Comparison of the work of a nurse practitioner with that of a general practitioner

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SUMMARY. The work of a nurse practitioner was compared with that of a general practitioner. Both were equally available to the same patient population over the same period. The nurse practitioner saw a similar age and sex distribution of patients to the doctor but saw different types of problems. More of the patients she saw were for follow-up of chronic diseases, health advice and screening measures while fewer were acutely ill. The doctor dealt with four times as many patients. The nurse practitioner managed 78% of her consultations without referral to a doctor, and 89% without resorting to prescribed drugs. There was a high level of patient satisfaction with her work and 97% of the patients who saw the nurse would choose to consult her again. The role of the nurse practitioner in our practice has developed differently from a similar post in another setting, thus emphasizing the need for flexibility when defining the role.

Nurse practitioners are a valuable extra resource for the development of new areas of care, rather than a cheaper substitute for a general practitioner.

Introduction

THE concept of the nurse practitioner has recently attracted attention in medical,[1-3] nursing[4-6] and government circles.[7,8] The term nurse practitioner is used here to define an experienced nurse with extra training who works with a large degree of autonomy in general practice. Patients have open access to her and she is able to deal with a wide range of problems. She concentrates on giving advice rather than practical procedures, and her consulting arrangements have more in common with a general practitioner than with a traditional practice nurse. There is as yet no agreed definition of a nurse practitioner or recognized training for this role in the UK.

In April 1987 Barbara Stilwell described her pioneering work as a nurse practitioner in a Birmingham practice.[1] She showed that she was able to deal with over 80% of patients on her own and her consultations largely involved preventive medicine, social problems, advice and ill-defined symptoms. She has suggested that nurses can contribute a different perspective to primary care from doctors, with the emphasis on caring rather than curing.[2]

However, there are important limitations to Stilwell's work.[1] It was carried out in a practice of two doctors working as single-handed practitioners, with no appointment system and no attached nurses or treatment room. No comparison was made between the patients presenting to her and those consulting the doctors and it is not known to what extent the circumstances of her practice influenced her role, or in what ways her presence affected the doctors' workload. Finally, there is no description of the patients' reactions to the project. It is important to address these limitations since the subject is increasingly discussed in the literature and has attracted the interest of the government,[7,8] without the benefit of factual data from the UK.

This study describes the work of a nurse practitioner in a practice which is perhaps more typical — a training practice of six partners caring for 13 300 patients. The practice has an appointment system and a full complement of nursing staff, including two nurses in the treatment room. All six doctors have a commitment to health education, preventive medicine and chronic disease management. We attempted to answer several questions. Which patients chose to see a nurse practitioner? Why did they choose to see her instead of a doctor? What were their problems? What was their opinion of the role of the nurse practitioner? The patients consulting the nurse practitioner were compared with those consulting one general practitioner; both nurse and doctor were equally available to the same patient population.

Method

The practice appointed a nurse practitioner in September 1985 in order to provide patients with a different type of service, particularly counselling and education. It was also hoped that the nurse practitioner would share the burden of acute minor illness with the doctors, and improve the care of patients needing regular review. Her job description corresponds with that recently described for a nurse practitioner by the Department of Health and Social Security.[7]

The nurse practitioner provides open access surgeries every morning and runs diabetic, health screening and well-woman clinics in the afternoons. She provides 20 to 30 minute appointments, and does not carry out any traditional nursing tasks in the treatment room. Her availability is advertised by notices in the waiting room area and in the practice leaflet. These emphasize her role in dealing with minor illness, health advice and preventive medicine. Many patients first meet her when they are sent an appointment for a health check or are referred to her by a doctor or receptionist.

The nurse practitioner has training as a state registered nurse, health visitor and registered sick children's nurse. She underwent an introductory training programme when she joined the practice, and now attends weekly tutorial sessions and relevant study courses. The nurse cannot write prescriptions but can recommend treatment available without prescription or ask a doctor to sign a prescription from a limited range of items. A doctor is always available for advice or referral at her request. There are no female partners at the practice but there is a female trainee.

Analysis of consultations

For a 10 week period between April and June 1987 all the consultations with the nurse practitioner and one of the general practitioners, for which the patients chose to make their own appointment, were noted. The nurse and doctor are both available for general appointments for about 22 hours each week. The study excluded diabetic, screening and antenatal clinics and visits and telephone consultations.

Details were recorded of the age and sex of the patients consulting, the type of problem(s) presented, whether the consultation was for a new problem or a follow-up, and whether

prescriptions or referrals were needed. Problems were categorized by the classification used in the third national morbidity study.[9] The activities carried out by the nurse practitioner were also recorded.

