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# PHYSICIAN PERCEPTION OF THE FAMILY NURSE PRACTITIONER ROLE AND THE WILLINGNESS TO HIRE

By

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# ABSTRACT

## PHYSICIAN'S PERCEPTION OF THE FAMILY NURSE PRACTITIONER ROLE AND THE WILLINGNESS TO HIRE

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As the managed care environment evolves in the health care system, the financial risk shifts from the payers to the providers. Providers will need to find new and creative ways to provide efficient, cost-effective, quality care. Though multiple studies over the past 20 years have shown that nurse practitioners provide cost-effective, quality care, their acceptance into the primary care arena has been limited. The purpose of this study was to provide descriptive information about the physician knowledge and perception of the family nurse practitioner role which would influence the physician willingness to hire.

A questionnaire that assessed physician knowledge of the family nurse practitioner role was hand delivered to 53 primary care physicians in a southwest county of Michigan. Descriptive, ANOVA, and correlation studies demonstrated that the more knowledgeable the physician is about the nurse practitioner role, the more willing the physician is to hire a nurse practitioner. Future endeavors to increase physician's experience and knowledge of the nurse practitioner role were discussed.

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# INTRODUCTION

By the year 2000, an estimated 36 million Americans will be 45 to 54 years of age (Kennedy, 1993) and 30 to 40% of traditional hospital admissions will shift to outpatient encounters due to a change in demographics, technological advances, and payor pressure (Satinsky, 1995). In 1993, 13.9% of the Gross National Product (GNP) was devoted to health care and the rate of increase was greater in the health care sector than in other sectors of the economy (Nighswander, 1994). According to Hickey (1996), the health care industry is ranked the fourth major industry in the United States and an estimated 37 million Americans do not receive some level of health benefits as a condition of employment or through a government subsidy program (p. 4). These factors have influenced the development and evolution of the managed care environment in the health care system.

Traditionally, hospitals and physicians provided care and were paid on a fee-for-service basis. The payers paid minimal attention to appropriateness of service, let alone to cost, quality, and efficacy (Satinsky,1995). The rising percentage of the GNP devoted to health care is evidence of this trend. According to Satinsky, managed care exists as a response to the fear of national health care reform through President Clinton's National Health care proposal. This fear has provided the impetus for many states, insurers, and many providers to make their own changes. Satinsky (1995) writes that managed care is considered a type of health insurance plan designed to provide a wide range of health care delivery at a reduced cost without compromising quality of care. There is an obligation to manage that is shared among providers, consumers, and payers. Satinsky (1995) goes

on to describe the shift in financial risk from the insurers to the providers of health care delivery which develops an "internally driven, but externally sensitive standards for delivering high-quality, cost effective care" (p.127). In this position, many physicians are conflicted with the ethical issue of providing quality care in a cost-effective manner.

Examples of managed care plans are health maintenance organizations (HMOs), preferred provider organizations (PPOs), point-of-service (POS) plans, and managed fee-for-service plans. In a managed care environment, the financing and delivery of health care are likely to come together in integrated systems. Completely integrated systems have not come to most parts of the country but many markets are in a transitional stage of development. According to Satinsky, there are four common characteristics in the process of integration: vertical integration in which different levels of care are combined into a seamless continuum of care; payment by capitation in which the provider receives payment based on cost per member per month; emphasis on low-cost/ high-quality services; and rationing of resources in which the provider becomes the gatekeeper to provision and management of care (p.132). Satinsky continues that there are two important ways in which a mature managed care environment contrasts with a non-managed care market "(1) competition is among integrated financing and delivery systems, not individual components, and (2) health plans and employers use many strategies to contain health care cost while ensuring quality of care" (p.133). As the integrated system evolves, the critical issue to their success will be the ability to capture, share, and manage information from all parts of the system.

In 1995, Holland Community Hospital, in Holland, Michigan, appointed a design team to evaluate its degree of integration in the health care market. The design team findings indicated that the health care environment of the Holland area was at Stage II of development on a scale from Stage I (least integrated) to Stage V ( most integrated). The team proposed plans to help the integration process progress. The team re-evaluated the market again in 1996 to find that the area had progressed to a Stage III of integration.

In September 1996, Arbor Associates developed a strategic medical staff plan for Holland Community Hospital (Arbor Associates, Inc., 1996). The study included a current (1996) needs evaluation and year 2001 needs projection for primary care physicians in the Holland community. All results were stated in terms of full time employment of physicians. For the purpose of the study, nurse practitioners (NPs) and physician assistants (PAs) were assumed to be the equivalent of 0.75 of a full time physician, except in the obstetrics-gynecology practice, in which the equivalent was 0.5.

The 1996 findings showed that there were 66 full time primary care physicians in the designated area, which supported a population of 133,586. According to Arbor Associates, the area could support 67 primary care physicians at that time. Projected primary care physician requirements for the year 2001 were also developed. Physician supply was adjusted to reflect retirement of primary care physicians in the future. The need and net need figures were shown as a range based on two different scenarios of the relative roles of primary care physicians as managed care continues to grow in western Michigan. Scenario I was developed as a reference point for the minimum number of primary care physicians needed based on the assumption that the demand for office visit volume of primary care physicians in the Holland will be relatively unaffected by increases in managed care. Scenario II, in contrast, provided the opposite end of the range based on the assumption that as the health care market shifts from fee-for-service to managed care, there would be a 20 to 30 percent reduction in referrals from primary care physicians to specialists. Under scenario I, a total of 74 primary care physicians would be required in the year 2001, or a net increase of 18 additional full time physicians. Scenario II would require a total of 84 primary care physicians, or 28 more doctors than are currently in practice. This is an increase of 27 to 42 percent in just five years. With managed care and various alternative delivery systems increasing, the most cost-effective mix of provider types should compliment the various patient populations. The objective of any managed care plan is to manage use and price by controlling the type, level, and frequency of treatment by restricting the level of reimbursement for services. Current

changes in the health care market have provided the impetus to hire mid level practitioners, especially family nurse practitioners (FNPs). In the Holland area, the next five year time period could provide the perfect opportunity to increase the utilization of the FNP.

## Statement of Problem

The Holland area is in the midst of integration into a managed health care system. As this system moves toward a mature managed care environment, the financial risk shifts from payers to providers. The implications of this shift for primary care are extremely complex. According to Swartz and Brennan (1996), the physician is no longer the independent decision maker guided solely by medical knowledge and a code of ethics. Physicians are dramatically impacted by the managed care system. The insurance companies are placing tighter restrictions on physician practice, a new and uncomfortable situation for the physician. This means physicians will need to find new and creative ways to provide efficient cost-effective, quality care to the community. Many studies have provided information regarding how NPs are cost effective, provide quality care, and have positive outcomes with patient satisfaction (Brown & Grimes, 1993; Office of Technology Assessment, 1986). If it is true that NPs provide quality cost-effective care and that the managed care environment emphasizes cost-effectiveness, why has the entry of NPs into the primary care arena been so limited? It is this author's belief that the physician still plays a key role in the hiring process and success of NPs in the health care system. How the NP role is viewed by the physician within the current health care market is thus vitally important.

The purpose of this study is to provide descriptive information about the physician's knowledge and perception of the NP role which would influence the physician's willingness to hire. The more positive the perception the physician has of the NP role, the more willing the physician will be to hiring a NP. The information obtained in this study would provide a base for developing a more effective marketing program for NPs. Therefore the following questions will be addressed.

## Research Questions

The research questions are:

(1) What is the physician's perception of the role of the FNP?

(2) What do physicians perceive as problems in utilizing the FNP in practice?

(3) What is the prior physician knowledge or experience with FNPs?

(4) What is the relationship of physician demographics to physician perception of the FNP role?

(5) What is the relationship of physician perception of the FNP role and the willingness to hire?

## Research Hypothesis

The more positive the perception of the role of the FNP, the more willing the physician will be to hire a FNP.

# THEORETICAL FRAMEWORK

## Conceptual Definitions of the Variables

The key variables to be discussed are perception and willingness to hire. According to King (1992), perception is "each person's representation of reality" (p.145). Perception is a process in which data that is obtained through the senses and from memory is organized, interpreted, and transformed. This process of human interaction with the environment influences behavior, provides meaning to experience, and represents the individual's image of reality. Thus, the physician's perception of the role of the NP is based on past and present knowledge and experience with the NP role.

