through the rehabilitation program at Casa Colina, the formulated goal to keep the patient independent at his own place is being reached.

In carrying out patient-monitoring as a strategy, the nurses employ a comparative problem-based cue searching. To document their problem-based cue searching, the nurses also checklist and fill-in the agency nursing progress notes form. In addition, they write the nursing interventions they perform during each home visit.

If the plan of care involves the mobilization of services of other members of the home health care team, then additional sources of information for monitoring purposes are accessible to the home health care nurse. These additional sources of information may include the physical therapist, social worker, the occupational therapist, and speech therapist. In many cases, home health care nurses receive relevant information about the patient's progress from the home health aide. As one home health care nurse asserted:

... she's an important member of my team ... because she stays with the [patient's] family an hour. She's there three days a week ... she sees what goes on. You know, she's totally up about abuse going on in the home.... She tells me a lot what's going on in the home and she's really good; she confers with me quite a bit.

Thus, to the home health care nurse, a wider constellation of individuals can serve as the sources of evidence

indicating the patient's progress towards attaining the goal of care.

The monitoring of patient care may lead to the generation of ideas for future planning. A home health care nurse brought this about prior to the discharge of a 58 year-old, Mexican patient who had a CVA with left hemiparesis. Because of his left-sided weakness, the patient received retraining for activities of daily living, gait training, and strengthening exercises. Prior to his stroke, his job in a factory required extreme manual dexterity. But, as the nurse narrated, she:

... doubt[ed] very much if he's going to be able to go back to work where he was working. We had to work with that problem; he had to face that it was a good probability that he might not.... We have to sit down and have to talk, we have to open up the door and have to at least see what's out there.... And because he was a man of the house in a Mexican family ... his image of his machismo was going to have to be dealt with.... With the Hispanic in him, I already knew where he was coming from.

Based on the cues pointing to a limited recovery of the patient's original manual dexterity, the nurse shifted from a monitoring strategy to getting the patient to envision and prepare for the future. In other words, the nurse went beyond the problem-based care plans to explore some future options for the patient. The nurse used her inherent knowledge of the family role and "machismo" of the Mexican male as a basis for engaging the patient in some reality-based discussion prior to his discharge. The home health

care nurse was able to bring up the probable problem of not being able to return to his job, to explore the ramifications of this possibility to his self-concept, and to discuss some options available to him.

Another focus of the monitoring strategy is the quality of the delivery of home health care services. For example, home health care nurses personally observe the manner in which a home health aide performs the delegated nursing care activities every two weeks. Although this supervision is mandated by federal and state regulations, it is a strategy that assures the maintenance of quality in the delivery of nursing services.

To monitor the delivery of the other arranged home health care services, home health care nurses inquire from the patients and caregivers about the timeliness and the results of these services. In effect, the home health care nurses obtain information about the patients' and their caregivers' degree of satisfaction with the pre-arranged home health care services.

In sum, this study revealed monitoring as the key strategy in evaluating the care of the patient. As a strategy, monitoring involves cue-searching and inferring about (a) the effectiveness and quality of delivering the health care of the patient in the home, (b) the progress of the achievement of the objectives of care, (c) the development of additional patient problems, (d) the

attainment of the overall goal of the plan of care, and (e) the generation of future plans. The strategy primarily uses a comparative problem-based cue searching as the basis for inferring the success or failure of the plan of care of the patient.

In conclusion, the management of patient's problems entails the processes of planning, intervening and evaluating. In performing these problem management processes, home health care nurses undertake an array of strategies ranging from linking the patient's problems with specific interventions and goals to the monitoring of these interventions and goals, culminating in the discharge of the patient from the home health care agency.

CHAPTER 6
MANAGING PATIENT CARE: STYLES OF
HOME HEALTH CARE NURSES

Central to the emergent theoretical framework are the home health care nurses' clinical decision making styles. Home health care nurses demonstrate three qualitatively different styles, each manifesting an approach to managing patient care. These styles are the "skimming," "surveying," and "sleuthing" styles (see Figure 2). Though these styles are mutually exclusive, a home health care nurse can exhibit a skimming style in one home visit, the surveying style in another, and the sleuthing style in another situation. No home health care nurse in the study consistently used the same approach in every home visit. On the whole, except when using the skimming style, each home health care nurse alternated from the surveying style to the sleuthing style, sometimes in the same home visit.

The Skimming Style

Home health care nurses with the skimming style manage a patient care situation by focusing on one prescribed, circumscribed and well-defined problem in a home visit. The problem has been identified for them before they go to the

Figure 2. Managing patient care: Styles of home health care nurses.

patient's home. Thus, their approach during a home visit is task-oriented. The purpose of skimming is to get enough information to manage the home visit and accomplish the task.

The account below of a nurse's follow-up visit to an elderly, female patient with severe rheumatoid arthritis illustrates this type of clinical decision making style. The patient moves about in a wheelchair because of the bilateral swan-like deformities of the upper and lower extremities. She is under the medical care of a county rehabilitation hospital but has been referred to the home health care agency for weekly injection of Myockrysine. She is a long-term patient of the home health agency.

Nurse: Good morning. How was your clinic visit [to the county rehabilitation hospital]?

Patient: It was okay, as usual.
(The nurse proceeds to take the patient's vital signs).

Nurse: How's your appetite?

Patient: They're okay.

Nurse: And your bowels?

Patient: I'm having diarrhea and I'm taking two tablets of lomotil as prescribed. My knees are still swollen.

Nurse: Let me listen to your lungs. (Auscultates patient's lungs). Your lungs are clear.

With this minimum amount of information, the nurse decides that it is appropriate to give the medication. Showing no inclination to attend to the patient's other problems of

diarrhea and swollen knees other than to document the conditions on the nurse's progress notes, the nurse prepares the syringe and medicine. The patient points to her right gluteal muscle's upper quadrant where the nurse injects the medicine. After the injection, the nurse disposes of the syringe and needle in a container reserved for this purpose in the patient's home. Then the nurse asks the patient to sign an agency form vouching for the home visit. The nurse bids the patient goodbye.

The account shows that the nurse obtained the information needed to fill in the agency's nursing progress report form and to decide and execute the medical therapy as ordered by the physician. The home visit was totally geared towards the fulfillment of the order and the required routine data gathering for a follow-up visit. Though the patient did not belong to this nurse's regular patient caseload, the nurse was asked to fill in for the patient's regular nurse who was scheduled for the week-end call. Thus, the nurse's decision making during the home visit centered on carrying out the doctor's order, not in managing the patient's total plan of care.

The nurse executive of a home health agency describes this kind of patient care management as "bone service:"

They'll tend to give bone service. They'll give the least amount that the patient can get along with and not be put in jeopardy.... I call it bone service, which means there's no fat, there's nothing, no frills. It's the least the patient can get along with.

In other words, the nurse with the skimming style delivers the least amount of required service without endangering the patient. If the main goal of the home visit is to deliver a delegated nursing function such as the administration of an injection, then the home visit focuses alone on this aspect of the care of the patient. Though the service is minimal, it still satisfies the activities demanded of a nurse during a follow-up home visit.

The Surveying Style

The second clinical decision making style is the surveying style. The home health care nurses with this style typically are logical in their approach to gathering and evaluating information during the problem finding and problem management phases of clinical decision making. During the first visit to the patient's home, the home health care nurses with a surveying style immediately pursue the completion of the agency assessment forms. Without delay, they get involved in checklisting the forms and filling in the necessary information. The nurse-patient interaction below illustrates the surveying style of information gathering:

Nurse: I am now going to go through and ask you some questions about your history. I know it will seem like a lot but it's only the first visit that we do so much and in the other ones we'll do more teaching. Okay? (The nurse brings out the agency assessment forms for the first visit).

Patient: Okay.

Nurse: You say you're hard of hearing. Do you use a hearing aid at all?

Patient: Yeah, sometimes.

Nurse: Sometimes, but you're not using it?

Patient: Sometimes when I'm lying down or anything like that.

Nurse: So you don't use it very often?

Patient: Oh, no. I don't use it very often. I have to get used to it yet, but I've got one.

Nurse: Okay. How's your vision with your glasses?

In seeking information from the patient, the nurse explored many areas about the patient by following the sequence of the categories of information in the agency form. Thus, she asked for information as it usually appears in the agency forms. In adapting a sequential exploratory approach, the nurse gathered information in a systematic and structured manner. In this way, the agency assessment format directed the nurse's information seeking process. As a result, the home care nurse with a surveying style deals with a mass of information prior to diagnosing a patient's problems. This amassing of information prior to diagnosing a patient's problems corresponds to the simultaneous scanning strategy that Hammond and his associates (Hammond, 1966; Hammond et al., 1966) found in their studies on nurses.

By closely following the agency forms, the nurse's information gathering banks on the information source freely

providing answers to the questions. Therefore, in accepting the given information, the home health care nurse implicitly assumes the truthfulness of the source of information. The surveying style reflects the way beginning nurses are taught data gathering: by collecting information according to a set of pre-determined sequences and by withholding inferences or judgments until all the required information is obtained.

Home health care nurses with the surveying style focus their cue searching efforts on surface-level information. The vital signs, the size of a wound, the presence of pitting edema serve as examples of surface-level type of information. Such surface-level types of information consists of disparate, observable, measurable and accessible types of data. Thus, the nurse with a surveying style pays attention to details in a serial and step-by-step fashion. This attention to surface-level information is consistent with the findings of a study on the problem-solving performance of novice physics students (Larkin, McDermott, Simon, & Simon, 1980).

In formulating their inferences about patients, home health care nurses with the surveying style use or identify one of the observed facts as the patient's problem. For example, a nurse checklisted knowledge deficit in the agency form as her inferred problem for a 61 year old, male patient with a diagnosis of respiratory failure. When asked how she arrived at this inference, the nurse replied:

... the patient has been regulating his own oxygen not according to the doctor's order; he needs some reminder or some instruction or explanation why he should not do that. It [the doctor's order] was for 4 liters and he reduced it to 3 1/2 liters.

The nurse's reasoning literally translates a disparate piece of information--the patient's reducing his oxygen flow from the ordered 4 liters per minute to 3 1/2 liters--into the problem. The reasoning highlights an observation during cue searching. Similarly, this same kind of reasoning underlies the nurse's inference of a stage 3 necrotic ulcer on the heels of a diabetic, elderly, female patient with renal failure. The inference is based on straight-forward, verifiable information. In this sense, specific, concrete acquired information drives the nurse's reasoning, not an abstract theory or principle.

In planning the patient's health care in the home, the home health care nurse with the surveying style primarily links the patient's obvious problems with standard operating procedures to solve problems. Consequently, the care planning is primarily directed by the standardized nursing care plans printed in the agency forms. In other words, the plan of care essentially incorporates routine and proven approaches to the patient's problems. If confronted with an unfamiliar patient problems, the nurse with a surveying style seeks advice from colleagues and consults with the nurse-supervisor.

Consistent with the focus on disparate patient problems, the nurse with a surveying style plans the home care of the patient fundamentally with short-term goals. The plan, therefore, is reactive and geared to the present and near future. Similarly, during the follow-up visits to their patients, home health care nurses with the surveying style adhere to the formulated plan of care. Thus, nursing interventions are tailored to carry out the specific objectives in the plan of care. In like fashion, the evaluation of the accomplishment of the care of the patient is based on specific, clear-cut, observable, comparative information.

In sum, home health care nurses with the surveying style of clinical decision making are methodical and structured in their approach to gathering and evaluating information. Based on concrete, observable data, they infer specific and distinct patient problems. With clearly defined patient problems, the nurses with the surveying style in turn plan to manage these problems using routine and proven measures. Clearly, home health care nurses with the surveying style are linear in their approach to clinical decision making. The surveying style is more typical of the novice than of the expert; nevertheless, expert home health care nurses rely on this style when they are constrained by time and caseload.

The Sleuthing Style

The third clinical decision making style is the sleuthing style. In contrast to the surveying style, the sleuthing style takes a flexible approach to gathering and evaluating information. The account below about a nurse who arrives at the patient's home for a follow-up (second) home visit depicts the sleuthing style of cue or clue searching. Though the patient is part of this nurse's regular caseload, another nurse made the first (evaluation) visit and wrote the plan of care two days previously. However, the nurse has not seen the patient's initial home visit records. Except for the information on the intake form and what was given to her by the nurse-supervisor--that the patient is supposed to have hypertension--the nurse does not have any clue about this patient.

Nurse: How are you doing? (She shakes patient's hand). Glad to meet you.

Patient: Fine.

Nurse: Now, my understanding is that you were in the hospital because of high blood pressure.

Patient: It wasn't my blood pressure. It's my low potassium and sodium.

Nurse: Okay, has your doctor placed you on any medications right now?

