

THE RELATIONSHIP OF KNOWLEDGE OF NURSING PROCESS,
VALUE AND REINFORCEMENT TO THE QUANTITY AND
QUALITY OF WRITTEN NURSING ASSESSMENTS

by

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A Thesis

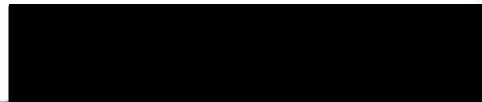
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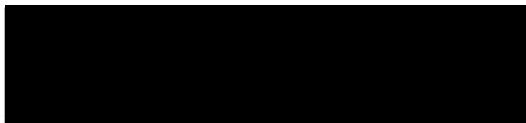
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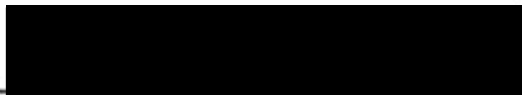
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CHAPTER I

INTRODUCTION

Review of the Literature

Written nursing care plans are said to be an essential element in the nursing process. They contribute to positive patient outcomes by serving as a "road map" for care givers. Through the plan it is believed quality care can be provided in a more efficient manner. In practice, however, nurses frequently fail to write care plans. Why is there such a discrepancy between theory and practice? This study, an extension of one done by Huckabay and Neal (1979), investigated the relationship of knowledge of nursing process, value and reinforcement to both the quality and quantity of care plans written by nurses. After a brief discussion of the nursing process, the literature review will focus on nursing care plans, knowledge of the nursing process, reinforcement and values.

Nursing Process

Current concepts of written care plans are based on their significance in the nursing process. The term "nursing process" describes a concept involving a "pattern of observation and logical thinking that is the basis for formulating the nursing care plan" (Little and Carnevali, 1976). It is the application of scientific problem solving to nursing care. In general, the nursing process is an orderly systematic manner of determining the client's problems, developing a

plan to solve them, initiating the plan or assigning others to implement it and evaluating the extent to which the plan was effective in resolving the problems identified (Yura and Walsh, 1973). The phases of the nursing process have been defined differently by various authors, but are generally identified as: (1) assessment, (2) planning, (3) implementation, and (4) evaluation (Yura and Walsh; 1973, Marriner, 1979). Little and Carnevali (1976) add diagnosis to the assessment process and prescription to the planning process.

A written assessment, the first phase of the nursing process, involves the collection, analysis and interpretation of data about patient care needs which results in a nursing diagnosis. Data about the patient come from observations and interviews with the patient and the patient's family as well as from institution and provider records and reports. An adequate knowledge base is necessary for an adequate diagnosis. In this process the data base helps: (1) determine the significance of cues in the presenting situation, (2) suggest the range of alternative explanations for the presenting cues, and (3) guide the reasoning entailed in searching the situation for additional cues to insure the soundness of the explanation (Little and Carnevali, 1976). Analysis of the data to determine patient care needs is a "process of clinical inferences from observed changes in a patient's physical or psychological condition" (Aspinall, 1976). The nursing diagnosis based on the analysis and interpretation of data, identifies the patient's current and potential problems, strengths and deficits (Ryan, 1973).

A written plan of action to meet goals related to maintenance or optimization of health is the second step of the nursing process. The

plan is based on desired outcomes or goals vis a vis specific patient problems and specific patient strengths and weaknesses. Goals may focus on behavioral changes, treatment outcomes or results of nursing interventions. The plan, built on these goals, specifies nursing interventions and includes schedules and directions for their completion. The plan is best when it is a mutually acceptable, mutually determined process carried out by the patient and/or family and nurse.

Phase three, implementation, begins once the care plan has been developed. Written documentation of nursing interventions, patient responses and current patient status provides a mechanism for monitoring implementation of the care plan. Since a plan's effectiveness cannot be evaluated unless it has been implemented, documentation of this step is important.

The fourth phase of the nursing process evaluates the original nursing diagnosis, the appropriateness of the plan, the degree to which the plan was complied with and the progress toward goals. Based on this evaluation, the plan is changed or continued in the current form.

The nursing process, therefore, is a continuing cycle in which the care plan is a vital part (Yura and Walsh, 1973). "Planning and implementing nursing care without a care plan is like exploring a strange land without a map; without something to provide direction the venture is aimless" (Bower, 1977, p. 139).

History of Written Care Plans

Written nursing care plans are not new: in fact, they were developed as a tool for team nursing during the 1940's. The written

plan provided a means of communicating the nursing care activities for each patient to all members of the nursing team (Bowers, 1977). These care plans consisted mostly of notations about medical orders with little attention given to the patient's emotional, spiritual or psychological needs (Kelly, 1966).

In the early 1960's, nurses started placing greater emphasis on nursing process, including patient care needs. The concept of a nursing care plan was enlarged to include: (1) objectives for care, (2) strategies for helping patients achieve objectives, and (3) strategies for evaluating attainment of objectives (Wagner, 1969). Although writers during this period accepted the concept of written care plans, practicing nurses had problems using them (Kelly, 1966). Long and short-term goals (objectives) were particularly difficult for practicing nurses and were often unrealistic or simply omitted (Grosichi, 1967). Toward the end of the 60's and the beginning of the 70's, an increasing number of authors further developed the concepts embodied in written care plans (Little and Carnevali, 1969; Smith, 1971; Mayers, 1972).

By 1970, the Joint Commission on Accreditation of Hospitals' (JCAH) nursing care standards included a requirement that nursing care plans be developed for each hospital patient (Kramer, 1972). In 1974, JCAH standards specified that the plan must be written. Written care plans were given further support in the 70's by state and local regulatory agencies, many of whom made written care plans a requirement for hospital licensure. The American Nurses' Association in 1973 included written care plans as one of the standards of nursing practice. No

longer could written care plans be considered an option; they became a must.

Nature of Written Care Plans

The literature supports the notion that written care plans serve many functions: they provide a mechanism for exchange of information; they help assure continuity and coordination; and, they facilitate individualized, comprehensive care. Without a written care plan, evaluation of care is difficult and quality of care is unlikely.

A well written and carefully conceived care plan provides accurate data about the patient's needs and the prescribed nursing interventions. It is available to the writer and others at any time during care. Since it is written, it alleviates distortions associated with verbal communication. The plan as a relay system, records changes in nursing approaches, goals of therapy and patient responses (Bowers, 1977). A plan that is kept current provides a continuous flow of relevant information about the patient, allowing continuity of care (Mayers, 1978; Cook, 1980; Jackson et al, 1978). When more than one nurse or one discipline is involved in delivery of care, a written care plan helps avoid errors, duplication or omissions.

Individualized care can be achieved when care plans contain approaches selected on the basis of the patient's particular needs or problems. Because each patient is unique in some way, particular interventions in individualized care planning can be selected to solve particular problems. This can be contrasted with generalized planning that bases interventions on the disease process (Bowers, 1977). Each

patient in individualized care planning has rights and privileges that must be considered when the plan is developed.

Comprehensive care plans require the inclusion of psychological social, physical and emotional needs of the patient. Care plans that focus only on the disease process or physician's orders provide only partial planning for care. To be comprehensive, contributions to the care plan should come from all members of the health care team. Observations of one member, coupled with the scientific knowledge of another, can provide a more complete picture of the patient's needs; therefore, a more holistic plan (Bower, 1977).

Coordination of care is essential when more than one service or professional is responsible. The written plan provides one mechanism necessary for coordination and communication (Mayers, 1978). In coordinated care planning, the patient becomes a recipient of the cooperative planning effort of the staff; therefore, care is less likely to be fragmented and inefficiently delivered. The patient who knows there is a plan for his or her care may experience less stress in adapting to a new situation and the nurse who uses the plan can proceed with his/her work in a more orderly fashion.

Evaluation of care is a continuous process that requires alteration of ineffective approaches and discontinuation of nursing actions no longer needed. Without a written plan, evaluation becomes impossible. Changes in nursing interventions, patient needs or schedules can be recorded and communicated through the care plan. Continuous evaluation is necessary to keep the care plan functional. A nursing care plan

will never assure quality care; however, quality is difficult to achieve without a plan (Kelly, 1966).

Reasons for Inadequate Care Plans

As much as written care plans have been promoted in the literature and regardless of the fact that they are required by most accrediting agencies, there is considerable evidence that nurses do not adequately write them. Marrimer (1979) observed that plans were being used primarily for the notation of functional duties relative to physicians' orders. Cuica (1972) noted that plans failed to reflect the patient as a total person. Reviews of kardex or patient charts by Hefferin and Hunter (1975), and Jackson et al (1980) revealed missing or grossly inadequate plans. Little and Carnevali (1976) noted nurses' complaints that care plans were impractical and impeded "their individual freedom to relate to patients in a spontaneous untrammelled fashion" (p. 224). Because of the inability to relate to patients in a spontaneous fashion, Palisin (1971) found nurses labeling care plans "a Snare and a Delusion".

Several authors have offered explanations as to why there is such a difference between theory and practice in the writing of care plans. According to Stevens (1972), part of the problem is due to "conceptual discrepancies". Nurses are educated to think there is one right answer for each nursing care problem. Fear of making an incorrect assessment or an incorrect plan of action results in a reluctance to commit the plan to writing where other nurses can see its shortcomings. Care plans do not include reasons for writing nursing orders. This

conflicts with the nurse's educational orientation which requires supportive principles for each judgement.