Willingness to hire is based on a decision making process which is founded on the perception of the individual making the decision. King (1992) defined decision making as "a dynamic and systematic process by which goal-directed choice of perceived alternatives is made and acted upon by individuals or groups to answer a question and to attain a goal" (p.132). Kahneman, Slovic, and Tversky (1982) describe decision-making as an individual's initial framing of the problem, which is dependent on how the problem is presented, the person's present mood, the ability to imagine alternatives, past

experience, perceived effect on current life-style, and whether the decision outcome will be a win or a loss for the person. Decision-making is thus a cognitive process based on the individual's interpretation or framing of the situation. Therefore, the decision to hire a NP is directly related to the physicians perception, both positive and negative, of the NP role. The decision is a process by which the physician assesses the current situation and the possible alternatives based on previous life experiences, current physical state, and current information available. The physician then evaluates the possible outcomes, and makes a decision which is believed to be the most appropriate.

## Conceptual Framework

The conceptual framework utilized in this study is King's theory of goal attainment (King, 1981,1992). The theory is written to describe nurse-client interaction but can be considered as the interaction between any two individuals. According to George (1995), King's theory of goal attainment is generalizable to any dyadic nursing situation and therefore can include the interaction between the NP and the primary care physician. For the purpose of this paper, the dyadic relationship will pertain to the nurse practitioner and the primary care physician.

King's theory is derived from an open systems framework and consists of three systems, personal, interpersonal, and social, which are in continuous exchange with their environment. The personal system involves the individual and is based on the concepts of perception, self, body image, growth and development, time, learning, and space. The interpersonal system involves dyads, triads, or small and large groups. The concepts relate to role, interaction, communication, transaction, and stress. The social system is composed of family, school, social organizations, and health care delivery systems. The concepts are organization, power, authority, status, decision making, control, and role. Figure 1 illustrates the three open interacting systems, which are distinctly unique but not separate. The broken lines represent openness and permeability that allow interaction to take place within the other systems. The arrows represent the integration of systems to

one another. All three systems can be seen interacting within the NP and physician relationship.

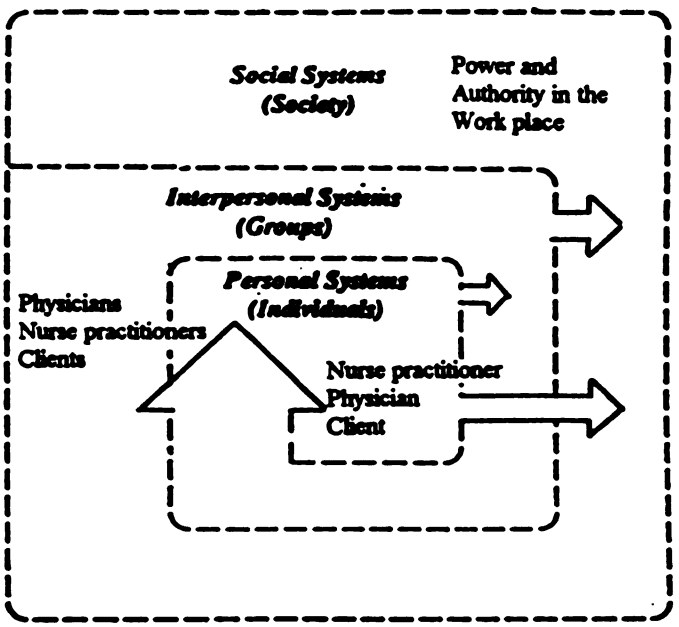



Figure 1. An adapted conceptual framework for physician-nurse practitioner interaction. (From King's Conceptual Framework for Nursing (King, 1992, p.20).)

Each individual has their own perception of themselves and the situation based on current and previous life experiences. When the NP and the physician interact with each other, their communications and transactions are influenced by their perception of their roles. The social system also influences the relationship by dictating the organization, power, and authority. Within this theory and the current health care system, physicians have the power and authority to make the decision whether to hire a NP into a private practice. This decision is based in part on the physician's knowledge or perception of the role of the NP. An inaccurate perception will directly impact the communication, interaction, and transaction between the NP and the physician. Ultimately, an inaccurate perception will result in an inability to reach a common goal. This relationship is illustrated in Figure 2. Perceptual congruence increases the chance of mutual goal setting and congruent role expectations thus avoiding role conflict, confusion, and stress.

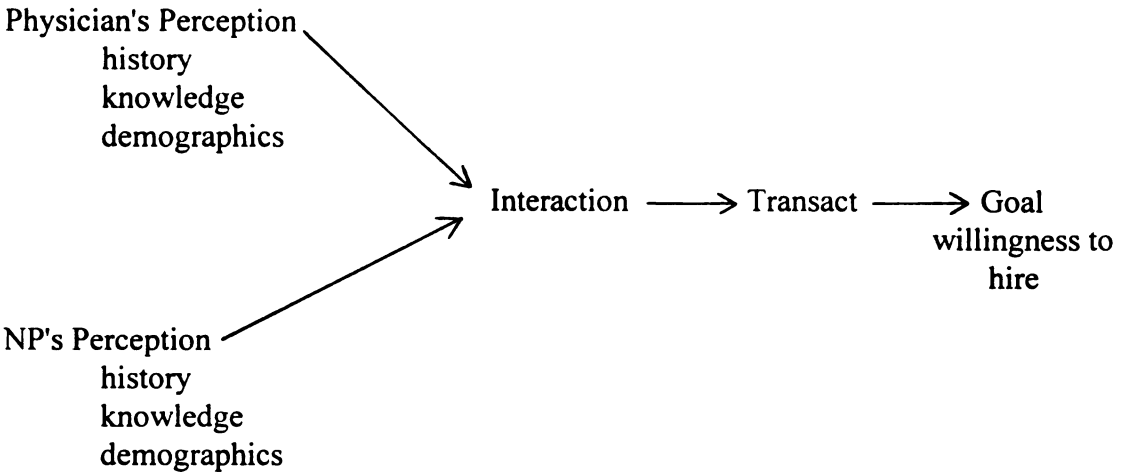



Figure 2. The process of physician-nurse practitioner interaction utilizing King's theory of Goal attainment (King,1992, p.21).

## REVIEW OF THE LITERATURE

### Managed Care and Physician Practice

Numerous studies have been conducted that have evaluated the effect of the managed care system on physician practice(Freund et al., 1989; Hillman, et al., 1989; Lurie et al., 1992; Clement et al., 1994; Lurie et al., 1994; Miller & Luft,1994; Greenfield et al., 1995). In general, these studies showed a consistently lower cost in the managed care system with an equal or better quality than in the fee-for-service arena. Processes and outcomes in managed care systems have been better or the same for patients with diabetes and blood pressure control (Greenfield et al,1995), urinary tract infections and pelvic inflammatory disease (Carey & Weis,1990), and care for patients with chronic mental illness (Lurie et al., 1992). In studies of care and outcome in the elderly, there is little difference between managed care and fee-for-service systems with regard to rate of functional decline (Lurie et al., 1994), number of outpatient visits to providers per year (Clement et al., 1994), or one year outcomes of patients with congestive heart failure (Retchin & Brown, 1991). The two major limitations of these studies are 1) that most of the studies are already more than three years old, and with rapid reorganization growth theie results are already outdated, and 2) most studies have evaluated relatively short

term outcomes, even when dealing with chronic illnesses like diabetes and congestive heart failure.

## Nurse Practitioners in Primary Health Care

Many studies have been conducted evaluating the efficacy of NPs in the ambulatory setting. Most notably are Brown and Grimes (1993) meta-analysis and the study by the Office of Technology Assessment (OTA) in 1986. Brown and Grimes found that NPs provided more health promoting activities, scored higher on quality of care measures, achieved higher patient satisfaction and compliance, and spent more time per visit than their physician counterparts (none of whom were in managed care). The OTA's 1986 policy analysis of NPs, PAs, and certified nurse midwives also found that NPs were more accessible and cost effective and had higher patient satisfaction ratings than physicians. These studies were done over a decade ago however, and have limited impact in today's health care system. New studies of the impact of the NP in the current health care system are currently underway and will likely provide information regarding the impact of the NP in an integrated health care system.

## Physicians' perceptions of the NP role in Managed Care

There exist very few published research studies conducted solely to assess the physician's perception or attitude toward the NP. Some studies have combined physicians' perceptions along with patients' perceptions, acceptance, and quality outcomes (Betancourt, et al., 1996; Olzack & Carrico, 1995). Other studies have examined the incentives managed care provides physicians to hire NPs (Bezjak, 1987) or the attitudes of HMO physicians toward the use of NPs and PAs (Johnson & Freeborn, 1986). Only two studies could be found that actually evaluated the physician's perception of the NP and their willingness to hire (Radke, 1977; Louis & Sabo, 1994).

