A Nurse Practitioner in a Family Practice Residency: Role Description and Impact on Continuity of the Practitioner-Patient Relationship

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The nurse practitioner and physician's assistant are new health practitioners providing primary health care. When teamed with family physicians, these new health practitioners can extend patient services. Family physicians should be trained to work with new health practitioners effectively. Presented is a model where a nurse practitioner and family practice residents work as co-practitioners in a family practice unit. A nurse practitioner in this role can improve the continuity of the relationship between patient and provider in a family practice residency.

The nurse practitioner (NP) and the physician's assistant (PA) have emerged as examples of new health practitioners (NHP) providing primary health care. It is generally agreed and legislated that the NP and PA should work under the supervision of physicians when providing medical care. Studies have shown that in certain settings these new health practitioners can provide care that is comparable to physicians,[1,4] that patient satisfaction is high,[2-6] and that economic viability is possible.[4,7-9]

In family practice, a NHP can bring specific expertise and medical manpower to the health-care team. Advantages to the family physician in working with a NHP include assistance with: health maintenance, such as well-child care and physical examinations, common acute problems, such as upper respiratory tract infections and urinary tract infections, and the stable phase of common chronic problems, such as hypertension and diabetes. The nurse practitioner can also extend nursing skills into medical practice through counseling and identification of behavioral or social problems. If the NHP functions as a co-practitioner with a family physician for a given patient population, in the absence of either one, practitioner-patient continuity may be maintained.

It is being increasingly recognized that physicians need training in working effectively with new health practitioners.[4,5,17] This paper describes a model for the role of a nurse practitioner in a university-based family practice residency.

The continuity of the interpersonal relationship between practitioner and patient has been described as an "element,"[10] or "dimension,"[11] of continuity of patient care, an essential of family practice. Geyman has described the many factors which work against continuity of care in a family practice residency program.[12] We felt it important to study and report on the manner in which continuity is affected by a nurse practitioner in a residency program's family practice unit.

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Nurse Practitioner Role Description

The University of Washington Family Medical Center (FMC), clinical teaching unit of the university-based family practice residency, employs a nurse practitioner. This NP functions on one of three teams (Team 1) in the FMC and serves as a co-practitioner in the practices of a limited number of family practice residents.

Each team in the FMC consists of six residents (two from each year), two faculty with limited practices, one nurse, a medical assistant, and a secretary. Each team is structurally identical except for the addition of the NP on Team 1. Each resident spends two or three half days each week in the FMC seeing patients.

Prior to beginning work in February 1976, the NP negotiated one of three working agreements with each of the Team 1 physicians:

Working Agreement A – MD and NP serve as co-practitioners for an entire practice.

Working Agreement B – NP serves as co-practitioner for a limited number of families in MDs' practice.

Working Agreement C – NP not primarily involved in physician's practice, but may provide coverage as a practitioner within the team.

The essential elements of the co-practitioner relationship are listed in Table 1.

Initially, by mutual agreement between the NP and each physician on Team 1, the NP had Working Agreement A with the two first and the two third-year residents, Working Agreement B with the two second-year

residents, Working Agreement C with the two faculty members. Because of administrative responsibilities not related to her NP role, the NP was forced to change the Working Agreement from A to B for the two third-year residents. The study in this report compares the two first-year residents on Team 1 with Working Agreement A, with the first-year residents on other teams not working with the NP.

As co-practitioners, the NP and resident work together seeing patients during the regularly scheduled two or three half days each week. The NP also sees patients in each practice in which she is a co-practitioner for acute visits when the resident is not present in the FMC (inpatient rotation, vacations), using an available Team 1 physician as back-up, if necessary.

All patient visits involving the NP are logged and characterized as shown in Table 2. As expected, during the first month the NP functioned, the frequency of parallel visits was low (eight percent of encounters) and the frequency of consulting visits to MD was high (64 percent). After five months the frequency of parallel visits rose to 52 percent, and the frequency of consulting visits to MD fell to 35 percent. The frequency of the other types of visits did not change significantly. Studies using the NP at other sites have shown that the frequency of patient visits seen by a NP not requiring immediate MD consultation stabilizes at 67 to 77 percent.[13]

Table 1
Physician and Nurse Practitioner as Co-Practitioners — Essential Elements of Practice

Both MD and NP must accept the philosophy of sharing patient care responsibility.

Exchange will be that of peer professionals. The physician will maintain a general supervisory role over medical care.

Faculty will maintain a supervisory role over Resident-NP practices.

NP will develop protocols or "patient care guidelines"[16] for the diagnosis and management of common conditions. These must be reviewed and accepted by any physician working as a co-practitioner.