Patient: Oh, yes.

Nurse: Okay, can I see those please? (The patient hands her several medication containers). How are you doing on your pills?

Patient: Fine, except that they make my ankles swell. I think it's due to Procardia.

Nurse: They make your ankles swell? (Inspects and palpates patient's ankles and marks a pitting edema). And you started noticing them at the time you started taking them? (Patient nods). Is it more towards the evening?

In this vignette, the nurse elicited clues from the patient without using the agency assessment forms. By not using the agency assessment forms, the home health care nurse allowed the incoming information to direct her cue searching, providing her flexibility in gathering and evaluating the information provided by the patient. She went where the clues led her. Thus, realizing that she was given misinformation about the reason for the patient's hospitalization, she pursued and validated information as the patient provided it. Hence, the clues she obtained directed and modified the course of her questioning.

Another home health care nurse depicted this flexible approach to gathering and evaluating information. This home health care nurse described how she asked questions during one of her first home visits:

On the evaluation [first home visit], you have an assessment form. On the assessment form it's not all detailed--it's brief. On the assessment it will say history.... They [patients] may have a diagnosis of hypertension but they have medications like everything for a COPDer. But there's no diagnosis for that. So when you come into the respiratory [system], you ask them: 'Have you had any respiratory problems in the past--asthma, bronchitis, emphysema, pneumonia?' You start naming and 'Yep, yep, the doctor told me I had that.'

In this instance, based on the obtained information about the patient's medication, the nurse drew up a mental checklist of conditions related to the medication. In her questioning of the patient, she used this mental checklist of conditions to direct her focused questioning. Such focused questioning provides the link between the patient's medication and past medical conditions, uncovering information that should have been provided by the physician during referral. It showed the sleuthing style's focus on establishing relationships between disparate pieces of data or information. When asked how she decided to ask those questions, the nurse replied:

... from practical experience, from knowing all your systems and knowing medications. For example, theophylline. You know that theophylline will be ordered for a COPDer. And you question as to why this patient is on Theophylline but has no diagnosis of COPD. So when you review the meds, because on the initial evaluation, you're reviewing all their medications, [you ask], 'but why is he on Theophylline?'

Thus, the nurse derived from her practical experience and stored knowledge the appropriate mental checklist to ask the patient. Her practical knowledge and experience led her to ask the appropriate question to establish a relationship between an evident clue--the theophylline medication--with an uncovered clue--that the patient has also a chronic lung condition.

Home health care nurses with the sleuthing style "dig up" and evaluate information that is not readily available

and accessible; they focus on "depth" rather than "surface" information. Thus, they pursue covert information--clues that are not readily obtained in a straight forward fashion. For example, an intake nurse using a basic surveying style narrates an incident that indicated the need to pursue covert information while gathering information by phone from a formal referral source:

[During referral] ... some things are just read off and it's very easy; you know they just say it very easily. Sometimes, they sound like they're fudging around something, you know. When they do that, you may suspect there may be something involved that they don't want to tell you or they're not sure how to tell you and that depends on each nurse. I'll handle it differently while others handle it another way.... Some people listen to words and some people listen to facial expressions. Some people listen to tone inflections. And that's our personalities.... You might be looking at the diagnosis and different problems--different inflections in their voice. Is there something in here?.... The more you are in intake, you know you're going to want further information.

In this situation, the intake nurse showed sensitivity to the context of the referral by listening with the third ear. She listened to the peripheral clues surrounding the referral source's information-giving: the tone of voice, the wording, and the voice inflection at the same time she was recording data. These peripheral clues gained significance in the absence of a face-to-face interaction. Though these peripheral clues gave no information about the patient, they prompted the intake nurse to search further for cues about the patient.

Home health care nurses with the sleuthing style use some cue searching strategies ingeniously. Examples of ingenious ways of obtaining information about the patient's environment include scanning and moving about. Social talking also provides a means of indirectly obtaining information. A sleuthing nurse describes how she "digs up" more information from her patients through social talking or chit-chatting:

Let's just say we finished the evaluation (first visit) and we sit and talk. You find a lot of things just chit-chatting. You find that may be in the family there might be a history of cardiac disease. Or you might [elicit] from the patient, "Well, yeah, one time the doctor told me he thought I was a diabetic but he didn't put me on any insulin." Well, then you wonder, "How long ago was this." 'Oh, this was just two months ago.'

Through informal conversation (chit-chatting), the nurse uncovered another past medical condition of the patient that is relevant to the patient's care at home. When asked to elaborate on this approach, the sleuthing nurse replied:

Well, it's just incorporated. It's just not even after the eval[uation]. I could even incorporate it. It just depends on the family, as you're getting to talk to them and getting to know them It just depends on how I'm received and how much I should be doing.

From this explanation, the sleuthing nurse shows a flexible and adaptable approach in gathering and evaluating information. This flexibility and adaptability, in turn, allow her to be able to follow-up any relevant information that is uncovered during the course of the history-taking interview and get more in-depth range of information. This

flexibility and adaptability enable the sleuthing nurse to also use several cue searching strategies simultaneously such as scanning and social talking.

Home health care nurses with the sleuthing style do not wait for the gathering of all information in order to formulate patient problems. Instead, consistent with the findings of Elstein and his associates (Elstein et al., 1978), they generate hypotheses based on only a few cues to help direct their further information gathering and evaluation. For example, when a nurse detected a low grade fever on an arthritic patient, the nurse right away generated two hypotheses: urinary tract infection or upper respiratory tract infection. These hypotheses, in turn, directed her cue searching to enable her to rule in or rule out either condition.

Home health care nurses with the sleuthing style allow their intuition to direct their gathering and evaluating of information. They identify intuition as "gut feelings," "sixth sense," "sensing," and "picking it up right away." For example, a home health care nurse recalled how her "sensing of gaps" led her to further cue searching. This home care nurse scheduled her second visit to a frail 79 year old female patient who lives alone, without any available family member, but who claims she has a paid caregiver. During the first home visit, the elderly patient informed the nurse that the caregiver is in her home between

10 in the morning until 3:00 in the afternoon. So the nurse scheduled her second visit at 2:30 P.M. to meet and confer with the caregiver. She called the patient the morning of the scheduled visit but got no answer. Nevertheless, she went ahead on the scheduled time. However, after knocking at the door for about five minutes, the nurse almost gave up and about to leave when the patient in her wheelchair opened the door with extreme effort. The home care nurse narrates the incident as follows:

I got in the house, and the first thing I questioned her about was why her caregiver wasn't there. She said, 'She didn't come today and I haven't been able to answer the phone.' That's as much as she would give me but I suspected that something wasn't right because of the fact that I think she was significantly weaker than she was on my first visit.... I tried to put all the information but sometimes there's gaps and a lot of times those gaps indicate that there is something wrong. You know, I don't know how to explain it. I just was sure that things weren't going well in some ways ... it took some probing When I continued to ask her further I found out how much she wasn't able to do ... that's when I realized that she didn't have any help from the previous visit to now.

The nurse in this situation perceived the inconsistency with the previously obtained information during the first visit. This intuitive perception of detecting gaps in information spurred the nurse to search for more cues to further validate her perception. In this instance, further cue searching validated the intuitive perception. In other words, the nurse's intuition obtained validation through further cue searching.

In elaborating on intuition, a home health care nurse aptly expressed the process of intuiting:

Isn't that a gut feeling? I think that's what it becomes after awhile ... you forget how you know some of those things or how you decide on which way to go sometimes. And you just do and most of the time you come from the right direction. Once upon a time you knew why you did those things because you read them from a book. But in all those years you've added little bits and pieces of things that aren't in books to how you go about doing something and you're not always really consciously aware of all the input you use to compute what you finally decide to do. And I think a lot of it is gut feeling, especially as you get older. I'm not sure I can explain it. Sixth sense, I guess. It's that same sense that says, 'I have that funny feeling that something's wrong ... and sure enough something's wrong.' And you say, 'How did I know that?' You don't have any idea. But there must have been some sound or some length of time you were away from that patient that you knew might be the amount of time until that patient might have problems that told you it was time to go back and look at that patient. And that's what all the nurses always say ... there's always that sixth sense that you don't know what it is. But you're picking up things in your subconscious that tell you, that help you.

This home health care nurse captures the characteristics and essence of intuiting: rapid, accurate, triggered by gut feelings or sixth sense, and based on a wealth of accumulated clinical experience (Dreyfus & Dreyfus, 1986; Benner, 1984; Benner & Tanner, 1987; Rew, 1988a; 1988b).

Along with intuition is the sleuthing style's capacity for pattern recognition (Dreyfus & Dreyfus, 1986; Benner, 1984; Benner & Tanner, 1987). The home health care nurses who ruled out drug abuse in the teen-age patient with Burkitt's Lymphoma and who diagnosed alcoholism in a male

patient both showed sleuthing styles of clinical decision making. Through their ability to perceive distinct patterns of behaviors, they accurately inferred their patient's health status.

In managing the care of patients, home care nurses with the sleuthing style formulate a plan of care for a network of interrelated problems. Thus, the plan of care tackles several related problems in a coherent manner. For example, the nurse's plan to empower the elderly female patient with hypertension who was hospitalized for hypokalemia secondary to diuretics included (a) getting the patient to ventilate her anger against the physician, and recognize her responsibility for self-care, and (b) teaching the patient about her condition and medications, and assertiveness in dealing with the physician. Instead of resolving the patient's anger, the hypokalemia, the lack of information and assertiveness as disparate, individual problems, the home health care nurse recognized their interrelationships and formulated a coherent plan of care addressing these problems in a unified way.

Another characteristic of the sleuthing style is the futuristic orientation of the plan of care. This is exemplified by the care plan of the nurse who arranged for the COPD patient to undergo rehabilitation at a nationally recognized center to be able to still live on his own independently. This is also illustrated by the nurse who

discussed future options for the Mexican patient with CVA whose chances of regaining his manual dexterity were very limited. In these patient care situations, the nurses developed care plans that are proactive, adaptive, futuristic and realistic.

In sum, home health care nurses with a sleuthing style approach clinical decision making in a flexible and adaptable manner. They focus on beneath-the-surface type of information; they aim for "depth" of information. They are sensitive to the context of information gathering and evaluation. In addition, they allow their intuition to direct their information gathering and evaluation. In managing patient care, they create a network of interrelated problems as the springboard for a coherent plan of care. Moreover, the care plans are proactive, adaptive, futuristic, yet realistic. Clearly, home health care nurses with the sleuthing style view clinical decision making as an integrated and holistic process of problem finding and problem management. Furthermore, the sleuthing style is more characteristic of the expert than of the novice home health care nurse. On the whole, the differences between the surveying style and the sleuthing style have been substantiated by studies examining the differences between novices and experts (Chi, Glaser, & Farr, 1988; Dreyfus & Dreyfus, 1986; Benner, 1984; Larkin et al., 1980).

In conclusion, home health care nurses in this study showed three clinical decision making styles: skimming, surveying, and sleuthing. These styles, as dimensions of the home health care nurses' approach to clinical decision making, enable the nurses to develop a range of strategies and to perform a range of tasks during their visits to the patients' homes. The skimming style, in sharp contrast to the surveying and sleuthing styles, depicts an overriding task-oriented approach to clinical decision making. However, the surveying and sleuthing styles portray differences in gathering and evaluating information approaches. The surveying style focuses on "surface" information using a structured approach. The sleuthing style focuses on "depth" information using a flexible and adaptable approach and includes intuition. In planning the care of home health care patients, the surveying style uses information as the basis for formulating care plans with short-term goals for specific, disparate patient problems. The sleuthing style, on the other hand, uses information to formulate care plans with long-term goals for a network of interrelated problems. Clearly, the surveying style depicts the characteristics of a novice home health care nurse, while the sleuthing style, an expert home health care nurse.

CHAPTER 7

MANAGING PATIENT CARE: INFLUENCING FACTORS

Various factors influence the clinical decision making of home health care nurses. In this study, clinical decision making, as a problem-solving process, emerged as subject to several influences (see Table 4). These include (a) the experiential and educational background of the home health care nurse, (b) the health-related attributes of the patient, (c) the nature of the nurse-patient interaction, (d) organizational factors related to the home health agency as a work setting, (e) the legal and statutory regulations governing the delivery of home health care services, and (f) the economic aspects of clinical decision making. Together, these factors converge to bear on the specific patient care situations that home health care nurses encounter and that require their day-to-day clinical decisions.

