ATTITUDES OF PORTLAND AREA PHYSICIANS TOWARD NURSES IN EXPANDED ROLES

by

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ATTITUDES OF PORTLAND AREA PHYSICIANS TOWARD NURSES IN EXPANDED ROLES

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This study is dedicated to Eric.

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CHAPTER ONE

INTRODUCTION

The health care delivery system in the United States has fallen short of its aim to provide adequate facilities for health promotion, maintenance, and the prevention of illness to all segments of our society (Lysaught, 1974). The proliferation of committees and commissions, boards and bureaus to study the problems involved in the health care field bears witness to the difficulties we are experiencing.

One of the major problem areas is that of insufficient numbers of physicians in relation to the total population. One solution to that situation that has been suggested and that has proven effective in at least some areas is the expanded role of the nurse.

The expansion of a role beyond the limits traditionally accepted for it is likely to cause some resistance on the part of persons in the counterroles (Bates, 1970). Specifically, as the nurse's role broadens, misunderstandings and resentments may be encountered from the doctors and patients with whom she(he) deals.

This study addresses the problem of role confusion and resistance that is met by the nurse as her role expands. The population sampled includes all physicians currently engaged in General Practice, Family Practice, Internal Medicine, Surgery, Pediatrics, and Psychiatry in three adjacent counties of the Portland, Oregon area.

The terms "nurse in an expanded role" and "Nurse Practitioner" will be used interchangeably. The definition for a Nurse Practitioner is that used by the Oregon State Board of Nursing, and is based on the Oregon Nurse Practice Act (ORS 678). The Nurse Practitioner is: a registered nurse who has had "specialized education" and is prepared to "...provide management of mental and physical health care in the applicable specialty area...in collaboration with physicians and other health care professions."

The Review of the Literature

The current nursing literature abounds with material on the expanded role of the nurse. Many varied facets of the concept are explored, some in considerable detail. The literature of the medical profession is becoming increasingly involved with examining and explaining the status of the nurse's expanded role, the nurse's abilities, and the effectiveness of her(his) work. The doctor's attitude toward the nurse who is functioning in this new capacity has received attention.

The studies represented in the literature may be grouped into three general categories, those dealing with: 1) the need for an expansion of the traditional nursing role; 2) the quality of care, acceptance by patients, and the cost-effectiveness of the expanded nursing role; and 3) the changes in the relationship between doctor and nurse as a function of changes in the traditionally accepted role of the nurse. A brief discussion of the literature in each of the first two areas and a more detailed examination of the third category

are found in the following paragraphs.

Need for Expansion of the Role of the Nurse

That the health care delivery system is not adequately meeting the needs of our society has become increasingly apparent. Skyrocketing costs of medical care, maldistribution of personnel, increased technology and increased demand by consumers are indicated by Abdellah (1973) to be factors contributing to the overall problem. One of the solutions she suggests is that nurses function in areas beyond those boundaries traditionally accepted for nursing.

The major emphasis in our system during the sixties was an increase in the number of health manpower personnel, particularly doctors. A change has been noted in the seventies, in that the policy now is to attempt to improve utilization of existing manpower, which includes expanding the practice of nursing beyond its traditionally accepted limits (Fottler, 1972).

The objective of better utilization is central to the development of expanded nursing roles. Productivity can be increased on all levels of manpower by assigning functions to the lowest paid, least skilled occupational group that is able to perform those functions. It has been shown by Silver and Becker (1970) and Merenstein, et al. (1974) that all functions performed by physicians do not necessarily have to be done by them.

In his book Who Shall Live? Health, Economics and Social Change, Fuchs (1974) points to exhorbitant costs, inaccessibility of the physician and mounting health problems as being difficulties that we

are trying to deal with in our present system. He states that "... the challenge facing American medicine is to devise a system of medical care that provides ready access at reasonable cost. In my view, such a system would make use of 'physician extenders' practicing within licensed institutions... It has been repeatedly shown that today's physician, with his intensive training in specialty and subspecialty care, is too expensive and sometimes too poorly suited to provide the primary, preventive and emergency care which lie at the heart of the present access problem" (p. 75).

Bullough (1976) suggests the shortage of physicians in primary care, the increasing complexity of in-hospital acute care, educational reform and the women's movement as being influences on the expansion of the nursing role. She also cites the highly visible (to the public) physician's assistant programs, and the changing functions of the Coronary Care Unit nurses as factors to be considered important in the evolution of the expanded role for nursing.

Various other authors have commented on the crisis in health delivery which may be solved in part by nurses' greater involvement. In an article describing their private practice in primary care, Alford and Jensen (1976) pose the following observation: "Perhaps the reason people believe the health care system does not meet their needs is that physicians practicing medicine only, identify and treat pathology. Yet, patients are asking for more: more health teaching, more time, more consideration of the whole person. The gap in health care really exists and is in nursing" (p. 1933).

Thus we see that there are problems such as excessive cost, maldistribution of personnel, and increased consumer demand. We also see the expanded role of the nurse as at least a partial solution to some of those problems.

Results of Care Given by Nurses in Expanded Roles

A second sub-topic deals with the results of care given by nurses in expanded roles; the quality of their care, patient acceptance and their cost-effectiveness.

Spector and his associates (1975) investigated the care given by nurses in an internal medicine clinic. Their findings showed effectiveness in the care given when adequate physician support is available.

Soper, Bystrom et al. (1975), Lewis and Resnick (1969), and Holmes (1976) have all shown a decrease in cost of care along with high degrees of patient acceptance, increased understanding by the patient and adherence to regimen, and no significant difference in the morbidity and mortality rates between the patients managed by the doctors and those cared for by the nurse. In Soper's study, 91% of the patients reported greater comprehensiveness of care, 89%, greater availability of the caretaker, and 88% felt their understanding and rapport was better with the nurse than with a physician.

Further studies that have supported the positive effects of practice by nurses in expanded roles include those by Kaku, et al. (1970); Taller and Feldman (1974); Duncan, et al. (1971); Merenstein, et al. (1974); Golladay, et al. (1973); Kane, (1974); and Hoekleman, et al. (1975).

Andrus, one of the participants in a conference on New Health Practitioners (Kane, 1974) stated that "...patient acceptance of nurse practitioners and physician assistants has been so favorable that it is no longer an issue; various studies show that when the role of the mid-level practitioner is properly introduced to the patient, there is uniform acceptance (Lewis and Resnick, 1969; Nelson, et al., 1974). Furthermore, their contribution to improve more comprehensive health care is well established (Spitzer, et al., 1974)" (p. 27). Andrus' statements are also supported by Shulman and Wood (1972) and by the Report of the Physician Extender Workgroup (1977).

A study by Gardner and Ouimette (1974) of the nurse-physician team approach in a private internal medicine practice showed that patient satisfaction was greatly enhanced by the broad functioning of the nurse. Fifty-one percent of the sample felt that their care was improved over that given by a physician alone. Another successful nurse-doctor partnership is described by Keller (1974) in a brief article that attests to the effectiveness of the nurse in an expanded role.

The majority of the studies reviewed support the concept of the expanded role of the nurse by demonstrating effectiveness of her care, acceptance by patients, and a positive cost benefit to the setting in which she practices.

Physician Attitude Toward an Expanded Role for Nurses

The third area to be discussed is that of the attitudes of physicians toward nurses in expanded roles. Bates (1970) refers to the

historical or traditional view that doctors have held toward nurses, namely the authoritarian attitude. This attitude has been coupled with acceptance of it, dependence and deference on the part of nurses. She also notes that nursing has emphasized obedience and has granted few rewards for innovation. Among the sociocultural factors that Dr. Bates mentions is the fact that most doctors are men and most nurses are women, leading to the "natural" dominance of doctor over nurse, man over woman. In respect to the expanded role nurse, "... the physician may believe that the nurse is usurping his responsibility and authority. His resistance to transfer of functions increases when he sees these functions as comprehensive rather than technical and routine, and when he views the transfer not as delegation, but as a surrender" (p. 133).

The potential conflict between professionals is examined in a slightly different way by Monnig (1976) in her study of professional territoriality. She showed that greater understanding of the expanded role can be obtained by using the territoriality concept. Briefly, she describes it as "...the set of mechanisms and the forces underlying them that professions have to protect their territory from invasion by those outside the profession. Professional associations, legislation, and education were seen as means of boundary demarcation" (p. 773). Her study examined autonomy, accountability, and identity as variables which reflect territoriality. One main generalization she reached was that nurses hold more favorable attitudes toward nurse practitioners working in an expanded role than do physicians.

