

# A comparison of the activities and opinions of attached and employed nurses in general practice

B. L. E. C. REEDY, MRCGP, DRCOG, A. V. METCALFE, B.SC, MIS,  
M. de ROUMANIE, MA, and D. J. NEWELL, PH.D, FSS

**SUMMARY.** We compared the nursing and medical activities and the opinions of nurses employed by area health authorities and nurses employed by general practitioners by interviewing a random sample of 153 nurses in 113 practices, situated in four rural and five urban area health authorities in England. The availability of a treatment room profoundly affected the work of both kinds of nurse and there were differences between them in the balance between 'caring' and 'technical' activities which may be largely attributed to the circumstances of their employment. However, their occupational histories and choices of employer appear to reflect both differences in their training and differences in their values about career and marriage.

### Introduction

**W**E have described how two sources of nursing have developed in association with general practice—that given by 'attached' nurses, who are employed by area health authorities and that given by 'employed' nurses, who are employed by general practitioners (p. 477-482). We showed that these nurses were similar in most professional respects but differed in their age, marital status, career pattern, and terms and conditions of employment. In particular, the employed nurses were more likely to have trained in a medical teaching hospital.

Our study was also designed to compare the type of work done by the two groups of nurses and to elicit their views about their work and careers. Studies of employed nurses (Taylor, 1954; Cartwright and Scott, 1961; Smith and O'Donovan, 1970) suggest that their work has

B. L. E. C. Reedy, Senior Lecturer in the Organization of Health Care; A. V. Metcalfe, Lecturer in Medical Statistics; M. de Roumanie, Research Associate and D. J. Newell, Professor of Medical Statistics, Medical Care Research Unit, University of Newcastle-upon-Tyne.

© *Journal of the Royal College of General Practitioners*, 1980, 30, 483-489.

always been of a technical (or medical) nature and includes laboratory investigations and surgical procedures carried out on general practitioners' premises. Attached nurses, on the other hand, are statutorily committed to providing a home nursing service and studies by Hockey (1970, 1972) and others suggest that their work consists mainly of basic nursing in the home, together with injections and dressings. However, the extent of this difference between the two kinds of nurse is unknown because no comparison has been carried out of their activities in the same practices. Furthermore, certain trends suggest the possibility of a recent change in at least one of these two occupational stereotypes.

First, the number of untrained nursing auxiliaries, aides, and bath attendants has increased rapidly and they now form about one third of all community nursing staff employed by area health authorities (DHSS, 1976). At the same time, the qualified nurses employed by area health authorities appear to be doing more of their work in general practitioners' premises where the proportion of 'first' (that is 'new') treatments carried out in these premises now exceeds those carried out in patients' homes (Table 1). The trend displayed was continuous between the years given. Finally, there has been a marked increase in the proportion of general practitioners' premises with a treatment room. In 1969, Irvine and Jefferys (1971) found that 71 per cent of general practitioners in health centres and 31 per cent of those in other premises had a treatment room. By 1977 these proportions had increased respectively to 96 per cent and 77 per cent of general practitioners (Cartwright and Anderson, 1979).

All these changes lead to speculation about the changing roles of community nurses and about adjustments in their relationships which might affect the concept of the primary care team. A further issue is that of substitution by nurses for the work of doctors, and the General Medical and Nursing Councils (amongst others) are concerned to know if such activities require legislation, quite apart from any need for special training (General Medical Council, 1977).

**Table 1.** Changes in the number and location of first treatments given by health authority employed nurses in England, 1972-1976.

Location of treatments	First treatments given			
	1972		1976	
	Number (1,000s)	Percentage	Number (1,000s)	Percentage
Patients' homes	1,060	59.5	1,219	44.8
General practitioners' premises				
Health centre	192	10.8	678	24.9
Other	530	29.7	824	30.3
Totals	1,782	100.0	2,721	100.0

The small number of first treatments given by nurses in maternity and child health centres, in hospitals and in residential homes have been omitted. In 1976 they formed only 2 per cent of all first treatments.

Sources: Department of Health and Social Security (1973).  
 Department of Health and Social Security (1977). Personal communication.

**Aims**

Our aims were:

1. To compare the clinical activities of attached and employed nurses and relate their work to the availability of a treatment room and other variables.
2. To explore the reasons for their choice of occupation and their opinions about trends in nursing in relation to general practice.