Each co-practitioner, by mutual agreement, may emphasize certain patient problems, eg, NP will emphasize patient problems for which she has a mutually agreeable protocol for diagnosis and management.

Patients will have the option to express preference for one of the practitioners.

Co-practitioners must agree to maintain open communication concerning all aspects of the practice. This requires regular meetings to discuss common patient concerns, review charts, create or modify protocols, and evaluate the co-practitioner roles.

The role of the co-practitioner in patient encounters will vary at the discretion of the practitioners or patients. A given patient may be seen by the co-practitioners together, by the MD or NP alone, or in another combination, for example, the patient is initially seen by the MD but the NP follows through with certain aspects of management. The frequency of each type of encounter should be recorded and evaluated. (See Table 2.)

When one of the co-practitioners is absent, the other will maintain primary responsibility for patient care. When the primary MD is absent, one or more MD's on Team 1 will provide back-up and supervision for NP in medical aspects of practice.

Continuity Study — Methods

The practices of the two first-year residents on Team 1 with the NP as a co-practitioner were compared with the practices of the first-year residents on Teams 2 and 3. Four hundred and twenty-eight patient records were randomly selected for study, with 198 being from the two resident-NP practices on Team 1, 127 records from Team 2, and 103 records from Team 3. Two time periods were selected: September 1975 to January 1976 (before the NP) and February 1976 to July 1976 (NP working on Team 1). All encounters listed in the progress notes as involving an MD or NP were analyzed. The frequency of patient encounters which involved a break in continuity with the primary practitioner(s) was calculated. A break in continuity was defined as a visit recorded in the progress notes by someone other than the patient's primary practitioner(s). A primary practitioner was defined as the first-year resident assigned to the patient, or the NP who worked as a co-practitioner during the second study period. Encounters involving a consultation requested by a primary practitioner were excluded, as well as those with the team nurse, social worker, pharmacist, or other non-physicians.

Because the University of Washington Family Practice Residency uses a resident pairing system,[14] all encounters involving a resident's partner

Table 2. Classification of Encounters

All patient visits involving the NP are documented as follows:

Parallel Visit
NP manages patient visit (per protocol). MD may acknowledge patient or sign prescription.

Shared Visit
MD and NP see patient together.

NP Initiated Visit
MD Consults
NP sees patient initially and involves MD in consultation.

MD Initiated Visit
NP Consults
MD sees patient initially and involves NP in consultation.

were included in the analysis. These encounters were considered a break in continuity, the justification for which is supported by the data (see discussion).

The number of different practitioners seeing each patient during the study periods was also examined with the same exclusions.

Continuity Study — Results

The frequency of breaks in continuity in the three teams during the study periods is presented in Table 3. The most striking finding is the highly significant difference in breaks in continuity between Team 1 and the other teams during the second study period with the NP working on Team 1. There were no significant differences in the time any of the residents spent away from their practices during the study periods. The only known difference among the teams during the second period was the addition of the NP as a co-practitioner with the two residents on Team 1.

Also present in Table 3 is the noticeable but not statistically significant ($p>.05$) increase in breaks in continuity on Teams 2 and 3 during the second study period. This difference could not be accounted for by a change in time the residents spent away from their practices. One factor which may account for the increase in breaks in continuity is the increase in number of encounters in the selected population during this period. Since this increase in patient visits occurred for all three teams, we suggest that the frequency in breaks in continuity during the second period would have also occurred on Team 1 without the NP.

An analysis of the continuity of the practitioner-patient relationship is presented from the perspective of the patient in Figures 1 and 2. These figures analyze the number of physicians seen by patients who made two or more visits during each of the study periods. All of these patients were seen at least once by their primary practitioner(s). The patterns for the three teams during the first study period (without the NP) were similar. Between 30 and 45 percent of patients saw more than one practitioner. Of interest is that the resident's partner sees very few of the patients not seen by the primary resident, minimizing the partner's ability to maintain continuity. During the second period a greater percentage of patients was seen by more than one practitioner with the most striking changes on Teams 1 and 3. However, on Team 1 most of the patients seeing a second practitioner were seen by the NP. Except for the NP on Team 1, there was no other consistent practitioner seeing patients when they were not seen by the patient's primary resident.

Discussion

New health practitioners such as the nurse practitioner and physician's assistant are already involved in delivering primary care, usually as members of health-care teams.

If family physicians are to be effective members of health-care teams with new health practitioners they must be trained.[4,5,17,18] A logical time and place for this to occur is during residency training in the family practice unit.

At the present time many family practice residencies do not have new health practitioners in their family practice units. In an informal survey by one author (JES), the reason most often stated by program directors for not having NHP's is that they would compete with residents for patients.