Little and Carnevali (1967) postulated that one cause for lack of plans is discrepancy between student and practice expectations. The detailed plan required of students with minimal productivity requirements is designed to elicit principles basic to nursing action as well as be a complete recipe for meeting all the patients' needs. The practicing nurse, facing more extensive responsibilities, finds it impossible to complete the detailed plan of student days so does nothing. Mayers (1978) postulates that nursing educators and nursing administrators fail to recognize that there is, and should be, a difference between the detailed educational plan and the efficient, functional plan for delivering nursing care.

The failure to clearly establish responsibility for initiating and updating care plans may well be another reason why plans are not written (Mayers, 1978). When it is everyone's job, it is really no one's job (Stevens, 1972). In many situations, a different nurse is assigned to the patient each day. If each of the nurses alter the care plan as he/she sees fit, a unified approach is lost. A plan that changes each day or shift is really not a plan. Primary nursing would seem the best solution for this problem since one nurse is clearly responsible and accountable for a particular patient's care plan (Manthey, 1973).

According to Mayers (1978), nursing administrators contribute to the care plan problem when they fail to clearly define the meaning and

purpose of care plans. When guidelines for defining patient problems or identifying approaches are not provided and orientation to use of care plans are omitted, staff perceive that care plans are not valued by administration. If care planning is to be effective, care givers need to be held accountable for implementation of orders written either by physicians or nurses.

Time is a factor nurses cite as a reason for not writing or updating care plans. In one of the few studies examining this problem, Beland (1969) reported that though nurses expressed a desire to spend time on more patient activities, they were indeed spending 25% of their scheduled time in the company of other nurses and not with patients. Aydelotte and Tener (1960) made similar observations. Nurses requested more staff for patient care, but when it was provided, there was no increase in patient welfare noted. The extra time was spent with co-workers rather than patients. These two studies belie the contention that time is a factor in care planning.

Even though there has been much speculation in the literature about why care plans are not written, there has been little research on the subject. Kramer (1974), in connection with an ongoing research program in 93 hospitals and public health agencies in the U.S., reported the following observations about nurses' perception of care plans:

- 1) Use and reference to plans is sporadic and superficial.
- 2) Information on plans is outdated or incomplete.
- 3) Developing the plan is not growth producing and there is no need for it.
- 4) Data on the plan overemphasized physical aspects of care.

Huckabay and Neal (1979) in a study of 76 nurses, examined three factors which they felt contributed to the problem. They believed that in order to write care plans, nurses needed knowledge of components of the nursing process, needed positive reinforcement for writing plans and needed to see value in the care plans. Based on the number of care plans the nurses could recall writing in the past week, they were designated as high or low care plan writers. The nurses then completed a questionnaire which tested their knowledge of nursing process, the amount of reinforcement they received for writing plans and the value they placed on written plans. High care plan writers had significantly higher scores in all areas.

Despite weaknesses in the study design, the elements identified by Huckabay and Neal seem to offer at least a partial explanation of why nurses continue to have problems writing care plans while the literature continues to support their need.

Relationship of Knowledge of the Nursing Process to Care Planning

The extent of the nurse's knowledge about nursing process may influence both the quantity and quality of care plans written. In order to be an effective problem solver, the nurse needs to proceed systematically through the steps of the nursing process. Knowledge of this process is essential if adequate care plans are to be developed based on logical thinking. Knowledge is defined by Gagne as "that inferred capability which makes possible the successful performance of a class of tasks that could not be performed before learning was undertaken" (1966, p. 117). Gagne asks a key question, "What would one

have to know in order to be capable of doing this task without undertaking any learning but given only instruction?" The answer to this question identifies a new class of tasks until a hierarchy of subordinate knowledge and capabilities essential to perform the final task is developed. Gagne refers to problem solving as the most complex form of learning because of the number of learning sets (classes of tasks) needed. Problem solving requires that the learner discover a combination of previously learned lower rules and apply them in the learning of higher level rules, thus, achieving a solution for a new problem. Gagne points out that persons who achieve problem solving capability can easily generalize it to a wide variety of problem situations.

The model for problem solving described by Gagne is directly applicable to the model of nursing process. A nurse is unable to formulate a plan of care unless she has already mastered the learning sets involved in combining observations into a concept (diagnosis). For example, the nurse may be cognizant that a patient has limited food intake, is incontinent and has decreased mobility, but he/she may not be able to bring these facts together into one meaningful phrase-potential impairment of skin integrity. Until the nurse masters the ability to formulate a diagnosis, he/she will be unable to develop a care plan. The successful completion of any stage of problem solving depends on the capability to do the previous stage.

In a study by Aspinall (1976), nursing diagnosis was described as the "weak link in the nursing process". Her study of 187 hospital

nurses, with varying educational backgrounds, revealed a lack of theoretical knowledge necessary to identify the cues that were pertinent in the assessment phase of the nursing process. The nurses also lacked the skills to evaluate those cues and form a diagnosis. Until nurses acquire the body of knowledge (learning sets) needed in the identification and evaluation of cues, they can not proceed to the next step (diagnosis). In turn, nurses who lack diagnostic skills can not successfully write a care plan.

The role of theoretical knowledge in the execution of nursing process is further supported by Tanner (1979) who describes a model for evaluation of the nursing students' skills in problem solving. The model lists sequential behaviors that can be used as measures of clinical problem solving ability.

Relationship of Reinforcement to Care Planning

The nurse may possess knowledge of the nursing process but not write care plans since learning, not acquisition of knowledge, insures behavior. Gagne (1965) defines learning as a more or less permanent change in behavior that has come about as a result of reinforced practice. Skinner (1968) sees learning as a process by which behavior is changed, shaped or controlled. He believes learning conditions must be organized so a satisfying activity closely follows the occurrence of the behavior. Reinforcement is central to both theories.

As conceived by Skinner, reinforcement is an arrangement of stimulus and response must be made contingent on the occurrence of certain stimulus conditions which in turn bring about other responses,

it is known as the contingency of reinforcement theory. The reinforcing state of affairs must follow the to-be-learned desirable behavior and not precede it (Skinner, 1968). Positive reinforcement, one of the major concepts of reinforcement theory, is anything that is desired or needed by the individual whose behavior is being reinforced (Holsinger, 1970). "A positive reinforcer will strengthen the response it follows and make that response more likely to reoccur" (Hunter, 1967, p. 1). Examples of positive reinforcers are approval, praise, special privileges, a good evaluation, promotion and feedback. The role of reinforcement as an external condition for problem solving provides its own feedback (Huckabay, 1980). The nurse who sees the effect of good care planning is reinforced by the positive results.

Research and application of reinforcement theory suggests that nurses can be influenced to write more care plans. There have been numerous studies done on the effect of positive reinforcement on performance (Catano, 1975; Stock, 1978; Komaki, 1978; Covington, 1979). Of particular interest is a study (Steckel, 1976) of 23 nursing personnel in a midwest medical center who were given positive reinforcement for increased written evidence of nursing assessment. In this study, a sharp increase in charting was identified during each reinforcement period; however, when reinforcement was discontinued, charting entries fell to levels lower than those found prior to reinforcement. Participants set their own goals for increased charting and their own reinforcers. The reinforcers chosen by participants included leaving early, having lighter assignments to allow more time for patient education and selected observations in other departments or

a library day. The study demonstrated that nurses write care plans in response to extrinsic rewards while those rewards are in effect, but discontinue this behavior when the rewards are absent, indicating that the care plans are not intrinsically rewarding. It is important to note that reinforcers are highly individualized and what is reinforcing to one person may not be reinforcing to another (Hersey and Blanchard, 1977).

Relationship of Valuation of Care Plans on Care Planning

A further explanation for the "why" of writing or not writing care plans lies in the value the nurse places on care plans. Value is a motivator; that is, it is "an impetus to an action directed toward a goal (Sears, 1967). Values or incentives are among the factors that increase the strength of behavior and they operate in two ways: (1) "they are goals or pleasant anticipation of repeating past experiences in the near future" and (2) "they strengthen responses which precede their delivery" (DeCecco and Crawford, 1974, p. 154).

Vroom's expectancy theory of motivation has relevance to the value nurses place on written care plans. Vroom (1964) defined expectancy as "a momentary belief that a particular outcome will follow a particular act" (p. 17). This theory assumes that an individual will have preferences among alternative courses of action based on the strength of a person's attraction to one alternative course of action vis a vis another. The actual satisfaction a person derives from the experience is called a "value". Vroom's theory is based on two assumptions about motivation. The motivation to perform a task is related to the value a

person places on the task's outcome. Motivation to perform a task is related to the person's belief that the task can be accomplished. In this framework, nurses would need to both value care plan writing and believe the task is possible of accomplishment before they would be motivated to write care plans.