In a study conducted in a university associated hospital, Reed and Roghman (1971) found that "...younger personnel who have not been indoctrinated with rigid role perceptions tend to be more receptive to the role change. ... Female physicians showed higher acceptance of the expanded nurse role than their male colleagues. Students were much more accepting than the house staff" (p. 375). Their study also supported the positive view that nurses seem to have of themselves in expanded roles.

Reed and Roghmann's finding of the greater acceptance of nurse practitioners by students and younger members of the medical profession was not substantiated by Daggett (1973) at the University of Oregon Medical Center. She found that all the professionals in her sample who had received their training before 1965 were more accepting of an expanded role than were those who graduated after 1965.

Wright (1975) conducted a study in Houston prior to the establishment of a Family Nurse Clinician program in that city. The findings showed that a generally favorable impression of the concept was held by the community physicians. For the most part, it was a new concept to them and they had no previous experience with the expanded role nurse upon which to base their ideas of her capabilities. They were willing to allow the nurse to function in traditional nursing areas such as teaching, keeping families informed, and collecting information. (Sixty-nine percent of the sample would allow the nurse to compile health histories, and educate individuals "to a great extent.") But such behaviors as physical assessment, ordering laboratory tests, and adjusting medications were viewed as an infringement on their own

traditional responsibilities. This group of physicians also felt that other nurses' acceptance of the role, legal status, and funds to cover services would prove to be problem areas surrounding the new role.

A survey of pediatricians in Massachusetts and in the United States conducted by Yankauer (1968) also indicated that physicians favored delegation of information seeking, information giving and counselling activities. (Eighty percent felt that patient care would be improved by delegation of some responsibility.) Yankauer also showed that medical school teachers and hospital based physicians were more accepting of the expanded role concept than were community based doctors in private practice.

This reluctance to turn over traditional doctors' tasks was borne out again by a study by Flynn (1975) in an ambulatory adult clinic. Activities such as history taking and patient education were seen as acceptable for nurses, but physical examination, medication adjustment, and diagnosis were not. It was interesting to note that in this study, more physicians than nurses viewed the Nurse Practitioner as the physician's colleague.

Glenn and Hofmeister (1976) asked the question, "Will physicians rush out and get physician extenders?" They based their answer on a three stage process of development in the physicians' attitudes: 1) motivation to hire a physician extender; 2) the opportunity to employ one, and 3) the ability and willingness to use a physician extender effectively (p. 69). They listed ten possible motivations for the physician in employing expanded role nurses. Briefly, they were: 1) increased net income; 2) more control over working hours; 3) posi-

tive mental set carried over from previous experience with extenders in medical school or residency; 4) desire to reward a trusted employee/associate by training her(him) for an expanded role; 5) provide expanded patient care services; 6) desire to be innovative; 7) competition from other physicians in the local area who have already employed an extender; 8) desire to reduce charges to the patient; 9) case studies, research reports and positive exhortations in the literature; and 10) a desire to make the practice optimal. The fourth item in this list of possible motivations was seen by the authors as being the most important in the physicians' decision to hire an "extender".

In discussion of the article by Glenn and Hofmeister, Stimson and Charles (1976) cite one reason that a physician may hesitate to hire physician extenders as being "...the natural tendency for an individual to prefer certainty over uncertainty and the known over the unknown. ... Because it is difficult for him to know how his practice would change, he might decide to leave well enough alone" (p. 74).

In their article about nurse-physician relationships, Frank and Frank (1975) discuss at some length the conflicts that exist between the two professions, and the need for a new collegial relationship in order for the health care team to provide its services in optimal fashion. They talk of the expanded role nurse as often being forced into an activist position, which is in turn resented by the physician, who sees her as "...too challenging because of (the physician's) inability to cope with intimate day to day working relationships in an egalitarian fashion" (p. 551). Physicians are further described as being "ambivalent" in their attitudes toward the nurse in the expanded role.

Margaret Risk (1975), in a summary of her two year practice as a community clinical nurse specialist makes the following statement: "I am a nurse and female, both attributes which have traditionally represented compliance. The medical profession is slow to realize that nurses are capable of independent function, a slowness for which nurses themselves must take some responsibility. I have found that the way I perceive myself greatly influences how others perceive me. Usually, if I act like a professional colleague, I am treated like one" (p. 768).

Nuckolls (1974) recognizes the nurse's competence as a possible threat to the physician and a reason for reluctance to turn over any part of his responsibility to her. Bates (1975) discusses in some detail both conflicts between nurse and physician that develop as individuals change their professional self-images, and the rewards that accrue to both doctor and nurse as they learn to work together toward the common good of the patient.

Lawrence and associates (1977) surveyed 1665 physicians in North Carolina and found 34% of the respondents willing to hire a Nurse Practitioner. It must be noted, however, that non-responses biased the results of that survey in a favorable direction. A study by Odell (1974) in California showed that 93% of the respondents favored an expanded role for nurses.

During a conference on New Health Practitioners in Bethesda, Maryland, (Kane, 1974) Lawrence and Callen stated: "It is axiomatic to note that the greater the degree to which the employer is aware that the New Health Practitioners exist, and more specifically that they can

be of benefit to him and the patients he is involved in serving, the more likely he is to consider the possibility of employing a New Health Practitioner" (p. 16). Factors they listed in addition to physician awareness in the decision to hire an NHP were: 1) benefits to the patient from the patient's perspective; 2) benefits to the patient from the employer's perspective; 3) cost to the employer; 4) extent of knowledge; 5) professional and regulatory sanctions; 6) personal taste and life-style of the employer; and 7) the organizational setting.

In summary, then, the prevalent attitude of the doctors toward nurses in expanded roles seems to be one of at least some degree of resistance to delegating functions traditionally viewed as the doctor's, but supporting expansion into areas of history taking, counselling and patient teaching. Acceptance of the expanded role for nurses is more likely in settings where previous experience with her(him) and an opportunity to observe her(his) abilities has been provided.

The Literature Review Summarized

The general topic of the expanded nurse role has been examined from three separate angles: 1) the need for an expanded role; 2) the results of care given by nurses practicing in expanded roles; and 3) the physician's attitudes toward nurses in the expanded roles.

The need for improvement in the health care delivery system has been documented, and the realistic possibilities for improvement that are offered by the expanded role of the nurse have been supported. The majority of the studies show positive results in the areas of quality of care given by nurses, acceptance by the patients of nurses

as care givers, and in the cost-effectiveness of their care.

A predominant attitude on the part of physicians in the studies reviewed was some hesitancy to turn over to the nurse the functions that have traditionally been within the medical realm, such as physical assessment, medication adjustment, and laboratory test requisition and interpretation. It was found that those physicians who had previously worked with nurses in the expanded role were more willing to delegate responsibility to them than were those with no previous first hand experience with those nurses. Physicians in some specialty areas were found to be more accepting of the concept of role-expansion than those in other specialities (e.g. pediatricians showed more acceptance than surgeons). Recency of graduation from medical training was shown in some studies to be an important factor in the physician's acceptance of expanded roles for nurses, with more recently trained personnel being more in favor of expansion.

Purpose

The purpose of this study was to examine the perceptions and attitudes of a specific physician population toward the expanded role of the nurse. It related physician attitudes toward nurses in expanded roles to selected factors such as recency of medical education, type of practice, specialty area, and previous experience with nurses in expanded roles.

CHAPTER TWO

METHODOLOGY

Subjects

A list of all the doctors currently practicing in Internal Medicine, Surgery, General Practice, Family Practice, Pediatrics, and Psychiatry in Multnomah County, Washington County and Clackamas County was obtained from the Board of Medical Examiners. Fifteen names were chosen randomly from Clackamas County, fifteen from Washington County and thirty from Multnomah County. (The number chosen from Multnomah County was larger because of the considerably larger number of doctors practicing in that county.) Random selection was accomplished by the use of a table of random number.

Instrument

The data for this study were obtained by a questionnaire, a copy of which can be found in Appendix C. The instrument was pre-tested for clarity in pilot studies conducted at the University of Oregon Health Sciences Center and the Portland Veterans Administration Hospital with various groups of doctors.

