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**WHAT IS THE PHYSICIANS' OPINION OF
THE NURSE PRACTITIONER ROLE AND FUNCTION?**

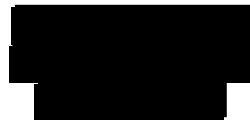
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Abstract

The study focused on the identification of physicians' opinions regarding the role and function of nurse practitioners. The research design was descriptive, using survey technique. Data were collected by a self-administered questionnaire, the Survey of General Practice Physicians' Opinions Concerning the Family Nurse Practitioner, which was developed by Karen J. Radke and Edith Wright. A convenience sample of 162 physicians, consisting of physicians specializing in family practice, pediatrics, internal medicine and obstetrics/gynecology, currently practicing in Monterey County, California, were surveyed. There were 61 (38%) survey's returned. Overall, physicians were "favorable" to all nurse practitioner functions, with the exception of nurse practitioners inserting intrauterine devices 34 (55.7%) and making hospital visits 41 (67.2%). The majority of respondents 49 (80.3%) were willing to hire a nurse practitioner. Problems anticipated by physicians were: a) patient, physician, and other nurses acceptance of the nurse practitioner; b) availability of funds to cover nurse practitioner services; and c) demands on the physicians time for supervision of and/or consultation with the nurse practitioner. Nursing implications included educating physicians regarding the success of nurse practitioners assisting physicians in making patient hospital visits, and inserting intrauterine devices. A future research study to elicit physicians' opinions concerning their insertion of intrauterine devices is indicated. If physicians are not favorable concerning their own insertion of intrauterine devices, then, they will not be favorable for nurse practitioners to insert these devices.

Purpose

Although research suggests that nurse practitioner services are comparable to physicians with regards to quality and competence, nurse practitioners still face barriers from physicians [1]. Research has shown that nurse practitioners can manage 80% of the adult care and 90% of the pediatric care normally provided by a primary care physician [1]. Despite this research, many physicians believe that nurse practitioners can not provide good patient care because they have less training and education than a physician. Nurse practitioners also experience opposition from physicians who worry that they may be displaced and lose financial compensation to a nurse practitioner [2].

The purpose of this study was to determine physicians' knowledge about nurse practitioners, and to determine physician opinion concerning the role and function of the nurse practitioner. This study focused on problems that physicians may have encountered or anticipated with the utilization of a nurse practitioner. This study assisted nurse practitioners to identify the areas which must be addressed to help facilitate a change of their perceptions.

Definition of Terms

For the purpose of this study the following definitions were used:

1. A nurse practitioner was defined as a registered nurse who “possesses additional preparation and skills in physical diagnosis, psycho-social assessment, and management of health-illness needs in primary health care, and who has been prepared in a program conforming to board standards” [3].

2. A role was defined as “a set of behaviors expected of persons occupying a position in a social system; rules that define rights and obligations in a position. If expectations of a role differ, then role conflict and confusion exists” [4].
3. A physician was defined as “a person who has completed a course of studies in medicine at a medical school that is recognized by the country and who has acquired the requisite qualifications for licensure in medicine” [5].
4. An opinion was defined as “1. A belief based on grounds insufficient to produce certainty. 2. A personal attitude or appraisal. 3. The formal expression of a professional judgment” [6].

Literature Review

Nurse practitioners perceived a lack of support from physicians regarding their roles. This perception was due to lack of physician information regarding the nurse practitioner role, or a personal bias [7]. In a recent study by Anderson, Gilliss, & Yoder, a survey was sent to 5,500 Californian nurse practitioners, to elicit their experiences regarding legal and social barriers in their practice. Nurse practitioners were most concerned about physician discrimination against their practice and a lack of acceptance by physicians. Nurse practitioners perceived physicians as being intimidated or threatened by their practice. They also perceived physicians as “unwilling to relinquish control and allow autonomy of the nurse practitioner as a professional” [7].

In 1997, Knaus, Felten, Burton, et al, completed a study that surveyed physicians, patients, and staff nurses regarding nurse practitioner performance in the acute care setting.