According to Kramer and Treat (1972), "Inferences as to the value a nurse may perceive as important to her work group, and therefore, important to her if she is to receive rewards as a member of that group, may be obtained from the kinds of questions asked in the work setting" (p. 20). To get an idea of what nurses perceived as important in their practice, 179 RN's in 37 medical centers were asked to list the three questions they most frequently asked of people responsible to them during the course of their working day. They were also asked to list the three questions their head nurse or supervisor most frequently asked of them. Responses were grouped into patient care, system maintenance and personnel categories. System maintenance questions accounted for 38% of the "you ask" and 58% of "supervisor asks" questions. This contrasted with the patient care category where there were only 29% "you ask" and 19% "supervisor asks" responses. The results indicate nurses have been socialized by the organization to believe "keeping things running" is the area about which they will be questioned and criterion by which they will be evaluated. This study indicated that organizations and their staff value system maintenance more than patient care; therefore, patient care planning would have comparatively little value. One could predict (using Vroom's theory) that a nurse confronted with system maintenance demands and patient

care planning demands, would choose system maintenance over patient care planning because it is more highly valued.

Conceptual Framework

The conceptual framework for this study was based on Gagne's theory of learning, Skinner's reinforcement theory and Vrooms expectancy theory of motivation. In this framework, the nurse that writes quality plans in an adequate number does so because she or he has the necessary knowledge about the nursing process (a necessary learning set for writing plans), is reinforced for writing plans and values the writing of plans (see Figure 1).

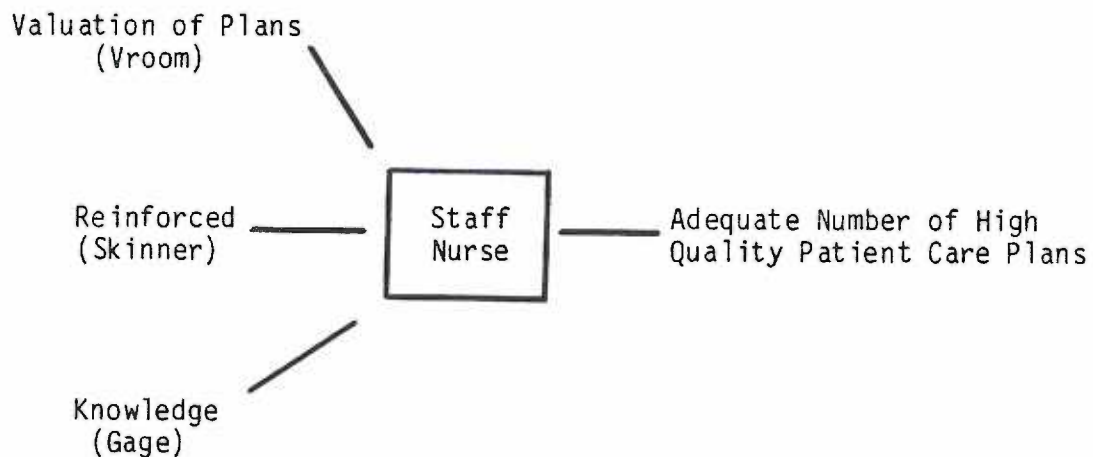


Figure 1: Conceptual framework for understanding relationship of patient care plans to values, reinforcement and knowledge.

Summary

A written nursing care plan is central to a competent nursing process since it provides information about patient status, nursing care goals and detailed plans for nursing interventions. However, there is evidence that many nurses do not write plans or if they do they are of poor quality. Lack of knowledge about the nursing process, failure to receive positive reinforcement for writing care plans and devaluation of care plans have been offered as reasons for inadequate performance in this area.

Statement of the Problem

Are the number and quality of care plans written by nurses related to their knowledge of nursing process, the positive reinforcement they receive for writing care plans and/or their valuation of care plans?

Hypotheses

- 1) There will be a positive relationship between quantity and quality of care plans and nurses who have knowledge of the nursing process.
- 2) There will be a positive relationship between quantity and quality of care plans and nurses who receive positive reinforcement of writing care plans.
- 3) There will be a positive relationship between quantity and quality of care plans and nurses who perceive value in care plans.

CHAPTER II

METHODS

The quantity and quality of nursing care plans written, or not written, by staff nurses in a metropolitan teaching hospital were correlated with written responses to questions about nursing process, reinforcement for care plan writing and value of care plans. Quantity of care plans was measured by counting the number of care plans written by each nurse during the study period; quality was measured by evaluating the initial care plan using predetermined criteria and assigning a numerical score for compliance. Knowledge of the nursing process, reinforcement of care plan writing and value of care plans were measured by a 56 item questionnaire developed by Huckabay and Neal and expanded by the researcher.

Design

The study design was an ex post facto association testing design. According to Diers (1979), association testing studies "depend on the natural variation already present in the situation" (p. 145). In this study, no attempts were made to manipulate the variables, but rather the data were collected on existing events.

Setting

The study setting was 10 adult medical and surgical units in a 425 bed teaching hospital. The units ranged in size from 14 to 30 beds and

each unit had its own specialty; such as, orthopedics, cardiology, nephrology and oncology. Nursing care delivery systems included team nursing on 2 units, total care on 5 units and primary nursing on 3 units.

This hospital's Department of Nursing policy required written care plans by an RN on all patients within twenty-four hours of admission, unless the patients were to be in the hospital less than three days. Required plan contents included a completed nursing assessment form and a statement of nursing care needs in the summary charting or on the care plan form.

Subjects

Criteria for inclusion in the study were:

- 1) Prior completion of the 4 week orientation program
- 2) Permanent assignment on one unit
- 3) Day and/or evening work schedule
- 4) Staff or assistant head nurse position.

There were 144 RN's who met criteria for inclusion in the study. A total of 89 RN's volunteered to participate and 61 (42%) completed the questionnaire. Of these 61 RN's, 11 did not write a care plan, therefore, 61 nurses were included in the analysis regarding numbers of care plans written and 50 nurses in the analysis of quality of care plans written.

Most of the nurses in the sample were under 30 years of age and had limited experience in nursing, as well as on the unit (see Table 1). Of these nurses, thirty five were educated at the baccalaureate level,

two at the masters level, fifteen at the associate degree level and nine held diplomas. The majority worked full time on eight hour shifts. Primary nursing was the most dominate mode of care with 43% of the subjects working under this system.

Table 1
Selected Demographic Characteristics of the Sample
(n = 61)

	<u>Mean</u>	<u>Mode</u>	<u>Median</u>	<u>S. D.</u>	<u>Range</u>
Age	34.5	25	30.5	10	22-61
Years Experience	5	1	2.4	5.6	1-26
Years on Unit	3.4	1	1.9	3.5	1-18

Measurement of Dependent Variables

The number and quality of care plans written by a particular nurse were the dependent variables. Measurements were obtained through review of the completed Nursing Assessment: Patient Data Base form (see Appendix A) and the statement of identified problems on the Nurse's Summary form (see Appendix B) or the Nursing Care Plan form (see Appendix C). Charts were reviewed after the patient had been on the unit at least 24 hours.

Quality of the initial care plan was determined by assessing its congruence with criteria previously established by the Quality Assurance Committee of the hospital's nursing department (see Appendix D). Twenty five items covering physical signs and symptoms, patterns of daily living, housing arrangements and patient goals were evaluated.

A quality score for each plan was computed by dividing the number of times the plan met the criterion for the item by the total number of times the criteria applied to the patient. If all criteria applied and were met in the plan, there would be a perfect score of 100. If 20 criteria applied and 20 criteria were met, there would also be a score of 100. On the other hand, if 20 criteria applied and only 16 criteria were met, there would be a score of 83.

The number of care plans written by each nurse was tallied as well as the number of day or evening shifts worked by that nurse during the three week study period. The mean number of care plans written by each nurse per shift was computed by dividing the total plans the nurse wrote by the total number of shifts the nurse worked. Variation in admission rates was controlled by tallying the number of patients admitted for more than a three-day stay on each unit. The variation was controlled for in the statistical analysis.

Measurement of Independent Variables

Knowledge of the nursing process, reinforcement of care plan writing and values about care plans were the independent variables measured using a questionnaire developed by Huckabay and Neal and expanded by this researcher (see Appendix E). The questions examined the nurse's knowledge of the steps of the nursing process, type, source and frequency of positive reinforcement received for writing a care plan and how much value the care plan had for the nurse.

Twenty five of the questions were designed to measure knowledge about the nursing process. Types of questions included: How should

information be gathered about a patient and from whom? What does the assessment phase include? How does one set priorities for care? Each question had four possible answers, only one of which was considered correct. Each correct answer generated a score of 1, while an incorrect answer or no response scored 0. A total score for knowledge about nursing process could range from 0-25.

Twenty two of the questions were designed to measure external rewards nurses received for writing care plans. Nine questions measured reinforcement from superiors which included positive social rewards: praise, attention via reading the plans and feedback about plans. The questions asked such things as: How often has your head nurse praised you for writing a care plan? How often have you seen a member of nursing administration read a plan you wrote? Answers to the questions included no response, never, rarely, at least once a month, at least once a week or every time I write a plan. Two questions measured reinforcement through utilization of care plans by peers. Two questions measured reinforcement through organizational rewards. Nine questions were designed to measure whether social rewards were perceived as positive, negative or neutral by the subjects. Answers to each question could be: like it, it makes no difference, or dislike it. The score for each question ranged from 1-3 with 1 indicating greater satisfaction with rewards.

Nine questions were designed to measure the value nurses place on the writing of care plans. The following are examples of these questions: If you were a patient, how valuable would it be for the nurses to have a written plan for you? How valuable is a written plan

for patients with obvious physical or emotional problems? What value are written care plans in evaluating the performance of a nurse? Subjects placed a numerical value by each statement on a scale ranging from 0-9 with 0 representing not valuable and 9 representing extremely valuable.