The questionnaire included a demographic data sheet to obtain information on recency of medical training (as determined by the year of graduation from medical school), type of practice (solo, partnership, group, or institutional), specialty area (Family Practice, General Practice, Internal Medicine, Pediatrics, Psychiatry, or Surgery), and

approximate size of practice. These questions were included because of the evidence in the literature which indicates that factors of recency of training, type of practice, and the size of practice may influence a physician's attitude toward expanded roles for nurses. Questions on previous and current experience with nurses in expanded roles were included because the literature shows that it is a positive factor in the physician's willingness to delegate responsibility and in his overall acceptance of the concept of expanded nursing roles.

Specific subjects included in the questionnaire were physician's perceptions of: 1) present problems in the health care delivery system; 2) objectives of expanding roles for nurses; 3) potential benefits of hiring a nurse in an expanded role; and 4) potential problems in hiring a nurse in an expanded role. Also included was a group of questions regarding the physician's willingness to delegate responsibility to nurses in expanded roles, preferred financial arrangements for the nurse's reimbursement should he decide to hire one, and a final question regarding his willingness to hire an expanded role nurse.

The foregoing areas were included because the literature review indicated that they are factors that may influence the physician's acceptance of an expanded role for nurses. In order for the physican to see a need for an expansion of nursing's role, he must recognize some problems in our present system. Question number one addressed his views of those problems.

If the physician has considered the expanded role of the nurse at all, he probably already has some ideas about the objectives of the role expansion. Question number two was designed to examine those ideas.

Question number three looked at the physician's perceptions of positive benefits of working with a nurse in an expanded role. Areas that the physicians may view as being problematic in regard to the nurses' expanded role were investigated in question number four. Both positive and negative factors must be weighed by the physician in forming his attitude toward the expanded role of the nurse.

Questions in Part two, numbers 1 through 18 took up the crucial point of the physician's willingness to delegate some of his functions to nurses in expanded roles. Willingness to delegate responsibility is termed "crucial" because the whole idea of role expansion revolves around the ability of the physicians to relinquish to the nurse some of his traditionally held responsibilities.

Part Three was included to obtain information on physician attitudes toward the financial aspects of hiring a nurse in an expanded role. The final question addressed the physician's willingness to hire an expanded role nurse. It was assumed that willingness to hire is the ultimate evidence of the physician's acceptance of nurses in expanded roles.

Design

This study was descriptive and comparative in design. Independent variables from the personal data sheet (recency of medical training, type of practice, specialty area, size of practice and previous experience with nurses in expanded roles) were related to the dependent variables of the physician's perceptions of and attitudes toward expanded nursing roles, willingness to delegate responsibility, and

willingness to hire those nurses.

Recency of training, type of practice, and size of practice have been shown to be important factors in establishing physicians' attitudes toward expanding nursing roles. Review of the literature has also shown that the concept of nurses in expanded roles is more easily acceptable to individuals who have had contact with them and have had opportunity to see what they can do (Flynn, 1975); Soper, et al., 1975).

Procedure

Following selection of the sample, a letter of introduction and explanation was sent to each of the sixty doctors, explaining the purpose of the study. A few days following the sending of the letter, the researcher made appointments for an interview with each doctor, during which time the questionnaire was administered.

At the time of the interview, the consent form was signed by the subject. He(she) was then given the form containing the introductory statement for term definition, demographic data items and the statements to which he(she) was asked to respond.

There were two reasons for having the questionnaire filled out in the presence of the researcher. It was assumed that the return rate would be better than if the questionnaire were simply mailed out. Secondly, questions or misunderstandings could be answered or discussed at the time of administration, thereby providing more complete and accurate information than might otherwise be obtained.

Analysis of the Data

Statistical analysis of the data was descriptive and correlational. Percentages of responses to the questions were noted in tables. Responses to questions in Part One were correlated with those of Part Two and Part Three. For example, scores on question 1, Part One, dealing with the physician's perceptions of problems in the present health care delivery system were correlated with his willingness to delegate responsibilities, as evidenced by his score on Part Two, questions 1 through 18.

Part One was scored according to a Likert-type scale, with "strongly agree" equal to 5; "moderately agree" = 4; "undecided" = 3; "moderately disagree" = 2; and "strongly disagree" = 1. Each question was treated individually, the score from question 1 being the total from parts a, b, c, and d, and the score with a range of 4 to 20; the score for question 2 equaled the total from parts a, b, c, and d, with a range of 4 to 20; the score for question 3 was the total of parts a, b, and c, with the score ranging from 3 to 15; and the score for question 4 was the total pf parts a, b, and c, and varied from 3 to 14.

Questions in Part Two were also scored according to a scale with values ranging from 1 to 5. A response of "always" equaled 5; "almost always" = 4; "sometimes" = 3; "rarely" = 2; and "never" = 1. Scores from questions 1 through 18 on Part Two were added together to produce a "willingness to delegate responsibility" score. Various authors have shown that physicians are more willing to delegate some types of duties than others (Yankauer, 1968; Wright, 1975; Flynn, 1975; Lawrence, 1977).

The items in Part Two were grouped to permit computation of sub-scores. Those tasks most likely to be delegated were placed together, as were those least likely to be delegated. This grouping was done in order to facilitate analysis of the responses.

The independent variables on the personal data sheet of the instrument were correlated with the questions in Part One, Part Two, and Part Three. Data regarding recency of medical training, type of practice, etc., were used to divide the respondents into groups (e.g. training in or before 1950 vs. training after 1950; solo vs. group practice; previous experience with Nurse Practitioner vs. no previous experience). Responses from the various groups were compared by non-parametric statistics, specifically the Mann-Whitney U. Kruskal-Wallis H, and Chi Square. For instance, those with training in or before 1950 were compared with those trained after 1950 in terms of 1) how they view problems in the health care delivery system (Part One, question one); 2) how they perceive the objectives of the nursing role expansion (Part One, question two); 3) their perceptions of the potential benefits of hiring a Nurse Practitioner (Part One, question three); and 4) their perceptions of potential problems involved in hiring a Nurse Practitioner (Part One, question four). These two groups (training in or before 1950, and training after 1950 were also compared on the basis of their willingness to delegate responsibility scores from Part Two, questions 1 through 18, as well as on their willingness to hire a Nurse Practitioner (Part Three, question three).

The same comparisons as those listed above were made for the independent variables contained in questions 2 through 5 on the personal data sheet. Responses from participants in each type of practice were analyzed separately. Specialty areas were examined to see how their responses to Part One and Part Two varied between the groups. The Kruskal-Wallis H test was used in these instances.

Previous experience with Nurse Practitioners was ascertained by question number five on the personal data sheet. Respondents were divided into two groups by their answers, either yes, (having had previous experience) or no, (no previous experience). Those physicians who presently have a Nurse Practitioner working in their practice settings were identified by question number six.

The reasons given for not hiring a Nurse Practitioner were grouped according to content. The responses were examined for identifiable patterns. The additional comments that were made under Part Three, question 4, were also examined for content and were observed for prevalent patterns.

CHAPTER Three

Results

A sample of 60 physicians was drawn at random from a list of practicing physicians in Multnomah, Clackamas, and Washington Counties. Appointments were made with 57 physicians from that sample. There were two physicians who refused to make appointments, one on the basis of being "too busy", and the other was "not interested". The third physician was deceased, and his alternate from the second sample could not be located. Two of the physicians with whom appointments were made kept the questionnaire to fill in and send back, but never returned them. One physician kept the appointment that was made, made several verbal comments on his attitudes toward the questions, but did not complete the questionnaire. Statistical analysis was done on 54 completed questionnaires.

Characteristics of the Subjects

From Table 1 it may be seen that the majority of the respondents were male. Almost half of the sample were engaged in solo practice. Slightly more than one-fifth were in partnership, one-fifth were in institutional practice settings, and relatively few were in group practices.

Internal Medicine was the specialty area with the highest representation in the sample, followed by Family Practice, Pediatrics, and General Practice. Surgery and Psychiatry were represented by the smallest numbers of physicians.

Slightly more than half of the physicians had had previous working experience with Nurse Practitioners, and far fewer were currently working with a Nurse Practitioner in their practice settings.