Betancourt, Valmocina, and Grossman (1996) utilized three questionnaires to evaluate the patient's perception of the NP role, the physician's perception of the NP role, and the knowledge the patient and the physician have with regard to the NP role. Both physicians and patients had positive perceptions of the NP role but each had different

limiting factors regarding role performance capabilities. The item that scored lowest on the physicians questionnaire was the ability to prescribe medications. The study did not report which states this questionnaire was completed in nor whether the NP had prescriptive authority there.

A study by Olzack and Carrico (1995), two clinical nurse specialists from a obstetrics-gynecology practice surveyed their patients and the physicians they worked with concerning their satisfaction with NP services. Of the thirteen physicians responded, eleven (85 %) stated they were satisfied with the care that was administered and would refer family and friends. Even though twelve (92%) of the physicians felt the NP made appropriate referrals and performed thorough assessments, only ten (77%) felt the assessment skills were effective. The authors state that the organization used the terms "clinical nurse specialist" and "nurse practitioner" synonomously. The organization was described as a main facility that supported three satellite facilities, which were staffed with three nurse midwives and ten NPs, who worked with ten physicians. The total number of questionnaires sent to physicians was never stated, so that the reader has no way of determining whether the thirteen who responded were a fair representation of the potential population. If it was a small percentage of the population, more could be implied by the fact that a high number of physicians did not respond to the questionnaire. This study was limited by the small number of respondents and could be skewed secondarily due to any relationships between the NP and the respondents.

A 1987 study by Bezjak concerned physicians' motivations to form associations with NPs. The study explored NP-associated incentives in relation to year of physician graduation from medical school, physician specialty, and the type of practice. The physician subjects were recruited through a process where NPs practicing in Arizona identified their physician counterparts. Of the eighty-eight physician/NP associations so identified, 63 (72%) responded within one month to the mailed survey. The survey contained four areas of study: accessibility, physician satisfaction, economic benefit, and quality of care, and its results indicated that physicians perceived an increased

accessibility to their services and improved quality of their care as being the most important incentive to hire a NP.

Johnson and Freeborn (1986) assessed the attitudes of physicians working in HMOs toward the use of NPs and PAs. Data for this study were collected in 1977, in the early evolution period of NP history. Physicians were surveyed from internal medicine, pediatrics, and obstetrics-gynecology in a HMO serving 270,000 members. The percentage of respondents per specialty was as follows; internal medicine 69%, pediatrics 84%, and obstetrics-gynecology 94%. The organization employed 21 NPs (16 females and 5 males) and 14 PAs which were all male. Overall, internists and pediatricians had more favorable attitudes toward NPs and PAs than did the obstetrics-gynecology physicians. Physicians from all three groups favored NPs more than PAs and felt that NPs were more likely to increase the quality of care and less likely to increase the risk of malpractice. Besides the fact that this is a very old study, the article does not provide information regarding the type of survey questions used nor tests run on the data collected to verify the assumptions or to document the validity or reliability of the data. The article stated that many of the results were not statistically significant but does not provide the reader with supporting statistical information.

Radke (1977) developed a 43-item questionnaire to determine the physician's perception of the FNP. This questionnaire was mailed to 239 general practice physicians in a selected county of southern California. Of the 81 respondents(34%), 73(90%) had heard or read about NPs and 56 (69%) had discussed the concept with other physicians or health professionals. However, 47 (58%) had not observed a NP in practice, 60 (74%) had not worked with a NP, and 70 (86%) had never employed or presently were not utilizing a NP. The physicians' most favorable responses to the function of the NP were to health teaching, obtaining a health history, counseling, making home visits, managing routine health care, and participating in evaluation of care. The greater percentages of unfavorable responses were for inserting intrauterine devices and performing physical exams. Many physicians had an unfavorable response to prescribing medications but also

had a comparable number of favorable responses. Forty (49%) of the physicians were willing to consider hiring a FNP as compared to 38 (47%) who were not willing to hire. Areas of uncertainty were identifying behavioral problems, managing commonly occurring acute illnesses and managing stabilized, chronic diseases. This study is twenty years old and most likely out of date; however, it does provide important information concerning physicians' previous attitudes.

Louis and Sabo (1994) assessed the need for and willingness to hire NPs, as viewed by nurse practitioners, nurse administrators, and physicians. Questionnaires were sent to all licensed physicians (N = 1,800), all state certified NPs (N = 120), and the top nurse administrators (N = 86) in the state of Nevada. The study had a return rate of 21% overall with 79% of the nurse administrators, 35% of the NPs, and 18% of the physicians. Overall, the respondents saw a need for NPs (74%) yet only 50%, including the NPs, wished to hire a NP. Over 20% of the respondents, including some NPs, indicated the need for more information about NPs before committing to hire. Seventy-six percent of all respondents had experience with NPs; however 75% of those respondents saw a need for NPs and only 55% indicated a desire to hire. Twenty-three percent of the physician group expressed a need for more information about NPs. These findings suggest that, if professionals need more information about NPs, the public also needs more information about services provided by NPs.

## Summary of Literature Review

The major focus of this study was to describe the physician's perception of the NP role and the physician's willingness to hire. The nearest study that has been done to evaluate this was twenty years old when advanced practice nursing was in its infancy not to mention the beginning of the managed care concept. Much has changed since that time and will continue to change. For this reason, more current studies need to be conducted to evaluate the physician's perception of the NP role and how the two roles interact. A clearer understanding of the physician's perception of the NP will better serve the NP in future interactions. The purpose of this study is to provide more descriptive information

regarding the physician's perception of the NP role which will aide the NP in employment.

## METHOD

### Design

This study was a non-experimental design in which a self selected convenience sample of primary care physicians completed a one-time survey. The purpose of the study was to provide the NP with information to better understand the physician's perception of the NP and then compare those perceptions to their willingness to hire a NP. The information obtained then provides the NP with concrete areas of role incongruence, information which can then be used to create planned change of the physician's perception of the NP. The survey required approximately ten minutes to complete and was given to primary care physicians in Ottawa County, Michigan, that were affiliated with the three hospitals in that county (Holland Community Hospital, Zeeland Community Hospital, and North Ottawa Community Hospital). The primary care physicians were defined as physicians practicing in family practice, pediatrics, obstetrics-gynecology, or internal medicine.

Permission was obtained to employ a 43-item questionnaire developed and copyrighted by Karen J. Radke and Edith Wright (Appendix A). The questionnaire was developed to include statements of function considered to be representative of those performed in the ambulatory health setting which could be performed by the NP. The questionnaire was updated to include the current description of a FNP and to include primary care physician demographics to enhance the study findings (Appendix B).

Five-point Likert type scale items are used in Section I of the questionnaire (questions 1-21) to assess the physician's perception of the FNP performing each function. The categories range from "Highly Favorable" (5) to "Highly Unfavorable" (1) and include a category of "Uncertain" (3). Section II of the questionnaire (questions 22-29) assesses perceived problem areas or barriers the physician might anticipate when employing a FNP. This section uses four-point Likert scale items ranging from "no

problem at all" (4) to "many problems" (1). Section III (questions 31-35) inquires about the physician's source of knowledge of and experience with FNPs. Physicians were asked to respond "yes" (1) or "no" (0) to the questions stated. SectionIV (questions 36-47) provides demographic information and also the critical question, "Would you ever be willing to consider hiring a Family Nurse Practitioner?" Given the age of the original survey and the evolution of the NP role, this question was changed. The author felt that this question, in the way it was written, would not evoke a significant number of "no" answers and would thus limit the sensitivity of the instrument. This question was changed into three questions regarding hiring a FNP now, in 1-2 years, or in 2-5 years. The response to each remained "yes" or "no". The physician was allowed space below Section I and Section II for any additional comments.

## Operational Definitions Of the Variables

The physician's perception of the FNP role was operationally defined by survey questions 1-35, which included areas of role definition, perceived utilization problems, and previous knowledge or exposure to NPs. The first section evaluated the physician's perception of the NP role. This variable was operationally defined by the summation of items 1 through 21 with scores ranging from 21 (highly unfavorable) to 105 (highly favorable). The second variable was the physician's perceived problems in utilizing a NP and was operationally defined by the summation of items 22 to 29 ranging from 8 (many problems) to 32 (no problems at all). The last section evaluated previous knowledge or experience to NPs. It was defined by items 31 to 35 with a summation ranging from 0 (all no) to 5 (all yes). The total range of scores for the physician's perception was from 29 to 142.

Willingness to hire is operationally defined by questions 43, 44, and 45 on the survey, which directly ask whether the physician would hire a family nurse practitioner now, in 1-2 years, or in 2-5 years.