Extraneous Variables

Each subject was asked to respond to questions about age, highest degree in nursing, length of employment at the hospital, length of time on the current unit, full or part-time employment, and length of usual work shift.

Validity and Reliability of the Tool

Validation of the original tool was done by Huckabay and Neal via a ten member judge panel and face validity was established through the literature. The fifteen questions measuring knowledge added by this researcher had face validity through the literature.

Reliability for the original instrument was obtained by a test-retest of 15 nurses administered two hours apart. Using the Spearman-Rho correlation formula, the score for the knowledge of nursing process was .86, for the reinforcement section .89, and for the values section .80, all significant at the .01 level. The reliability of the expanded tool was retested by this researcher employing a two week interval for the test-retest of 14 nurses. Using the Spearman-Rho correlation formula, the score for knowledge of nursing process was .67, for reinforcement .76 and for value .95, all significant at the .01 level.

Data Collection Procedures

Permission to conduct the study was sought through Nursing Administration of the selected hospital, in accordance with the procedure provided by the facility (see Appendix F). Arrangements were made to have the Care Plan Questionnaire tested for reliability by permanent night shift RN's because they would not be study subjects.

Data related to the quality and quantity of care plans were collected entirely by the researcher. Surveillance of the charts was done by the researcher in a manner similar to the Quality Assurance (Q.A.) audits done by the hospital. The Q.A. audit forms were used for data collection and staff were told it was a care plan audit. The unobtrusiveness hopefully avoided any bias introduced by knowledge of the study.

Six weeks after the care plan data were collected, the study was explained to the nursing staff on the selected units. An RN with no administrative responsibility distributed questionnaires to 89 RN's who volunteered to participate and met the study criteria. A cover memo attached to the questionnaire stated that completion "indicated informed consent to participate" (see Appendix G). Completed questionnaires were returned by 61 nurses. The data about quality and quantity of care plans were matched with the corresponding questionnaire and coded prior to being returned to the researcher to preserve anonymity of participants.

Analysis of Data

Pearson Product - Moment Correlation Coefficients were used to

determine the relationships between the dependent and independent variables of this study. In order to control for the possibility that each nurse did not have equal opportunity to write a care plan based on the number of admissions to the unit, a Partial Correlation Coefficient formula was computed controlling for number of admissions. Stepwise multiple regression analysis was the method used to understand the additive effects of the independent variables on the dependent variables. This method tested all the possible combinations to determine which sets of variables were significant. Regression coefficients were used in the analysis. Although 61 nurses participated in the study, missing data caused variations in the n's tabulated in the study.

CHAPTER III

RESULTS

Description of Variables

The variables measured in this study included the quantity and quality of care plans, the nurse's knowledge of nursing process, the amount of reinforcement the nurse reviewed and the nurse's valuation of care plans.

Quantity of Care Plans

A total of 342 patients were admitted to the 10 medical-surgical units of the hospital during the three week study period. Not included in this total were patients expected to be hospitalized less than three days, who were transferred to another unit or who went to surgery within the first 24 hours. A review of the patient records at the end of 24 hours found care plans completed on 288 patients and plans missing on the remaining 55 records.

The staff on these 10 units included 144 full and part-time RN's who worked the day or evening shift. Sixty-one nurses (42%) agreed to participate in the study. Eleven nurses in the study wrote no care plans and the average nurse wrote 2.5 plans during the three-week study period. Two nurses averaged one plan every other shift they worked. A total of 106 care plans were written by the nurses in the study for an over all average of 1.7 plans written in the three-week period. The 83 day and evening nurses not included in the study group wrote 156 plans

for an average of 1.9 plans per nurse. There were 26 care plans completed by LPN's even though hospital policy assigned this function only to RN's.

Quality of Care Plans

The quality of care plans, as described in this study, were relatively high. One needs to remember that the researcher looked only at the initial plan which consisted of the Nursing Assessment: Patient Data Base form and the summary statement of the patient's problems or needs. No other elements of the care plan were evaluated. If all care plan criteria were met, a score of 100 was possible. Three nurses maintained an average score of 100 for all plans they wrote. The mean care plan quality score was 85 with a standard deviation of 13, and a range of 43-100. More than 90% of the care plan criteria were met by 26 nurses. Eleven nurses wrote no plans, hence, were excluded from the quality portion of the study.

Knowledge of the Nursing Process

The knowledge of nursing process section of the questionnaire contained 25 questions, each of which had one correct answer for a possible score of 25. Scores ranged from 6 to 23 with a mean of 18.6 and a standard deviation of 2.97. Sixty percent of the nurses had scores of 18 or higher indicating an adequate knowledge of the nursing process by most of the nurses in the sample.

Reinforcement of Care Plan Writing

Reinforcement scores indicated that the nurses received little or no positive social reinforcement for writing care plans even though they would like such reinforcement. Reinforcement by superiors (nursing administrators, head nurses and inservice staff) was rated never or rare. The mean score was 1.59, mid way between never and rarely, with a standard deviation of .46 (see Table 2). Eighty-three percent of the respondents indicated they never heard a nursing administrator praise them for writing a care plan and 88% thought comments from them about care plans were rare. The majority of the nurses (80%) said they rarely received praise from their head nurse for writing plans while 26 nurses (43%) indicated that the head nurse read their care plans at least weekly. Only 25% of the nurses said they had received comments from head nurses on how the plans were written. Nearly all (90%) of the nurses had received no praise or feedback from the inservice staff.

Utilization of care plans by peers was another measure of reinforcement. According to 63% of the sample, some nurses on all shifts read their plan while only 4% indicated no one read them. The belief that some nurses on all shifts carried out the plan was supported by 83% of the respondents.

Reinforcement by Organizational Rewards was the subject of another group of questions. When asked if writing care plans played a part in salary increases, 94% of the nurses said they didn't know or not at all. A similar number of nurses believed care plan writing had no effect on promotions.

Table 2
 Mean Score of Reinforcement Variables
 On Scale From 1 (low) to 5 (high)
 (n = 59)

	Mean	S.D.	Range
Reinforcement by Superiors	1.59	.46	1-3
Utilization by Peers	4.33	.96	1-5
Reinforcement by Organizational Rewards	1.13	.44	1-5

When respondents were asked whether they would like, dislike or feel neutral about positive reinforcement from nurse administrators or head nurses, the majority (90%) indicated they would like it while only 4% indicated they would dislike it. More neutral feelings (20%) toward reinforcement from inservice staff were reported, but a greater number of nurses (76%) indicated they would like it from them also. The scores related to the desire for reinforcement for care plan writing ranged from 1-3 with 1 indicating dislike and 3 indicating like. The mean was 2.8 with a standard deviation of .3.

In summary, nurse superiors give very little praise or feedback to nurses who write care plans although head nurses do sometimes read them. The organization does not encourage care plan writing by salary increases or promotions. The main source of reinforcement is other nurses who usually read and carry out the plans.

Valuation of Care Plans

Care plans appear to be valued by nurses in this sample (see Table

3). On a range of 0 to 9 with 9 representing the highest value, care plans received a mean score of 6.76. The nine questions looked at care plans under different circumstances. For purposes of this study, a score of 0-2 was assigned low value, 3-6 was considered moderate and 7-9 was considered high.

Table 3
Mean Score of Valuation Variables
(n = 57)

	<u>Mean</u>	<u>S.D.</u>	<u>Range*</u>
Value of plan if nurse were patient	7	2.7	0-9
Value of assessing needs- incorporate into plan	7.5	1.7	2-9
Value for short term patients	5.3	2.4	0-9
Value for patient with obvious physical or emotional needs	8.4	1	4-9
Value in helping adapt to illness	7.3	1.8	1-9
Value of plan written by other nurses	6.7	2	1-9
Value in evaluation performance	5.2	2.7	0-9
Value for individualizing care	6.3	2.4	1-9
Value communicating information	7	2.2	1-9

*Scores from 0-2 low, 3-6 moderate, and 7-9 high

When the nurses were asked how important a care plan would be if they were patients, 54% gave a rating of 7 or higher. Only 5% of the respondents said the plan would have low value. Assessing patient needs and incorporating them into the care plan was given high value by 60% of the nurses. Care plans for patients in the hospital less than three days was given low value by 15% of the sample and high value by

20% of them. The need for care plans on patients with obvious physical or emotional problems was rated 9, extremely high by 70% of the sample. The value of a care plan in helping a patient adapt to illness or hospitalization was also seen to be high by 76% of the nurses. When asked if plans written by other nurses were helpful, a slightly lower percent gave a high rating. Approximately 50% of the nurses believed care plans had moderate value and 20% believed they had low value in evaluating the performance of a nurse. Care plans as a mechanism for providing individualized care and communicating information were highly valued by 50% of the nurses.

Test of Hypotheses

To assess the degree of correlation between knowledge of nursing process, reinforcement for writing care plans, the value seen in care plans and the quantity and quality of care plans, the Pearson's Product Moment Correlation Coefficient was used. After this initial analysis, the data was again analyzed controlling for the number of admissions.

Knowledge of Nursing Process and Quality and Quantity of Care Plans

Knowledge of the nursing process had no significant effect on the quality of care plans. Controlling for admissions, the correlation remained insignificant. Likewise, there was no significant effect on the quantity of care plans. The correlation remained insignificant when controlling for admissions. The hypothesis that there would be a positive relationship between quality and quantity of care plans and nurses who had knowledge of the nursing process was not supported.