Experiential and Educational Background of Nurses

Several experiential and educational characteristics of home health care nurses emerged as key factors that influence their clinical decision making. These include

Table 4

Managing Patient Care: Influencing Factors

Nurse's experiential and educational background

- Practical knowledge
- Educational background
- Pre-home care clinical background
- Use of rules of thumb (heuristics)
- Use of intuition

Health-related attributes of the patient

- Patient's condition
- Caregiving support and resources
- Home environment

Nurse-patient interaction

- Patient's ethnic and socio-economic background
- Patient's psychological traits and needs
- Nurse's feeling of "ownership" of the patient's care

Organizational factors

- Philosophy of home health agency
- Role of supervisor
- Staffing
- Size and administrative composition of home health agency

Legal and regulatory factors

- Nursing Practice Act
- State and federal regulations
- Accreditation standards

Economic factors

- Payor or funding source
- Patient advocacy
- Nursing productivity

(a) their practical knowledge, (b) educational background, (c) pre-home care clinical background, (d) the use of rules of thumb, and (e) the use of intuition.

Practical Knowledge

Practical knowledge appears as a key factor in the home health care nurses' clinical decision making. When asked to explain how she decided to ask a caregiver certain questions, a home health care nurse remarked:

Well, I just ask them. I already know.... Like for example, for a catheter. Let's say, 'My mother's having pain from the catheter.' 'Well, what kind of pain? Is it in the abdominal area? Is it in the vaginal area? Is it in the urethra? What kind of pain?' ... I rely on past knowledge, knowledge that I've gained through nursing, starting from nursing school and working with that through all these years.... It's knowledge that I've already gained through [the] practice of nursing.

In other words, the home health care nurse's cue searching decisions were drawn from her knowledge of and experience with catheterized patients. This knowledge of and experience with catheterized patients together make up the specific practical knowledge that enabled the nurse to decide not only what kinds of information to search for and gather but also how to ask the questions in this specific situation. In this sense, practical knowledge refers to the content and procedural knowledge that are relevant and useful to the nurse's day-to-day activities (Sternberg & Caruso, 1985).

In contrast to the narrower range of practical knowledge in hospital nursing, home health care nursing requires practical knowledge applicable to a wide range of technical procedures, patient conditions, ages, and problems. A nurse-supervisor cites the breadth of practical knowledge that a home health care nurse should possess:

You need people who can do IVs real well and can do catheters; who can do wound care with their eyes closed because we have tons of those; who can change NG tubes and G-tubes; who can take care of med/surgical patients, [such as] CVAs [cerebro-vascular accident patients]; who are really sharp on diabetic teaching ... a nurse in home care needs to be well versed in every aspect of nursing. Your geriatrics, your med/surg, your pain control.... We do get OB/GYN patients at times and you need to know that.... In here you need to know everything. It's asking a lot more than a hospital because you have to handle anything that's thrown out.... There's a wide variety of ability or knowledge that a nurse in this kind of setting needs to have.... There's no specializing here. You get whatever referral comes in and you need to handle it.

This supervisor underscores the broad range and depth of practical knowledge that enables a home health care nurse to meet the uncertainty and ambiguity inherent in home health care nursing. Without this broad range and depth of practical knowledge, a home health care nurse will find it very difficult to function autonomously and manage patients in their homes.

The practical knowledge for the autonomous functioning of home health care nurses is amplified by another nurse-supervisor:

Home care is a little bit unique from hospital [nursing]. [The nurses] need absolutely very sharp nursing skills and they need at least a year of acute care experience. They need to be very sure in all of their nursing skills because they're out in an independent manner making judgment.... [They] need to know when to call a doctor and when to call paramedics and when something has changed.... [They] need to be able to make an assessment each visit and make accurate assessments and judgment calls.

This nurse-supervisor underscored the autonomy that characterizes home health care nursing. Unlike nurses in the hospital, home health care nurses function in the patient's home without the presence of colleagues who are readily available on a hospital floor. In this context, they have to depend on their practical knowledge when delivering nursing care in the patient's home.

In managing patient care in the patient's home, home health care nurses also draw upon other aspects of their practical knowledge. A nurse-supervisor describes these areas:

First of all, their understanding of community health and their role ... to make good assessments ... not only of the patient but their assessment of psychosocial needs of the family and community as well. That plays a factor in the decision making. Their knowledge of community health in a sense, the various disciplines that they have to work with within home health especially with the VNA's structure, with the other people they have besides supervisors to consult with ... they have other disciplines and other personnel to discuss the patient's and their family needs as well.

Hence, part of the practical knowledge required of the home health care nurse involves the broader context of the patient's family and community. In managing the care of the

patient in the home, the clinical decisions that home health care nurses make and execute involve a wider network that includes not only the patient but also family and community and an interdisciplinary team. Thus, based on an assessment of the patient's health care needs at home, the home health care nurse deliberately refers and arranges for the necessary health care services such as social work, physical therapy, speech therapy, and others to be delivered in the patient's home.

In sum, one of the major factors influencing the clinical decision making of home health care nurses is their practical knowledge. The study reveals that clinical decision making in home health care nursing requires a vast array of relevant specific knowledge and experience. The lack of a command of a body of practical knowledge greatly hampers the home health care nurses' clinical decision making ability. In short, an elaborate network of practical knowledge serves as the foundation for effective and efficient clinical decision making in home health care nursing. Practical knowledge, however, develops primarily from formal education and from clinical experience.

Educational Background

Another factor that surfaced from the data that influences the clinical decision making of home health care

nurses is their educational background. A home health care nurse with a baccalaureate degree in nursing discussed how her educational background influences her clinical decision making:

In the nursing program I was in--I have my bachelor's degree--they had a little bit more focus on psychosocial aspects of nursing.... I think that's one area in nursing that a lot of nurses feel uncomfortable with. You know, they might try or because of their discomfort wait for something to happen instead of actively pursuing it. Because I think when you start dealing with psychosocial, you bring up a lot of your hurts and feelings too. You know, just doing a task is much easier.

This home health care nurse's educational background enables her to delve more into the psychosocial aspects of patient care than other nurses may be willing to. This educational background facilitates her exploring or focusing into the psychosocial aspects of home health care nursing and instituting measures to get patients to verbalize their concerns rather than bottling them up. As she points out, doing a task is much easier than dealing with the psychosocial aspects of patient care. With the skills she acquired during her education, she is able to obtain information and manage more actively the psychosocial aspects of patient care. The role of the nurse's educational background on the resolution of patient problems is supported by the earlier study of del Bueno (1983).

Pre-Home Health Care Clinical Background

Another characteristic of home health care nurses that influence their decision making is their clinical background before their entry into home health care. A nurse-director aptly described how this clinical background serves as an influence to the nurse's clinical decision making:

I know in my many years of supervising nurses directly ... that what they [the home health care nurses] would respond to me when I would ask them to describe the home situation was really couched in words and understanding of the experiences that they had prior [to home health care]. For example, if I'm working with a diploma nurse who has extensive experience in med-surg nursing, she really directs her attention to that area. If I'm working with a nurse who's had a great deal of experience with pediatrics, she'll bring out a different aspect of what she sees in the home: she's very attuned to the children in the home and their behavior and how they interact with the elderly patient that they're seeing. Whereas, with the other nurse, she wouldn't even notice that at all. So they really bring with them the experiences and the level of education that they've had prior.

In other words, the clinical background of the nurses prior to their entry into home health care nursing influences the types of information they seek out or attend to. This clinical background provides a specific perspective in the types of information gathered, attended to, and interpreted. These interpretations in turn determine the types of problems formulated and managed. The influence of the clinician's background on clinical decision making has been supported by Eisenberg (1979).

Specialization, even within the broad base which develops over time and is required in home health care nursing can result in a kind of limited vision. For example, a pediatric nurse was sent to attend to a 17 year old parent, with Burkitt's lymphoma; however, it turned out that a medical surgical nurse was better equipped to deal with the teenager with adult responsibilities than the pediatric nurse had been. In other words, the pediatric nurse's specialization actually limited her effectiveness.

Use of Rules of Thumb (Heuristics)

In applying their broad-based knowledge and experience, home health care nurses have created certain personalized rules of thumb that affect their clinical decision making. These rules of thumb correspond to heuristics (Kahneman, Slovic, & Tversky, 1982) or production rules (Anderson, 1985). For example, a home health nurse posited her own rule of thumb or heuristic during the first home visit:

I usually do a lot of assessment. I do not focus so much on teaching unless it's something that's more urgent ... because I know [the patients] never remember. They never usually remember anything that happens on the first visit because you're bombarding them with so many questions. So that's just my way of doing it. I don't know if everybody else does it that way.

This nurse highlights the nature of experience-based rules of thumb--they are uniquely personalized; other nurses may not employ them. This nurse's rule of thumb--that patient

teaching has a limited place during the first home visit unless it is really compelling--helps in achieving the primary goal of the first home visit. This rule of thumb enables the nurse to focus on the goal of the first home visit--to gather information about the patient as the basis for the plan of care, especially in meeting the patient's health-related teaching-learning needs.

Another nurse underscores the personalized nature of rules of thumb when she narrated how she performs patient assessment during the first home visit:

It's [not] just going in and asking point-blank questions and not having any feedback from them [the patients], and just asking what's on the paper. That's not all that's involved. You have to get a little bit more familiar with that patient. At least, that's *how I see it* [italics supplied]--that has always helped me with my visits. It's not just going in there asking questions from an assessment form--that's not just gonna do it.

Again, the nurse's statements bring out the personalized characteristic of rules of thumb. This nurse's rule of thumb involves personalizing the patient interview. This rule of thumb provides a guide in the nurse's approach to the patient interview thus facilitating the cue searching phase of clinical decision making. By personalizing the interview during the initial home visit, establishing rapport with the patient becomes easier. Because of their positions as guests in their patients' homes and because of the responsibilities for patient care in the home, home

health care nurses aim to establish a positive rapport in order to gain patient cooperation immediately in the care process.

Another nurse employs certain rules of thumb in reinserting urinary catheters in patients using them for a prolonged period of time.

If a catheter needs to be reinserted, then it has to be done immediately after the removal of the older catheter to make it possible.... You see, if you don't do that ... if you let even five minutes to pass, it will be impossible to reinsert a new catheter. You also saw that I applied a lot of lubricant to facilitate reinsertion. I remember a patient in another home health agency who had used for a long period of time an indwelling catheter. This patient had to be brought to the Emergency Room for catheter reinsertion because after some time the prostate goes into spasm and there is no way that a catheter could be reinserted except by the urologist.

Based on her practical knowledge, this home health care nurse has evolved two rules of thumb: to speedily replace urethral catheters in patients using the device over a prolonged period of time and to use adequate lubrication in reinserting them. To her, these rules of thumb prevent the unfavorable effects of delayed catheter reinsertion thereby saving the patient from being brought to the emergency room for catheter reinsertion.

Use of Intuition

A key factor that emerged influencing the clinical decision making of home health care nurses is the use of their intuition. They described intuition as "gut feeling,"

"sixth sense," "sensing," and "picking it up right away." Through intuition, the home health care nurses are able to immediately and directly "know" what is the patient's status, problem, or needs without going through the reasoning process. As discussed in chapter 4 and 6, it is intuition that led a home health nurse to further cue searching about the caregiver of the elderly, female, dialysis patient and discover the absence of a caregiver. It is intuition that led a home health care nurse to diagnose the alcoholism of an elderly, male patient referred for wound care; it is through intuition that a home health care nurse ruled out the use of drugs in a black, teen-age patient with Burkitt's Lymphoma. It is through intuition that home health care nurses go beyond the "surface" information and obtain "depth" information. It is intuition that separates the inexperienced home health care nurse from the experienced--the novice from the expert clinical decision maker. The use of intuition among experts has been supported by the studies of Dreyfus and Dreyfus (1986) and Benner and her associates (Benner, 1984; Benner & Tanner, 1987).

To summarize, the home health care nurses' knowledge and experience, educational background, clinical background prior to entry into home health care, and use of rules of thumb and intuition all influence their clinical decision making activities.

The Health-Related Attributes of the Patient

Several health-related attributes of the patient influence the decision making of the home health care nurses. These include (a) the nature of the patient's condition, (b) the patient support network and caregiving resources, and (c) the home environment.

Patient's Condition

Several attributes of the patient's health state or condition influence the clinical decision making of home health care nurses. One of these attributes is the acuity of the condition as it affects the patient's activities of daily living. For example, in deciding that a 73 year old female patient, newly discharged from the hospital for spinal compression, needed more physical therapy and home health aide assistance than nursing, the nurse focused on the patient's mobility and self-care capability. In explaining her patient management decision, the nurse said:

... physical therapy ... could start her into an exercise program to strengthen her back and also to check on what special things she needs for her bed to make it easier for her to move about.... Also, she's in bed quite a bit, so I think a physical therapist could initiate a home exercise program that would be good for her to get her stronger ... so that she's not losing muscle tone and getting weaker.... This lady is obese; she is not getting around real well right now. So I felt that a home health aide could, you know, wash her up, ... change the linen, ... wash her hair, things that she can't do right now at this time.