Table 3. Comparison of Breaks of Continuity During Two Study Periods*

	Team 1	Team 2	Team 3	Teams 2 & 3
Charts reviewed during period 9/75-1/76 (No NP)	198	127	103	230
Visits	235	127	119	246
Breaks in continuity	30	19	25	44
% Breaks in continuity	13	15	21	18
Differences from Team 1	—	NS†	NS†	NS†
Period 2/76-7/76 (NP on Team 1)				
Visits	365	191	217	408
Breaks in continuity	38	44	63	107
% Breaks in continuity	10	23	29	26
Differences from Team 1	—	$p < .0002$	$p < .0001$	$p < .0001$

*Comparison of the breaks in continuity in the study practices on each team during two five-month periods. The NP worked as a co-practitioner with the residents on Team 1 during the period February 1976 thru July 1976.

†NS = Not Significant, $p > .05$

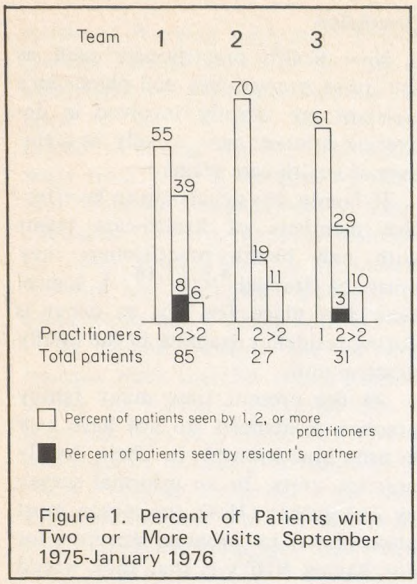

Figure 1. Percent of Patients with Two or More Visits September 1975-January 1976

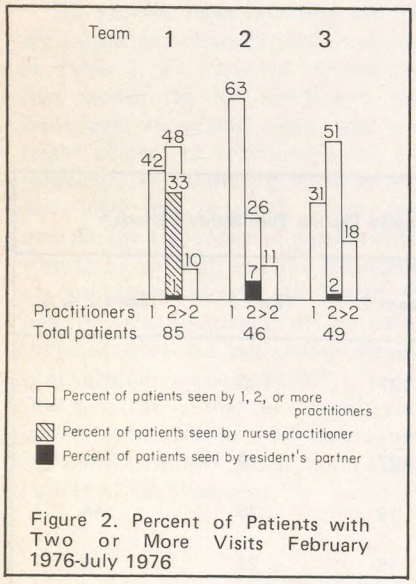

Figure 2. Percent of Patients with Two or More Visits February 1976-July 1976

There are two aspects of the model presented here which reduce the possibility of competition between the resident and the nurse practitioner. First, the NP functions as a co-practitioner with the resident for a given practice; she does not have her own panel of patients. This shared involvement in patient care fosters more of a complementary rather than competitive relationship. Second, resident involvement with the NP occurs on an optional and negotiable basis. Those residents not interested in having NP involvement with their patients are not required to do so. All residents receive some exposure to the NP by observing her function in the family practice unit and because she occasionally sees their patients for acute visits under Working Agreement C. There would need to be a NP on each of the three teams in the unit (six residents per team) in order to allow each resident the option of working with the NP as co-practitioner for all or part of his or her practice.

Because family practice residents are by necessity part-time providers in their practices, patients in these practices may have frequent breaks in continuity with their primary resident. In the study presented here, 10 to 29 percent of all patient visits involve a break in practitioner continuity. Of patients with more than one visit over five months, 30 to 60 percent see at least one practitioner other than their primary physician.

In discussing the lack of continuity in family practice residencies, Geyman presents several approaches to the problem.[12] These include: group practice with modular organization into resident teams, use of the problem-oriented record, use of the resident pairing system,[14] and use of full-time family practice rotation. All of these approaches are employed by the University of Washington family practice residency and are helpful in facilitating patient coverage by an organized group of residents. However, there remains a striking lack of continuity in the resident practices examined in this report.

As demonstrated by Starfield et al,[15] continuity of the flow of patient information relating to care is better when the practitioner providing follow-up care is the same from one visit to the next. Since family practice residents are not consistently available to their patients, there is a need for another primary practitioner on the team that is in close communication with the resident and is consistently available to the patient. Because a resident's partner in a pairing system is also inconsistently available and is concerned primarily with his or her own patients, the partner is limited in ability to maintain continuity in the model unit. As demonstrated here, a nurse practitioner working as a co-practitioner with residents is helpful in maintaining practitioner-patient continuity.

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