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A study of interruption rates for practice nurses and GPs

This study compares the rate and perceptions of interruptions experienced by practice nurses and GPs. During two recording periods, nurses noted the number of interruptions they experienced before and during their consultations (Paxton et al 1996). The nurses reported 48.5 interruptions per 100 consultations in the first period and 30.2 in the second. Fifty per cent of nurses in the first period and 33 per cent in the second were interrupted during consultation more than ten times per 100 consultations. Nurses reported that interruptions were distracting, affected patient flow and that the confidential nature of some consultations was irrevocably damaged by constant disturbances. It was the perception of the nurses that GPs caused most interruptions. Few patients, however, reported being disturbed as a result of an interruption to the nurse. The rate of interruptions for GPs was much lower and 94 per cent reported being interrupted during fewer than one in 20 consultations, although even then doctors reported interruptions as disruptive. Despite the decrease in interruptions to nurses in the second period of recording, the level remained much higher than that of interruptions to doctors.

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Traditionally, the doctor-patient consultation in the surgery has been considered sacrosanct. It symbolises the doctor's independence and the personal nature of the relationship with the patient. Many doctors refuse to be interrupted during their surgery consultations and reception staff are instructed accordingly. Nurses are not always treated on an equal basis.

The majority of doctors are still predominantly male, nurses predominantly female; doctors delegate, nurses carry out their instructions (Bowling 1981, Clay 1987, Robinson 1990). Increasingly, nurse-patient consultations in general practice have a greater psycho-social component because of the health promotion aspects of the work (Peter 1993, Ross et al 1994). This shift from the more traditional 'treatment' type of workload to that of listening and counselling (Atkin et al 1993, Drury et al 1988, Ross et al 1994) emphasises the necessity of equal privacy when patients are consulting the nurse.

There have been no reported studies of interruptions to GPs and nurses in UK primary care, but in a study of interruptions to four doctors working in a neighbourhood health centre in Israel, Shvartzman and Antonovsky (1992) reported that 44 per cent of interruptions in the doctor's consulting room were instigated by nurses and 35 per cent by medical students. Interruptions were recorded in 94 cases, with an average of 1.36 interruptions per consultation.

This paper examines the frequency of interruptions faced by nurses while seeing patients in the practice treatment room. The data is from a study (Paxton et al 1996) of workload and work flow of nurses working in the treatment rooms of general practices in the Lothian region before and after the introduction of the new GP contract in 1990 (DoH 1989).

The contract required GPs to achieve targets for cervical screening and childhood immunisation in order to qualify for items of service payment. In addition, health promotion and advice to be offered to adult patients every three years and those over 75 years on an annual basis, resulted in the recruitment of large numbers of practice-employed nurses to undertake some of these tasks (ISD/Scottish Health Service Common Services Agency 1993, Sheppard 1992).

This data is also related to a study which collected information from 85 GPs over the course of a year from November 1987 to November 1988, as part of a survey of their workload. The doctor study was based in broadly the same practices in Lothian (Heaney et al 1991, Howie et al 1991).

METHODS

Subjects In 1990, 34 nurses from 22 practices were each asked to provide workload information on 15 half days. The exercise was repeated in 1991, a year after the introduction of the new GP contract to see if there had been any change in workload over time. Some staffing changes took place during the periods between recordings, and, in 1991, 33 nurses from 21 practices took part.

In the study of doctors' workload during 1987 to 1988, the 85 GPs who were recruited to the study (17 per cent of all Lothian region's GPs) represented a cross-section of single-handed doctors and those working in group practices. There was a varied age range and male and female doctors participated.

Data collection During the 15 half days of the two nurse study periods, practice nurses recorded information relating to every patient consultation. This included details of any interruptions which took place during the consultation or before it (thus delaying its start), and whether these interruptions were made in person or by telephone (or through an intercom system). An interruption was defined as anything

that disturbed the continuity of the nurse's work when already engaged on a task or caused a distraction during a consultation with a patient.
Additionally, a sample of patients (n=1,930) from 15 of the 21 participating practices, completed a satisfaction questionnaire during the second year of the nurse workload study. This was to be completed in the waiting room before leaving the surgery. Part of the questionnaire asked patients if they were aware of an interruption to their consultation with the nurse and, if so, whether they found it an intrusion.
Although no formal data were collected on nurses' attitudes toward interruptions, each participating nurse was interviewed between the two recording periods, after receiving a mid-way report on some of the findings from the study. Several GPs from the participating practices also commented on the information.
In the doctors' study, the GPs recorded information on all surgery consultations on one day in every 15 for the year from November 1987 to November 1988. The method of collecting information about interruptions was similar to the method used for the nurses. A detailed description of the methods used and the results obtained from the doctor study have been reported elsewhere (Heaney et al 1991, Howie et al 1991).