In this instance, because of the limitations imposed on the patient's mobility by the spinal compression, the nurse decided to arrange more visits by the physical therapist than visits by the nurse to build up the muscular strength of the patient and to prevent potential complications associated with immobility. At the same time, the nurse also arranged for a home health aide to come and assist in the personal care of the patient while the patient is building her muscular strength.

Another variable of the patient's condition is the number of co-existing medical conditions. For example, during the initial home visit of a 65 year old, male, Caucasian referred for infected aortic graft wound, the home health care nurse not only discovered that the patient recently lost 30 pounds but she also strongly suspected alcohol abuse. The open wound on the patient's left hip measured approximately 1 1/4" long and 1/4" deep with small to moderate amounts of tan drainage. The nurse decided to schedule twice a day home visit for this patient during the first week. This schedule enabled the visiting nurse to provide the skilled wound care adequately and to monitor the nutritional intake of the patient more closely. At the same time, this schedule facilitated the validation of the patient's alcoholism as the patient, very shortly, was found inebriated during one afternoon visit.

Another patient condition variable is the nature of the procedure involved, influencing the amount of time spent on a home visit. For example, field notes showed that a home health care nurse spent only 20 minutes with a patient with severe arthritis who needed an intramuscular injection while another nurse spent one hour and ten minutes with a pediatric patient requiring the administration of an IV medication. In the patient requiring intramuscular injection, the nurse left as soon as she administered the medicine. In contrast, the nurse administering the IV injection, while waiting for the IV solution to be completely infused, got involved in a cluster of patient-related activities. The 13 year old female patient, referred for follow-up care of an infected fracture on the left femur, has spastic quadriplegia as a result of cerebral palsy since birth and requires gastrostomy feeding. While waiting for the IV infusion to be completed, the nurse thoroughly assessed the patient from head-to-toe and suctioned the patient. This head-to-toe assessment included vital signs, heart and lung auscultation, inspection of the gastrostomy tube, neurovascular assessment of the left lower extremity in cast, and inspection of the area beneath the cast window. In addition, anticipating the possibility of an IV reinsertion, the nurse examined the patient's extremities for a potential IV site. Furthermore, the nurse conversed with and updated the relief caregiver who is a

licensed vocational nurse (LVN) about the care of the patient. Thus, the time required to administer the IV injection allowed the home health care nurse to perform a thorough assessment of the patient and to inform a relief caregiver about the patient's plan of care.

Patient's Caregiving Support and Resources

The presence of a caregiver highly influences the decision making of home health care nurses. Specifically, the availability of a capable caregiver influences the number of visits a home health care nurse plans for a patient. For example, a home health care nurse decided to decrease the number of home visits from two to once per week on an elderly, female, Hispanic patient with CVA and diabetes and who needs gastrostomy feeding:

The blood pressures ... and her blood sugars came down and stabilized. She also had a wound on her hand that was progressing nicely and healing well. The daughter was very capable of taking care of her [the patient] and there really wasn't any more skilled nursing that we could do on our part. So we'd go in once a week to monitor these things and make sure they're staying stable and that the daughter's not having problems. She knows that she can call us and we can change our schedule.

In other words, with the stability of the patient's condition and with the patient's daughter capably providing the nursing care needed, the home health care nurse decided that a weekly monitoring visit would be sufficient. However, in making this decision, the daughter was appropriately informed that the schedule of home visits can

be modified accordingly should changes occur. Implicit is that the daughter was taught and supervised in caring for the patient prior to the decision to decrease the number of home visits for the patient.

However, although a caregiver may be available, the caregiver may not have the inclination to provide the care needed. As a home health care nurse asserted:

There may be a husband that's there, and he can easily say, ... 'I am not going to touch the wound.... I don't want to do it.' That's his right. Then we will have to come out because we cannot find anyone else that will be willing to learn. Medicare will accept that as long as it's documented. But we have to go check all avenues. ... If you can't find a family member, how about a neighbor, a granddaughter, or grandson? We cannot force someone to do wound care.... And then we have to state in the chart that we've tried and we just can't find anybody, so the nurse has to be the one coming out to do this wound [care].

Thus, the willingness of a caregiver to learn and provide the care needed by the patient at home influences the decision of the nurse to provide the care herself within the guidelines of the payor source. Nevertheless, a deliberate search for a caregiver who is willing to learn and perform the wound care after due nursing instruction and training is required with Medicare funding, and this search and exploration is the home health care nurse's responsibility.

In some instances, a willing and capable caregiver may be available, but other circumstances prevent this caregiver from providing the direct care. However, this caregiver can provide the financial resources to obtain a hired caregiver.

For example, a home health care nurse worked with the son of a 72 year old male patient to hire a 24-hour live-in homemaker for his father. The home health care nurse instructed and supervised this homemaker on the patient's medications, wound dressing care, and hydration and nutritional measures in preparation for the discharge of the patient. With the son's financial support, the homemaker, with the home health care nurse's supervision, assisted the patient's recovery and discharge from the home health agency. Thus, through the patient's support network, a home health care nurse can effectively implement the plan of care formulated for the patient.

Patient's Home Environment

The home environment of the patient influences not only the kind of information elicited by a home health care nurse but also the plan of care. For example, at her initial home visit to an elderly patient with hypokalemia and hyponatremia, a home health care nurse took note of the clutter and disarray of the patient's home. She shared her observations as follows:

I mean, that house is kinda cluttered. If she's already having weakness to the legs, [due to hypokalemia and hyponatremia], she's prone to accidental falls and injury. There's too much disorganization in there. Maybe, that's her lifestyle. If I get to know her better, I'll talk to her about it. That's why I asked her, 'who's helping you? Is there anybody else here? Who is with you?' Thus, I find she has a husband. He wasn't there but I found out.... Maybe, she may

benefit ... from a referral for a homemaker who will help her clean up.

In this vignette, the clutter and disarray led the nurse to obtain information about her patient's support network in the home. Also the nurse linked the home clutter and disarray to the patient's weakness which may lead to falls and injury. Based on this connection, the nurse thought of obtaining a referral for a homemaker to help the patient straighten the clutter and disarray. The awareness of the importance of the patient's environment certainly influences the kind and array of clinical decisions of the home health care nurse.

The Nurse-Patient Interaction

Several sociological and psychological factors emerged to affect the clinical decision making of home health care nurses through the nurse-patient interaction. The influence of sociological and psychological factors on the clinical decision making of clinicians has been well documented by Eisenberg (1979). These factors include the (a) patient's ethnic and socio-economic background, (b) the patient's psychological traits and needs as perceived by the nurse, and (c) the nurse's feeling of ownership of the patient.

Ethnic and Socio-economic Background

The patient's ethnic and socio-economic background influence the nurse's clinical decision making. For

example, a Caucasian home health care nurse was asked to take over the care of a 17 year old, black, female patient with Burkitt's Lymphoma. The patient was originally part of the case load of another Caucasian nurse in charge of pediatric patients. However, because of lack of rapport between this pediatric nurse and the patient as well as the latter's non-compliance, the other nurse was requested to follow-up the 17-year old patient. In explaining the diagnosis of non-compliance in the 17 year-old female patient, the home health care nurse who was requested to follow-up the patient declared:

As far as I know, she's non-compliant.... She's 17 years old, black and of low socio-economic status. They tend to have babies and have relationships sooner than somebody who is in a higher socio-economic group, you know. And she's mainly interested in having boyfriends and relationships and having a family--not really having a family--but children seem to be the result because they do not use birth control.... Right now, at that age group and her social setting, this is the time to fool around and play around. So, I can understand the non-compliance.

The nurse's commentary suggests that the patient's ethnic and socio-economic background raises certain prejudices. However, field notes on the nurse's interaction indicate that the nurse considered the ethnic and socioeconomic background of the patient as relevant information. The nurse approached the patient as a young adult rather than a rebellious teenager by asking and expecting her to actively participate in taking care of the Hickman catheter. In response to the nurse's expectation, the patient cleansed

the Hickman catheter and its insertion site, observing aseptic principles. Also, the nurse showed she cared about the patient's child and earned the cooperation of the patient's mother who was her caregiver. By treating the ethnic and socio-economic background of the patient ultimately non-judgmentally, the nurse successfully turned the situation and got the patient to comply with her treatment regimen.

Paralleling this situation, a Hispanic nurse used a patient's Japanese background as a guidepost to facilitate the establishment of rapport. As the home health care nurse remarked: "Before I entered the home, I took off my shoes." Such gesture indicates sensitivity to and respect for the patient's cultural norms, and enhances nurse-patient rapport.

Psychological Traits and Needs

Certain perceived psychological traits of patients qualitatively influence the nurse-patient interaction. For example, instead of the affable conversations usually pursued with her other patients, a home health care nurse became very serious and very business-like with a 45 year old female patient with back injury whom the nurse suspects of abusing narcotic medications. The home health care nurse, whose judgment was unclouded and whose performance was unaffected by an allegedly non-compliant teenage parent,

acknowledged the effect of a patient's traits when she described this 45 year old patient:

[the patient is a] know-it-all; she's hostile, you know, she's passive ... she's conniving. I just don't trust her with anything. I really don't.... Her obnoxiousness irritates me, so a lot of times it affects my judgment, even sometimes my effectiveness, ... I really have to work to overcome that.

In other words, the perceived hostility, passivity, and conniving traits of the patient influenced the way the nurse related to the patient. With a conscious effort on her part, the home health care nurse eventually set aside focusing on the negative traits of the patient but instead focused on how to enable the patient to taper off her dependence on the pain-killing drugs, and she eventually succeeded.

The perceived psychological need of the patient also influences a nurse's approach to managing the care of patients. A nurse narrated how she approached a patient whom she perceived to need encouragement and affirmation:

... what he needed was to hear that what he's doing is being done correctly. He needed that recognition ... to give him that push in doing things.... 'Yes, ... you can get well; yes, that's why I'm here to help you ... you will get better and this is how we're gonna do it. But I need you to do it this way in order to get you back on your feet.' And we worked it that way. And with him, I noticed he needed a lot of encouragement, he needed a lot of pats on the back.

To obtain the patient's cooperation, the nurse supplied what she perceived to be the psychological need of the patient: the need for encouragement and affirmation. In this

situation, the nurse's perception of the patient's psychological need directly influenced the approach she took in managing the patient's care. With this approach, the patient steadily recovered his strength and health allowing his discharge from the home health agency.

In contrast to this pattern of interaction whereby the nurse guides and seeks the patient's cooperation, a passive and non-compliant patient may cause the nurse to employ a directive approach. For example, a nurse described her approach to a non-compliant diabetic patient:

... all of a sudden the wound becomes infected.
[The patient says] 'Ugh! what are we gonna do?
What am I gonna do?' ... I'll sit them down and
say, 'Look, this is the bottom line.... I do not
want to waste your time; I do not want to waste my
time. What are you willing to do and not willing
to do?.... You are non-compliant; your wound will
not heal unless you do this or you do that.'

By confronting the patient's non-compliance and setting the bottom line, the nurse's pattern of interaction involves directing the patient as to what specific behaviors are expected. In other words, the patient is given a set of explicit directives that the nurse expects to be complied with. With this pattern of interaction, the nurse assumes an authoritarian role to get the patient to execute health promoting behaviors.

Another type of interaction involves the nurse facilitating patients and family to help themselves. For example, this type of interaction was operating when the COPD patient expressed his desire to be able to live alone,

independently in his own home. Cognizant of the patient's desire, the nurse involved both the patient and family members in discussing the options available for the patient, especially for one undergoing a rehabilitation program. The nurse maximized the patient's desire for independence and the family members' support for the patient's desire. To this end, the decision to undergo rehabilitation was shared among the patient, family, and the home health care nurse.

Ownership of Patient Care

Finally, another factor emerged as a key ingredient in the nurse-patient interaction--the nurse's feeling of "ownership" of the patient leading to a commitment and involvement in the patient's care. This feeling of ownership is reflected when a home health care nurse remarked:

You know, some of the other nurses say that I should learn to give away some of my patients. But you know, I've done that several times and I find that the others don't do as well. I mean, not that they do a bad job. But, they don't know as much as I do about my patients. For example, this renal patient that I visited this morning ... even though anybody can take care of her dressings, somehow it does not turn out the way she likes it. It's little things, like the way you apply the dressing over the cannula.... So you see, I feel very protective of my patients and I hesitate to give them away.

This home health care nurse speaks of a proprietorship of her patient's care. Such proprietary investment generates a commitment to her patients who are part of her regular

caseload so that she would go out of her way to visit more patients during the day instead of allowing her patients to be seen by some other nurse. Because of this sense of ownership, she knows her patients on an individual basis and is able to tailor her interventions to fit the individual patient. This proprietary influence makes her feel hesitant to just let any other nurse substitute for her and perform the necessary nursing procedures.