## Sample

The questionnaire was delivered to a convenience sample of primary care physicians located in Ottawa County, Michigan. The primary care physicians included obstetrics and gynecology, internal medicine, pediatrics, and family practice physicians that were actively affiliated with the three community hospitals (Holland Community Hospital, Zeeland Community Hospital, and North Ottawa Community Hospital) and their primary office was located in Ottawa County. This excluded physicians whose primary office was in another county and who did not have active privileges. Since all the physicians practice in close proximitry, all were similarly effected by managed care.

## Field Procedures

The following procedures were implemented in this study:

1. An envelope containing an introduction and consent letter (Appendix C) and the questionnaire was personally delivered to each physician's office. Offices with one or two physicians received a self addressed stamped envelope to return the completed survey. Offices with three or more physicians received a large manila envelope to hold the completed surveys and the author returned on a designated date to collect them. It was believed that this would increase the number of respondents without compromising confidentiality. Voluntary consent was determined by the completion and return of the survey.

## Protection of Human Rights

The rights of all subjects involved in this study were protected in accordance with the Michigan State University Committee on Research Involving Human Subjects. Approval #97-487 was obtained from the committee prior to initiating any data collection (Appendix D). Voluntary consent to participate in the study was indicated by completion and return of the survey, as indicated in the introduction and consent letter (see Appendix C). Anonymity was maintained by providing self addressed stamped envelopes for the return of surveys given to practices with only one or two physicians. Larger practices

were provided a manila envelope to place the completed forms which were collected together at one time by the surveyor.

## Assumptions

The following were identified as assumptions for the purpose of this study:

1. Self-reported data given by subjects was accurate to the best of their knowledge.
2. The surveys were completed alone without consulting another individual and thus the data are independent.
3. The sample comes from populations of the same variance.
4. The subjects practice within an integrated health care system.

## Limitations

The results of this study are limited by several methodological flaws. The sample was made up of a small group of physicians in western Michigan. Given the varying degrees of managed care integration in communities across Michigan and the country, the results of this study could not be generalizable to a larger population.

After the questionnaires were collected, it became obvious that the return rate was greater for the questionnaires that were mailed back as opposed to being personally picked up by the author. One contributing reason for this could be that the author did not call the group practices the day before the established pick up date to remind the physician. It is believed that it would have been easier and possibly yielded a greater number or responses if all the questionnaires had been returned by mail.

There was some difficulty in locating physicians' offices. Some listed addresses according to the hospital register were not up to date and the author was unable to find three physician offices. It must also be noted that the survey was done in the middle of the summer and the author was informed at many of the offices the some of the physicians were on vacation during a portion or all of the time period allotted for the survey response. This limited the number of responses and should be considered if another study were to be conducted.

Other threats to external validity include physicians who may have given socially acceptable responses because of perceptions that the author was a supporter of all that was included in the questionnaire. The author has also worked professionally with many of the physicians surveyed, so that their answers may have been biased. This kind of bias due to physician knowledge of NPs was the major finding of this study.

Threats to internal validity involved confusion related to two specific areas of the questionnaire. The first area concerned the year that the physician graduated from school. Since the question was written to include both the MD and the DO, some respondents simply circled one or the other but did not give the year of graduation. It can only be assumed that either the question was not read carefully or that there was confusion regarding the question. The second area of concern dealt with questions 43, 44, and 45. These questions involved the decision to hire a FNP now, in
1-2 years, or in 2-5 years. Some physicians responded yes to hiring a FNP now but left the next two questions blank. Other physicians answered yes to all three questions. In discussion with some of the physicians, there appeared to be confusion as to how to answer these questions when they had just hired a FNP within the last six months. Further clarification of these questionswould help future studies.

## RESULTS/FINDINGS

### Data Analysis

Statistical analyses of the data were done with the SPSS/PC+ computer program. Descriptive and summary statistics were provided as a basis to understand the distribution of the physician types.

1. Analysis of varience (ANOVA) was used to compare the physician groups with respect to knowledge of the descriptive NP role (Section I).

2. ANOVA was used to compare the physician groups with respect to perceived problems in utilization of the NP (Section II).

3. ANOVA was used to compare the physician groups with respect to prior knowledge or experience with a NP (Section III).

4. ANOVA was used to compare the physician groups with respect to total knowledge of the NP role (Total Sections I, II, & III).

5. Correlations were computed to test for a relationship between physician type, years since physician graduation, perception of NP role, and willingness to hire now and in the future.

A total of 90 surveys were delivered to primary care physicians in Ottawa County, Michigan, which broke down to 17 OB-GYN (19%), 39 Family Practice (43%), 12 Pediatricians (13%), and 21 Internal Medicine (23%). Of these surveys, 53 (59%) were returned. These frequencies and percentages can be found in Table 1. Analyzing each physician type with respect to actual versus potential returns, the internal medicine group had the highest return rate (71%). It is of interest to note that the family practice group was the largest potential sample group but had the lowest percentage of returns.

Table 1. Analysis of Physician Type with Respect to Actual versus Potential Returns

| | **Frequency** | | | **Percent** | |
|---|---|---|---|---|---|
| **Label** | Actual | Potential | Actual/Potential | Actual/Total | Potential/Total |
| OB-GYN | 9 | 17 | 52% | 17.0% | 19.0% |
| Family | 20 | 39 | 51% | 37.7% | 43.3% |
| Pediatrics | 8 | 12 | 67% | 15.1% | 13.3% |
| Internal Med. | 15 | 22 | 71% | 28.3% | 24.4% |
| Other | 1 | | | 1.9 | |
| Total | 53 | 90 | | 100 | 100 |

Demographic information demonstrated that 89% of the physicians surveyed were males, with a mean number of years since graduation of 17 years. Within the sample, the breakdown of physician group practice showed that 43% of physicians are in a group practice of 2-4 physicians, 36% practiced in a group of 5 or more physicians and 21% are in solo practice. The physicians' practice settings are shown in Table 2.

Table 2. Frequency and Percentage of Physician Practice Setting

| Value | Frequency | Percent |
|---|---|---|
| Private | 49 | 92.5% |
| Federal | 2 | 3.8% |
| Other | 2 | 3.8% |
| Total | 53 | 100% |

The next area to be analyzed related to the physicians' knowledge of each of the three sections of the survey that pertain to the NP role. Summary statistics can be found in Table 3, in which all physician groups were evaluated for each section of the questionnaire pertaining to the NP role (Sect1, Sect2, Sect3) and the total of all the sections (Totalsc). The mean of each section was used to determine the physician's knowledge or perception of each area. Section I totals are illustrated in Figure 3, along with the mean for that section.

Table 3. Summary Statistics of Physician's Perception of the NP

| Variable | Min | Max | Mean | Median | Standard Deviation | Reliability |
|---|---|---|---|---|---|---|
| Sect1: MD Perception of NP role | 50 | 105 | 86.57 | 87.5 | 11.66 | .9274 |
| Sect2: Perceived Utilization Problems | 13 | 31 | 21.03 | 19.65 | 4.43 | .8511 |
| Sect3: Previous Knowledge/experience | 0 | 5 | 4.04 | 5 | 1.33 | .7774 |
| Totalsc: Total score for three sections | 66 | 137 | 111.40 | 111 | 16.08 | .7909 |

Research question # 1 asked: What is the physician's perception of the role of the FNP? This schematic view illustrates the more favorable view the physicians toward FNP roles.

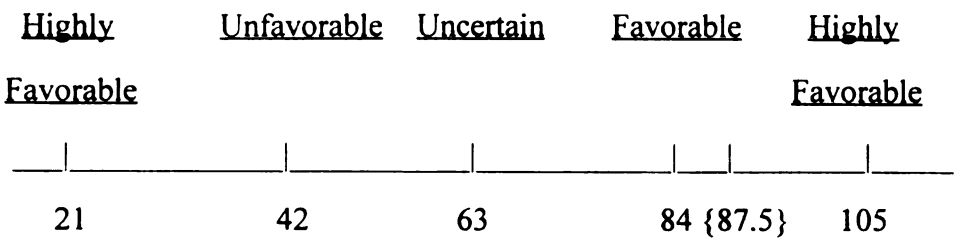



Figure 3. Physician perception of NP role. (Mean response in braces)

Closer evaluation of the frequencies of each individual question in section 1 yields very interesting data. As stated earlier, the questions in this section are answered in 5-point Likert scale items ranging from highly favorable to highly unfavorable. The majority of questions had distribution over all possible answers with the concentration of answers being either favorable or highly favorable. Two questions were answered as either favorable or highly favorable by all respondents. These questions pertained to the NP obtaining a health history and providing health teaching ( questions 9 and 4 respectively). The most controversial question in this section had to do with insertion of intrauterine devices. Of the respondents, 23% viewed this as a highly favorable function of the FNP role while 14% viewed this as highly unfavorable and 44% were uncertain. The last question of this section asked the physician about their overall feelings of the FNP concept. None of the respondents answered highly unfavorable. The majority answered this question "favorable" (43%) with "highly favorable" next (32%) and "uncertain" third at 19%.