RESULTS
Nurses During both periods of recording, the mean consultation time for the nurses was 9.7 minutes. In the first recording period, the nurses collected data on 6,675 consultations and, during the second period, they collected data on 6,050 consultations. The necessary information for analysis in this paper was available for 6,353 and 5,725 consultations respectively.
Nurses reported 48.5 interruptions per 100 consultations (n=3,081) (Table 1) during the first phase and 30.2 interruptions per 100 consultations (n=1,729) during the second phase of recording. The interruption rate decreased in each category during the second period, with interruptions in person decreasing more markedly than interruptions by telephone, and interruptions during consultations decreasing more than those before consultations.

Table 1. Nurse interruptions.

	PERIOD 1		**PERIOD 2**	
	No.	Rate per 100 consultations	No.	Rate per 100 consultations
Before consultation				
Phone	470	7.4	315	5.5
Person	534	8.4	326	5.7
Total	1,004	15.8	641	11.2
During consultation				
Phone	997	15.7	561	9.8
Person	1,080	17.0	527	9.2
Total	2,077	32.7	1,088	19.0
Total interruptions	3,081	48.5	1,729	30.2
Total consultations	6,353		5,725	

Consultations interrupted by individuals coming into the treatment room during a consultation almost halved in the second period, from 17.0 to 9.2 per 100 consultations. Nurses, however, reported that they seldom interrupted doctors during consultations. The reception staff were asked to notify the GP between consultations if advice or help was requested. In 7.5 per cent of consultations in the first year and 5.5 per cent of consultations in the second year, nurses requested the assistance of the GP.
Patients In response to the patient satisfaction questionnaire, 27 per cent of patients who had had an

interrupted consultation were aware of the interruption, and 15 per cent of these patients (or 4 per cent of those interrupted) reported that they found it an intrusion.
General practitioners In the study of GPs, the mean consultation time for doctors was 7.9 minutes and they collected data on 21,707 consultations. In total they were interrupted at a rate of 18.6 interruptions per 100 consultations (4,030 times) (Table 2). Although interruptions before consultations were in a similar range to that of the nurses, the greatest difference between nurses and doctors was in the interruption rate during consultations. The doctors were interrupted during consultation by someone entering the room in 2 per cent of cases in comparison to the 17 per cent and 9 per cent reported for nurses.

Table 2. Doctor interruptions.

	No.	Rate per 100 consultations
Before consultation		
Phone	1,139	5.2
Person	1,091	5.0
Total	2,230	10.2
During consultation		
Phone	1,394	6.4
Person	406	1.9
Total	1,800	8.3
Total interruptions	4,030	18.6
Total consultations	21,707	

Comparison between nurses and doctors For many doctors, interruptions during consultations by people were reported as a rare event. Thirty six per cent of doctors were never interrupted and notably, 94 per cent of doctors were interrupted during less than one consultation in 20 (Table 3).

Table 3. Comparison of nurses' and doctors' interruptions in person during consultation.

Nurses: Period 1 (1990)
9 per cent of nurses (3) were interrupted less than once in 100 consulations
50 per cent of nurses (17) were interrupted more than 10 times in 100 consultations
21 per cent of nurses (7) were interrupted more than 20 times in 100 consultations

Nurses: Period 2 (1991)
15 per cent of nurses (5) were interrupted less than once in 100 consulations
33 per cent of nurses (11) were interrupted more than 10 times in 100 consultations
6 per cent of nurses (2) were interrupted more than 20 times in 100 consultations

Doctors
36 per cent of doctors (31) were interrupted less than once in 100 consulations
32 per cent of doctors (27) were interrupted more than twice in 100 consultations
6 per cent of doctors (5) were interrupted more than five times in 100 consultations

Percentage figures cumulative at each extreme

In contrast, 50 per cent of nurses were interrupted more than ten times in 100 consultations during the first period of recording. This level fell to 33 per cent during the second period.

DISCUSSION

Interruptions to nurse consultations In the nurse study, 39 per cent of consultations involved a direct referral from the doctor. The referrals that resulted in an interruption occurred where doctors telephoned through to the treatment room, used an intercom system, or came in to the nurse to explain the nature of that referral or another referral about to take place.

The reduction in the level of interruptions during the second recording period was possibly a consequence of giving the nurses a mid-way report on some of the findings from the first part of the study, which included interruption data. The nurses reported concern that the level of interruptions they had experienced was so high, and the intervention caused them to make an effort to reduce interruptions in the second year. Intervention was not part of the study design, but the effects were, hopefully, beneficial for nurses and patients. It should also be noted that the rate of interruptions to the nurses, rather than their workload, was measured in the part of the study reported in this paper.

The nurses who reported the highest number of interruptions in the first recording period had a marked reduction in interruption levels in the second year. The changes in interruption rate in 1991 could also reflect the fact that the nurses were working more autonomously, making more of their own appointments and undertaking more of the health promotion and illness prevention procedures specified in the new GP contract.