Implicit in the nurse-patient interaction is the nurse's liking the patient and the patient liking the nurse. Thus, a subjective element pervades the nurse-patient interaction because it is, particularly in its initial, introductory phase, a social as well as a professional exchange. The nurse's professional goals are achieved through a positive social interaction.

In sum, sociological and psychological factors influence the clinical decision making of home health care nurses. Since a nurse's visit to a patient's home involves a social exchange, the clinical decisions arising from home visits are also susceptible to the factors that influence any social exchange. Thus, the patient's socio-economic background, the psychological traits and needs as perceived by the nurse, and the nurses' feelings of proprietary investment in the patient's care contribute to the clinical decisions arrived at in managing the patient's care. In effect, a wide range of social and psychological

sensitivities influence the decisions related to the care of patients in the context of their homes.

Organizational Factors

In this study, several organizational factors emerged to influence the home health care nurses' decision making. These include: (a) the philosophy of the Visiting Nurse Association as a home health agency, (b) the role of supervisors, (c) staffing, and (d) the size and nursing leadership of the home health care agency.

The Philosophy of the VNA

In managing the care of patients, the philosophy of the home health agency as a part of the Visiting Nurse Association appears as a pervading influence. This is particularly significant in the care of referred patients without health insurance or financial resources. As a home health care nurse narrated:

You don't give up [on these patients]. We still see them and the company [the VNA] knows that it will be a loss to them. But we'd rather go out and see them and keep that continuity for keeping the patient's well-being to prevent any further [complication].... [In] this office, we run it [visiting the patient] by the supervisor, the administrator and it's approved.... And we see them.

Thus, although the Visiting Nurse Association as a home health agency operates as a business organization to keep itself financially afloat, it subscribes to the philosophy

that patients who legitimately need home health services are not deprived of them if they are unable to pay. The Visiting Nurse Association provides home health care services to many patients with very limited health insurance and financial resources after careful screening of the patients' need for health services. A nurse-executive director explained this philosophy of the Visiting Nurse Association:

... within this agency is something we try to drill into them [the home health care nurses] that we want to give what the patients need--whether it's paid for or not is not the important factor.

This nurse executive highlights the agency's philosophy which centers on providing for the patient's needs regardless of the ability to pay. A nurse-supervisor reinforced the agency's philosophy when she remarked:

... this is an agency that provides free care. We will be expected to not abandon the patient but to provide the care some other way. If that means doing another visit, you know, if we have a physician who says they will order it and we really see the need there, this agency does not deny care. That's one of the biggest philosophies of the visiting nurses--that we don't deny care ever on reimbursement. We always look at what's best for the patient.

The nurse-supervisor reiterates the views of the home health care nurse and the nurse-executive regarding the needs of patient as the guiding focus of care rather than the economic factor of reimbursement. With this philosophy, the Visiting Nurse Association clings to the time-honored mission--to provide home care to patients regardless of

their ability to pay. Nevertheless, because of the limited amount of money available for free care, the decision to provide free care is a consensual decision involving the home health care nurse, supervisor, and administrator.

The Role of Supervisors

The second organizational factor is the role played by the supervisors in the home health agency, especially in threshing out economic issues of patient care. Though the agency philosophy subscribes to the non-denial of patients unable to pay, the supervisors are charged with monitoring the revenue-generating aspect of managing the care of patients at their homes. As a nurse-supervisor remarked:

We're supposed to be, as supervisors, more business minded as far as the agency as a whole.... It's very hard because [the home health care nurses] are very patient-oriented and they would like to go out and provide several visits and it's hard to hold them back. What we're trying to do is hit a happy medium between the most generous care plan or number of visits as opposed to one that's more business oriented, that's more conservative.... And you feel a little hard-hearted but if we didn't do that we'd go out of business.

Cognizant of the need for the agency to be financially viable, the nurse-supervisor clearly identifies her influence on the clinical decision making of home health care nurses--to keep the nurses' patient-oriented plan of care within economic bounds. Specifically, this translates into keeping the number of home visits scheduled by home health care nurses and the types of services planned within

the reimbursable guidelines of payor sources. In executing this restraining influence on the clinical decision making of home health care nurses, however, the nurse-supervisor communicates with the home health care nurse:

I always have the nurse come in and talk to me: 'Describe the patient to me; what are you doing and why are you doing it. What are your perceptions and why did you come up with this number of visits in this care plan.... Is there a family member who could learn this? What are your resources? Can we whittle it away here and there?' I try to work with them to where they're part of the process at least initially.... I always have to talk to them because they've seen the patient, they've assessed the patient and they know what's out there and I need to have their input. So I take it from their point of view and then I work with it.

In exercising her restraining influence, however, the supervisor talks with the individual nurse to create a compromise that would (a) meet the needs of the patient for home visits and services, and (b) conform with the reimbursement guidelines of the payor source. In doing this, a decision agreed to by the home health care nurse and the supervisor is reached.

Another role of the supervisor that influences the clinical decision making of home health care nurses is the chart review or audit. This chart review involves the examination of the nurses' documentation in the patients' charts. As one nurse-supervisor commented:

... we review the chart. Insurance companies base the reimbursement completely on the documentation. So they're going to look at a chart and say, 'This was skilled care or it was not skilled care.' So our payment is totally dependent on the nurse's documentation. And

that's probably the number one thing that the agency fiscally looks at more than anything. Can we get reimbursed for this care? Are we doing the appropriate thing?

In other words, the chart review or audit determines if the types of services that are documented by the nurse and are rendered to patients conform to the reimbursement guidelines of the payor sources. In particular, Medicare requires skilled nursing as a criterion for reimbursing home visits. Thus, the chart review or audit role of the supervisor influences the nurses' decision making by reinforcing the nurses' focusing on patient problems that require skilled nursing and therefore are reimbursable under Medicare guidelines.

In addition to their fiscal role in the home health nurses' management of patient care, nurse-supervisors, when consulted, directly influence the nurse's clinical decisions through their recommendations. As a nurse-supervisor recounts:

When there's a continuing [patient] problem, that's usually when the supervisor goes out. Or the nurse can't think of anything else to do and the supervisor has to evaluate. And usually why the supervisor does that, either she has more experience, maybe more education, and then she's got other resources, too, to use than maybe more than the case manager would.

In other words, nurse-supervisors get consulted about the care of patients. When this happens, the supervisors make recommendations about the care of the patient to be implemented by the home health care nurse. With the

implementation of their recommendations for the care of patients, nurse-supervisors contribute to the quality of nursing care.

Staffing

The third organizational factor that emerged involves staffing. The influence of staffing on the clinical decision making of hospital nurses has been documented by Prescott and her associates (Prescott et al., 1987). Staffing refers to the availability of registered nurses for home visits. Staffing, in particular, affects the follow-through of the originally planned number of visits to patients by home health care nurses. As a nurse-executive observed:

... if we have lots of staff, they might see a patient three times a week. [Otherwise], they'll say, 'Well, she [the patient] could probably get along on two times a week.' So they'll cut out that visit.... And they tend to do that because they know how busy we are and they say, 'I just can't take another visit on Thursday, so I can't see her on Thursday. I'll wait until next week, so I'll schedule it for once a week'.... So staffing has an effect.

In other words, when the caseload of patients is not equitably staffed, home health care nurses cope by decreasing the number of home visits originally formulated in their patient's calendar of care. Thus, to be able to visit newly admitted patients, home health care nurses lessen the number of times they visit the patients in their original case load. In effect, the time for visiting the

previously admitted patients is shifted to the newly admitted ones. Clearly, with inadequate staffing, a potential for ethical conflicts can arise should a nurse be made to choose between a patient in the current caseload and a newly admitted one who equally requires nursing services.

Another effect of the inequitable patient load and staffing is that home health care nurses also discharge some of their patients in their case load. As one nurse-supervisor observed:

... when we don't have enough nurses and there's too many patients to see, we all look at each other and say, 'It's time to start discharging some of these people.'

Hence, when there's not enough staff for the number of patients requiring home visits, home health care nurses decide to discharge some patients. By discharging patients, the available home health care nurses can thus channel their time to attend to the newly admitted set of patients. However, this situation engenders ethical and professional conflict for the home health care nurses. Moreover, the question arises as to the criteria for discharging patients and how much economic consideration is given to increasing, maintaining, and decreasing a patient caseload.

A third effect of the lack of adequate nursing staff is the absence of one nurse to manage and follow-up the patient, leading to the lack of continuity of patient care. For example, a home health care nurse verbalized this

situation when she discovered the lack of a follow-through of the prescribed foot care in an elderly diabetic patient:

... when there's no case manager, the case doesn't get managed as well mainly because what they [the supervisors] do is assign her [the patient] to different part-time people all through the week. Unfortunately, the [patient care] management part of it gets left on the shoulders of the supervisors who may or may not be getting a complete picture of what's going on.

In other words, with inadequate staffing, a patient gets assigned to different home health care nurses who lack adequate information about the total health care needs of the patient. Such a situation engenders "bone service" nursing. With a succession of different nurses taking care of the patient and with a nurse-supervisor directing the care away from the actual care situation, the continuity of patient care inevitably suffers, and untoward medical complications may occur but pass unnoticed until they become critical.

Size of Agency and Administrative Composition

Finally, the size of the agency and its administrative composition influence the clinical decision making of home health care nurses. This has been borne out by the study of Prescott and her associates (Prescott et al., 1987). A small agency with an all-nurse administrative structure facilitates the home health care nurses' access to information and validation of clinical decisions. The

following observation of a nurse-executive supports this influence:

I think probably because we're fairly small that access is easier for our staff than it is for someone in a larger organization. I think ... that [home health care nurses] can get to all steps of the organization within five minutes if they want to.... And the fact that we're all nurses--in some agencies the executive is not a nurse--and I think that makes a difference too, in order for [the home health care nurses] to have some validation of what they're doing.

The smallness of the home health agency and its nurse leadership therefore influence the clinical decision making of home health care nurses by providing them easy access to patient information and other information relevant to their care planning. Moreover, the accessibility of the administrators in a small home health agency, in addition to their nursing background, encourages and facilitates the consultation that the home health care nurses may seek when they are unsure of their patient care planning.

In sum, within the home health agency as a work organization, several factors operate to influence the clinical decision making of home health care nurses. These include the philosophy of the home health agency to provide free care, the role of supervisors in monitoring the revenue-producing aspects of home health care nursing, and the availability of nursing staff in relation to the case load of patients requiring home visits. Further, the size of the agency determines the accessibility to patient information and the nursing background of the home health

agency administrators enhances validation of the nurses' care plans.

Legal and Regulatory Factors

Further removed from the actual care-giving situation are legal and regulatory factors that influence the home health care nurses' clinical decision making. A basic legal factor influencing the home health care nurses' clinical decision making is the Nursing Practice Act. According to a nurse supervisor:

... [the] Nursing Practice [Act] has a real big impact.... Do they [home health care nurses] understand what a nurse can legally and not legally do in the performance of their practice?.... How should you be covering yourself in carrying out physician orders, in meeting all the needs of the patient and the family in the home environment? ... why they're doing some of the things they do, as far as documentation. You have the intervention as far as the care plan. Why would you with a patient with dehydration instruct on signs and symptoms to report to the physician? But there's a legal reason for that as well. And that it's important that you document and that you document exactly what was taught.

In other words, the Nursing Practice Act directly influences the clinical decision making of home health care nurses as it regulates the scope of practice in the state. Analysis of *Regulation of Nursing Practice in California* (California Nurses Association, 1986) reveals that the California Nursing Practice Act provides registered nurses the legal authority to execute their functions and activities. It stipulates that the performance of common nursing practice

requires nurses with the knowledge and ability to perform their functions. In addition, it also recognizes the functions performed by registered nurses that cross over into the practice of medicine and permits this overlapping of practice through the development of standardized procedures. In California, the current scope of nursing practice is contained in the revised California Nursing Practice Act, a law that became effective January 1, 1975.

The same supervisor expressed that home health care nurses are more aware and conscious of the provisions of the Nurse Practice Act:

In a hospital, a lot of the parts of the nursing practice act is done for them. The hospital has covered themselves. They have their physicians come in, they have standing orders that they sign. The nurse doesn't have to think--do I have standing orders to do this? But in the home setting, she has to do that herself. She has to know that in order to provide care for this patient, she needs a diet order, she needs a diagnosis, she needs a date of onset. These things are automatically taken cared of by people in the hospital setting: they're taken cared of by admissions; they're taken cared of by the clerk who takes the order off the chart. It's a whole different concept. I didn't know it when I came into home health.... I have learned along the way ... that ... we're functioning like this fifteen department hospital is suddenly in the hands of a nurse ...