Research question # 2 asked: What do physicians perceive as problems in utilizing the FNP in practice? Analysis of responses to Section II of the questionairre shows that, overall, then physicians see few to some problems in utilizing the FNP in practice (see Fig.4).

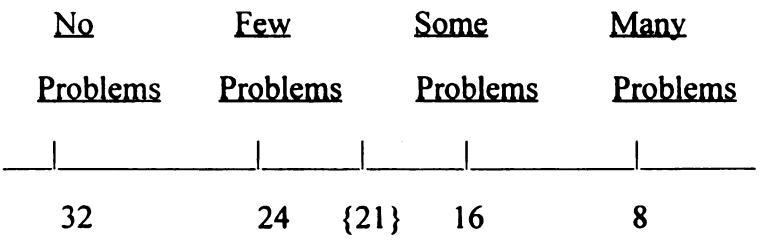



Figure 4. Physician perception of problems in utilizing NPs. (Mean response in braces.)

Table 4 shows the percentages for each question and answer in Section II.

Table 4. Frequency Percentages for Section 2: Perceived Problems Utilizing NP.

| | No Problems | Very Few | Some | Many Problems |
|---|---|---|---|---|
| #22. Patients | 11.3 | 28.3 | 47.2 | 13.2 |
| #23. Physicians | 1.8 | 43.4 | 49.1 | 5.7 |
| #24. Other RNs | 13.5 | 40.4 | 40.4 | 5.7 |
| #25. Quality | 17.6 | 60.8 | 17.6 | 4.0 |
| #26. Legal | 11.5 | 55.8 | 25.0 | 7.7 |
| #27. Interference | 23.5 | 49.0 | 21.6 | 5.9 |
| #28. Funds | 6.2 | 57.1 | 26.5 | 10.2 |
| #29. MD Demand | 7.8 | 49.0 | 37.3 | 5.9 |

The first two columns of Table 4 are more positive (few to no problems); the last two columns are more negative (some to many problems). The areas that were perceived as having predominantly none to few problems with utilization of the FNP were Quality (78%), Legal (67%), and Interference with the physician-patient relationship (73%). The areas perceived as having a more negative relationship were patient's acceptance (60%), and physician's acceptance (55%). All other areas were slightly more positive. It was interesting that the area that the physician views as being the most problematic was that of the patient's acceptance of the FNP. Numerous studies that actually assessed the patient's perception of the NP (Betancourt et al., 1996; Brown, S., & Grimes, D., 1993; OTA, 1986; Guyther, J., & Sabo, J., 1982) have found just the opposite.

Research question # 3 asked: What is the physician's prior knowledge or experience with family nurse practitioners? Analysis of Section III responses show that the vast majority of the physicians surveyed had experienced working with a NP in 4 out of 5 possible ways. The results are obviously skewed to the right with a mean of 4.04 and a median of 5 as a result of the scoring of the "yes" and "no" answers.

The total of all three sections can be visualized in a similar manner as before. The overall scores depicted on a line with placement of the surveys mean score.

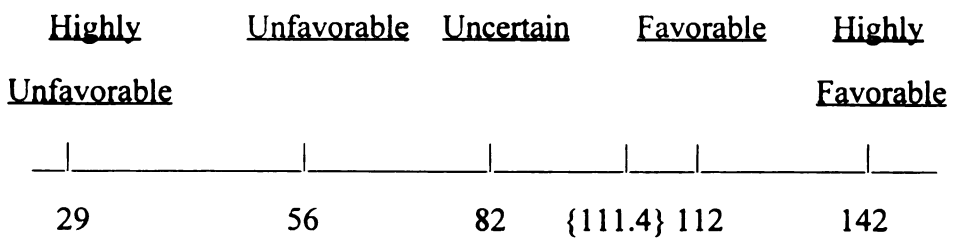



Figure 5. Physician overall perception of the NP. (Mean shown in braces.)

Figure 5 shows that the overall score was a favorable perception of the FNP by all physician typescombined.

Section IV of the questionairre provided descriptive information regarding physician type which was discussed earlier. The section also provided more information regarding the physician's perception of the health care environment along with their willingness to hire. Seventy three percent of the responding physicians did not feel there was a shortage of general practitioners in this community. The physicians responded at a rate of 69% that the services of a FNP would enhance the delivery of health care in their practice setting. In response to the question of hiring a FNP now, in 1-2 years, or in 2-5 years, the physicians marked "yes" in 42%, 49%, and 61% respectively. Thus it would appear that the willingness to hire may increase over the next 5 years. This could be interpreted a number of ways. Since the majority of physicians did not feel there was a shortage of health care providers in the area, it stands to reason that the physicians would not be looking to increase the number of providers to their area. Another possibility could be that the physician may have recently hired another provider in the last 6 to 12 months, thereby financially affecting their decision to hire a FNP. Another impact on the decision could be the current reimbursement constraints by insurance companies and the government for FNP services. But what are the reasons for the increased percentages for hiring in the next 1 to 5 years? This could be related to future population growth predicted to the area, retirement of physicians within the time period, stabilization of current financial status, or better insurance reimbursement anticipated in that time period. Further questions to illuminate the reasons for waiting were not asked.

Analysis of variance was then conducted utilizing first the non-parametric Kruskal-Wallis test and then confirming the results with parametric ANOVA testing. Since the results were the same for each variable in both the Kruskal-Wallis and the ANOVA and the ANOVA is considered the more powerful of the two tests, the results of the ANOVA testing are shown in Table 5. The results show that there is no statistically significant difference between the scores and the physician type. Thus, the different physician types have similar amounts of knowledge and acceptance of the NP role. As a note, the p-value for physician type and Section II (Perceived Utilization Problems) was .07. Examination of the means underlying this nearly significant trend suggests that the internal medicine physicians viewed greater problems in utilizing NPs.

Table 5. ANOVA Results

| Variable | F-Statistic | P-Value | Significant |
|---|---|---|---|
| Sect1: MD Perception of NP Role | .2065 | .9335 | No |
| Sect2: Perceived Problems Utilizing NP | 2.3002 | .0737 | No |
| Sect3: Physician's Knowledge/ experience of NP | .6760 | .6119 | No |
| Totalsc: Total of all sections | .5571 | .6949 | No |

Correlations were computed to test for relationships between variables, including each section, type of physician, and willingness to hire now and in the future. Results are shown in Table 6.

Table 6. Correlation Results

| | Gradyrs | Q39 | Q43 | Q44 | Q45 | Q46 |
|---|---|---|---|---|---|---|
| Sect1: MD Perception of NP role | .0980 | -.1463 | .5496 | .4455 | .4576 | .1964 |
| Sect2: Perceived Problems Utilizing NP | .1215 | -.2673 | .4900 | .4239 | .4761 | .1240 |
| Sect3: Physician Knowledge of NP | -.0539 | -.2070 | .4761 | .1446 | .1159 | .3126 |
| Totalsc: Total of all sections | .1036 | -.2399 | .6046 | .4241 | .4542 | .2175 |

Gradyrs refers to the number of years since the physician graduated from medical school. A Pearson's r was used with this data because the years since graduation is an interval scale. Q39, Q43, Q44, Q45, and Q46 refer to questions 39, 43, 44, 45, and 46 respectively in the questionnaire. Spearman's rho correlations were used to evaluate the relationship between these questions and each section of the survey. This data answers research questions # 4 and #5: What is the relationship of physician demographics to physician perception of the FNP role and what is the relationship of physician perception of the FNP role and the willingness to hire? As seen in Table 6, there is no statistical relationship between the physician's perception of the NP and the year the physician graduated from school or the type of physician practice. Question 43 asks, " Would you or your group hire a Family Nurse Practitioner now?". For the purposes of this study, any Spearman rho figure greater than 0.5 was considered of practical significance (values greater than 0.5 are statistically different from 0.). With a Spearman rho value of .60, there is a positive relationship between hiring a FNP now and the physician's perception of the FNP (totalsc). In reviewing the breakdown of physicians' perceptions of NPs, the strongest relationship is Section I relating to the specific role characteristics. This could be due to the fact that this is the largest section of the survey and therefor would carry more impact to the overall score. Section II and III are also positively correlated but not as strongly as SectionI and the total score section. There is less of a relationship with questions 44, 45, and 46, which relate to future hiring of a FNP and the employment of a PA.