Doctors in the participating practices, who commented on the findings, disclaimed responsibility for more than an occasional interruption. Certainly, in discussion with the nurses, several of the interruptions were reported to be by reception staff who were unsure how to deal with patient problems and asked for advice from the nurse. In some cases, receptionists asked the nurse to make a decision about whether a patient requiring an appointment should be seen by the doctor or the nurse. The nurses reported that they regularly had to make decisions of this kind because the receptionists did not want to interrupt the doctor.

Other nursing colleagues were reported to be responsible for interrupting consultations. Interruptions by other community nurses usually consisted of district nurses coming in to collect supplies, or health visitors borrowing equipment for clinics or collecting leaflets from treatment rooms that held the main store cupboard. Similarly, doctors working in practices where the treatment room housed the drug cupboard came in while the nurses were consulting to restock their medical bags or to ask the nurses to do so. A practical solution to this particular problem could perhaps be found if surgeries had sufficient space to locate supplies in another area.

Nurse and patient responses to interrupted nurse consultations Ten per cent of nurse consultations in the first year and 17 per cent in the second year involved some kind of therapeutic listening, making any interruption a distraction. In discussion with the nurses, many reported that people coming in to the treatment room while they were consulting did not knock at the door and, having come in, did not identify themselves to the patient. In several cases, the nurses reported that while having a delicate conversation with a patient, the interruption disturbed the flow of the consultation to such an extent that it was impossible to recover the rapport that had existed up to the moment of interruption.

The assumption that patients feel equally distracted by interruptions when having a conversation with the nurse is not supported in this nurse study (4 per cent of those interrupted reported feeling it was an intrusion). Perhaps this reflects the public image that it is the doctor's prerogative to give the nurse instructions and it is the duty of the nurse to carry them out. Thus, any interruption to the nurse's consultation by the GP is not perceived as an interruption by the patient, but simply the doctor using the power of delegation. Time spent in a consultation with the doctor on the other hand is precious and patients reasonably expect to have that time dedicated to their problems.

Interruptions to GP consultations Doctors were seldom interrupted by nurses during a consultation and the GPs participating in the nurse study reported that they only occasionally interrupted the nurse. As 39 per cent of nurse consultations involved a direct referral, perhaps doctors did not consider that sometimes these referrals could constitute an interruption.

Communication The perception of nurses as understanding, sympathetic and accessible is perhaps the reason why other members of the primary healthcare team, such as reception staff and other nursing colleagues, are more likely to disturb a nurse-patient consultation than a doctor-patient consultation. While it is recognised that communication between doctors and nurses working together in general practice is very important, perhaps the nature of the communication deserves closer attention. Some doctors never experience interruptions at all and most doctors do not experience interruptions on the scale that nurses do. Nevertheless, doctors who do get interrupted report these interruptions as stressful (Howie et al 1993) It has also been reported that doctors feel more stressed when there is no nurse on duty in the practice (Howie et al 1993) Nurses also report that frequent interruptions are stressful and, if this is the case, it may affect the quality of care they provide.

It is accepted that many practices do negotiate methods of working together as a team to meet the needs of the staff concerned, and of the practice population that they serve (Adelaide Medical Centre Primary Health Care Team 1991). In some practices, however, the structure of the nurse's employment is still relatively unco-ordinated, with no specific role definition, and the number and type of tasks delegated by the GP allows the nurse little control and direction in his or her work. This, perhaps unwitting, lack of

respect for the level of professional status of the nurse could be reflected in the number of interruptions experienced.

CONCLUSION

Since these two studies were undertaken, the role of the practice nurse has expanded from that of relieving doctors of time-consuming practical tasks and acting under their supervision and direction. Nevertheless, many practice nurses are still undertaking a wide range of procedures as described in the nurse study (Paxton et al 1996), as well as expanding their role into disease management and health promotion activities (Hibble 1995, Jeffreys et al 1995, Ross et al 1994). Nurses are increasingly becoming the first point of contact for patients in general practice and are taking more decisions about patients' care (Drury et al 1988, Marsh and Dawes 1995). As practice nurses expand their role and develop a greater degree of autonomy in their working environment, it is perhaps less likely that nurses and doctors will be interrupted by each other.

Primary healthcare teams will also have to function interactively if they are to identify and meet the changing healthcare needs of society (Bond et al 1987, Hutchinson and Gordon 1992), and nurses should be able to work with GPs as equal partners in the delivery of health care.

If practice nurses wish to expand their role, however, they must be aware of professional accountability in their working practices and be adequately prepared with accredited practice nurse education. Support for innovative practice can now be found in The Scope of Professional Practice (UKCC 1992), and in recognition of this greater degree of autonomy in their employment, nurse consultations should now be as inviolate as that of their doctor colleagues.

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