Respondents were asked to rate the performance of the nurse practitioner. Ratings were characterized by “excellent,” “very good,” “good,” “fair,” and “poor.” Physician ratings that were rated “very good” included discharge planning and coordination of patient education. Physicians rated the nurse practitioners as “good” at developing a plan of care, determining need for laboratory studies, and providing outpatient teaching. A majority of physicians (66%) indicated they were able to re-direct their time to other activities when a nurse practitioner assisted with prehospitalization physicals, clinic visits, administrative tasks, teaching, clinical research, organizing consults, discharge planning, and family interventions [8].

Koehler studied the role of the nurse practitioner as viewed by nurse practitioners and other health care providers. The focus of this study was to determine the degree of decision making and the independent judgment expected of the nurse practitioner. Structured interviews of 40 nurse practitioners, physicians, registered nurses, and hospital administrators, were used for data collection. “Few agreements by all groups were found, with the exception of three functions: taking health history, determining level of wellness, and follow-up” [9]. All groups agreed that the nurse practitioner should exercise independent judgment in making referrals, and they should not be limited to drug therapy from an approved list [9].

Radke studied physicians’ opinions of the family nurse practitioner. A 43-item, questionnaire was used for data collection, and sent to 239 general practice physicians in Southern California. The questionnaire included statements of function considered to be representative of skills a nurse practitioner can perform in an ambulatory health care setting. Respondents utilized a 5 category, Likert-type scale. Words included in the scale were: “highly favorable,” “favorable,” “uncertain,” “unfavorable,” and “highly unfavorable.” The study found that nurse practitioner

functions obtaining the most approval were health teaching, obtaining a health history, patient counseling, managing routine health care, and participating in evaluation of care. Nurse practitioner functions obtaining the least approval were inserting intrauterine devices and performing physical examinations. Prescribing medications with physician approval had many “unfavorable” as well, as “favorable” responses. Functions that received the most “uncertain” responses were family nurse practitioners identifying behavioral problems, managing common acute illnesses, and managing stabilized chronic disease. Radke also identified other areas of physician concern, including legal implications, physician acceptance, and the availability of funds to cover family nurse practitioner services. Of the physicians that participated in the study, 49% were willing to consider hiring a family nurse practitioner, as compared to 47% who were not willing to hire a family nurse practitioner. Physicians were 47% “favorable” to the concept of family nurse practitioner; 34% were “unfavorable;” 19% remained “uncertain” [10].

In summary, the nursing and medical community revealed mixed opinions regarding the role of the nurse practitioner. All studies reviewed were limited by the size of the sample population, geographic regions, or specialty areas.

Research Question and Objectives

The research question of this study was “what is the physicians’ opinions of the nurse practitioner role and function?” The objective of this study was to identify opinions of physicians, practicing in Monterey County, California regarding the role and functions of the nurse practitioner. The information obtained in this study will assist nurse practitioners in their ability to

determine possible employment opportunities. If physicians are “favorable” to the concept of the nurse practitioner, then there is the possibility they might be accepting of the nurse practitioners in their practice.

Method/Design

The instrument, “General Practice Physicians’ Opinions Concerning the Family Nurse Practitioner,” developed by Karen J. Radke and Edith Wright, and was utilized for this study. The instrument consisted of a 43 question self-administered questionnaire. The authors of the instrument utilized a Likert-type scale in the development of the tool. The scale, which consisted of the terms, “highly favorable,” “favorable,” “uncertain,” “unfavorable,” and “highly unfavorable,” were used. In consultation with a clinical psychologist, Radke and Wright chose to use the word “favorable” because it was a relatively neutral word in eliciting emotional reaction, and it did not indicate any degree of commitment to a given concept. To increase validity, clear instructions were provided, and the meaning of the items were explained to raters [10].

Radke and Wright pretested their instrument by two nurse educators with previous experience developing and administering similar type surveys. It was further evaluated by graduate nursing faculty at Loma Linda University, and by a physician who was a faculty member in the school of medicine. Radke and Wright completed their pretesting of the instrument by sending the questionnaire to 9 physicians. Physicians were requested to evaluate the instrument for: clarity of instructions; ease of understanding; ease of responding to the categories on the scale; choice of terminology; and length of the questionnaire.