Reinforcement For Writing Care Plans and Quality and Quantity of Care Plans

Certain segments of the reinforcement scores were significantly correlated with the quality and quantity of care plans (see Table 4). Reinforcement From Superiors was significantly correlated with both the quality and quantity of care plans when admissions were controlled for ($r=.27$; $p < .05$). Utilization by Peers and Organizational Rewards as sources of reinforcement demonstrated no significant correlation with either the quality or quantity of care plans. Desire for reinforcement was significantly correlated with the quality of care plans both before ($r=.32$; $p < .01$) and after controlling for admissions.

Table 4

Relationships Between Reinforcement
and
Quantity and Quality of Care Plans

	Quantity ^a	Quantity/ Control Adm.	Quality ^b	Quality/ Control Adm.
Reinforcement From Superiors	.22	.27*	.24	.27*
Utilization by Peers	.23	.18	.07	.14
Organizational Rewards	.03	.02	.17	.20
Reinforcement Desire For	.14	.15	.32**	.32**

$a_n = 58$
 $b_n = 47$
 $*p < .05$
 $**p < .01$

The hypothesis that there would be a positive relationship between quantity and quality of care plans and nurses who received positive reinforcement for writing care plans was partially supported.

Value of Care Plans and Quality and Quantity of Care Plans

The value a nurse held of written care plans showed no significant correlation with the quantity of care plans written. There was, however, a significant correlation between value and the quality of care plans ($r=.35$; $p < .01$). It appears that nurses who value care plans place more effort in the writing of the plans. Controlling for admissions, the relationship between value and the quality of plans remained significant ($r=.31$; $p < .01$).

The hypothesis that there would be a positive relationship between quantity and quality of care plans and nurses who perceived value in care plans was partially supported.

Combined Effect of Knowledge of Nursing Process, Reinforcement and Value on the Quantity and Quality of Care Plans

Stepwise multiple regression indicated that knowledge of nursing process, reinforcement and valuation of the care plan contributed nothing to understanding the variance in the quantity of care plans (see Table 5).

Stepwise multiple regression indicated that the valuation of care plans contributed to understanding 12% of the variance in the quality of care plans (see Table 6). Desire for reinforcement explained an additional 6%.

Table 5
 Combined Relationship
 of
 Knowledge of Nursing Process, Reinforcement and Value
 on the Quantity of Care Plans

	<u>n</u>	R Square ^a	RSQ Change ^b	Simple R ^c
Reinforcement from Superiors	58	.046	.046	.215
Reinforcement Utilization by Peers	58	.087	.040	.176
Value	57	.096	.009	.129
Reinforcement Desire For	58	.1	.004	.144
Reinforcement	58	.102	.002	-.030

Table 6
 Combined Relationship
 of
 Knowledge of Nursing Process, Reinforcement and Value
 on the Quality of Care Plans

	<u>n</u>	R Square ^a	RSQ Change ^b	Simple R ^c
Value	46	.12	.12	.352*
Reinforcement Desire For	47	.184	.06	.315*
Reinforcement From Superiors	47	.230	.046	.243
Reinforcement Organizational Rewards	47	.255	.024	.17
Knowledge	47	.275	.020	-.061
Reinforcement Utilization by Peers	47	.289	.004	-.141

^aR Square = coefficient of determination

^bRSQ Change = cumulative value of coefficient of determination

^cSimple R = multiple correlation coefficient

* $p < .01$

CHAPTER IV

DISCUSSION

This study investigated whether or not certain theoretically derived factors influenced care plan writing. It was hypothesized that there would be a relationship between the quantity and quality of written care plans and the nurse's knowledge of nursing process, the amount of positive reinforcement received and the value perceived in care plans. Study findings indicated that these elements accounted for none of the variance in the quantity of care plans, but did explain 18% of the variance in the quality of care plans written.

Quantity of Care Plans

The findings in this study are quite different from those noted in the original study done by Huckabay and Neal. Huckabay and Neal found significant correlations between the number of care plans written and knowledge of the nursing process, reinforcement for writing plans and valuation placed on written care plans. They also found a positive correlation between the amount of reinforcement received and the amount of value the nurse placed on care plan writing. The findings were unsupported by the current study; no significant relationships were noted between the number of plans written and the independent variables.

An interesting difference between Huckabay and Neal's study and this study was the number of plans written. In Huckabay and Neal's

study, nurses reported writing or revising an average of 3.3 plans per week. In the current study, actual tabulation revealed nurses wrote less than one plan per week. It should be noted that the current study did not include revisions which may account for a portion of the variation. Also, the ratio of RN's to patients could have been quite different. The original study may have had fewer nurses to care for more patients; thus, providing more opportunities to write care plans.

In this study, statistical analysis revealed that 14% of the variance in the number of plans written could be explained by admission rates. Perhaps, assignments of specific patients to specific nurses could explain more variance. Completion of the initial plan appeared to be done most frequently by the nurse who was assigned to admit the patient to the unit. If this did not occur, the plan usually was omitted. Sixteen percent of all charts reviewed were missing care plans. Though policy required a care plan to be completed within 24 hours of admission, no specific nurse was held accountable for the plan's completion.

Quality of Care Plans

Though the quantity of care plans written by the nurses was low, the quality of the plans was relatively high as measured for this study. The quality of care plan writing in this study was determined by an analysis of the patient data base and initial problem statement.

The portion of the care plan that contained goals and nursing interventions was not reviewed; however, the researcher noted that this section was frequently missing even though the assessment section and

problem statement was complete. These findings are similar to those reported in the literature (Ciuca, 1972; Case and Rooney, 1982). Aspinall's (1976) belief that nursing diagnosis is the "weak link" in care planning offers additional explanation for the incomplete care plans. The nurse who experiences difficulty analyzing the data is unable to determine patient needs and fails to complete the plan.

Knowledge of the Nursing Process

Participants in this study appeared to have adequate knowledge of nursing process, but there was no significant correlation of the knowledge score with either the quantity or quality of care plans. Gagne's theoretical framework for learning was not supported by these findings. This discrepancy may be related to the tool used to measure knowledge. The questionnaire assessed the nurse's ability to identify rather than perform the steps in the nursing process. According to Gagne (1970), written test designs for assessment of problem-solving competence is in its embryonic stages. This is supported by Tanner (1979) who states that the ideal test to measure problem-solving skills required in the nursing process would include both content and simulation exercises. Failure to support the hypothesis that there would be a positive relationship between care plan quality and knowledge of the nursing process may rest with the methods of measurement.

An interesting extraneous finding of this study was the significant correlation between knowledge of nursing process and the nurse's desire for reinforcement. One possible explanation for this

relationship may be that nurses who like to receive positive feedback are better test takers. They may place more importance on getting a good score than do nurses who feel indifferent about positive reinforcement from superiors. The relationship may also be spurious.

Reinforcement

Though it was not statistically significant, there was a weak correlation ($r=.24$; $p<.058$) between the quality of care plans and the reinforcement by superiors. The principle of positive reinforcement states that a desired behavior can be increased by providing reinforcement for that behavior. It should be possible to increase the number of care plans a nurse writes by use of positive reinforcement such as praise and feedback. A probable explanation for the low correlation was the extremely small amount of positive reinforcement that was perceived by the nurses. The nurses reported that nurse administrators and inservice staff rarely read or commented on care plans nor did they praise the writer. One needs to ask whether this was true or did reinforcement from this source have such little value it was forgotten? If it is true, then nurse administrators and inservice staff, by failing to reinforce care plan writing, have contributed to the problem. Currently, this group conducts audits to identify care plan deficiencies when in fact their time might be better spent reinforcing those nurses for writing plans. The opportunities for raises or promotions are limited, but recognition of the nurse who writes quality care plans can be given freely.

The nurses indicated head nurses read their plans, however, they did not recall receiving praise or comments about how well they did their care plans and did not know if writing plans affected the evaluation of their performance. This suggests that head nurses did not give feedback to care plan writers nor did they make known the value they held for care plans relative to patient care or job performance. If reinforcers are to be truly reinforcing, then nurses need to be able to identify favorable consequences (Steckel, 1976) from head nurses.

Though the nurses believed their care plans were read and carried out by other nurses on all shifts, there was no significant correlation between reinforcement through utilization of care plans by peers and the quality or quantity of care plans. If plans are read, they must be serving some useful function for the care giver. However, when the author of a large portion of the care plan is anonymous, care givers are unable to give direct feedback to the writer. Reinforcement does not occur.

Reinforcement through organizational rewards had no measurable effect on the quality or quantity of care plans. Study findings suggest that nurses were unaware of any raise or promotion consequences due to writing or not writing care plans. If nurse administrators feel that the care plans are an essential part of the nursing process, then they must provide tangible rewards for care plan writing. Standards of performance need to include expectations for care plan writing and performance evaluations need to speak to the nurse's compliance with the standard.

The only reinforcement measure which demonstrated a statistically significant correlation with care plan quality was desire for reinforcement ($r=.27$; $p < .05$). The majority (95%) of nurses indicated they would like it if nurse administrators and head nurses read their plans, commented on the plans or praised them for writing them. The nurses reported more neutral feelings about reinforcement from inservice staff. This is easily understood when one identifies lines of authority. Inservice staff have no line authority in this setting and are not involved in performance evaluations. Organizational rewards and job security come from head nurses and nurse administrators, not inservice staff.