Statistical comparisons were made between the consultations of the nurse and doctor using the chi-square test with Yate's correction.

Patient questionnaire

During the study 100 consecutive different patients consulting the nurse practitioner were asked to complete a brief questionnaire after seeing her. A mixture of open and closed questions was used. Patients were asked how they heard about the nurse practitioner, why they chose her instead of a doctor, whether they would consult her again and with what types of problems, and how satisfied they were with their consultation. They were also asked to add further comments if they wished to. As the questionnaires were anonymous no follow-up of non-responders was possible.

Results

Over the 10 week period the nurse practitioner saw 210 different patients presenting with 365 problems in 322 consultations. The general practitioner saw 836 different patients with 1239 problems in 1115 consultations.

The mean age of the 322 patients consulting the nurse was 37.1 years (range 0–84 years) while the mean age of the 1115 patients seen by the doctor was 38.0 years (range 0–94 years); 63.4% of the nurse's consultations were with female patients compared with 63.6% of the doctor's. Of the 322 patients consulting the nurse practitioner 13.0% presented more than one problem, as opposed to 10.2% of the 1115 patients consulting the doctor. Of the 365 problems seen by the nurse practitioner 43.3% were new problems while of the 1239 problems seen by the general practitioner 53.8% were new ($P<0.001$).

The distribution of problems by diagnostic category showed significant differences between the nurse practitioner and the doctor (Table 1). As category XVIII (supplementary) represented such a large proportion of the nurse practitioner's work it was subdivided. The 10 most common activities of the nurse practitioner are shown in Table 2. It can be seen that most of her work involved the management of chronic conditions, particularly obesity, hypertension, diabetes and asthma. The only acute problem she encountered frequently was rashes, both in childhood infections and from other causes.

The general practitioner wrote a prescription in 57.2% of his consultations while the nurse practitioner arranged for a doctor to write a prescription after only 10.9% of her consultations ($P<0.001$). After 70 (21.7%) of the nurse practitioner's consultations the patient was referred to another professional — 66 to a general practitioner and four to paramedical services. The general practitioner made 69 referrals following consultations (6.2%) of which 49 were to outpatient departments, and six to the nurse practitioner.

Patient questionnaire

Of the 100 questionnaires distributed 73 were returned. Thirty-six patients had heard about the nurse practitioner from their doctor, 24 from the receptionist and five had read the notice in the waiting area. No patients consulted the nurse after reading the practice leaflet, but two claimed to have read about her in a newspaper. Of the 73 respondents 70 were 'very satisfied' with their consultation and three were 'satisfied'. None were dissatisfied and 71 would consult her again. When asked what problems they would consult her with the most common response was 'anything' (16 replies).

When asked about the reasons for consulting the nurse instead of the doctor[11] patients mentioned 'saving the general practitioner's valuable time' or 'taking pressure off the general practitioner', while eight patients would consult the nurse when they did not need a doctor or 'did not want to bother the doctor'. Eleven patients found the nurse easier to talk to than the doctor, and 10 mentioned that she was good at listening, explaining or understanding. Eight patients chose to see her because she was a woman, and four because they felt she had more time. Five patients commented that they were unsure of the nurse practitioner's role, or what sort of problems they could consult her about.

Table 1. Distribution of problems presented to the nurse practitioner and the general practitioner by diagnostic groups. Groups representing less than 1.5% of work for both practitioners are omitted.

		Number (%) of problems presented to			
		Nurse ($n=365$)		Doctor ($n=1239$)	
Diagnostic group					
I	Infections	29	*(7.9)*	71	*(5.7)*
III	Endocrine and metabolic	14	*(3.8)**	21	*(1.7)*
V	Mental disorders	5	*(1.4)*	84	*(6.8)***
VI	Nervous system and sense organs	4	*(1.1)*	116	*(9.4)***
VII	Circulatory system	55	*(15.1)***	88	*(7.1)*
VIII	Respiratory system	38	*(10.4)*	171	*(13.8)*
IX	Digestive system	0	*(0.0)*	49	*(4.0)***
X	Genitourinary system	5	*(1.4)*	76	*(6.1)***
XII	Skin and subcutaneous tissue	2	*(0.5)*	93	*(7.5)***
XIII	Musculoskeletal	2	*(0.5)*	110	*(8.9)***
XVI	Symptoms and ill-defined conditions	27	*(7.4)*	147	*(11.9)**
XVII	Accidents, poisoning and violence	6	*(1.6)*	46	*(3.7)*
XVIII	Supplementary				
	Preventive	69	*(18.9)***	16	*(1.3)*
	Contraception	3	*(0.8)*	63	*(5.1)***
	Administration	0	*(0.0)*	21	*(1.7)**
	Advice and health education	98	*(26.8)***	8	*(0.6)*

n = total number of problems. ** $P<0.01$, * $P<0.05$.