An exploratory, descriptive approach utilizing a mailed 41 question survey was utilized to elicit the opinions of physicians regarding the role and function of nurse practitioners. The original instrument of 43 questions was adapted to 41 questions by the investigator to facilitate clarity.

The target population of this study was physicians practicing in Monterey County, California. A convenience sample of 162 physicians, who specialized in family practice, pediatrics, internal medicine, and obstetrics/gynecology, was used. Physician names and addresses were obtained from the Pacific Bell Yellow Pages, with addresses confirmed by telephone.

Four sections were incorporated within the survey. The first section elicited opinions of the physician concerning the function of the nurse practitioner. Participants responded to these items utilizing a 5 point Likert-type scale, responses included "highly favorable," "favorable," "uncertain," "unfavorable," and "highly unfavorable." The second section elicited responses from physicians concerning problems they have had with nurse practitioners, or problems that they anticipated having with nurse practitioners. Participants responded to these items on a 4 point Likert-type scale, responses included, "no problems at all," "very few problems," "some problems," and "many problems." The third section asked physicians their experience and knowledge regarding nurse practitioners. Participants responded with "yes" or "no" answers [10]. The fourth section contained questions regarding demographics.

A cover letter was attached to the survey explaining how the investigator would maintain anonymity, and a self-addressed stamped envelope was included for the physician to return the completed survey. Participants were asked to return the completed survey within three weeks. Ten days after the initial survey was sent to physicians, a postcard was sent reminding physicians to return the completed survey.

Data Analysis

Descriptive statistics in the form of frequency numbers and percentages were calculated for each of the 41 items included in the questionnaire. A total of 162 survey's were mailed, with a return rate of 61(38%).

Findings

Physicians' opinions of nurse practitioner functions are shown on Table 1. Functions which received the most "highly favorable" responses from physicians were promoting health teaching 45 (70.5%), obtaining patients health history 40 (65.6%), providing counseling to individuals and their families 37 (60.7%), managing routine health care 34 (55.7%), evaluating quality and effectiveness of health care 34 (55.7%), and ordering routine laboratory studies 24 (39.3%). Functions which received the most "favorable" responses were prescribing medication with physician approval 35 (57.4%), evaluating patient progress regarding therapies and treatment 32 (52.5%), identifying developmental and behavioral problems in children and adolescents 29 (47.5%), making initial patient assessment 28 (45.9%), making decisions regarding when to refer a patient to a physician 27 (44.3%), and managing stable long-term or chronic illnesses 23 (37.7%). There were 28 (45.9%) physicians who were "uncertain" regarding nurse practitioners inserting intrauterine devices and 24 (39.3%) "uncertain" responses regarding nurse practitioners making hospital visits to assist physicians in evaluating patient's condition. There were 15 (24.6%) physicians who were "highly unfavorable" toward the nurse practitioner making hospital visits to assist physicians in evaluating the patients condition.

Physician problems or anticipated problems with the use of a nurse practitioner are shown in Table 2. Physicians identified "some problems" with patient's 30 (49.2%), physician's

34 (55.8%), and other nurses' 26 (42.6%) acceptance of the nurse practitioner. There were 28 (45.9%) respondents concerned with the availability of funds to cover the nurse practitioner services, and 26 (42.6%) were concerned with the amount of physician time used for supervision or consultation with a nurse practitioner. Physicians identified "very few problems" with the nurse practitioners quality of service 39 (63.9%); interference with physician-patient relationship 39 (63.9%); and legal problems 27 (44.3%).

Physician experience and knowledge of the nurse practitioner is shown in Table 3. The majority of respondents have read or heard about nurse practitioners 58 (95%), have observed a nurse practitioner in action 59 (96.7%), have had experience in working with a nurse practitioner 55 (90.2%), and one half of all respondents have employed or are presently utilizing a nurse practitioner 35 (57.4%). The majority of respondents did not feel a shortage of health care services in the community 46 (75.4%).

Physician demographic data are listed in Table 4. The majority of respondents were male 44 (72.1%). Of the majority of respondents, 25 (41%) were between 40-49 years of age, 25 (41%) worked in a family practice setting, and 22 (36%) graduated from medical school in 1980-1989.