Valuation of Care Plans

The value nurses perceived in care plans was significantly correlated with the quality of care plans in this study. This finding adds support to the validity of Vroom's expectancy theory of motivations. Nurses are motivated to write care plans if they expect that care plans will result in positive outcomes. Care plans will more likely be written if the nurse believes the plan will help the patient, better meet his needs, or help the nurse organize her care.

The expectancy theory speaks not only to the value one places on a tasks outcome, but also to the persons belief that the task can be accomplished. Hence, a nurse may perceive value in a care plan, but believe she lacks the skills necessary to write one. Inservice staff can play a vital role in helping nurses develop skills in the nursing process and its tangible outcome, the written care plan.

The overall value nurses expressed for written care plans was moderately high: 6.75 on a scale of 0-9. The moderate value score may be explained by the fact that this section of the questionnaire examined a number of concepts related to value of care plans. The nurses assigned high value to some functions of care planning and low value to others. Meeting the needs of patients with obvious physical or emotional problems and helping patients adapt to illness or hospitalization received high ratings. Care plans for patients staying in the hospital less than three days were rated as having low value. For purposes of performance evaluations, evidence of care planning was perceived as having moderate value. Compressing the scores of all the concepts into one resulted in a mid-range score.

These findings suggest that nurses saw care plans as being valuable under certain conditions; for instance, when patients exhibited overt problems. In other situations, such as, where patients were hospitalized for short stays, the nurses did not believe care plans were needed. Although nursing literature says the nursing process (and care planning) is the essence of quality care, perhaps there is need to listen to what the practitioners are saying. Either nurses have not been taught the value of this care plan writing or, indeed, written care plans may not always be essential components of nursing process.

Study Assumptions

It was assumed that all nurses in this study had equal responsibility for writing care plans. The three week period chosen to

collect data was believed to be typical in terms of workload, types of patients, staff nurse performance and head nurse expectations.

Study Limitations

1. The care plan quality tool measured only minimum requirements for care plans and was not discriminating since it did not evaluate the content of the nursing assessment data base or the accuracy of the problem statement. As a result, there was minimal variation in the quality score.
2. No attempt was made to control for variations in the opportunities nurses had to write care plans during the study period. These included:
 - A) The ratio of RN's to patient admissions per unit
 - B) The number of shifts or days of the week the nurse worked.
3. The amount of work nurses were required to accomplish per shift was not considered.
4. Only the assessment and problem statement portion of care plans were evaluated. The goals and nursing orders were omitted because the author of this portion could not be identified.

CHAPTER V

SUMMARY, IMPLICATIONS AND SUGGESTED FUTURE STUDIES

Summary

Though written care plans have long been supported in the nursing literature as being central to the nursing process and essential for quality care, there is considerable evidence that nurses do not write them or if they do they are of poor quality. The search for an explanation generated the following questions: Are the number and quality of care plans written by nurses related to their knowledge of the nursing process, the positive reinforcement they receive for writing care plans and/or their valuation of care plans?

The conceptual framework for this study was based on Gagne's theory of learning, Skinner's reinforcement theory and Vroom's expectancy theory of motivation. In this framework, a nurse who has the necessary knowledge about nursing process (a necessary learning set for writing care plans), who is reinforced for writing care plans, and who values the writing of plans will write adequate numbers of quality care plans.

In this study, the quantity and quality of nursing care plans written (or not written) by 61 staff nurses in a metropolitan teaching hospital were correlated with written responses to questions about nursing process, reinforcement for care plan writing and value of care plans. The quantity of care plans was measured by counting the number of care plans written per shift by each nurse during the study period; quality was measured by evaluating the initial care plan using

predetermined criteria and assigning a numerical score for compliance. Knowledge of the nursing process, reinforcement of care plan writing and value of care plans was measured by a 56 item questionnaire developed by Huckabay and Neal and expanded by the researcher.

Prior to the study, three hypotheses were made. The first hypothesis: There will be a positive relationship between quantity and quality of care plans and nurses who have knowledge of the nursing process, was rejected. The second hypothesis: There will be a positive relationship between quantity and quality of care plans and nurses who receive positive reinforcement, was supported. The third hypothesis: There will be a positive relationship between quantity and quality of care plans and nurses who perceive value in care plans was partially supported.

The average number of care plans written by nurses in this study was low, less than one per week, but the quality of plans was high. Questionnaire results indicated the nurses had adequate knowledge of nursing process, received minimal amounts of reinforcement from nurse administrators, inservice staff and head nurses for writing care plans, and perceived care plans overall as having moderate value.

Implications

The findings indicated there is little reinforcement or reward given for care plan writing in this setting. It behooves nurse administrators, head nurses and staff nurses to increase the amount and frequency of reinforcement in order to improve the quality of the care plans as well as make known the value they perceive in care plans.

Another implication of the study relates to the value staff nurses see in care plans. Only 30% of the nurses saw care plan writing as being highly valuable in evaluating the nurse's performance. If nurse administrators and head nurses feel care plans are central to the nursing process, then care plan writing behavior needs to be included in performance evaluations. Secondly, nurse administrators need to explore with their nursing staff whether or not written care plans are always essential. For certain patients, written care plans may be like giving the nurse a road map when she already knows the way home.

Suggested Future Studies

1. Studies are needed to determine whether care plans are essential for all patients.
2. The relationship of knowledge of nursing process to the quality of care plans needs to be retested using a revised tool which includes simulation tests as well as content for measuring knowledge.
3. The quality of care plans on units using primary nursing need to be compared with the quality of care plans on units using the total patient care system.
4. Compare needs of patients for whom care plans are written with patients for whom no care plans are written to identify circumstances for which care plans are valued by nurses.
5. Correlate quality nursing care plans with the quality of care being given.

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APPENDICES

APPENDIX A

Nursing Assessment: Patient Data Base

NURSING ASSESSMENT: PATIENT DATA BASE

Unit No.
Name
Birthdate

I. IDENTIFYING DATA

Date _____ Admitted per Ambulatory From: ADM Accompanied by: _____
Time _____ Stretcher OPC Expected visitors: _____
Unit _____ Wheelchair ER _____
Emergency contacts: (family/friend/minister) _____

Beliefs affecting hospital care: _____
Communication problems: _____
ADL Aides: _____

II. CURRENT STATUS

VITAL SIGNS:
T _____ PULSES: _____ RESP. RATE _____ BP (lying/standing) _____ Mental Status: _____
Wt: _____ Apical _____ QUALITY _____ R. arm ____/____
Ht: _____ Radial _____ PATTERN _____ L. arm ____/____
RHYTHM: _____

OTHER: _____
PRESENTING PROBLEM(S): (Subjective and objective data; effect on patient) _____

HEALTH HISTORY: (Include chronic illness, hospitalizations with emphasis on feelings about care, health maintenance habits) _____

ALLERGIES: (List allergens and reactions; if none, so state) _____

MEDICATIONS/TREATMENTS: (list name, dose, frequency, time of last dose; disposition if meds brought with patient; if none so state) _____

INTEGUMENT: (Comment on skin & mucous membranes-color, turgor, texture, presence of any lesions) _____

PATIENT'S GOALS/EXPECTATIONS: _____

AFFECT/BEHAVIOR: _____

III. **FUNCTIONAL STATUS:** (Check as normal (N) or impaired (I); comment specifically on impaired function and compensatory aides).

N		I
	Vision	
	Hearing	
	Sensation	
	Circulation	
	Respiration	
	ROM	
	Gait	
	Feeding	
	Bathing	
	Dressing	
	Defecation	
	Urination	

IV. **PATTERNS OF LIVING:**

Self description of typical day: _____

FOODS: (Include usual diet, times of eating, likes, dislikes, problems of appetite, chewing, swallowing, smell or taste) _____

FLUIDS: (Include usual beverages, amounts, likes, dislikes, problems) _____

REST/SLEEP: (Include times, aides, problems) _____

HYGIENE: (Include bath/shower preference, time of day, oral care, any special skin care) _____

ELIMINATION: (Include frequency, times of day, problems, aides for stool and urine) _____

OCCUPATION/RECREATION: _____

HOUSING: (Include type, household members, problems related to illness) _____

DEPENDENCY/INDEPENDENCY: (Include what pt. does for self, others, has others do for pt.; how others know what pt. wants; how pt. feels when asking help) _____

V. **POTENTIAL DISCHARGE NEEDS:** (Check appropriate box)

Referrals

- Continuing Care Coordinator
- Social Service
- Dietitian
- P.T.
- O.T.

Teaching

- Medications
- Diet
- Activity
- Hygiene
- Other _____

Equipment/Supplies

- Dressings
- _____
- _____
- _____

Signature: _____

APPENDIX B

Nurse's Summary Form

APPENDIX C
Nursing Care Plan Form

APPENDIX D

Care Plan Quality Assessment Tool

INSTRUCTIONS: Refer to the medical record, NURSING ASSESSMENT: PATIENT DATA BASE in answering the following questions.