In home health care nursing, therefore, the nurse has more direct responsibility in complying with the provisions of the Nursing Practice Act when managing the total home care of the patient. Because of the absence of the bureaucratic

structure available in a hospital, the home health care nurse bears more of the individual responsibility for seeing to it that the information and procedures embedded in the Nursing Practice Act are complied with.

Another legal factor that influences the nurse's clinical decision making comes from the state and federal regulations and accreditation standards. These statutory regulations and accreditation standards govern the operations of the home health care agencies. A nurse-supervisor noted these factors:

We also have all these regulatory bodies that are out there that put their rules on us.... One is the state licensing.... It gives the agency their provider and the certification numbers. That's so you can provide care to Medicare and Medi-Cal patients. They have rules that have been developed by the state known as Title 22.... That in turn is governed by the federal government which is HCFA [Health Care Financing Administration] who developed their federal guidelines.... Now the other thing that has come in, there is now going to be a third regulatory body which you will see evolving in all the agencies. And that is the accreditation process ... [dealing with] the quality assurance issue. And they have regulatory guidelines; they have the same kind of thing. They follow the state regulatory factors, the federal regulatory factors. They take those factors and say in order to meet these guidelines, you must be able to perform this kind of care. In order to perform this kind of care, these are the programs you need to have in place ...

In other words, regulatory bodies at the state and federal levels and accreditation-granting bodies directly govern and monitor the operations of home health agencies through the rules, regulations, and standards they promulgate. Alluded

to by the nurse's explanation is the overlap of the requirements of state and federal regulations and the accreditation standards. Together, these regulations and standards serve as criteria for monitoring the structure, process, and outcomes of the health care services rendered by home health agencies at the homes of patients. Behind many clinical decisions of home health care nurses is their awareness of regulations related to information gathered and documented as well as the eligibility of patients for certain services.

Document analysis of the *Comparative Matrix of Home Care Regulations and Accreditation Standards* (1990) published by the California Association for Home Health Services at Home (CAHSAH) reveals that home health agencies are subject to the following mandatory state and federal regulations: (a) California home health licensing regulations in Title 22 of the California Administrative Code; (b) Medicare Conditions of Participation; and (c) Peer Review Organization (PRO) Review Criteria mandated by the Health Care Financing Administration (HCFA). Additionally, agencies have the option of pursuing accreditation by either of two accrediting bodies: the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Standards for Home Care Organizations or the National League for Nursing (NLN) Community Health Assessment Program (CHAP) Core Home Care Standards. In California, the rules and

regulations governing the licensing of home health care agencies are stipulated in Title 22, Division 5, Chapter 6. Though the federal government leaves the licensing of home health care agencies in California to the state, federal rules and regulations are promulgated, executed, and monitored by HCFA. The federal regulations require compliance with the Medicare Conditions of Participation, published in the Federal Register, Vol. 54, No. 155, August 14, 1989. Furthermore, the federal regulations mandate establishing Peer Review Organization review criteria; these criteria are implemented and monitored by the California Medical Review, Inc. To be certified as a recipient of Medicare funds, a home health care agency has to abide by these regulations set forth by the Federal government.

Moreover, home health care agencies can voluntarily pursue accreditation either through the JCAHO or CHAP. Accreditation implies meeting quality care standards set forth by these two accreditation bodies. The voluntary nature of accreditation remains voluntary in theory, for in practice, an agency cannot survive economically without hospital referrals, and hospitals require accreditation to make patient referrals. What is voluntary in theory is mandated by economics.

Though the state and federal regulations and accreditation standards deal with a range of management and administrative structure and issues, certain areas directly

influence home health care nurses' clinical decision making. As shown in the *Comparative Matrix* (CAHSAH, 1990) the state and federal regulations and accreditation standards include numerous areas that involve the home health care nurse. These areas include client care/intervening care, client rights and responsibilities, safety management, infection control, home care record, and quality assurance/utilization review. This pervasive influence of state and federal regulations and accreditation standards on the clinical decision making of home health care nurses is reflected in the types of information gathered and documented by home health care nurses during their home visits. This has been summed up by a nurse-supervisor:

... our forms have got to be printed up so that the necessary information is uniform and obtained in a uniform way. And the care plans are uniform ... so that we're doing the right things in the home.

In short, the state and federal regulations and accreditation standards are reflected in the types of information gathered and documented as well as the plan of care constructed by the home health care nurses. In other words, externally imposed rules, regulations and standards permeate the problem finding and problem management of home health care nurses' clinical decision making.

The impact of the home health care agency's compliance with federal and state regulations and accreditation standards is the increase in the nurses' time spent on paper

work to ensure that the work meets these requirements, insuring the flow of revenue (Harris, 1989). However, as the time increases for the nurses' processing paper work, the time spent with the patient decreases. This implies, therefore, that nurses need to work fast and to make quick and accurate patient care decisions. In short, home care nursing becomes less and less a field for novice nurses because there is no time for information processing. With the current shortage of nurses, home health care agencies have to address strategies to retain their most valuable resource--the expert nurse.

Economic Factors

The payor or funding source for the patient's home health care services is one of the most important and overriding factors influencing the clinical decision making of home health care nurses. A home health care nurse describes how a payor source controls the number of home visits a patient can receive:

I would say that the source of fee makes the difference to a degree on how many visits the patient is going to receive. Also, because ... they [the payor sources] will authorize what they want to authorize, so you may not be given ... [the home visits] ... you feel the patient needs and even if the doctor orders it, ... if they don't authorize it, then we can't go.... You cannot just go ahead and make the visit. We have to have authorization before we can go ...

This home health care nurse highlights a reality in home health care nursing--the payor source directly controls key clinical decisions of home health care nurses, notwithstanding the philosophy of the Visiting Nurse Association. In particular, as the nurse points out, the payor source determines the number of visits that a patient can receive, regardless of the patient's needs as judged by the home health care nurse and certified by a physician.

A nurse-supervisor further amplifies the influence of the payor source on the nurse's clinical decision making:

... it depends on the payor source. Some of them you tend to have more leeway. Private insurance, a lot of time--your judgment depends on what they're going to pay and a lot of them are hands-on only, which limits some of what you would do. So the amount of care you're going to give depends on that. With Medi-Cal patients, you have to be very conservative with, so your care plan is going to be very short. Your Medicare generally have a little more leeway with, although you need to be familiar with their guidelines. A big thing to look at is what your payor source is--because that's what's going to guide what you can and what you can't do in a lot of cases.

This nurse-supervisor underscores how the payor source which ranges from private to public funding limits the plan of care and its implementation for the referred home care patient. In addition, the nurse-supervisor also points out that the plan and implementation of the care in the patient's home has to conform to the payor source's guidelines to assure payment of the nursing and other related health care services rendered in the patient's home.

The critical nature of compliance with the payor source guidelines is articulated by a nurse-supervisor:

If you don't do it right, you don't get paid. It [the guidelines] dictates a lot of procedures and a lot of the care that you actually are able to give.

In other words, the payment of health services planned for and executed depends on compliance with the guidelines of payor sources. The guidelines that home health care agencies contend with, in general, involve Medicare regulations. As a nurse-supervisor states:

... you're talking Medicare and that's 60-70% of our business. So that's the main guidelines that we worry about.

As the nurse-supervisor points out, since the majority of patients cared for by home health care agencies are elderly, then Medicare becomes a major funding source for home care services.

The reimbursement guidelines of Medicare have been codified in the Health Insurance Manual (HIM) published by the HCFA. Specifically, Chapter 11 specifies the conditions to be met for coverage of home health services. Analysis of this document reveals that a patient must meet certain stipulated conditions to qualify for coverage of home health care services. These criteria include (a) that the patient be confined to his home or homebound, (b) that the services are provided under a plan of care established and approved by a physician, and (c) that the patient needs skilled nursing care, (which is reasonable and necessary and is

needed on an intermittent basis), physical therapy, or speech therapy, or has a continued need for occupational therapy. Furthermore, the document spells out the general principles governing reasonable and necessary skilled nursing care and discusses the application of the principles to skilled nursing services for which payment is being claimed. Thus, the financial stability and survival of the home health agency depends on the home health care nurses' complying with the guidelines stipulated by Medicare for reimbursement of the health care services delivered in the home of patients. As a result of these guidelines, the appropriate documentation of the clinical decisions of the home health care nurse attains critical significance. As a home health care nurse remarked:

In home health, when you're charting, you focus on the negative--always on the negative. You want to beef up the negative ... for insurance purposes, even though there's positive things and you may be giving the patient positive strokes or you may see progress.... You can document, you know, progress, but you don't want to overemphasize the progress. You want to emphasize the negative points ... for insurance reimbursement.

Hence, to comply with the guidelines of Medicare, nurses' documentation of their clinical decisions highlights the problems of patients and what needs to be done to resolve them. This problem-oriented documentation aims to show the need for skilled nursing care thus following the guidelines for reimbursement of services. In short, behind every nurses' clinical decision lurks an economic consideration.

Patient Advocacy

As a result of the economic constraints imposed by payor sources on clinical decisions about patient care, home health care nurses have emerged as advocates for patients. A nurse-director succinctly described the advocacy role of the home health care nurse:

It's the nurse who bargains for the patient; who advocates for the patient; [and] who speaks for the patient.

This nurse-director definitely recognizes the pivotal advocacy role of the home health nurse. She acknowledges that it is through this patient advocacy that a home health care nurse directly communicates and negotiates with the private insurance claim reviewer or the representative of the health maintenance organization to authorize additional home visits that the patient legitimately needs. It is through this advocacy that a home health care nurse "stretched" to the maximum the number of visits to the COPD patient; it is through this advocacy role that a home health care nurse made sure that her elderly patients get access to and enjoy the benefits that they are entitled through Medicare.

Within the Visiting Nurse Association, advocacy for the patient is highly supported by top-level administration. As one of the VNA nurse-executives remarked:

... I give [the home health care nurse] back-up in terms of accepting her decisions [that patients need more home visits].... Yes, the patient really does need more and I go bat with her to the

payor source. And usually if you feel very strongly that a patient needs some service that they've said no on, they will reverse and give you the visits because they have a legal responsibility. And if you can show them that, in fact that patient will be in danger if they didn't provide this, they're more than likely to go ahead and approve it.

In other words, the VNA nurse-executive supports the patient advocacy role of home health care nurses. With this administrative reinforcement, the home health care nurses carry on their advocacy for patients within the economic constraints imposed by payor sources. As the nurse-executive mentioned, if home health care nurses can fully justify the need for additional patient visits, the payor source also has to contend with its legal responsibility in meeting the health care needs of the patient enrolled in its health insurance plan. Therefore, as long as the home health care nurses adequately support and document their judgment about the patient's need for additional home visits, their advocacy role is strengthened within the context of the legal responsibility of the insurance plans that the patients belong to.

Nursing Productivity

As a result of the economic constraints on home health care, the concept of productivity has been introduced in home health care agencies. A nurse-supervisor defined the productivity requirement and standard as follows:

... you must see five to six patients a day in order to get your eight hours day. If you aren't seeing five to six patients a day, then you're not working eight hours a day.

In other words, productivity is measured by the number of home visits per day of each home health care nurse. Since reimbursement is directly tied to the number of billable home visits, then productivity impacts on the revenues generated for the financial stability and viability of the home health agency. Consequently, to meet productivity standards, home health care nurses might increase their reliance on the faster, skimming style of managing patient care, generating concerns about the quality of nursing care rendered to patients.

Productivity standards, moreover, increase the stress level of home health care nurses. As one nurse-supervisor comments:

There's always a problem when nurses feel stressed to produce a certain amount of revenue for the agency they're working for. Often I think nurses who are working in the home are putting in a lot more time than they're actually charging against the client.... Then, of course, you have to add the documentation time, the travel time, and that can be ... real difficult.... Many times, the nurses spend the majority of their time with the patients and then do their paperwork at home later. And really they aren't paid for that time.... They have to keep up a certain amount of productivity ... of six patients per day ... and I think a lot of times the nurses make up for it by spending a lot of their own time in the documentation. And that is unfortunate, but it happens much of the time.

These observations underscore the multiple factors that bear on the issue of productivity. The nurse-supervisor identified several factors that require the nurse's time, such as patient care and teaching, travel time, and documentation requirements for reimbursement. Also, she alluded to the reality that in the patient's home, a nurse performs billable and non-billable, yet necessary patient-care activities. So as not to detract from the time needed for visiting and managing the care of six patients per day, a home health care nurse accomplishes the required documentation work for reimbursement on her own time. To the supervisor, clearly, the economic constraints imposed on the delivery of home care services create stress on the home health care nurses.