In summary, there is a significant positive relationship between the physician's perception of the NP and the willingness to hire. Though only 42% would hire a FNP now, the percentage increased to 61% in 2 to 5 years. Perceived problems in utilizing the FNP relate to patient acceptance of the FNP. The specific role that produced the widest spread of opinion and the highest negative response had to do with the insertion of an intrauterine device.

## Findings in Relation to the Model

The findings of this study were consistent with the conceptual model. In King's theory of goal attainment, each individual has a perception of self which then interacts with others in order to form the concepts of role, interaction, and transaction of the self and of others in the dyad or triad. The physician's perception of the NP role is based on the past and the present knowledge and experience. As seen in Figure 2, past experience could be included under the history and knowledge component that influences the physician's perception. The results of the study concur that the past experience with NPs was more of an influence on willingness to hire than the demographics.

Section II of the survey found that the strongest perceived barrier to utilization of the FNP by the physician was that of the patient's acceptance of the FNP. King's theory emphasizes the need for accurate perceptions of each role (physician, NP, and patient) in order to have positive interaction and transactions which directly impacts goal attainment. Many studies (Betancourt et al., 1996; Brown, & Grimes, 1993; OTA, 1986; Guyther, & Sabo, 1982) have found that patients have a positive perception of the NP and the physician's misconception regarding this could definitely affect the interaction between the physician and the FNP. Thus, the FNP needs to evaluate the accuracy of the physician's knowledge of the FNP role and educate the physician in areas that are weak or inaccurate. An inaccurate perception would directly impact the communication, interaction, and transaction between the physician and the FNP and thus the hiring of a FNP.

## Findings in Relation to the Literature

The findings of this study were fairly consistent with the limited literature available, with the exception of physicians' perceptions of practitioner shortage in the practice area. The physicians in this study did not feel there was a shortage of general providers in the area, in conflict with the literature findings. Willingness to hire was consistent with the literature but none of the previous studies differentiated between hiring now, in 1 to 2 years, or in 2 to 5 years. Comparisons of perception of the NP role

yield similar results. The area of greatest conflict in this study and the literature is that of insertion of an intrauterine device. There is no clarification as to whether this is perceived as a problem regarding the FNP or a negative perception of the use of intrauterine devices. The literature describes role conflict with regard to performing a physical exam and prescriptive authority, conflicts which were not found in this study.

## DISCUSSION

One important and interesting finding from the survey may play an integral part in the hiring of the FNP. The physicians in this survey did not feel there was a shortage of general practitioners in the area. Could this perception be a reaction to the paradigm shift the physicians have encountered in the area over the past few years? The physicians in the area studied have only recently become effected by the impact of managed care or working within an integrated health care system. Managed care has forced the physician to be accountable for all business decisions or else risk loss of income. Therefore the physician now scrutinizes every aspect of the practice, including the decision to increase staff. Extensive evaluation regarding the addition of another physician or a mid-level provider will be done but only after there is a sense of need for another provider. In an area where there is no perceived shortage of general practitioners, the FNP may be considered either an asset or a threat to the practice. When making the decision to hire, the physician will base that decision on past experience, the present situation, and the perceived outcomes of that decision. This study supports the hypothesis that the more positive perception of the FNP role, the more willing the physician will be to hiring a FNP. Experience working with a FNP has the greatest impact on physician knowledge and perception of what a FNP can provide to the practice.

The top two areas the physicians perceived as problems in utilizing the FNP were the patients' acceptance of the FNP and the physicians' acceptance of the FNP, respectively. Though the study showed that these physicians had a positive perception of the FNP, they still felt that the FNP would not be accepted by the patient or the physician. This appears to indicate that the physician agrees with the FNP concept but not with the

reality of the FNP in the workplace. The FNP is viewed as competition to the physician's practice as opposed to being an asset to the primary care environment.

## Implications for Practice

The greatest predictor of willingness to hire is the physician's previous experience with a FNP. The FNP in practice should develop strategies to increase their experience with various physicians. This would increase their visibility in the health care community as well as the general public. Ways to do this include getting involved in physician directed work teams affiliated with the local hospital, encourage and attend inservices for all medical staff, and work with various physicians at a clinic for the underserved community population.

The FNP also needs to find support within the profession. There are two professional support groups located in the Holland area: a NP-PA group which meets monthly to discuss professional issues, current job market, and ways to better market the profession; the Journal Club of Grand Rapids is composed solely of NPs and meets on a quarterly basis. Each meeting updates members on current issues pertaining to the profession but also provides an inservice on various practice topics. Each group provides a support network for the NP in practice.

Other ways to increase awareness of NPs would be to increase interaction with the community. This could be done by volunteering on health-related committees within the medical community and the public sector. This would increase visibility and cultivate allies outside the nursing continuum. Every community government has various committees that the NP could join that would help increase community awareness and knowledge regarding the NP role.

## Implications for Education

The study clearly shows the importance of previous experience between the physician and the NP. Schools of Nursing which also have an affiliated School of Medicine should strive toward joint education of the students as much as possible. It is believed that some of the basic course work could be combined, both undergraduate and

graduate. Currently there is social interaction between the groups but a stronger interaction, e.g., clinical and residency, would better serve the collaborative process. In the meantime, NP students preparing for their clinical rotations should look seriously at combining their learning experiences with established NPs and with physicians in their area of interest. This strategy is especially important for students who plan to work in an area in which there does not appear to be a shortage of general practitioners. Establishing a professional relationship with a physician will increase the odds of future employment.

## Implications for Further Research

This survey provides a comprehensive appraisal of the physician's knowledge of the NP role but does not provide adequate information regarding what information a physician would utilize when making the decision to hire a NP. Further investigation of the influences and criteria a physician uses when deciding to increase professional staff, whether it would be another physician, NP, or PA, would be helpful in determining a marketing scheme for the professional. As the health care market changes, there is a shift from quality of care issues to financial stability which plays an important role in the hiring process. An accurate understanding between professionals regarding the reasons for hire may be very important in providing job security and satisfaction.

As the NP role continues to expand, so does conflicting or confusing information regarding the role. This study attempted to assess the physicians knowledge but it did not provide an area to evaluate the areas of actual or perceived lack of information. By assessing the areas that the physician perceives as needing more information, the NP can develop an educational plan.

With the increased influence that insurance companies play in health care practices, it would be appropriate to assess the insurance industries' knowledge and perception of the role of the NP. This could provide invaluable information that the NP could use to promote the NP role.

More studies need to be done that evaluate the effect of managed care on health care delivery and outcomes in relationship to cost effectiveness and care provided by the

physician and the NP. Evaluation of physicians' perceptions of the managed care changes in relation to their practice and what factors influence the decision to hire more providers. All this information would be valuable to the NP assessing the market place.

In replicating this study, it would be advisable to sample a larger population, so that results could be more widely generalized. Further clarification should also be made regarding the questions related to willingness to hire. For example, one might add, "If you answered "no" to the previous question, would you hire a FNP in 1-2 years?" Finally, providing an open response area for further explanation as to why there is an unwillingness to hire would be helpful.

## Summary

This study of primary care physicians in Ottawa County, Michigan, examined the physician's knowledge and perception of the FNP role and their willingness to hire. Physicians, for the most part, had a positive perception of the FNP role. The hypothesis that the more positive perception of the role of the FNP, the more willing the physician would be to hire, was supported by the data. Given the continually changing health care environment, there is growing competition and confusion regarding who would provide the most cost-effective, quality care in primary care. The NP will benefit from the results of this study by increasing experiences with physicians since there is statistical proof that the more knowledgeable the physician is of the NP role, the more willing the physician will be to hire a NP.

# APPENDICES

# APPENDIX A

## Radke and Wright

## Physician Questionnaire

23 Dunmow Crescent
Fairport, NY 14450
February 4, 1997

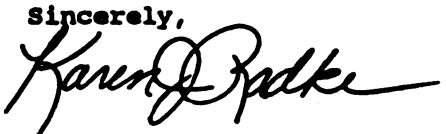
Dear Ms. Ivkovich:

Enclosed is a copy of my survey tool regarding "General Practice Physicians' Opinions Concerning the Family Nurse Practitioner." You have my permission to use it as you see fit for your study, providing the appropriate acknowledgements are given.

When you have completed your study, I would appreciate receiving a copy of an abstract regarding your findings.

Best of everything to you as you proceed.