REVIFW ONLY PATIENTS WHO HAVE BEEN IN HOSPITAL AT LEAST 24 HOURS

CRIT. NO.	PASSES REVIEW?			CRITERIA Check Yes, No or NA (not applicable) to questions.	COMMENTS Explain No & NA responses	CORRECTIVE ACTION
	Yes	No	NA			
1.11				Is temperature noted?		
1.11				Is pulse noted?		
1.11				Is resp: rate noted?		
1.12				Is BP recorded?		
1.12				Is BP lying/sitting if patient at risk for orthostatic change or reports hypotensive episodes, recorded?		
1.13				Is level of consciousness recorded?		
1.13				Is orientation recorded?		
1.42				Is height noted?		
1.43				Is weight noted?		
1.14				Is pain or discomfort described?		
1.21				Are allergic reactions to medications described?		
1.22				Are allergies to medication described?		
1.23				Are current treatments described?		
1.61				Are observations of skin recorded?		
1.71				Is affect or behavior at time of admission recorded?		

DATA RETRIEVAL: Medical-Surgical generic screen

CRIT. NO.	PASSES REVIEW?			CRITERIA Check Yes, No or NA(not applicable) to questions.	COMMENTS Explain No & NA responses	CORRECTIVE ACTION
	Yes	No	NA			
1.72				Are patient's goals or expectations noted?		
1.31				Is gait noted as normal or impaired?		
1.32				Is range of motion noted?		
1.33				Are mobility aids listed or stated none when gait or ROM are noted impaired?		
1.41				Is usual diet noted?		
1.44				Are functional feeding problems of taste, smell, chewing, swallowing, feeding & appetite identified?		
1.51				Is functional status of elimination noted?		
1.52				Is what is done for identified problems with elimination recorded?		
1.62				Is functional ability with dressing and bathing recorded?		
1.73				Are data on patient's housing noted?		
1.74				Are independency/dependency patterns noted? (ie, with support people)		
TOTAL #				ASSESSMENT		
				Initial Problem Statement		

APPENDIX E

Care Plan Questionnaire

SECTION I

LEVEL OF KNOWLEDGE OF NURSING PROCESS

This scale is designed to elicit information about your understanding of the nursing process as it relates to care planning.

Please check one answer to each question: PLEASE DO NOT leave any questions unanswered.

1. In order to write an individualized nursing care plan, you need some information regarding the patient's perception of his illness. Check the best method of obtaining this information.

- 1) have an LVN/LPN or aide interview patient on admission
- 2) the patient's doctor
- 3) admission interview with patient and/or family by R.N.
- 4) have patient and/or family complete a nursing history form

2. When patient gives you information that conflicts with your own value system, would you....

- 1) ask for more information on the subject?
- 2) tell the patient your opinion?
- 3) accept what the patient says without judgement?
- 4) change the subject?

3. Please check the item below that best defines a patient need/problem/concern:

- 1) something the doctor sees as necessary for the patient
- 2) anything vital or related to the patient's well-being or welfare
- 3) something the nurse sees as necessary for the patient
- 4) something the patient wants

4. When a patient presents multiple (three or more) needs/problems/concerns at one time, how do you select the one(s) on which to work first?

- 1) follow guidelines based on a hierarchy of needs
- 2) I just seem to know which ones to work on through experience
- 3) I try to do something about each one
- 4) ask the patient

5. Please check the item below that defines a long-range goal or objective, as used in nursing care plans:

- 1) specific results of nursing care
- 2) precise, standardized approaches to care
- 3) tentative and intermediate plans for care
- 4) desired end results of an illness or hospitalization

6. Check the item which is an example of a long-range goal or objective.

- 1) Mr. J. will ambulate to the nurses' station and back BID.
- 2) Following a massive M.I., Mr. M. will be assisted to live within the physical limitations of his illness.
- 3) Help Mrs. Smith to walk on crutches.
- 4) Teach Mrs. B. to cough and deep breathe.

7. Short-range goals or objectives may be defined as:

- 1) end result of the hospitalization
- 2) desired short-term results of a patient's need/problem/concern
- 3) routine nursing care
- 4) short-term goal of the illness

8. Check the item that is an example of a short-range goal or objective:

- 1) Give Digoxin 0.25 mgms. daily
- 2) force fluids
- 3) reassurance
- 4) prevent skin breakdown

9. Nursing actions, solutions and approaches are designed to eliminate or reduce the patient's needs/problems/concerns. How do you decide which specific ones to use with any one patient?

- 1) am not aware of any selection process
- 2) select one(s) of the patient's choice
- 3) select one(s) designed to reach the short-range goal or objective
- 4) select one(s) based on my experience

10. Check the item that best defines "nursing actions, solutions or approaches."

- 1) the method of "how" the nurse plans to reach to short-range goal or objective
- 2) desired end results of the patient problem/need/concern
- 3) implementation of orders
- 4) routine nursing care

11. The adequacy of a nursing care plan depends first on which of the following:

- 1) realistic objectives expressed in behavioral terms
- 2) specific behavioral cues to use in evaluation
- 3) nursing orders which consider the patient's individuality
- 4) accurate assessment of patient's needs

12. Which of the following is the best statement defining nursing process?

- 1) the collection of data about a client who is to receive care
- 2) the application of scientific problem solving to nursing care
- 3) an analysis of the care a nurse gives the client
- 4) the means of providing a common language in the hope of unifying professionals.

13. Which of the following components of the nursing process implies action on the part of the nurse?

- 1) assessment
- 2) planning
- 3) implementation
- 4) evaluation

14. The first phase of the nursing process is:

- 1) planning
- 2) evaluation
- 3) assessment
- 4) intervention

15. The assessment phase of the nursing process includes:

- a. data collection
- b. goal statements
- c. nursing diagnosis
- d. nursing actions

- 1) A, C
- 2) A, C, D
- 3) A, B, C
- 4) All of the above

16. Which of the following represents the outcome of the assessment phase of the nursing process?

- 1) Goal statement made
- 2) Evaluation criteria selected
- 3) Nursing diagnosis stated
- 4) Care documented

17. Nursing diagnosis is defined as:

- 1) the outcome of the planning phase of the nursing process
- 2) a statement of existing or potential negative health behavior related to those factors which influence this response.
- 3) a statement of the person's beliefs about why he has entered the health care system
- 4) the end phase of the nursing process which guides all nursing care

18. The last phase of the nursing process is:

- 1) planning
- 2) evaluation
- 3) assessment
- 4) intervention

19. Benefits of using written records to communicate health care workers include:

- a. increased quality of care
- b. prevention of duplication of care
- c. provision for continuity of care
- d. provides evaluation tool

- 1) A, B
- 2) C, D
- 3) B, C, D
- 4) All of the above

20. Assessment within the nursing process is a:

- 1) random gathering of facts
- 2) purposeful process designed to provide a foundation upon which to build a nursing diagnosis
- 3) the least important phase of the nursing process
- 4) purposeful process designed to provide information on the effectiveness of care provided

21. In assessing:

- 1) the nurse is obligated to investigate a wide variety of factors
- 2) the person is obligated to supply information requested by the nurse
- 3) both are true
- 4) neither is true

22. Which of the following are methods for collecting data?

65

- a. observation
- b. reading references
- c. inspection/examination
- d. interviewing

- 1) A, B
- 2) C, D
- 3) A, C, D
- 4) All of the above

23. In doing a health assessment, sources for collecting data include:

- a. the person himself
- b. family/friends
- c. records/reports
- d. health team members

- 1) A, B
- 2) C, D
- 3) A, C, D
- 4) All of the above

24. In the planning phase of the nursing process the nurse:

- 1) collects data and analyzes it
- 2) makes a judgment statement based on standards/norms
- 3) documents all nursing care given so that no questions exist about what was done
- 4) utilizes the nursing diagnosis to identify goals to be negotiated with the individual.

25. An appropriate goal statement for Marsha, whose problem has been identified as weakness due to dehydration from decreased fluid intake, should be:

- 1) Marsha will drink ten 10-oz. glasses of fluid every 24 hours for 3 days
- 2) provide Marsha with ten glasses of fluid every 24 hours
- 3) increase Marsha's fluid intake
- 4) Marsha will be well hydrated by the end of 3 days

SECTION II

REINFORCEMENT MEASURE

Please check on answer only to each question. Even if no answer fits your situation exactly, please check the one that is closest to your work situation. It is very important to check one answer/question. Please DO NOT leave any blank.

- (38) 1. How often have you heard any member of the Nursing Service Administration (Coordinator, Assistant Director or Director of Nursing) PRAISE you for any part of a nursing care plan that you wrote?
- 1) never
 2) rarely
 3) at least once/week
 4) at least once/month
 5) every time I write one
- (39) 2. When this occurs, or if it should occur, do/would you.....
- 1) like it?
 2) dislike it?
 3) or would it make no difference to you?
- (40) 3. How often have you seen any member of Nursing Service Administration (Coordinator, Assistant Director or Director of Nursing) READ a nursing care plan that you, or any other nurse, wrote?
- 1) never
 2) rarely
 3) at least once/week
 4) at least once/month
 5) every time one was written
- (41) 4. When this occurs, or if it should occur, do/would you.....
- 1) like it?
 2) dislike it?
 3) or would it make no difference to you?
- (42) 5. How often does any member of Nursing Service Administration (Coordinator, Assistant Director or Director of Nursing) give you KNOWLEDGE OF THE RESULT of your written care plans and/or make a comment on how it was written?
- 1) never
 2) rarely
 3) at least once/week
 4) at least once/month
 5) every time I write one
- (43) 6. When this occurs, or if it should occur, do/would you.....
- 1) like it?
 2) dislike it?
 3) or would it make no difference to you?