Question 4 on the personal data sheet dealing with the approximate size of the practice was worded in such a way that it caused considerable confusion for the subjects. Corrections made on the question after pretesting the questionnaire did not satisfactorily eliminate the confusion, and it was decided not to use the question for purposes of data analysis.

TABLE 1

Characteristics of Subjects

Characteristic	Number	Percentage
Sex		
Male	49	90.7
Female	5	9.3
Total	54	100.0
Type of Practice		
Solo	24	44.5
Partnership	12	22.2
Group	6	11.1
Institutional	12	22.2
Total	54	100.0
Specialty Area		
Family Practice	11	20.4
General Practice	8	14.8
Internal Medicine	13	24.1
Pediatrics	9	16.7
Psychiatry	6	11.1
Surgery	7	12.9
Total	54	100.0
Previous Work Experience With a Nurse Practitioner		
Yes	24	44.5
No	30	55.5
Total	54	100.0
Current Work Experience With a Nurse Practitioner		
Yes	12	22.2
No	42	77.8
Total	54	100.0

Physicians' Perceptions of Role Expansion (Part One of Questionnaire)

The physicians' perceptions of the need for role expansion, objectives of role expansion, and problems and benefits of hiring a Nurse Practitioner were analyzed by type of practice (solo vs. all other types of practice) and by recency of graduation from medical school (during or before 1950 vs after 1950). The Mann-Whitney U test revealed no significant differences in physicians' responses to questions 1, 2, 3, or 4 by type of practice or recency of graduation. In short, those variables did not affect the physicians' perceptions of present problems in the health care delivery system, objectives of role expansion for nurses, or the potential benefits and potential problems in hiring a nurse in an expanded role. The percentages of responses to each question in this part of the questionnaire can be found in Appendix D, Table A.

Physicians' Willingness to Delegate Responsibility (Part Two)

The scores on Part Two, "willingness to delegate responsibility" scores, ranged from 36 to 90, with the mean score being 62.9, and one standard deviation equal to 12.1. The scores were compared by recency of graduation (training during 1950 or before vs. training after 1950); by type of practice (solo, partnership, group, and institutional); by specialty area (Family Practice, General Practice, Internal Medicine, Pediatrics, Psychiatry, and Surgery); and by previous working experience with a Nurse Practitioner. Some differences did appear, but they were not statistically significant at the .05 level of probability.

Comparison of the delegation of responsibility scores was made by the Mann-Whitney U test. No significant differences were found between physicians graduating before vs. after 1950 in their willingness to delegate responsibility.

The Kruskal-Wallis H test was used to determine differences in scores on Part Two between the types of practice. The four groups (solo, partnership, group, and institutional) did not vary significantly, with df=3, and a computed value of 6.5. Mean scores for the groups are noted in Table 2.

The Kruskal-Wallis H test was also used to ascertain differences between the specialty areas of practice. A computed value of 9.89 was not significant at the .05 level of probability with df=5. Mean scores for these groups are also noted in Table 2.

The delegation of responsibility scores were compared for physicians with and without previous experience with Nurse Practitioners, and for physicians with and without current experience with Nurse Practitioners. The Mann-Whitney U test was used and again no statistically significant differences were found between the groups. The mean scores for these groups are also found in Table 2. Percentages of responses to all variables can be found in Appendix D, Table B.

TABLE 2

Scores on Part Two - Physicians' Willingness to Delegate Responsibility by Selected Variables

Variable	Number	Mean Score
Recency of Graduation from Medical School		
Before 1950	10	58.8
After 1950	44	63.9
Type of Practice		
Solo	24	59.8
Partnership	12	63.5
Group	6	54.6
Institutional	12	72.3
Specialty Area		
Family Practice	11	65.9
General Practice	8	57.4
Internal Medicine	13	69.9
Pediatrics	9	62.5
Psychiatry	6	61.0
Surgery	7	53.7
Previous Work Experience with a Nurse Practitioner		
Yes	24	66.9
No	30	55.3
Current Work Experience with a Nurse Practitioner		
Yes	12	67.3
No	42	60.6

Note. Scores on Part Two did not vary significantly between any of the groups indicated in this Table.

Perceptions of Role Expansion Compared with Willingness to Delegate

Chi Square was used to compare the responses of the physicians' perceptions of an expanding role for nurses and their scores on "willingness to delegate responsibility". The scores on each question in Part One, dealing with perceptions, and the scores on Part Two, defining "willingness to delegate responsibility", were divided into two groups, those above the mean score and those below the mean score. The only statistically significant relationship between those groups was found in the scores on question 2, Part One. A computed value of 3.9 was obtained, significant at $p \leq .05$, df=1. Therefore a significant relationship exists between the physicians' perceptions of the objectives of expanding roles for nurses and their willingness to delegate responsibility to a Nurse Practitioner. The higher the agreement with the objectives of nursing role expansion as outlined in this questionnaire, the higher the "willingness to delegate responsibility" score. There are no significant relationships between willingness to delegate responsibility and perceptions of existing problems in the health care delivery system, potential problems or potential benefits of hiring a Nurse Practitioner.

Financial Preferences and Willingness to Hire Nurse Practitioners

Some of the responses to Part Three, financial items and willingness to hire, were analyzed by computing only averages and percentages. Question 1, dealing with the preferred method of payment for the Nurse Practitioner, was answered by 48 of the 54 respondents, with 6 of them

indicating no opinion as to reimbursement methods. Most of the physicians indicated a straight salary as their preference. A few felt that salary plus a fixed percentage would be their choice, and only three chose fee-for-service. There were none who preferred a limited partnership arrangement. Table 3 indicates the numbers of physicians responding to each method of reimbursement.

The second question on appropriate yearly salary received 44 answers, with 6 indicating "don't know" and 4 with "no opinion". The 44 answers ranged from $9000.00 to $35,000.00 per year, with the mean suggested salary being $16,598.00 per year.

There were three available answers to question 3, Part Three. Several of the respondents answered "Yes", that they would like to hire a Nurse Practitioner. Slightly over half answered "no", although they approved of the concept. Their reasons for saying "no" will be discussed later. Only 3 respondents stated "No", that they would not like to hire a Nurse Practitioner, and that they disapprove of the concept of expanded nursing roles. Table 3 contains the numbers and percentages of responses to this question.

There were several reasons given for answering "no" to question 3, in spite of approving of the concept of expanded nursing roles. The most frequent reason was "no need in my practice at the present time", (12 respondents). Other reasons given were: "I have capable R.N.'s now who do a lot of 'those things'," (5); "There is no room in my office to add another person." (3); "I like to retain personal contact with and control of my patients." (3); "Nurse Practitioners could and should

TABLE 3

Financial Preferences and Willingness to Hire Nurse Practitioners

Question	Number	Percentage
Which method of reimbursement do you prefer for a Nurse Practitioner in your practice setting?		
Straight salary	38	70.4
Salary + fixed percentage	7	13.0
Fee-for-service	3	5.5
No response	6	11.1
Total	54	100.0
Would you like to hire a Nurse Practitioner?		
Yes	21	39.0
No, but I approve of the concept	30	55.5
No, I do not approve of the concept	3	5.5
Total	54	100.0
What would you consider to be a reasonable annual income for Nurse Practitioners?		
Salary range: $9000.00 to $35,000.00 per year		
Mean Salary suggested: $16,598.00 per year		

be used best in rural areas where there are few doctors." (2); "I already have a Physician's Assistant." (1); "Malpractice questions would keep me from hiring a Nurse Practitioner." (1).

Comments included by those who disapprove of the expanded nursing roles were: "They should go to medical school if they want to do 'those things'."; "If I get sick, I want the attention of a doctor."; and "There is too much delegation required for non-medically trained personnel." The three physicians who disagreed with the concept all graduated more than twenty years ago, are in solo practice and have never had any previous experience working with a Nurse Practitioner. Two were in general practice and one was a surgeon.

The characteristics of those physicians who answered "yes", they would like to hire a Nurse Practitioner, are noted in Table 4. The eleven who currently have a Nurse Practitioner working in their practice settings are not the same eleven who work in institutional settings.

Physicians' willingness to hire Nurse Practitioners was analyzed according to their previous experience with Nurse Practitioners, by recency of graduation from medical school, and by type of practice. Chi Square was used to test the differences in the responses and statistically significant differences were found in one instance.