Sincerely,



Karen J. Radke, PhD, RN
Associate Professor
University of Rochester
School of Nursing, and
Department of Pharmacology & Physiology
School of Medicine and Dentistry

UNIVERSITY OF
ROCHESTER
MEDICAL CENTER

STRONG MEMORIAL HOSPITAL
SCHOOL OF MEDICINE AND DENTISTRY
SCHOOL OF NURSING

November 5, 1997

Dear Ms. Ivkovich:

In previous correspondence with you I gave you permission to use my survey tool regarding "General Practice Physicians' Opinions Concerning the Family Nurse Practitioner." I also need to add that acknowledgement for use of the survey tool needs to be given to Karen J. Radke and Edith Wright as developers of this particular survey instrument.

Wishing you the best of everything,

Karen J. Radke

Karen J. Radke, PhD, RN
Associate Professor of Nursing, School of Nursing
Associate Professor of Pharmacology/Physiology,
School of Medicine & Dentistry

601 Elmwood Avenue
Rochester, New York 14642

## LOMA LINDA UNIVERSITY SCHOOL OF NURSING

### Role Description of a Family Nurse Practitioner

The role assumed by nurses in the provision of health services is undergoing a continuous and dynamic change toward more active and responsible participation in providing comprehensive health care to people. The Family Nurse Practitioner is a graduate of an accredited baccalaureate program in nursing and has had advanced education and clinical experience in the areas of obstetrics, gynecology, family planning, pediatrics, and adult medicine. Instruction is provided jointly by physicians and nurses. The additional responsibilities of the Family Nurse Practitioner are performed in collaboration with and/or under the supervision of a physician and generally will include the following:

1. To continue to provide the nursing skills of health teaching, health counseling, and coordination of patient care with emphasis on the promotion of health and the prevention of illness.
2. To acquire patient data through history-taking and physical assessment; to analyze the data collected; and to initiate needed action according to protocol approved by a physician.
3. To differentiate between normal and abnormal findings and to consult with the physician to determine what health problems can be handled by the nurse practitioner and which problems must be referred to other resources.
4. To collaborate with the physician in establishing a treatment plan for the clinical management of chronic and commonly occurring acute illness.

## SURVEY OF GENERAL PRACTICE PHYSICIANS' OPINIONS CONCERNING

## THE FAMILY NURSE PRACTITIONER

I. After reading the role description of a Family Nurse Practitioner, please check the one response that indicates how you personally feel about the Family Nurse Practitioner performing each one of the following functions.

| | Highly Favorable | Favorable | Uncertain | Unfavorable | Highly Unfavorable |
|---|---|---|---|---|---|
| a. Makes the initial assessment of an individual's health-illness status when he or she enters the health care system. | [1] | [2] | [3] | [4] | [5] |
| b. Prescribes medications with physician approval. | [ ] | [ ] | [ ] | [ ] | [ ] |
| c. Evaluates progress of patient with prescribed therapeutic regimen and adjusts medications, treatment or therapy in collaboration with physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| d. Provides health teaching to patient and family in order to maintain or promote health, and to prevent illness. | [ ] | [ ] | [ ] | [ ] | [ ] |
| e. Perform a physical examination on individuals in any age group. | [ ] | [ ] | [ ] | [ ] | [ ] |
| f. Recommends plan for health care to patient and family based upon clinical findings and in consultation with a physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| g. Makes home visits to do follow-up evaluations of the condition of the patient and his family. | [1] | [2] | [3] | [4] | [5] |
| h. Initiates treatment and therapeutic regimens of commonly-occurring, acute health problems of individuals in any age group as authorized by a physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| i. Obtains and records the patient's and family's health history. | [ ] | [ ] | [ ] | [ ] | [ ] |
| j. Performs insertion of intrauterine devices. | [ ] | [ ] | [ ] | [ ] | [ ] |
| k. Makes hospital visits to assist physician in evaluating patient's condition. | [ ] | [ ] | [ ] | [ ] | [ ] |
| l. Manages uncomplicated prenatal and postpartum care. | [ ] | [ ] | [ ] | [ ] | [ ] |
| m. Identifies development and behavioral problems of children and adolescents. | [ ] | [ ] | [ ] | [ ] | [ ] |
| n. Coordinates health care of individual and family through referral to other health professionals and/or community agencies. | [ ] | [ ] | [ ] | [ ] | [ ] |

PLEASE CONTINUE WITH QUESTIONS ON THE BACK OF THIS PAGE →

| | Highly Favorable | Favorable | Uncertain | Unfavorable | Highly Unfavorable |
|---|---|---|---|---|---|
| o. With written guidelines makes decision regarding when to refer patient to a physician. | 1[ ] | 2[ ] | 3[ ] | 4[ ] | 5[ ] |
| p. Manages routine health care of essentially well individuals. | [ ] | [ ] | [ ] | [ ] | [ ] |
| q. Orders routine laboratory studies as indicated. | [ ] | [ ] | [ ] | [ ] | [ ] |
| r. Manages stabilized, long-term and chronic illness of individuals in all age groups. | [ ] | [ ] | [ ] | [ ] | [ ] |
| s. Participates with physician in continuous evaluation of the quality and effectiveness of health care. | [ ] | [ ] | [ ] | [ ] | [ ] |
| t. Provides counseling regarding the health-illness problems of individual and families. | [ ] | [ ] | [ ] | [ ] | [ ] |
| u. Overall, how do <u>you</u> <u>feel</u> about the Family Nurse Practitioner Concept at this time? | [ ] | [ ] | [ ] | [ ] | [ ] |

II. Which of the following areas do you feel may be a problem in the utilization of a Family Nurse Practitioner (FNP)? Please check the <u>one response</u> which is most representative of your belief.

| | No problems at all | Very few Problems | Some Problems | Many Problems |
|---|---|---|---|---|
| a. Patients' acceptance of FNP. | 1[ ] | 2[ ] | 3[ ] | 4[ ] |
| b. Physicians' acceptance of FNP. | [ ] | [ ] | [ ] | [ ] |
| c. Other nurses' acceptance of FNP. | [ ] | [ ] | [ ] | [ ] |
| d. Quality of service rendered. | [ ] | [ ] | [ ] | [ ] |
| e. Legal problems (licensure, malpractice, etc.). | 1[ ] | 2[ ] | 3[ ] | 4[ ] |
| f. Interference with physician-patient relationship. | [ ] | [ ] | [ ] | [ ] |
| g. Availability of funds to cover FNP services. | [ ] | [ ] | [ ] | [ ] |
| h. Demands on physician time for supervision of and/or consultation with FNP. | [ ] | [ ] | [ ] | [ ] |

i. Other problems (list).

_____

_____

_____

III. The concept of utilizing Family Nurse Practitioners in the delivery of health care is relatively new, and thus, many health personnel are not familiar with this idea. Please indicate your source of knowledge or experience regarding Nurse Practitioners by responding "yes" or "no" to the following items.

| | | |
|---|---|---|
| a. Have you read or heard about Nurse Practitioners before receiving this questionnaire? | 1[ ] Yes | 2[ ] No |
| b. Have you discussed with other physicians or health professionals the idea of Nurse Practitioners providing health care? | [ ] Yes | [ ] No |
| c. Have you observed a Nurse Practitioner in action? | [ ] Yes | [ ] No |
| d. Have you had experience in working with a Nurse Practitioner? | [ ] Yes | [ ] No |
| e. Have you ever employed or are you presently utilizing a Nurse Practitioner? | [ ] Yes | [ ] No |

PLEASE CONTINUE WITH QUESTIONS ON FOLLOWING PAGE →→→→→→→→→→→→→→→

IV. Please answer the following questions:

a. What is your sex?

[1] [ ] Male

[2] [ ] Female

b. In what year did you receive your M.D. degree? _____

c. Are you doing practice primarily in:

[1] [ ] Solo

[2] [ ] Group of 2-4

[3] [ ] Group of five or more

d. Is your practice setting primarily in a/an

[1] [ ] Private Office

[2] [ ] Industry

[3] [ ] School Health

[4] [ ] Public Health Clinic

[5] [ ] Pre-paid Health Plan System

[6] [ ] Other

e. Do you feel there is a shortage of general practitioner services in your community? [1] [ ] Yes [2] [ ] No

f. Would the services of a Family Nurse Practitioner enhance the delivery of health care in your practice setting? [ ] Yes [ ] No

g. Would you ever be willing to consider hiring a Family Nurse Practitioner? [ ] Yes [ ] No

h. Do you or your group presently employ a physician's assistant? [ ] Yes [ ] No

i. Please list any additional comments you may have about the Family Nurse Practitioner Concept and/or this particular questionnaire.

_____

_____

_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

PLEASE CHECK THROUGH THE QUESTIONNAIRE TO BE SURE NO QUESTIONS WERE MISSED.