Limitations

The limitations of this study, included the small sample size and low response rate. Since the study was limited to one geographical location, the findings cannot be generalized beyond the study group. The small sample size may represent the number of physicians who are favorable to the nurse practitioner concept; however, no information is available on the nonrespondents to confirm this conclusion.

Conclusion

The majority of physicians surveyed indicated a “favorable” response of the role and function of nurse practitioners. There were 49 (80.3%) respondents willing to consider hiring a nurse practitioner, as compared to 12 (19.7%) respondents not willing to consider hiring a nurse practitioner. Although 55 (90.1%) respondents were “highly favorable” or “favorable” to the concept of the nurse practitioner, five (8.2%) of the respondents were “uncertain,” and one (1.6%) respondent was “highly unfavorable” to the concept of the nurse practitioner. These “highly favorable” and “favorable” findings were surprisingly high, since physicians have expressed negative opinions of nurse practitioners. For example, in a discussion article in the *New England Journal of Medicine* a physician states: “I worry that further expanding a fully independent role for nurse practitioners in primary care will be an irreversible step that we may regret” [11]. In the *Nebraska Nurse* journal, another physician states: “nurse practitioners education and clinical experience have not proven sufficiently long or intense. Nurse practitioners have not mastered the ability to diagnose and treat patients independently” [12].

The highly favorable response of this study may be due to the majority of physicians who participated in the study already had a “favorable” response regarding the concept of the nurse practitioner. Perhaps other physicians who were not “favorable” of the nurse practitioner concept did not take their time to complete the survey. However, these “favorable” findings may suggest that obtaining employment with a physician in Monterey County may not be difficult.

The response rate of this study, was similar to the study done by Radke, which was published in 1977. Radke reported a 34% response rate which is similar to this investigators response rate of 38%. However, there were differences in the findings of this study. Radke,

reported 49% of physicians willing to consider hiring a family nurse practitioner; while, the findings of this study indicated that 80.3% of physicians were willing to consider hiring a nurse practitioner. Radke reported 47% of physicians were not willing to hire a nurse practitioner. This study indicated that only 19.7% of physicians are not willing to hire a nurse practitioner. Radke reported 47% of physicians “favorable” to the concept of the nurse practitioner [10]. This study indicated that 39.3% of physicians were “highly favorable” and 50.8% were “favorable” to the nurse practitioner concept. Since this study was completed in 1998, it appears that perhaps over time, physicians have changed their opinions about the nurse practitioner concept. It should be noted that Radke’s study was completed in Southern California, while, this study was completed in Northern California. Radke surveyed general practitioner physicians; the investigator for this study surveyed physicians specializing in family practice, pediatrics, internal medicine and obstetrics/gynecology.

Implications

This study indicated a less than favorable response toward nurse practitioners assisting physicians in evaluating the patient’s condition during a hospital admission, and inserting intrauterine devices. These findings suggested the need for increased physician education in order to facilitate an opinion change. Physicians may not know that many hospitals are incorporating nurse practitioners into the acute care setting and physicians favor working with this group. Almost one half of the respondents were “uncertain” regarding nurse practitioners inserting an intrauterine device. The nursing community must educate physicians that the insertion of an intrauterine device is a function nurse practitioners perform. A future research study to elicit physicians’ opinions concerning their insertion of intrauterine devices is indicated. If physicians

are not favorable concerning their own insertion of intrauterine devices, then, they will not be favorable for nurse practitioners to insert these devices.

This study identified physician problems or anticipated problems with acceptance of nurse practitioners by patients, physicians, and other nurses. Nurse practitioners must educate physicians concerning the opinions of other physicians, patients and nurses. This group believed nurse practitioners are important in providing quality patient care.

Physicians found problems or anticipated problems concerning the availability of funds to cover nurse practitioner services. Nurse practitioners do face barriers regarding payment for services from third parties. As of January 1, 1998, nurse practitioners are able to receive reimbursement for their services from Medicare. This is an advance for the nursing profession. However, nurse practitioners still face many obstacles obtaining third party reimbursement. The professional nursing community must continue to advocate for insurance companies to provide reimbursement to nurse practitioners. The nursing community must also write and demand insurance carriers to list nurse practitioners as primary care providers. Until current reimbursement policies change, physicians are still concerned with the availability of funds to cover nurse practitioner services.