Differences in previous experience were significantly related to the physician's willingness to hire Nurse Practitioners. (Chi Square = 14.2, df=1, significant at $p > .001$.) Responses did not differ significantly according to recency of graduation or type of practice (solo vs. all other types of practice).

The physicians with previous experience with Nurse Practitioners were more willing to hire them than were those with no previous experience with them. Physicians having graduated since 1950 were no more willing to hire Nurse Practitioners than were those who graduated from medical school during 1950 or before. There were no significant differences found in willingness to hire between the solo practitioners and those in all other types of practice.

TABLE 4

Characteristics of Physicians Desiring to Hire Nurse Practitioners

Characteristic			
Type of Practice			
Solo		7	33.3
Partnership		2	9.5
Group		1	4.7
Institutional		11	52.5
	Total	21	100.0
Specialty Area			
Internal Medicine		8	38.1
Pediatrics		5	23.8
Psychiatry		5	23.8
Family Practice		3	14.3
	Total	21	100.0
Previous Experience			
Yes		16	76.2
No		5	23.8
	Total	21	100.0
Current Experience			
Yes		11	52.4
No		10	47.6
	Total	21	100.0

Additional Comments Surveyed

Thirty-five of the respondents made additional comments in the space provided at the end of the form. Most of the comments were brief and fell into a few general categories. Following is a list that summarizes those comments and indicates how many individuals made each comment.

1. Nurse Practitioners could be used most effectively in rural areas. (7).
2. Liability and malpractice are serious considerations that still need to be addressed. (5)
3. Nurses should work in some arrangement with a supervising physician and should not work independently. (5)
4. The success of any arrangement with a Nurse Practitioner is going to depend greatly on the individuals involved. (3)
5. I am reluctant to risk alteration of the physician-patient relationships as they now exist. (3)
6. Nurses could make important contributions in areas such as teaching, counselling, management of minor episodic illnesses, and help with long-term compliance problems. (4)
7. The question of excessive cost of medical care is confusing. Everything costs too much. (5)
8. Nurse Practitioners would likely be most effective in Family Practice, General Practice or with a large group of surgeons. (2)
9. Physicians are no longer able to fulfill the expectations of public for medical care alone. (2)

10. Nurses who want to do this kind of work should go to medical school. (2)
11. Who will administer nursing care in the hospitals and nursing homes? (1)
12. This town is "over-doctored", and addition of a Nurse Practitioner would put an extra strain on the situation. (1)
13. Roles of this type should be filled with nurses rather than lay people (i.e. "Physician's Assistants") because of the richer background the nurse brings to it. (1)
14. The Oregon State Board of Nursing definition of a Nurse Practitioner is vague. (1)
15. Maldistribution of personnel and excessive cost of care will not be solved by the Nurse Practitioner. (1)
16. There is the possibility that over the years unscrupulous individuals would get into the program and do as little as they could get by with. (1)
17. I could use a Nurse Practitioner with a strong background in physiology, pathophysiology and pharmacology. In my mind, there is no way to get that background in a training program that lasts less than two years. (1)
18. Now that I'm in private practice, I'm aware of the "financial threat" from Nurse Practitioner competition that I did not feel during residency or in an institutional practice. (1)
19. I'm currently involved in a residency training program. The residents do a lot of things a Nurse Practitioner could do.

If I did not have the residents, I would probably hire a Nurse Practitioner. (1)

20. The questionnaire is slightly biased toward the concept of the Nurse Practitioners. (1)

Several of the respondents made more than one comment, so the total number of individuals indicated in parentheses is greater than the total number who responded.

CHAPTER FOUR

Discussion

In beginning discussion of the findings of this study, several observations are in order. First of all, placing a reliable numerical value on an attitude is a very difficult thing to do because of the many variables that impinge on the development of attitudes. The questionnaire used in this survey was constructed to consider several variables, and to have the participants answer the questions from the same basic frame of reference. The term Nurse Practitioner was defined and the situation in which the physician would delegate responsibility was specified. Questions and comments from several of the doctors during administration of the questionnaire made the researcher aware that yet another specification should have been added. Many of the participants wanted more specific information as to how much supervision of the Nurse Practitioner was to be presumed in responding to the items. They stated that if daily review and immediate consultation with the physician were the routine practice, they would answer the questions in Part Two in one way. If the nurse were essentially independent and sought consultation infrequently, they would answer less liberally. When this point came up during the interviews, the researcher, in an attempt to maintain reliability, answered that daily consultation and ready availability of physician assistance should be presumed. However, all participants did not raise this question, and some proceeded to answer on the basis of their own ideas of how the Nurse Practitioner would practice. In this way, reliability of the

scores as true indicators of physicians' attitudes may have been diminished.

A second point to note is that there were several physicians who answered specific items with "never" if that item did not apply to their practice. For instance, some psychiatrists marked "never" on the immunization item because they do not do immunizations. Some surgeons saw no need for education classes in their type of practice and marked "never" on that item. Other physicians answered all questions as though they did apply to their practice. This variation in answering may also have had a negative effect on the reliability of this questionnaire.

A further comment should be made on the method of data collection. The presence of the researcher during the administration of the questionnaire may have altered the results somewhat if some of the physicians were reluctant to risk "hurting the feelings" of the researcher. However, there were some who expressed negative attitudes without fear of personal insult.

Perceptions of Nursing Role Expansion

The statistical analysis of the responses to Part One indicated no significant differences between scores of the different age groups, as approximated by recency of education, or between the scores of the physicians in the various types of practice. The problems in the present health care delivery system, the objectives of expanding nursing roles, and potential problems and benefits of adding a Nurse

Practitioner are viewed essentially the same regardless of the number of years since graduation from medical school and the type of practice in which the physician works.

The specific responses to Part One, dealing with the physicians' perceptions of role expansion, will be discussed, beginning with the statement with which most respondents agreed, proceeding to that statement with which most disagreed or were undecided.

Question 2b received the most "strongly agree" responses (70.3%) and "moderately agree" (27.8%). Only one doctor was undecided and none disagreed that one objective in expanding the nurse's role should be counselling and education regarding health maintenance and/or adherence to medical regimen. This finding supports the results of previous studies by Yankauer (1968), Wright (1975), and Flynn (1975), who found physicians most willing to turn over educational and counselling types of activities to nurses.

The second most agreed upon statement was 1a, referring to maldistribution of professional personnel. Forty-five (84.9%) agreed, moderately or strongly, that maldistribution is a present problem. Five (9.4%) were undecided, two moderately disagreed, and one strongly disagreed. The one physician who strongly disagreed on this point included a long statement to explain why he felt that maldistribution of personnel and excessive cost of care were not problems, and that if they were, the Nurse Practitioner would not solve the problems. The maldistribution of professional personnel was substantiated by Lysaught (1974) and Abdellah (1973) and others. The majority of the

physicians surveyed in this study agreed that there are maldistribution problems as stated by Lysaught and Abdellah.

Reduction of cost of care as an objective of role expansion was moderately or strongly agreed upon by forty-three (79.7%) of the physicians. Eight (14.8%) were undecided, two moderately disagreed, and one strongly disagreed. This response indicates an awareness in the physicians of the cost problem in medical care and an interest in decreasing the cost. It refutes a sometimes popular public image of the doctor as one who is not concerned with the cost of medical care. Soper, Bystrom, et al. (1975), Lewis and Resnick (1969), and Holmes (1976) all showed a decrease in cost of care with addition of Nurse Practitioners to practice settings. Those results support the view of the Portland area physicians on the reduction of costs through the use of Nurse Practitioners.

The next most agreed upon statement was 1b, which refers to excessive cost of care as a problem in our present health care delivery system. Forty physicians (74.1%) agreed or strongly agreed that the cost of care is a problem. Seven (12.9%) were undecided, six (11.1%) moderately disagreed, and one physician strongly disagreed. It is interesting to note that 79.7% felt that reduction of cost should be an objective of expanding nursing roles, but only 74.1% felt that excessive cost of care was a problem.

The sixth most agreed upon statement was 3c, which mentioned the use of a Nurse Practitioner to increase opportunities for personalized instruction for patients. Thirty-seven (72.6%) agreed moderately or strongly that such instruction time would be increased. Two were

undecided, eight (15.7%) moderately disagreed and four (7.8%) disagreed strongly. It is interesting that this percentage was relatively low (72.6%) when compared with the percentage of physicians who thought that counselling and education should be an objective of nursing role expansion (98.1%). Several of the physicians mentioned that they saw counselling and instruction as an important part of their role, and were reluctant to completely give up that kind of patient contact.