(44) 7. How often have you heard your Head Nurse PRAISE you for any part of a nursing care plan that you wrote?

- 1) never
- 2) rarely
- 3) at least once/week
- 4) at least once/month
- 5) every time I write one

(45) 8. When this occurs, or if it should occur, do/would you.....

- 1) like it?
- 2) dislike it?
- 3) or would it make no difference to you?

(46) 9. How often have you seen your Head Nurse READ a nursing care plan that you, or any other nurse, wrote?

- 1) never
- 2) rarely
- 3) at least once/week
- 4) at least once/month
- 5) every time one was written

(47) 10. When this occurs, or if it should occur, do/would you.....

- 1) like it?
- 2) dislike it?
- 3) or would it make no difference to you?

(48) 11. How often does your Head Nurse give you KNOWLEDGE OF THE RESULT of your written care plans and/or make a comment on how they were written?

- 1) never
- 2) rarely
- 3) at least once/week
- 4) at least once/month
- 5) every time I write one

(49) 12. When this occurs, or if it should occur, do/would you.....

- 1) like it?
- 2) dislike it?
- 3) or would it make no difference to you?

(50) 13. How often has a member of the Inservice Education or Staff Development Department PRAISED you for any part of a nursing care plan that you wrote?

- 1) never
- 2) rarely
- 3) at least once/week
- 4) at least once/month
- 5) every time I write one

(51) 14. When this occurs, or if it should occur, do/would you.....

- 1) like it?
- 2) dislike it?
- 3) or would it make no difference to you?

- (52) 15. How often have you seen a member of the Inservice Education or Staff Development Department READ a nursing care plan that you, or any other nurse, wrote?
- 1) never
 2) rarely
 3) at least once/week
 4) at least once/month
 5) every time one was written
- (53) 16. When this occurs, or if it should occur, do/would you.....
- 1) like it?
 2) dislike it?
 3) or would it make no difference to you?
- (54) 17. How often does a member of the Inservice Education or Staff Development Department give you KNOWLEDGE OF THE RESULT of your written care plan and/or a comment on how it was written?
- 1) never
 2) rarely
 3) at least once/week
 4) at least once/month
 5) every time I write one
- (55) 18. When this occurs, or if it should occur, do/would you.....
- 1) like it?
 2) dislike it?
 3) or would it make no difference to you?
- (56) 19. When you have written a nursing care plan, what other nurses on your unit READ it?
- 1) no one, to my knowledge
 2) nurses on my team who were caring for the patient
 3) Head Nurse plus nurses on my team
 4) other nurses on my shift only
 5) some nurses on all shifts
- (57) 20. When you write a nursing care plan, who usually CARRIES IT OUT?
- 1) no one, to my knowledge
 2) only me
 3) only the aides caring for the patient on my shift
 4) nurses on my shift plus one other shift
 5) some nurse caring for patient on all three shifts
- (58) 21. Does the writing of nursing care plans play a part in you receiving a promotion in your hospital?
- 1) not at all
 2) rarely
 3) sometimes
 4) usually
 5) definitely
- _____ lb) I don't know
- (59) 22. To what extent do written nursing care plans play a part in your salary increases?
- 1) none at all
 2) definitely play a role, but I don't know exactly what
 3) must submit at least one written plan/year
 4) must submit at least one written plan/month
 5) must submit at least one written plan/week
- _____ lb) I don't know

VALUE MEASURE

A graduated scale from 0 to 9 appears after each question. Please circle the number which indicates the amount of value you place on the question asked. DO NOT mark in the space between the numbers: simply circle one number for each question. Please answer each question.

- (60) 1. If you were a patient in a hospital, how valuable would it be for the nurses to have a written nursing care plan for you?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (61) 2. How much value do you place on a nurse assessing patient needs and problems and incorporating them into a written nursing care plan?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (62) 3. How valuable is a written nursing care plan for a short-term patient? (One that stays no more than 3 days)
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (63) 4. How valuable is a written nursing care plan for a patient with obvious physical and/or emotional problems?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (64) 5. How valuable is a written nursing care plan in helping a patient adapt to an illness and/or hospitalization?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (65) 6. In general, what is the value of care plans written by other nurses on your unit?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (66) 7. Of what value are written nursing care plans in evaluating the performance of a nurse?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (67) 8. In general, of what value have written nursing care plans been in helping you provide individualized patient care?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable
- (68) 9. How valuable are written nursing care plans in communicating information about a patient?
Not valuable 0 1 2 3 4 5 6 7 8 9 Extremely valuable

Please return this entire questionnaire in the envelope provided. Thank you very much for your participation.

OFFICE USE ONLY

DEMOGRAPHIC INFORMATION

Please complete the following questions:

Age: _____

Age: 28 29

Highest Nursing Degree:

Associate Degree _____
Diploma _____
Baccalaurate _____
Masters _____

Highest Degree

Assoc. (1)
Dip. (2)
Bac. (3)
Mast. (4) 30

How long have you worked at University
Hospital? _____ years.

Yrs. Exp. 31 32

How long have you worked on your present
unit? _____ years.

Yrs. Unit 33 34

Do you work full time? ___yes ___no.

Full Time Yes (1)
No (2) 35

What is your normal work shift?
___8hr. ___10hr. ___16hr.

Hours: 36 37

APPENDIX F

Procedure for Use of Clinical Facilities for Research Purposes

UNIVERSITY OF OREGON HEALTH SCIENCES CENTER

University Hospital / Department of Nursing

PROCEDURE FOR USE OF CLINICAL FACILITIES FOR RESEARCH PURPOSES

<u>RESPONSIBILITY</u>	<u>ACTION</u>
Investigator	1. Writes letter to Director of Nursing Service requesting permission to utilize clinical facilities.
Director of Nursing	1. Approves or disapproves research endeavor. 2. Forwards letter of request to Staff Development Coordinator.
Staff Development Coordinator	1. Contacts investigator and arranges appointment for facilitating use of clinical facilities.
Investigator	1. Provides evidence that research proposal has been sanctioned by UOHSC Human Subjects Committee. 2. Submits copy of: A. Abstract B. Consent form C. Tool 3. Indicates methodology to be used, including: A. Type of subjects B. Number of subjects C. Method of administering tool
Staff Development Coordinator	1. Reviews research endeavor with investigator. 2. Facilitates use of clinical facilities by discussing research proposal and obtaining permission (for appropriate individuals to participate in data-collecting process) from Nursing Administration and Head Nurse of identified service.
Subject of Study	1. Participates in nursing research.
Investigator	1. Collects and analyzes data. 2. Furnishes Staff Development Coordinator with abstract of research findings.
Staff Development Coordinator	1. Shares research findings with Nursing Administration, Head Nurse, and other nursing staff participating in research endeavor.

APPENDIX G

Memo to Staff Nurses Regarding Study and Informed Consent

APPENDIX H

Correspondence - Permission to Use Tool

CALIFORNIA STATE UNIVERSITY LONG BEACH

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December 2, 1980

Ms. Ardys Symons
Assistant Director of Nursing
University Hospital
3181 Southwest Sam Jackson Park Road
Portland, Oregon 97201

Dear Ms. Symons:

Enclosed you will find one copy of each of the tools used in our "The Nursing Care Plan Problem" study that was published in Journal of Nursing Administration, 9(12):36-42, December 1979.

Both Ms Neal and myself would appreciate it if you would give appropriate credit (documentation with citation of reference) in your thesis or publication.

Good luck in your endeavor.

Sincerely,



Loucine M. Huckabay, R.N., Ph.D. F.A.A.N.
Professor of Nursing
Department of Nursing

LMH:gf

AN ABSTRACT OF THE THESIS OF

ARDYS SYMONS

For the MASTER OF NURSING

Date of Receiving this Degree: June 11, 1982

Title: THE RELATIONSHIP OF KNOWLEDGE OF NURSING PROCESS, VALUE AND
REINFORCEMENT TO THE QUANTITY AND QUALITY OF WRITTEN NURSING
ASSESSMENTS

Approved:

Linda Kaeser, R.N., Ph.D., Thesis Advisor

Though written care plans are supported in the literature as being essential to quality care, there is considerable evidence that nurses have problems writing them. This study investigated the effects of knowledge of nursing process, reinforcement and values on the quantity and quality of care plans.

The number and quality of care plans written by 61 staff nurses in a 425 bed teaching hospital was correlated with written responses to a 56 item questionnaire which measured the nurse's knowledge of nursing process, the amount of reinforcement received for writing plans and the nurse's valuation of care plans.

Using Pearsons Product Moment Correlation Coefficient, it was determined that there was no correlation between knowledge of nursing

process and either the quality or quantity of care plans. Value had a significant relationship ($r=.31$; $p < .01$) with the quality of plans as did reinforcement from superiors ($r=.32$; $p < .01$). Stepwise multiple regression indicated that the nurse's desire for reinforcement and the nurse's valuation of plans contributed to 18% of the variance care plan quality.

According to these findings, nurses who receive positive reinforcement for writing care plans and who value care plans will be motivated to write higher quality plans.