Table 2. The 10 most common activities of the nurse practitioner.

	No. of times performed	Percentage of all problems presented ($n=365$)
Advice about weight/diet	82	*22.5*
Hypertension management	52	*14.2*
Diagnosis of rash	44	*12.1*
Asthma management	37	*10.1*
Hypertension screening	33	*9.0*
Audiometry	19	*5.2*
Diabetic management	17	*4.7*
Advice about cholesterol	16	*4.4*
Allergy testing	16	*4.4*
Gynaecological advice	13	*3.6*

n = total number of problems.

Discussion

It is likely that nurses, doctors and government are interested in the concept of the nurse practitioner for different reasons. Nurses wish to extend their role,[10] doctors want to share their workload and enhance the practice team,[11] and the government is probably looking for a cheaper way of meeting health service needs. The subject is controversial and it is noteworthy that we have been able to broadly replicate Stilwell's original work[1] in a different practice environment, and have shown that the nurse practitioner and the doctor have distinct roles.

Although the consulting arrangements of the nurse practitioner and the doctor were similar they were used by patients in different ways and the content of their work was different, the doctor dealing with a wider range of problems. We have confirmed earlier reports[1,4] which suggest that nurse practitioners make a major contribution in the areas of chronic disease management and health promotion. Nurses using agreed protocols, as in this practice, have been shown to provide equal or better care than doctors in the management of hypertension and obesity.[12,13]

Although we have confirmed the overall pattern of a nurse practitioner's work the actual problems seen and activities undertaken by the nurse are not exactly the same as those recorded by Stilwell.[1] The nurse in this study saw more patients with infective, circulatory, metabolic and respiratory disorders, but less with mental and social problems. She also undertook fewer administrative, technical and contraceptive procedures, probably because of the availability of other practice and family planning nurses.

There have been calls for a clear definition of the role of a nurse practitioner but any such definition must take into account the need for flexibility and the role is partly defined by other local nursing and medical facilities. Some practice nurses are developing their job beyond the treatment room, and individual nurses are undertaking many of the tasks described for a nurse practitioner.[10]

In our study it was found that most patients with acute minor illness consulted a doctor and the general practitioners were aware that many patients consulted them with problems that could equally well be handled by a nurse.[14] Although it was intended that the nurse practitioner would share the burden of acute minor illness with the doctors this has not occurred, and there has been no obvious effect on the doctors' workload. However, our impression is that patients are increasingly willing to consult the nurse practitioner with minor illness as they gain experience of her services and the change in her work with time will be the subject of a future study.

What are the implications for the practice and for primary care? It appears that the nurse practitioner is providing an extra service rather than acting as a substitute for the general practitioner. What then are the particular qualities of the nurse practitioner? First, she offers different attitudes and skills from those of a doctor. Doctors are trained within an illness model with the emphasis on physical disease and treatment, particularly medication. Nurses, especially those with health visitor training, place more emphasis on practical care and advice. There are many patients with chronic diseases or with health worries for whom this approach may be more appropriate.

Secondly, patients may have different expectations of a nurse practitioner, and may develop a different relationship with her than with a doctor. The relative status of doctors and nurses in society may make it easier for some patients to relate to the nurse practitioner and in this study 29% of patients commented that they found her easier to talk to than the doctor, or felt that she was good at listening, explaining or understanding. Is this a function of nurse training, or of the patient's perception of nurses, or is it because the nurse has more time available? The very high level of patient satisfaction with the nurse practitioner in this study is impressive. However, similarly high rates of satisfaction with general practitioners have been found in other surveys.[15]

Thirdly, the nurse practitioner provides longer appointments than the general practitioner. In this practice the purpose of the nurse practitioner was to provide time for those patients who needed it and she was protected from the potentially unlimited demand which doctors have to try to meet. The concomitant of this is that the nurse practitioner sees far fewer patients — in this study just over one quarter of the number seen by the general practitioner. Therefore, nurse practitioners do not necessarily represent a cheaper alternative to doctors.

Some doctors have anxieties about the concept of the nurse practitioner, and in the USA this resistance has put the concept under threat.[16] The work described here suggests that this defensiveness is largely unnecessary as the nurse practitioner is developing a different role from that of the general practitioner. New developments in primary care require time, for example, protocols for chronic disease management, health education, computerized audits and well-person checks. All these initiatives create new work and nurse practitioners are ideally placed to help develop these areas.[17,18] They should be viewed as a valuable asset to meet these needs rather than as a threat to the general practitioner's traditional role.

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