The next statement was 2a, dealing with primary health care as an objective of expanded roles for nursing. Thirty-seven physicians (68.8%) agreed strongly or moderately with the statement. Seven (12.9%) were undecided, eight (14.8%) moderately disagreed, and two strongly disagreed. The high percentage of agreement on this question indicated a positive view of the function of Nurse Practitioners as primary health care providers.

The statement regarding problems revolving around protocols for care (4b) was the next most agreed upon statement. Thirty-five (66%) felt that the need for protocols could present problems. Seven (13.2%) were undecided, nine (17%) moderately disagreed, and two strongly disagreed. In interpreting these numbers it must be mentioned that this question's wording caused some confusion. The numbers may not truly represent the physicians' attitudes toward protocols.

The next statement is 4c, regarding definition of authority and responsibility for patient care. Thirty-four (63%) agreed that problems could arise in this area. Five (9.3%) were undecided, thirteen (24.1%) moderately disagreed and two strongly disagreed. One might

interpret this response as the physicians' reluctance to turn over responsibility for patient care to a nurse. It must be noted that the wording of this question also caused some confusion and the results may not be truly indicative of the physicians' attitudes.

Lack of emphasis on prevention was seen as a problem by 62.9% of the physicians. Twenty-four percent strongly agreed and 39% moderately agreed. There were six (11.1%) undecided, thirteen (24.1%) who moderately disagreed, and one who strongly disagreed. Verbal comments made during the interviews indicated that several physicians felt that there has been marked improvement in this area in the last several years. Examples of the emphasis on correct diet, regular exercise, and regular tooth brushing were given.

Sixty-one percent of the physicians agreed moderately or strongly that addition of a Nurse Practitioner would free them of routine duties. Eight (14.8%) were undecided, ten (18.5%) moderately disagreed, and three strongly disagreed. It was stated by some who disagreed that a considerable amount of time would be involved with consultation and teaching of the Nurse Practitioner and the end result would be less time available for patients.

Availability of third party payments for nurses' services was seen as a problem by thirty physicians (57.7%). Fifteen (28.8%) were undecided, two moderately disagreed, and five strongly disagreed. Those who strongly disagreed here were practicing in Kaiser Clinics, and third party payment for the nurse was no problem for them at all, as the nurses are salaried employees of the Kaiser group.

Research activities by the nurse was seen as an objective for nursing by only 41.5% of the physicians. Four strongly agreed with the statement (2d) and eighteen (34%) moderately agreed. Sixteen (30.2%) were undecided, ten (18.9%) moderately agreed, and five strongly disagreed. One comment was made that "research activities are not health care delivery". These figures indicated that physicians did not generally see nurses functioning in research roles.

The statement with which the least number of physicians agreed was 3b, regarding the net increase in income for the practice after hiring a Nurse Practitioner. Only three strongly agreed that their income would increase. Eight (15.4%) moderately agreed, sixteen (30.8%) were undecided, while eighteen (34.6%) moderately disagreed, and seven (13.4%) strongly disagreed. From these figures we see that the physicians did not view the addition of a Nurse Practitioner as a financial asset. It is interesting that 39% of the sample said they would like to hire a Nurse Practitioner, even though only 21.2% felt that her presence would contribute to a financial net increase for the practice.

In general the responses to Part One seem to be quite favorable toward expanding nursing roles. The physicians did agree that there are some problems in the present health care system and that certain objectives related to those problems are appropriate for expanding nursing roles. There was less agreement in regard to perceived benefits and potential problems involved with hiring a Nurse Practitioner. That apparent lack of agreement may have been caused at least in part by the wording of the questionnaire.

Physicians' Willingness to Delegate Responsibility

The responses to Part Two, dealing with willingness to delegate responsibility to Nurse Practitioners, showed a general trend that would be expected after reviewing the literature on that subject. There were a few surprises, however. In general, the respondents were more willing to delegate items at the top of the scale "always" or "almost always", than they were those farther down the scale.

On the first five items, 79.1% of the physicians would delegate "always" or "almost always". Eighteen percent would delegate them "sometimes", and 6.1% "rarely" or "never". These five items were more closely associated with traditional nursing roles that were some of the other items. It is therefore not surprising that a fairly large percentage of the physicians were willing to delegate these duties.

The second group, items 6 through 9, received "always" or "almost always" responses from 47.4% of the respondents. Thirty-nine percent chose "sometimes" and 13.9%, "rarely" or "never". These items were less frequently associated with traditional nurses' duties than were those in the first group.

Items 10 through 14 in the third group were marked "always" or "almost always" by 56.6%, with 26.9% responding "sometimes", and 16.4% "rarely" or "never". The final group, items 15 through 18, contained the duties more commonly thought of as medical responsibilities. As would be expected, they received the lowest percentage of "always" or "almost always" responses (25.3%). "Sometimes" appeared on 34.4% of the questionnaires in this group, and "rarely" or "never" received 40.4% of the responses.

Table 5 lists in descending order those items which the physicians would delegate "always" or "almost always". Table 6 lists the items marked "never", also in descending frequency. Percentages of the responses are noted on the tables.

TABLE 5

Tasks in Order Physicians Would Delegate "Always" or "Almost Always"

Task	Percentage of Physicians Answering "Always" or "Almost Always"
Prescribe and administer immunizations according to a protocol	84.6
Conduct classes for patients with chronic illnesses	83.0
Modify diet	81.5
Obtain social history	81.5
Modify exercise regimen	76.9
Obtain medical history	70.4
Review of systems	69.8
Explore family problems with the patient	69.7
Telephone consultation with patients	59.2
Home visits	53.7
Screening examination	50.9
Decide when patients should return for an office visit	38.9
Office visits, including drop-ins	37.8
Order laboratory studies	35.1
Adjust medications	26.0
Interpret laboratory results	22.3
In-hospital visits	20.4
Initiate drug therapy	7.4

TABLE 6

Tasks Physicians Would "Never" Delegate

Task	Percentage of Physicians Answering "Never"
Initiate drug therapy	35.0
Adjust medications	18.4
In-hospital visits	14.9
Interpret laboratory results	12.9
Order laboratory tests	11.3
Screening examination	7.6
Immunizations according to protocol	3.9
Decide when patient should return to office	3.7
Home visits	1.9
Office visits, including drop-ins	1.9
Review of systems	1.9

The responses to Part Two of the questionnaire are seen as essentially positive toward delegation of responsibilities to Nurse Practitioners. At least fifty percent of the respondents would delegate eleven of the eighteen tasks always or almost always to a Nurse Practitioner whom they found to be competent. Eleven of the items also received responses of "never", but those percentages were generally much smaller than the "always" responses.

As noted earlier, the physicians were more willing to delegate such responsibilities as information-giving, information-gathering,

and counselling than they were those tasks requiring judgments and decision-making. Fifty-one percent of the physicians were willing to allow the nurse to do screening examinations, but far fewer were willing to turn over the decision as to when the patient should return to the office. Most (from 74% up) prefer to retain the responsibility for duties such as ordering laboratory studies, interpreting laboratory results, adjusting medications, and initiating drug therapy.

Responses to Questions on Reimbursement and Willingness to Hire

The responses to Part Three indicate that the majority of physicians still view the nurse in an employee position, in that 70.4% preferred a straight salary as means of reimbursement of the Nurse Practitioner. There were none who would consider a limited partnership arrangement, while only 5.5% preferred a fee-for-service, and 13% favored a salary plus a fixed percentage of the practice income.

These results were comparable to those received by Lawrence, et al. (1977), where 75.5% of the respondents preferred straight salary reimbursement. Their results showed 13.6% favored a salary plus a fixed percentage of the practice income, 2.5% a fee-for-service, and 0.6% preferred a limited partnership agreement.

The range of suggested salaries for Nurse Practitioners was quite wide, from $9000.00 to $35,000.00 per year. Many of the physicians did not have any idea what the general duty staff nurse earns in a hospital, and had difficulty arriving at a figure for the Nurse Practitioner's income. Some based their answers on the salaries they pay their office nurses, which in general are somewhat less than the

hospital staff nurse is paid. The mean salary of $16,598.00 is approximately what the beginning practitioner is being paid in the Portland area at the time of this study.