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# APPENDIX B

## Updated Physician Questionnaire

Role Description of a Family Nurse Practitioner

The role description of a Family Nurse Practitioner as defined by the American Nurses Credentialing Center is a registered nurse with a graduate degree in nursing who is prepared for advanced practice with individuals and families throughout the life span and across the health continuum. This practice includes independent and interdependent decision-making and direct accountability for clinical judgment. Graduate preparation expands the comprehensiveness of the family nurse practitioner role to include participation in and use of research, development and implementation of health policy, leadership, education, case management and consultation.

## SURVEY OF GENERAL PRACTICE PHYSICIANS' OPINIONS CONCERNING

## THE FAMILY NURSE PRACTITIONER

1. After reading the role description of a Family Nurse Practitioner, please check <u>one response</u> that indicates how you personally feel about the Family Nurse Practitioner performing each of the following functions.

| | | Highly Favorable | Favorable | Uncertain | Unfavorable | Highly Unfavorable |
|---|---|---|---|---|---|---|
| 1 | a. Makes the initial assessment of an individual's health-illness status when he or she enters the health care system. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 2 | b. Prescribes medications with physician collaboration. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 3 | c. Evaluates progress of patient with prescribed therapeutic regimen and adjusts medications, treatment or therapy in collaboration with physicians. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 4 | d. Provides health teaching to patient and family in order to maintain or promote health, and to prevent illness. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 5 | e. Perform a physical examination on individuals in any age group. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 6 | f. Recommends plan for health care to patient and family based upon clinical findings and in consultation with a physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 7 | g. Makes home visits to do follow-up evaluations of the condition of the patient and his family. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 8 | h. Initiates treatment and therapeutic regimens of commonly-occurring, acute health problems of individuals in any age group as authorized by a physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 9 | i. Obtains and records the patient's and family's health history. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 10 | j. Performs insertion of intrauterine devices. | [ ] | [ ] | [ ] | [ ] | [ ] |

| | Highly Favorable | Favorable | Uncertain | Unfavorable | Highly Unfavorable |
|---|---|---|---|---|---|
| 11 k. Makes hospital visits to assist physician in evaluating patient's condition. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 12 l. Manages uncomplicated prenatal and postpartum care. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 13 m. Identifies development and behavioral problems of children and adolescents. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 14 n. Coordinates health care of individual and family through referral to other health professionals and/or community agencies. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 15 o. With written guidelines makes decision regarding when to refer patient to a physician. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 16 p. Manages routine health care of essentially well individuals. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 17 q. Orders routine laboratory studies as indicated. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 18 r. Manages stabilized, long-term and chronic illness of individuals in all age groups. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 19 s. Participates with physician in continuous evaluation of the quality and effectiveness of health care. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 20 t. Provides counseling regarding the health-illness problems of individual and families. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 21 u. Overall, how do <u>you feel</u> about the Family Nurse Practitioner concept at this time? | [ ] | [ ] | [ ] | [ ] | [ ] |

II. Which of the following areas do you feel may be a problem in the utilization of a Family Nurse Practitioner (FNP)? Please check the <u>one response</u> which in most representative of your belief.

| | No problems at all | Very few problems | Some problems | Many problems |
|---|---|---|---|---|
| 22 a. Patients' acceptance of FNP. | [ ] | [ ] | [ ] | [ ] |
| 23 b. Physicians' acceptance of FNP. | [ ] | [ ] | [ ] | [ ] |
| 24 c. Other nurses' acceptance of FNP. | [ ] | [ ] | [ ] | [ ] |
| 25 d. Quality of service rendered. | [ ] | [ ] | [ ] | [ ] |
| 26 e. Legal problems (licensure, malpractice, etc.). | [ ] | [ ] | [ ] | [ ] |
| 27 f. Interference with physician-patient relationship. | [ ] | [ ] | [ ] | [ ] |
| 28 g. Availability of funds to cover FNP services. | [ ] | [ ] | [ ] | [ ] |
| 29 h. Demands on physician time for collaboration and/or consultation with FNP. | [ ] | [ ] | [ ] | [ ] |

30 i. Other problems (list).

_____

_____

_____

PLEASE CONTINUE WITH QUESTIONS ON FOLLOWING PAGE >>>>>>>>>>>>>>>>>

III. Please indicate your source of knowledge or experience regarding Nurse Practitioners by responding "yes" or "no" to the following items.

31 a. Have you read or heard about Nurse Practitioners before receiving this questionnaire? [ ] Yes [ ] No

32 b. Have you discussed with other physicians or health professionals the idea of Nurse Practitioners providing health care? [ ] Yes [ ] No

33 c. Have you observed a Nurse Practitioner in action? [ ] Yes [ ] No

34 d. Have you had experience in working with a Nurse Practitioner? [ ] Yes [ ] No

35 e. Have you ever employed or are you presently utilizing a Nurse Practitioner? [ ] Yes [ ] No

IV. Please answer the following questions:

36 a. What is your sex?
[ ] Male [ ] Female

37 b. In what year did you receive your M.D./D.O degree? _____

38 c. Are you doing practice primarily in:
[ ] Solo [ ] Group of 2-4 [ ] Group of five or more

39 d. Is your practice primarily:
[ ] OB-GYN [ ] Family Practice [ ] Pediatrics [ ] Internal Medicine

40 e. Is your practice setting primarily in a/an:
[ ] Private Office
[ ] Industry
[ ] Federally Designated Clinic
[ ] Pre-paid Health Plan System
[ ] Other

41 e. Do you feel there is a shortage of general practitioner services in your community? [ ] Yes [ ] No

42 f. Would the services of a Family Nurse Practitioner enhance the delivery of health care in your practice setting? [ ] Yes [ ] No

43 g. Would you or your group hire a Family Nurse Practitioner now? [ ] Yes [ ] No

44 h. Would you or your group hire a Family Nurse Practitioner in 1-2 years? [ ] Yes [ ] No

45 i. Would you or your group hire a Family Nurse Practitioner in 2-5 years? [ ] Yes [ ] No

46 j. Do you or your group presently employ a physician's assistant? [ ] Yes [ ] No

47 i. Please list any additional comments you may have about the Family Nurse Practitioner Concept and/or this particular questionnaire.

_____

_____

_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

PLEASE CHECK THROUGH THE QUESTIONNAIRE TO BE SURE NO QUESTIONS WERE MISSED.

# APPENDIX C

## Introduction and Consent Letter

**Dear Potential Participant,**

**I am a graduate student in the College of Nursing at Michigan State University. My studies include the completion of my master's thesis.**

**I am using a questionnaire to examine the physician's perception of the Family Nurse Practitioner (FNP) and whether there is a relationship between this perception and the willingness to hire a FNP. This questionnaire is being sent to primary care physicians, including obstetrics and gynecology, internal medicine, pediatrics, and family practice, with staff privileges at Holland Community Hospital, Zeeland Hospital, or North Ottawa Community Hospital. The commitment involved is one-time. The questionnaire will take approximately 10 minutes to complete. Participation in this study is voluntary; you may choose to participate or may return the unanswered questionnaire. If you choose to participate, no information which could identify you will be asked and all responses will be kept confidential. If you prefer not to answer any particular question, please feel free to leave it blank. Please do answer the questions if you can and write any comments or concerns about any question in the margin or the space provided. You indicate your voluntary agreement to participate by completing and returning this questionnaire.**

**A postage-paid return envelope has been provided for your convenience. To analyze the information in a timely fashion, I ask that you return the questionnaire to me by August 1, 1997. If you have any questions or would like a copy of the summary, you may contact me at (616) 786-4951.**

**Thank you very much for you cooperation and assistance in this endeavor.**

**Sincerely,**

Suzanne Ivkovich RN. BSN

**Suzanne Ivkovich, R.N., B.S.N.**

# Appendix D

# UCRIHS Approval Letter

MICHIGAN STATE
UNIVERSITY

July 9, 1997

TO: George D. Allen
A230 Life Sciences Bldg.

RE: IRB#: 97-487
TITLE: PHYSICIAN PERCEPTION OF THE FAMILY NURSE PRACTITIONER ROLE AND THE WILLINGNESS TO HIRE
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: 07/07/97

The University Committee on Research Involving Human Subjects'(UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

**RENEWAL:** UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

**REVISIONS:** UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

**PROBLEMS/ CHANGES:** Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171.

Sincerely,

David E. Wright, Ph.D
UCRIHS Chair

DEW:bed

cc: Suzanne Ivkovich

OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES

University Committee on
Research Involving
Human Subjects
(UCRIHS)

Michigan State University
246 Administration Building
East Lansing Michigan
48824-1046

517/355-2180
FAX 517/432-1171

# LIST OF REFERENCES

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