Summary

In conclusion, clinical decision making in home health care nursing does not occur in a vacuum. In this study, many factors that influence the clinical decision making of home health care nurses emerged from the data. Several factors relate to those that home health care nurses bring into the clinical decision making situation: the application of their accumulated practical knowledge in home health care nursing, along with their educational and pre-home care clinical backgrounds, and the use of their rules of thumb and intuition. Additional factors include health-related

attributes of patients such as the nature of their health conditions, their support network and resources, and the nature of their home environments. Moreover, the nature of the nurse-patient interaction based on sociological and psychological factors, such as the patients' ethnic background and their personality needs, influence the clinical decisions of nurses. Finally, over and above the nurse and patient factors, organizational factors operating in the home health agency as a work setting also affect clinical decision making in terms of staffing patterns and workload. The economic, legal and regulatory factors governing the operation of the home health agency may constrain the clinical decision making of home health care nurses or may create needs that conflict with the goals of quality care.

PART THREE

CONCLUSION

CHAPTER 8

SUMMARY AND DISCUSSION

This study has examined the phenomenon of clinical decision making among home health nurses, with the goal of generating a substantive theory of clinical decision making in home health nursing. This chapter summarizes and discusses the substantive theory that emerged in the context of existing clinical decision making theories. It also seeks to delineate the limitations of the study, and to discuss its implications in nursing education, nursing service, and nursing research.

The Theory of Managing Patient Care and its Relationship to Existing Clinical Decision Making Theories

In this study, managing patient care emerged as the data-grounded organizing construct that explains the clinical decision making of home health care nurses. As a process, it has three elements that surfaced (Figure 3). First, it embodies the problem solving process. As such, it encompasses the cognitive phases of problem finding and problem management along with the processes and strategies that home health care nurses undertake when making decisions about patient care. The processes are iterative, cyclical,

Figure 3. Managing patient care: A substantive theory of clinical decision making in home health care nursing.

simultaneous, interactive and interdependent. These consist of cue searching, inferring, planning, intervening, and evaluating. Second, home health care nurses exhibit different styles in managing patient care based on the way they gather and evaluate patient care information. These are the skimming, surveying, and sleuthing styles. And third, managing patient care is subject to a host of interacting influencing factors that include not only the personal attributes of the nurse and the patient that they bring into the patient care situation but also organizational, legal, and economic factors.

The theory of managing patient care integrates certain elements embedded in three related cognitive theories on clinical decision making: information processing theory (Newell & Simon, 1972), cognitive continuum theory (Hammond, 1986), and skills acquisition theory (Dreyfus & Dreyfus, 1986). The next section discusses the integration of the specific elements of these existing theories in the emergent data-grounded theory of managing patient care.

Information Processing Theory

The clinical decision making model based on information processing theory focuses on the diagnostic component of clinical decision making. Specifically, the information processing theory posits that the diagnosis of patient problems involves early hypothesis generation and

hypothetico-deductive reasoning (Elstein et al., 1978; Elstein, Shulman, & Sprafka, 1990). Based on a few cues, clinicians generate hypotheses--hunches--about the patient's condition. From three to five cues, clinicians formulate from four to eleven hypotheses (names of diseases) to explain the patient's complaints. Basic to hypothesis generation is the clinician's ability to retrieve from memory the knowledge of disease entities. With several hypotheses in mind, clinicians proceed to gather more information from the patient so as to rule in or rule out each of the hypotheses. In other words, the hypotheses generated by the clinician direct the subsequent data collection to evaluate each of the competing hypotheses. In the evaluation of the generated hypotheses, the clinician searches for crucial supporting facts to arrive at the judgment that a particular hypothesis would explain or account for all the findings from the patient. This chosen hypothesis becomes the diagnostic conclusion. As a theory, the hypothetico-deductive theory of clinical decision making portrays a general method of inquiry applicable to any scientific discipline (Groen & Patel, 1985). In nursing, the studies of Tanner (Tanner et al., 1987) and Gordon (1980) support the hypothesis generation and hypothetico-deductive reasoning of nurses.

The problem finding phase of the emergent theory of managing patient care supports the diagnostic hypothetico-

deductive theory. In this study, however, the home health care nurses exclusively exhibited this early hypothesis generation and hypothetico-deductive reasoning in relation to medical diagnostic conditions. In other words, the home health care nurses' early hypothesis-generation and hypothetico-deductive reasoning was primarily limited to the formulation of multiple medical diagnostic labels rather than nursing diagnostic labels.

The home health care nurses' early hypothesis-generation and hypothetico-deductive reasoning in relation to medical diagnosis reflects the current state of nursing diagnosis. Intrinsic to the diagnostic activity is a pre-existing series of categories resting on a solid, and firm foundation of knowledge (King, 1967). Medical diagnostic categories or labels rest on research-based knowledge. This knowledge base of medical diseases include their etiology, occurrence, signs and symptoms, laboratory and diagnostic tests, treatment, complications, and prognosis. This medical knowledge base permeates the basic education of all nurses, embedding this knowledge base in the memory of nurses over a period of time.

In contrast, since nursing diagnostic categories first started in 1973 during the first national conference on the classification of nursing diagnoses (Gebbie & Lavin, 1975), many nurses went through their nursing education without having been exposed to nursing diagnosis. Also, because of

its infancy, nursing diagnosis still lacks the requisite knowledge base. The initial diagnostic nomenclature is the product of "group empiricism" (Tanner & Hughes, 1984), with groups of participants at the North American Nursing Diagnosis Association's (NANDA) biennial national nursing diagnosis conferences recalling clinical experiences and designating diagnostic labels. The current diagnostic categories were accepted by a majority vote of all conference participants (Kim, 1986). Such a method of generating diagnostic labels runs counter to the scientific method of observation to detect patterns of similarities and dissimilarities as a basis for categorization and classification. In addition, the available nursing diagnostic categories are incomplete and inadequate (Kelly, 1985; Kritek, 1985). Furthermore, the nursing diagnostic labels or categories do not encompass the diversity of patient responses to actual and potential health problems that nurses focus on. Thus, the current state of nursing diagnosis may account for the easier use and retrieval of medical diagnostic labels as hypotheses to guide the cue searching process of home health care nurses in actual patient care situations.

Amplifying the hypothetico-deductive reasoning model that dominated clinical decision making research for a long time since the publication of *Medical Problem Solving: An Analysis of Clinical Reasoning* (Elstein et al., 1978) were

the studies of Gale and her associate (Gale, 1982; Gale & Marsden, 1983). Their studies on medical students and physicians delineated three stages of diagnostic thinking: initiation, progress, and resolution, with the first two stages denoting processes prior to hypothesis generation. In addition, they identified 14 separate cognitive components of the three-staged diagnostic thinking process, thereby describing this process in greater detail and specificity than the hypothetico-deductive theory: (a) prediagnostic interpretation; (b) diagnostic interpretation; (c) judgment of need for further inquiry; (d) expectation, searching for specific information; (e) reinterpretation: no new information; (f) reinterpretation: with new information; (g) enquiry responsive to elicited information (h) enquiry determined by clinician's interpretations; (i) routine enquiry; (j) failure to make specific enquiry; (k) failure to make general enquiry; (l) active confirmation of interpretation; (m) active elimination of an interpretation; and (n) postponement of judgment.

The emergent theory of managing patient care supports the delineated stages of initiation, progress, and resolution. These stages correspond to the emergent theory's problem finding phase. Initiation occurs when the intake nurse admits the patient to the home health agency, while progress and resolution occur during the home health care nurse's initial (evaluation) and subsequent home

visits. The emergent theory's clinical decision making processes and strategies concur with Gale and her associate's findings (Gale, 1982; Gale & Marsden, 1983). Specifically, the emergent theory's cue searching process and focused questioning and exploratory questioning strategies correspond to categories (d), (g), (h), and (i). The home health care nurses' initial impressions about the patient corresponds to category (a); their inferences regarding the patients' medical and nursing problems correspond to category (b); their evaluation process to categories (c), (e), and (f); and their focused questioning to rule in or rule out hypothesized patient care conditions and states to categories (l) and (m). Clearly, the emergent theory supports Gale and Marsden's findings in relation to the cognitive processes used in clinical decision making.

Though the hypothetico-deductive model of clinical reasoning intimates the role of organized knowledge in clinical reasoning, studies focusing on the nature and extent of this knowledge among medical students and physicians appeared much later, during the mid-to-late-80's (Groen & Patel, 1985; Patel & Groen, 1986; Patel, Groen, & Frederikson, 1986; Patel, Evans, & Groen, 1989; Patel, Evans, & Kaufman, 1989). In the course of their studies, Patel and her associates discovered other forms of clinical reasoning: forward reasoning and backward reasoning. Forward reasoning is a process of reasoning that involves

the linking of the problem situation with domain principles and concepts (factual or declarative knowledge) and solutions (procedural knowledge) (Aschcraft, 1989). Forward reasoning is theory-driven and is characteristic of expert doctors. Expert doctors use their biomedical knowledge to create a mental representation of the problem that serves as the basis for a diagnosis (Groen & Patel, 1985; Patel & Groen, 1986; Patel et al., 1986; Patel et al., 1989). The use of forward reasoning also makes use of special rules, called production rules (Newell and Simon, 1972; Anderson, 1985) that state that if certain conditions are present in the situation, then certain actions can be performed (Greeno & Simon, 1988). These rules appear to derive from the physician's underlying knowledge base rather than from any information about the problem (Patel & Groen, 1986). On the other hand, backward reasoning involves the highlighting of the information obtained about the problem as the basis for the diagnosis or inference. This type of reasoning is data-driven and is used by novices because of their limited knowledge base.

The emergent theory set forth in this study acknowledges not only the role of a highly organized and structured knowledge in effective clinical decision making among home health care nurses but also their use of both forward and backward reasoning. Furthermore, nurses employing forward reasoning also use individualized,

experience-derived rules of thumb or heuristics; that is--a home health care nurse's rule of thumb may not be subscribed to by another nurse; hence, the nature of nurses' rules of thumb is highly personalized.

The Cognitive Continuum Theory

Another theory that has relevance to the emergent theory is Hammond's (1986) cognitive continuum theory. The cognitive continuum theory posits that there is a range of cognition and a range of decision-making task situations. According to this theory, intuition and analysis are the poles of a continuum of cognition. Intuition involves rapid, unconscious data processing and has low consistency while analysis entails slow, conscious, and consistent data processing. Cognition is neither purely intuitive nor analytical, for it includes an "in-between or "quasi-rational" or "common sense" mode; as a continuum, cognition, therefore combines the features of intuition and analysis, or the fluctuating back and forth use of intuition and analysis.

Additionally, the theory posits that decision-making task situations range in their capacity to induce intuitive and analytical cognition (Hammond, 1986). The decision-making situation ranges from ill-structured to the well-structured (Hammond, 1983; Hamm, 1988), with the degree of structure hinging on the properties or features of the

decision-making task condition. Accordingly, the less structured the situation, the more intuitive the mode of cognition; the more structured the task, the more analytical the mode of cognition. In other words, the mode of cognition corresponds to the features of the decision-making situation. Thus, such features as the complexity, ambiguity, and the form of task presentation affect the type of thinking to be adopted. Because the decision-making situation does not exist in a vacuum, the cognitive continuum theory, therefore, takes into account the social and contextual aspects of the clinical decision making situation (Hamm, 1988). However, it also considers the knowledge of the decision maker about the situation. If the decision maker lacks the knowledge needed for the situation, then the type of cognition appropriate for the situation is not induced.

The emergent theory of managing patient care sustains the use of analysis and intuition in the clinical decision making of home health care nurses. Likewise, the emergent theory upholds the alternation between intuitive thinking and analytical thinking as shown by the home health care nurses' validating their intuitive inferences through analytical thinking. Like the cognitive continuum theory, the emergent theory takes into account the contextual features of the clinical decision making situation. Furthermore, the emergent theory describes the influence of

contextual factors on the clinical decision making of home health care nurses. These contextual factors include (a) the cognitive attributes of the home health care nurse, (b) the personal attributes of the patient, (c) the nature of the nurse-patient interaction, (d) the institutional factors, (e) the legal/regulatory factors, and (f) the economic factors.

There is a divergence, however, between the cognitive continuum theory and the emergent theory of managing patient care. Hammond (1986) suggests that the decision task situation--an external factor--determines the choice of cognitive thinking. He further suggests that the more uncertain and ambiguous the situation, the more it induces intuition; hence, the more expert the clinician, the less intuition is used.

While the emergent theory supports the use of the analytical and intuitive modes of thinking, including the alternation between the two modes of thinking, the data supporting the emergent theory suggest that the expert clinician uses intuition while the novice uses analytical thinking. In other words, the emergent theory shows that it is an internal factor--the clinician's experience--that directs the cognitive process. It is the nurse's experience that directs the type of thinking and not the decision situation.