Responses on willingness to hire Nurse Practitioners were also comparable to those obtained by Lawrence, et al. (1977). In the Portland sample, thirty-nine percent of the total responded that they would like to hire a Nurse Practitioner. Fifty-six percent stated they would not hire, but did approve of the concept, and only 5% were opposed to the concept. Answers to the Lawrence study were: 36.8% = Yes; 54.4% = No, but I approve; and 8.8%, No, I disapprove of the concept.

The statistically significant differences between those physicians with and without previous experience in their willingness to hire Nurse Practitioners supported the results of Lawrence's study. The results of both studies indicated that physicians who have previously worked with Nurse Practitioners and are familiar with their role were more likely to hire them, or to approve of the concept than were those who have not had prior contact with them.

Additional Comments

The comments included at the end of the questionnaire covered a fairly wide range of topics surrounding the question of Nurse Practitioners. Of greatest concern seemed to be the need for physician supervision, the most effective utilization of Nurse Practitioners in rural areas, and the question of liability and malpractice suits. Also mentioned by several physicians was their reluctance to risk a

change in the physician-patient relationships as they now exist. Several comments supported the findings of the delegation scores from Part Two, in that the physicians agreed that nurses could make important contributions in areas such as teaching,counselling, and helping with long-term compliance problems. Five physicians commented on the cost of medical care in its relation to the cost of living. Some related it to the cost of plumbing, or the doctor's fee to the truck driver's wages. The consensus seemed to be that the cost of medical care is too high, but so is the cost of many other things.

There were only a few comments that could be interpreted as negative toward the concept of the Nurse Practitioner. Two physicians felt that the nurse who aspires to "more than nursing" should go to medical school and get the "proper education". Two or three felt that Nurse Practitioners would put a strain on physicians financially, in that they would compete with the doctors for patients. One respondent found the questionnaire to be biased toward the concept, but he did not specify or elaborate on that statement. One physician wrote a long and detailed response to the questionnaire in which he specified his reasons for being distressed at the "steady deterioration" of medical care in this country. He asserted that maldistribution of personnel and high cost of care were not problems that would be solved by the use of Nurse Practitioners.

There were three physicians who voiced reluctance to change the status quo, and there may have been others who reacted that way, but did not verbalize it. This type of response corroborates the contention of Stimson and Charles (1975) that physicians prefer certainty

to uncertainty, and are not eager to get into situations with which they would be unfamiliar.

These additional comments are seen then, as representing some of the concerns the doctors held in regard to the expanding nursing role and their personal involvement with it.

CHAPTER FIVE

Summary, Conclusions, and Recommendations for Further Study

Summary

The problem addressed in this study was that of physician acceptance of expanded roles for nurses. Review of the literature supported the need for improvement in various aspects of the present health care delivery system, and the past successes of nurses working in expanded roles. Physicians' attitudes toward role expansion was also investigated.

A randomly chosen sample of 54 physicians from three Oregon counties was surveyed regarding their perceptions of and attitudes toward expanding roles for nurses. A three part questionnaire was administered, scored and analyzed statistically with Mann-Whitney U, Kruskal-Wallis H, and Chi square tests.

Scores of various groups, divided according to recency of graduation from medical school, type of practice, specialty area, previous experience and current experience with Nurse Practitioners were compared. There were no statistically significant differences found in scores on Part One (related to physicians' perceptions of role expansion) and Part Two (assessing physicians' willingness to delegate responsibility) between any of the groups. Significant differences were found between two groups in their willingness to hire a Nurse Practitioner, or their approval of the concept. Those with previous experience were more willing to hire and approved more of the concept

than did those who had no previous experience with Nurse Practitioners. Solo practitioners and those practicing in all other types of practices did not differ significantly in the approval of the concept or their willingness to hire Nurse Practitioners. Recency of graduation from medical school was not found to be a significant factor in physicians approval of the concept or their willingness to hire Nurse Practitioners.

Comments added at the end of the questionnaire were interpreted as generally favorable, but with a few recurrent themes. Many physicians stipulated that they support the concept of expanded roles for nurses as long as adequate physician supervision is available. Several felt the Nurse Practitioner would be most useful in rural areas, the the question of malpractice insurance and liability was mentioned as an obvious hurdle to be overcome in the expansion of nursing roles.

Conclusions

Portland area physicians hold a generally positive view of the expanding role of the nurse. Ninety-four and one-half percent of the sample surveyed would hire a Nurse Practitioner, are currently working with one, or for various reasons would not hire one now although they support the concept. Only three of the sample disapproved of the idea of nursing role expansion. There were two physicians from the original sample of 60 who refused to make appointments with the researcher, and another one who was, by his own admission "archly conservative", and who did not complete the questionnaire.

The physicians in the sample saw the need for changes in our health care delivery system, and agreed with some of the objectives

of nursing role expansion as they were listed on the questionnaire. The physicians were willing to delegate many of their traditional duties to a Nurse Practitioner at least some of the time. They were willing to turn over data-gathering, information-giving, counselling, and supporting activities more readily than some of those tasks requiring judgment and decision-making, such as medication adjustment, laboratory data interpretation, and initiation of drug therapy. These findings supported those reported in the literature and were not unexpected.

The majority of the physicians in the study continued to see the nurse in an employee relationship in that 70.4% prefer straight salary as a method of reimbursement for a Nurse Practitioner. Only 13.0% preferred a salary plus a fixed percentage of the practice income, and three doctors favored the fee-for-service method. None agreed to accept a limited partnership arrangement with the Nurse Practitioner.

Recommendations for Further Study

1. Subject this questionnaire to further testing and revision to improve its validity and reliability.
2. Replicate the study on a state-wide basis to compare responses of the metropolitan physicians with those of the rural areas.
3. Survey practicing Nurse Practitioners in the area to compare what they are doing with what the physicians would delegate according to this study.

4. Survey R.N.'s in the area in regard to their attitudes toward expansion of nursing roles, comparing their responses with those of the physicians.

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APPENDICES

APPENDIX A

Letter of Introduction

Letter of Introduction

Dear Doctor _____:

I am a graduate nursing student currently working on a research project as part of my course work at the University of Oregon Health Sciences Center. My study involves investigation of attitudes currently held by practicing physicians toward nurses in expanded roles.

I have chosen to examine the attitudes in question by means of personal interviews with a random sample of physicians in our community. Your name is one of those included in the sample.

I will be telephoning your office in a few days in order to make an appointment with you. The interview will take approximately ten minutes. I will appreciate your cooperation very much. Please be assured that all responses will remain confidential. The results of the study will be available should you desire to have them.

Sincerely,

(Ms) Dawn A. Sides, B.S.N., R.N.

Ms. Sides is a regularly enrolled graduate student in the University of Oregon School of Nursing. Any assistance you can give her will be appreciated.

B. Evelyn Schindler, M.A., R.N.
Research Advisor

APPENDIX B

Informed Consent Form

Informed Consent Form

I, _____, herewith agree to
(First Name) (Middle Name) (Last Name)
serve as a subject in the investigation named "Attitudes of Portland Area Physicians Toward Nurses in Expanded Roles", by Dawn A. Sides, B.S.N., R.N., under the supervision of B. Evelyn Schindler, M.A., R.N.

The procedure to which I will be subjected is filling out a questionnaire. There is no risk for me from this procedure. The information will be kept confidential. My name will not appear on the records and anonymity will be insured by the use of code numbers.

Dawn Sides has offered to answer any questions that I might have about my participation in this study. I understand I am free to refuse to participate or to withdraw from participation in the study at any time without effect on my relationship with the University of Oregon Health Sciences Center.

I have read the foregoing.

_____ _____
(Date) (Subject's Signature)

_____
(Witness' Signature)

APPENDIX C

Questionnaire Form

Questionnaire Form

Attitudinal Survey -- Nurse Practitioner

The study in which you are participating involves physicians' perceptions of and attitudes toward nurses in expanded roles. Because there are different types of roles developing, and because there are different titles used by nurses in expanded roles, I would like to share with you the term and definition I am using for my study.

The form you will fill out refers to a "Nurse Practitioner". The definition used by the Oregon State Board of Nursing, based on the Oregon Nurse Practice Act (ORS Chapter 678) is: a registered nurse who has had "specialized education" and is prepared to "...provide management of mental and physical health care in the applicable specialty area...in collaboration with physicians and other health care professions."