Since this study has geographic limitations, a future study could be replicated surveying physicians throughout California. This may provide a more representative sample for the population. It may provide a clearer understanding of Californian physicians' opinions about nurse practitioner roles. When the opportunity arises, nurse practitioners can discuss and educate physicians' about their concerns to facilitate a change in perception.

Table 1. Physicians' Opinions about the Nurse Practitioner Function

N = 61

	Highly Favorable	Favorable	Uncertain	Unfavorable	Highly Unfavorable
	n %	n %	n %	n %	n %
1. Makes the initial assessment of an individual's health-illness status when he or she enters the health care system.	19 31.1	28 45.9	7 11.5	5 8.2	2 3.3
2. Prescribes medications with physician approval.	17 27.9	35 57.4	4 6.6	4 6.6	1 1.6
3. Evaluates progress of patient with prescribed therapeutic regime and adjusts medications, treatment or therapy in collaboration with physician.	18 29.5	32 52.5	6 9.9	4 6.6	1 1.6
4. Provides health teaching to patient and family in order to maintain or promote health, and to prevent illness.	45 70.5	16 26.2	0 0	0 0	1 1.6
5. Performs physical exams on individuals in any age group.	23 37.3	24 39.3	10 16.4	1 1.6	3 4.9
6. Recommends plan for health care to patient and family base upon clinical findings and in consultation with a physician.	24 39.3	37 44.3	6 9.8	3 4.9	1 1.6
7. Initiates treatment and therapeutic regimens of commonly occurring acute health problems of individuals at any age.	21 34.4	24 39.3	10 16.4	4 6.6	4 6.6
8. Obtains and records the patient's and family's health history.	40 65.6	19 31.2	0 0	1 1.6	1 1.6
9. Performs insertion of intrauterine devices	12 19.7	15 24.6	28 45.9	3 4.9	3 4.9
10. Makes hospital visits to assist physician in evaluating patient's condition.	6 9.8	14 23.0	24 39.3	15 24.6	2 3.3
11. Manages uncomplicated prenatal and postpartum care.	16 26.2	24 39.3	17 27.9	1 1.6	3 4.9
12. Identifies development and behavioral problems of children and adolescents.	18 29.5	29 47.5	10 16.4	1 1.6	1 1.6
13. With written guidelines makes decision regarding when to refer patient to a physician.	20 32.8	27 44.3	6 9.8	5 8.2	3 4.9
14. Manages routine health care of essentially well individuals.	34 55.7	23 37.7	2 3.3	1 1.6	1 1.6
15. Orders routine laboratory studies as indicated.	24 39.3	22 36.1	10 16.4	4 6.6	1 1.6
16. Manages stabilized, long-term and chronic illness of individuals in all age groups.	19 31.2	23 37.7	15 24.6	3 4.9	1 1.6

	Highly Favorable n %	Favorable n %	Uncertain n %	Unfavorable n %	Highly Unfavorable n %
17. Participates with physician in continuous evaluation of the quality and effectiveness of health care.	34 55.7	21 34.4	4 6.6	1 1.6	1 1.6
18. Provides counseling regarding the health-illness problems of individuals and families.	37 60.7	19 31.2	1 1.6	1 1.6	2 3.3
19. Overall, how do you feel about the Nurse Practitioner concept at this time.	24 39.3	31 51.8	5 8.2	0 0	1 1.6

Note: Not all percentages equal 100%. Questions 4, 7, & 18 were left unanswered by n=1 (1.6%) physician. Question number 12 was left unanswered by n=2 (3.3%) physicians.