Skills Acquisition Theory

Lastly, the skills acquisition theory (Dreyfus & Dreyfus, 1986) is pertinent to the emergent theory. The skills acquisition theory describes the stages involved in the acquisition and development of a skill. To become an expert, an individual goes through five stages: novice, advanced beginner, competent, proficient, and expert. In this theory, experience assumes a paramount role in a clinician's progression through the five stages.

Dreyfus and Dreyfus (1986) propose that it is the clinician's experience that determines whether an analytical or intuitive approach is brought to bear on the clinical decision making situation. According to the skills acquisition theory, a novice clinician thinks analytically in a detached manner, uses abstract principles as guides to clinical decision making, and decomposes the elements of a problematic situation into its component parts. In contrast, an expert clinician thinks intuitively and recognizes the totality of the problematic situation in an involved manner. In other words, with increasing experience, there is a corollary increase in the use of intuition as the primary mode of thinking in clinical decision making. The results of the studies of Benner and her associates (Benner, 1982; Benner & Wrubel, 1982; Benner, 1983; Benner, 1984; Benner & Tanner, 1987) support the premises of the skills acquisition theory.

The emergent theory concurs with the role of experience as a major basis for differentiating the approach undertaken by the novice and expert home health care nurse in managing patient care. Because of inexperience, the novice home health care nurse focuses on and manages disparate patient problems based on overt and accessible surface information. In contrast, the expert home health care nurse, using intuition based on cumulative clinical experience, focuses on and manages a network of interrelated patient problems based on both surface (overt) and depth (covert) information. In short, the use of intuition is based on experience and marks the difference between the novice and expert home health care nurse's approach to managing patient care.

In summary, the emergent theory of managing patient care integrates components of three current clinical decision making theoretical frameworks: information processing theory, cognitive continuum theory, and skills acquisition theory. The emergent theory concurs with the information processing theory in its conceptualization of (a) clinical decision making as a problem-solving process with a repertoire of strategies; (b) the role of an organized and structured knowledge as requisite to effective clinical decision making; and (c) the home health care nurses' clinical reasoning that includes hypothetico-deductive reasoning, forward reasoning, and backward

reasoning. The emergent theory upholds the cognitive continuum theory's premises by acknowledging (a) the home health care nurses' use of either the analytical or intuitive modes of cognition and the alternation of these modes of cognition; and (b) the influence of contextual factors on the home health care nurses' clinical decision making. And finally, the emergent theory bolsters the skills acquisition theory with its premise that expert home health care nurses use experience-derived intuition in their clinical decision making. By integrating the key premises of the information processing theory, the cognitive continuum theory, and the skills acquisition theory, the emergent theory not only highlights the complexity of clinical decision making but also provides a unique and comprehensive perspective that bridges the traditional dichotomous rational and phenomenological perspectives.

Limitations of the Study

The limitations of the study encompass those inherent in qualitative research and those specific to grounded theory methodology. The limitations arise from the primary role of the investigator as the "instrument" in qualitative research using the grounded theory methodology, giving rise to issues of reliability and validity. However, as discussed in Chapter 3 (methodology), the study incorporated

several measures to enhance its credibility, transferability, dependability, and confirmability.

The generalizability of the emergent theory is limited to the home health care agencies and home health care nurses involved in the study. However, this study possesses ecological validity as it mirrors the actual-day-to-day clinical decision making of home health care nurses in two Visiting Nurse Associations. Though the emergent theory of managing patient care originated from a study of home health care nurses employed by Visiting Nurse Associations, the support of related theories on clinical decision making strongly suggests its relevance to other substantive areas of clinical nursing.

Implications for Nursing

Since clinical decision making is the heart of clinical nursing, the emergent theory of managing patient care has implications for nursing education, service, and research. The next section describes the theory's implications for these three nursing domains.

Nursing Education

The emergent theory of managing patient care has implications for the teaching of clinical decision making to the future practitioners of professional nursing. A basic implication focuses on the teaching of the core clinical and

communication skills needed in managing patient care. These skills relate to gathering and evaluating information (interviewing, physical examination, and inference of patient problems), and planning, implementing, and evaluating care plans. In addition, the skills in giving information to patients and motivating them to effectively manage their health problems are necessary. Moreover, with the increasing technology involved in the care of patients, the caring and helping aspects of patient care management need to be emphasized and reinforced in the education of nursing students.

A reexamination of the placement, content, methods of teaching, scope, and integration of these skills throughout the nursing educational curriculum is needed to enable nursing students to function effectively in the real world. In reexamining the nursing educational curriculum for the teaching of the core clinical and communication skills, the following issues need to be addressed: What information gathering and evaluation processes and strategies are taught? How are they taught? How effective are students in gathering and evaluating overt and covert information needed in managing patient care? How aware are students about non-clinical influences in their decision making? Are they aware of the complexity and ambiguity inherent in many patient care situations? Are they aware of the potential ethical dilemmas awaiting them in the real world of patient

care, given the increasing emphasis on cost containment in health care? Do the faculty recognize the role of both analysis and intuition in the decision making of students? Do faculty enhance the students' development and use of their analytical and intuitive skills? What types of information are students taught to give patients and caregivers? What are they taught to motivate patients and caregivers? What content and learning experiences should be included in the nursing curriculum to ensure that the students have both the theoretical and procedural knowledge needed to be able to manage patient care in the real world in a caring and helpful manner? These are among the key issues that need to be examined as an initial step towards the adequate preparation of students for their future role in managing patient care.

Nursing Service

An implication of the emergent theory of managing patient care focuses on the transition of novice nurses from nursing school into the real world of practice. This transition phase needs a comprehensive examination. How does nursing service ease this transition? How are novice nurses oriented to the work place? What mechanisms are in place to assist novice nurses in managing patient care? How are they made aware of the extraneous factors that influence their management of patient care? How will they learn

about and deal with the economic constraints of providing nursing care? Who will initially assist them in meeting the productivity standards of the organization? When confronted with ethical dilemmas, whom can they consult? Are there expert role models or mentors who will guide and teach novice nurses? For the nursing service employing novice nurses, these are but a few of the issues that are raised by the emergent theory of managing patient care.

Another implication involves the improvement of the clinical decision making performance of practicing and expert clinicians. What mechanisms are in place to update the practicing and expert clinicians' declarative and procedural knowledge? What rewards are fostered to encourage and sustain their quest for the most current knowledge essential to the practice of nursing?

Another implication relates to the retention of expert nurses. Do employing agencies develop effective retention strategies? How do employing agencies support expert nurses in confronting ethical dilemmas brought about by the increasing economic constraints on health care? In addressing these issues, nursing service will create an environment that will influence the use and maximization of the skills of a scarce resource--the expert nurse.

Finally, another implication pertains to the pervading economic constraints imposed on the delivery of health care services. Certain issues arise: Who is the client of

nursing service? Is it the patient or is it the payor source? What are the ethical dilemmas confronted by practicing nurses as a result of the economic limitations imposed on nursing? What avenues are available for nurses to strengthen their advocacy for patients? These are but a few of the significant issues that nursing service has to confront and resolve to withstand the increasing economic pressures buffeting nursing today.

Nursing Research

The emergent theory of managing patient care reveals the complexity of clinical decision making in nursing. Because of this complexity, clinical decision making, as a field of inquiry, offers abundant opportunities for developing multi-pronged, multi-method programs of research that aim to improve patient care by educating future clinicians to become effective clinical decision makers and efficient practicing clinicians. Thus, many of the issues raised in the implications for nursing education and nursing service can be studied systematically.

Given the rudimentary nature of the emergent theory of managing patient care, a logical next step is a program of research aimed at testing the theory. The first step in such a program of research involves the development of valid and reliable instruments to measure the emergent theory's concepts. Once the measures are developed, the

relationships between the concepts can be tested, using multivariate methods or approaches. For example, the emergent theory proposes that economic factors influence the nurse's clinical decision making. To test this relationship, instruments to measure economic factors and clinical decision making need to be developed and psychometrically tested.

Another program of research entails the extension of this qualitative study to other clinical specialties. In the program of study, the role of intuition as a legitimate mode of cognition in clinical decision making can be further examined. In addition, the impact of economic factors on the nurse's clinical decision making autonomy can be further investigated. Moreover, the ethics of clinical decision making can be explored and studied. The extension of this study into other clinical specialties would expand and clarify the proposed substantive theory and offer the potential of building a body of substantive theories that would lead to a formal theory of clinical decision making in nursing. A formal theory should include the more definitive role of intuition, economics, and ethics in the clinical decision making process. Such a formal theory can be of use in developing deeper understanding of the process of clinical decision making in nursing, thus serving as the basis for the exploration, control, and prediction of clinical nursing practice.

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APPENDICES

APPENDIX B

INFORMED CONSENT TO PARTICIPATE IN A NURSING STUDY

I, _____, a registered nurse working at _____ Home Health Care Agency, consent to participate in a study to learn how home health care nurses define and decide what to do with their patients problems.

I understand that my participation in this study means that I will be observed while performing my usual responsibilities as a registered nurse in this home health care agency. This observation includes home visits and office activities and interactions. As such, this observation may range from one day to a total of five days (spread out over the entire period of the study) of work time.

I understand that during this time the investigator may ask questions for me to clarify the observed home visits, office activities, and interactions. I understand that my answers will be tape recorded and transcribed.

I understand that my participation may cause some inconvenience due to the time involved in the data collection.

I understand that possible benefits associated with my participation in the above procedures include providing information regarding the processes used by nurses in assessing and managing patient problems. I understand such information will lead to the building of the knowledge base needed in home health nursing.

I understand that all data gathered will be held confidential and my name will not be associated with the data. I understand that some of my ideas will be quoted in the study report.

I understand that my participation is voluntary and that I may withdraw this consent and discontinue my participation in this study at any time during the study.

I understand that the study is being conducted under the direction of Felicitas A. dela Cruz under the guidance of Dr. Mary Quayhagen. I understand that I may call Ms. dela Cruz, if I have any questions about the procedure and that they be will be answered prior to my agreement to participate, at (818) 969-3434, Ext. 3271.

I understand that there is no agreement, written or verbal, beyond that expressed on the consent form. In addition, I understand that the University of San Diego Committee on Protection of Human Subjects has approved this study.

I, the undersigned, understand the above explanations and, on that basis, I give consent to my voluntary participation in this research.

Signature of Subject Date _____

Address City/State/Zip

Signature of Principal Investigator Date _____

Signature of Witness Date _____

APPENDIX C

Preliminary Questions and Probes* Related to Patient Visits

Could you tell me how you usually get your home care patient assignment? How did you get this particular home care patient?

What patient problems did you find?

Which problem is the most important? Why?

What is the next important one? Why?

What do you think is the most important to the patient?

Could you tell me how you identified the patient's problems?

What information did you have initially?

What additional information did you need?

How were you able to get it?

Thinking back, what do you feel influenced the way you went about identifying the patient's problems?

Have you seen this situation before? When?

How was it similar? How was it different?

What were you feeling during the time you were trying to figure out what the patient's problem(s) were?

How difficult was it to figure out the patient's problem(s)? Can you tell me what made it so?

What did you find particularly helpful in arriving at the patient's problems?

What did you do resolve the patient's problem(s)?

Do you feel you were adequately prepared to handle this incident?

What other professional help do you think you need to help the patient?

Do you have the resources to manage the situation?

What happened? Are you satisfied with what happened?

What would have happened if you didn't do what you did?

What outcome or results made you feel that your decisions contributed to effective patient care?

Looking back, is there anything you would have done differently?

* Indented questions are probes

SCHOOL OF NURSING

TO: Whom It May Concern

FROM: Barbara Artinian, RN, PhD
Professor, School of Nursing

DATE: January 29, 1991

SUBJECT: Statement on the external research audit of the research
by Ms. Felicitas A. dela Cruz

This statement is to certify my involvement and satisfaction with the research findings as a research auditor of Ms. Felicitas dela Cruz's grounded theory research on the clinical decision making process of home health nurses. I have reviewed her proposal initially to ascertain its suitability for conducting grounded theory research and have read the major portion of all field notes and interviews generated in the conduct of this research project to determine the fit between the categories which emerged and the data set. I have validated Ms. dela Cruz's line by line analysis of the interviews from which the initial categories were generated and the refined categories depicting the basic social process of managing patient care, the styles of clinical decision making of skimming, surveying and sleuthing, and the factors influencing the clinical decision making of home health care nurses. I have reviewed the theoretical framework that emerged from the study.

The research process used by Ms. dela Cruz is consistent with grounded theory methodology. As an exploratory and interpretive research effort, her work is excellent in terms of sensitivity and thoroughness in identifying the pertinent issues and has great relevance for an understanding of how home health care nurses do their work.