Respondent's Personal Data Sheet

1. Year of graduation from medical school _____

2. Type of practice (circle appropriate letter)

   a. solo

   b. partnership

   c. group

   d. institutional teaching or staff position (e.g. HMO, Medical School, Kaiser)

3. Specialty Area (circle appropriate letter)

   a. Family Practice
   b. General Practice
   c. Internal Medicine
   d. Pediatrics
   e. Psychiatry
   f. Surgery

4. If in private practice, approximate number of patients in your practice.

   a. less than 100

   b. 101 to 300

   c. 301 to 600

   d. 601 to 900

   e. more than 901

5. Have you worked with a Nurse Practitioner before? (Check appropriate space)

   _____ Yes _____ No

6. Do you currently have a Nurse Practitioner working in your practice setting? (Check appropriate space)

   _____ Yes _____ No

Part One: Please respond to the following statements by placing a check mark (✓) in the square that most closely approximates your attitude toward the statement.

	Strongly Agree	Moderately Agree	Undecided	Moderately Disagree	Strongly Disagree
1. Problems within the present health care delivery system include:					
a. maldistribution of professional personnel					
b. excessive cost of care					
c. an uninformed public					
d. lack of emphasis on prevention					
2. Objectives in expanding the nurse's role in the delivery of health care should include:					
a. primary health care for ambulatory patients					
b. counselling and education regarding health maintenance and/or adherance to medical regimen					
c. reduction of cost of care due to more efficient use of facilities and personnel					
d. research activities by the nurse					
3. Addition of a Nurse Practitioner to my practice would:					
a. free me from routine duties in order to devote more time to complicated cases					
b. contribute to a net increase in income for my practice					
c. offer my patients opportunities for personalized instruction for which I do not have time					

Part One (continued)

4. Problem areas that might be involved in hiring a Nurse Practitioner include:	Strongly Agree	Moderately Agree	Undecided	Moderately Disagree	Strongly Disagree
a. availability of third party payment for her services					
b. clearly set down protocols for care she gives					
c. definition of authority and responsibility for patient care					

Part Two:
Imagine that you have had occasion to become acquainted with the abilities of a Nurse Practitioner. You find her to be a competent, dependable individual. Below is a list of tasks involved in patient care. Please indicate your willingness to delegate to the Nurse Practitioner these tasks by placing a check mark (✓) in the appropriate square.

	Always	Almost Always	Sometimes	Rarely	Never
1. organize, conduct and evaluate formal education classes for patients with chronic illness					
2. modify diet					
3. modify exercise regimen					
4. explore family problems with the patient					
5. prescribe and administer immunizations according to a protocol					
6. home visits					
7. office visits, including drop-ins					
8. telephone consultation with patients					
9. decide when the patient should return to the office					
10. adjust medications					
11. order laboratory studies					
12. obtain medical history					
13. obtain social history					
14. review of systems					
15. screening examination					

Part Two (continued)

		Always	Almost Always	Sometimes	Rarely	Never
16.	in-hospital visits					
17.	interpret laboratory reports					
18.	initiate drug therapy					

Part Three:

1. If you decided to include a Nurse Practitioner in your present practice setting, what method of reimbursement would you prefer for this person? (check only one)

   _____ a. Fixed percentage of practice income only

   _____ b. Salary plus fixed percentage of practice income

   _____ c. Straight salary

   _____ d. Fee-for-service reimbursement

   _____ e. Limited partnership arrangement

2. Regardless of which mechanism of reimbursement you have checked above, what do you think is a reasonable annual income for a full-time Nurse Practitioner? $_____

3. Would you like to employ a Nurse Practitioner in your practice? (check one answer)

   _____ Yes

   _____ No, while I approve of the Nurse Practitioner concept, I would not like to employ one in my practice because (Please specify)_____

   _____ No, I do not approve of the Nurse Practitioner concept because (Please specify)_____

Part Three (continued)

4. Please include here any comments you may have regarding the subject of expanded nursing roles that may not have been adequately addressed in the above statements.

APPENDIX D

Tables

Table A

Percentages of Responses to Part One - Physicians' Perceptions of Expanded Nursing Roles - by Individual Question

Question	Strongly Agree	Moderately Agree	Undecided	Moderately Disagree	Strongly Disagree
1. Problems in the health care system include:					
a. maldistribution of personnel	32.1	52.8	9.4	3.8	1.9
b. excessive cost	31.5	42.6	12.9	11.1	1.9
c. uninformed public	24.5	50.9	9.4	15.1	
d. lack of emphasis on prevention	24.1	38.8	11.1	24.1	1.9
2. Objectives in expanding the nurses' role should include:					
a. primary health care	27.8	40.8	12.9	14.8	3.7
b. counselling and education regarding health maintenance	70.3	27.8	1.9		
c. reduction of cost	31.5	38.2	14.8	3.7	1.8
d. research activities	7.5	34.0	30.2	18.9	9.4
3. Addition of a N.P. to my practice would:					
a. give me more time	25.9	35.2	14.8	18.5	5.6
b. increase practice income	5.8	15.4	30.8	34.6	13.4
c. increase personal instruction for my patients	31.4	41.2	3.9	15.7	7.8
4. Problems in hiring an N.P. might include:					
a. third party payment	13.5	44.2	28.8	3.9	9.6
b. protocols for care	16.9	49.1	13.2	17.0	3.8
c. authority and responsibility for patients	20.4	42.6	9.3	24.0	3.7

Table B

Percentages of Responses to Part Two - Willingness to Delegate Responsibility - by Individual Question

Item	Always	Almost Always	Sometimes	Rarely	Never
1. education classes for patients with chronic illnesses	41.5	41.5	11.3	5.7	
2. modify diet	33.3	48.2	16.7	1.9	
3. modify exercise	26.9	50.0	21.1	1.9	
4. explore family problems	33.9	35.8	28.3	1.9	
5. immunizations per protocol	53.8	30.8	11.5		3.9
6. home visits	31.5	22.2	37.0	7.4	1.9
7. office visits	18.9	18.9	47.2	13.2	1.9
8. telephone consultation with patients	22.2	37.0	33.3	7.4	
9. decide when patient should return to office	16.7	22.2	37.0	20.4	3.7
10. adjust medications	1.9	24.1	35.2	20.4	18.4
11. order laboratory studies	3.7	32.1	37.7	15.1	11.3
12. obtain medical history	27.8	42.6	22.2	7.4	
13. obtain social history	35.2	46.3	16.7	1.9	
14. review of systems	26.4	43.4	22.6	5.7	1.9
15. screening examination	22.6	28.3	28.3	13.2	7.6
16. in-hospital visits	5.6	14.8	40.7	24.1	14.9
17. interpret lab results	5.6	16.7	37.0	27.8	12.9
18. initiate drug therapy	1.9	5.6	31.5	25.9	35.2

An Abstract of the Clinical Investigation of

Dawn A. Sides

For the: Master of Nursing

Date of receiving this degree: June 9, 1978

Title: Attitudes of Portland Area Physicians Toward Nurses in Expanded Roles

Approved: [redacted]
B. Evelyn Schindler, M.A. Advisor

This study was a survey of Portland area physicians' perceptions of and attitudes toward nurses in expanded roles. A random sample of 54 physicians was interviewed by the investigator. At the time of the interview a brief questionnaire was filled out by the respondents. Perceptions of 1) problems within the health care delivery system, 2) objectives of expanding nursing roles, 3) benefits of hiring a nurse in an expanded role, and 4) potential problems in hiring an expanded role nurse were assessed. The physician's willingness to delegate responsibility was ascertained and was correlated with his perceptions of the expanded role of the nurse. Questions about the method of reimbursement and an estimate of reasonable yearly income for a Nurse Practitioner were included. No statistically significant differences were found between various groups in their perceptions of expanded roles for nurses or their willingness to delegate responsibility to Nurse Practitioners. Statistically significant differences were found in willingness to hire Nurse Practitioners between those physicians who had had previous

experience working with the N.P. and those who had not had previous experience. (Chi square = 14.2, df = 1, significant at $p < .001$). Portland area physicians were shown to be generally favorable toward the concept of expanded roles for nurses. They were less willing to delegate traditional physicians' duties than they were education of patients, data gathering and counselling types of activities.