Table 2. Physicians' Opinions Concerning Problems with the Utilization of a Nurse Practitioner

N=61

	No Problems %	Very Few Problems %	Some Problems %	Many Problems %	No Response %
1. Patients' acceptance of nurse practitioner.	3 4.9	26 42.6	30 49.2	1 1.6	1 1.6
2. Physicians' acceptance of nurse practitioner.	3 4.9	17 27.9	34 55.8	6 9.8	1 1.6
3. Other nurses' acceptance of nurse practitioner.	7 11.5	21 34.4	26 42.6	4 6.6	3 4.9
4. Quality of service rendered.	8 13.1	39 63.9	11 18.0	2 3.3	1 1.6
5. Legal problems (licensure, malpractice, etc.).	7 11.5	27 44.3	21 34.4	4 6.6	2 3.3
6. Interference with physician-patient relationship.	8 13.1	39 63.9	11 18.0	2 3.3	1 1.6
7. Availability of funds to cover NP services.	7 11.5	17 27.9	28 45.9	6 9.8	3 4.9
8. Demands on physician time for supervision of and/or consultation with nurse practitioner.	2 3.3	24 39.3	26 42.6	8 13.1	1 1.6

Table 3. Physician Knowledge and Experience Regarding Nurse Practitioners

N=61

	Yes %	No %
1. Have you heard or read about nurse practitioners before receiving this questionnaire?	58 95.1	3 3.9
2. Have you discussed with other physicians or health professionals the idea of nurse practitioners providing health care?	55 90.2	6 9.8
3. Have you observed a nurse practitioner in action?	59 96.7	2 3.3
4. Have you had experience in working with a nurse practitioner?	55 90.2	6 9.8
5. Have you ever employed or are you presently utilizing a nurse practitioner?	35 57.4	26 42.6
6. Do you feel there is a shortage of general practitioner services in your community?	15 24.6	46 75.4
7. Would the services of a nurse practitioner enhance the delivery of health care in your practice setting?	36 59.0	25 41.0
8. Would you ever be willing to hire a nurse practitioner?	49 80.3	12 19.7
9. Do you or your group presently employ a physician's assistant?	24 39.3	37 60.7

Table 4. Demographics of Respondents

N=61

Characteristic	n	%
Gender		
Male	44	72.1
Female	16	26.2
No response	1	1
Age (years)		
30-39	13	21.3
40-49	25	41.0
50-59	17	27.9
60-69	5	8.2
70-79	0	0
No response	1	1.6
Medical Specialty		
Family Practice	25	41.0
Obstetric/Gynecology	11	18.0
Pediatrics	9	14.8
Internal Medicine	15	24.6
No response	1	1.6
Year Graduated from Medical School		
1950-59	2	3.3
1960-69	10	16.4
1970-79	17	27.9
1980-89	22	36.0
1990-97	9	14.8
No response	1	1.6
Number of Partners in Medical Practice		
Solo	15	24.6
2-4	26	42.6
>5	19	31.2
No response	1	1.6

REFERENCES

1. Munding M: Advanced Practice Nursing-Good Medicine for Physicians? N Engl J Med 1994;330 (3):211-213.
2. Betancourt JC, Valmocina M, Grossman D: Physicians' and Patients' Knowledge and Perceptions of the Roles and Functions of Nurse Practitioners. Nurs Pract 1996; 21(8):13-15.
3. California Board of Registered Nursing; Nursing Practice Act Rules and Regulations. Sacramento: Author, 1997:80.
4. Marriner-Tomey A: Nursing Theorists and Their Work. St. Louis: Mosby, 1994:309.
5. Taber C: Taber's Cyclopedic Medical Dictionary. Philadelphia: F.A. Davis Company, 1981:1099.
6. Random House: Random House Webster's Dictionary. New York: The Ballantine Reference Library, 1993:463.
7. Anderson AL, Gilliss CL, Yoder L: Practice Environment for Nurse Practitioners in California. West J of Med 1996;165(4):209-214.
8. Knaus VL, Felten S, Burton S, et al: The Use of Nurse Practitioners in the Acute Care Setting. J of Nurs Admin 1997;27(2):20-27.
9. Koehler ML: Defining the Role of the Nurse Practitioner. West J of Nurs Research 1981;3(4):409-415.
10. Radke K: Physicians' Perceptions of Family Nurse Practitioners. Nurs Pract 1977;2(2):30.
11. Kassirer JP: What Role for Nurse Practitioners in Primary Care? New Engl J of Med 1994;330(3):204-205.

12. Filipi D: A Physician's Perspective on Nurse Practitioner Legislation. Nebr Nurs
1995;28(4):20.