**Method**

As previously described (p. 478) we interviewed a random sample of 153 nurses working in 113 general practices of which 12 were in health centres. About half (81) of the nurses were employed by nine area health authorities in England (randomly sampled) and attached to 81 practices of which half had a nurse employed by general practitioners. The remaining 72 nurses were employed by general practitioners in the same areas and half of these nurses worked in practices with an attached nurse. The samples of nurses were weighted and thus we give our estimates of values only as proportions in the population. This sampling scheme and analysis ensure that our results are free from bias.

**Results**

When differences between values are specified in the text, these are significant at or below the 1 per cent level of confidence. Other levels of significance are specified in brackets.

**Table 2a.** 'Caring' activities (traditional nursing) of attached and employed nurses (percentages).

	Attached nurses N = 81		Employed nurses N = 72	
	Activities Done Ever in last done month	Activities Done Ever in last done month	Activities Done Ever in last done month	Activities Done Ever in last done month
Assisted patients to lavatory, commode, bed pan	95*	90	9	4
Assisted patients to dress/undress	94*	90	65	59
Cared for patients' hair, nails, feet	92*	88	45	39
Bathed patients in bed or bath	92*	92	1	0
Treated bowel by suppository or enema	91*	89	14	9
Administered medicines	83*	75	51	50
Prepared food/drinks for patient	77*	67	7	5
Gave exercise to patients	64*	56	13	7
Fed patient by hand	56*	41	1	0
Tepid sponged patient	55*	39	6	5

*Clinical activities of the nurses*

We listed 43 activities recorded in the nursing and general practice literature as being carried out by nurses working in patients' homes or general practitioners' treatment rooms. These activities were classified as follows:

1. 10 'caring' activities which traditionally are carried out in the community only by nurses (such as bed baths and toileting).
2. 17 'intermediate' activities for which nurses as well as doctors are trained and which can be done by either, at choice (for example, urinalysis and the measurement of blood pressure).
3. 16 'technical' activities which traditionally have been carried out in the community only by doctors, either because they were statutorily controlled (for example, vaccination against smallpox) or because they were part of a scientific technology (such as laboratory or other tests), were frankly surgical, used powerful drugs (for instance, local anaesthetics), or implied a knowledge of diagnosis possessed only by doctors. All of these imply a need for additional training for the nurses.

The nurse respondents indicated those activities which they had carried out at any time during their current attachment or employment and those carried out during the month before the survey. Table 2 gives these rates with the significance level of any differences between attached and employed nurses. Owing to the large number of activities, differences at the five per cent confidence level have been ignored.

Tables 2a and b shows that attached nurses were more

**Table 2b.** 'Intermediate' activities (for nurses or doctors) of attached and employed nurses (percentages).

	Attached nurses		Employed nurses	
	Activities Done Ever	in last done month	Activities Done Ever	in last done month
Surgical dressings of all kinds	100	93	85	80
Tested urine	97	94	94	93
Removed sutures	96	87	86	76
Measured temperature, pulse, and respiration	92	91	74	72
Given counsel or support	91	87	84	75
Adjusted slings or dressings	89	77	80	73
Given eye treatments	83*	69	49	38
Catheterized a patient	77*	64	17	7
Changed vaginal pessaries	65*	51	33	20
Taken swabs for bacteriological examination	64	45	63	59
Given preventive inoculations (except smallpox)	50*	29	96	90
Weighed patients	45*	41	84	75
Taken blood pressure	40*	29	78	69
Performed dip-slide culture on urine	25*	22	49	43
Removed plaster of Paris	8	4	5	3
Performed biochemical tests on faeces	5	2	2	0
Performed audiometry	4	2	0	0

involved than employed nurses with 'caring' activities whereas in 'technical' activities the employed nurses predominate. However, there was much less difference between them in 'intermediate' activities (Table 2c). The median numbers of the three kinds of activity undertaken by the two groups of nurses are shown in Table 3.

On average, all the nurses had carried out about half of all the activities and about two thirds of the intermediate activities. The differences between the attached and employed nurses lay in their involvement in caring and technical activities and the difference in this respect is significant beyond the 0.1 per cent level. We also compared the activities of attached nurses working on their own with those working with employed nurses but found no differences between the activities of these two groups of attached nurses. Likewise, there were no differences between the two groups of employed nurses in the same respect.

*Treatment rooms and the nurses' work*

Amongst the employed nurses, 78 per cent had a treatment room to work in and this proportion was unchanged whether nurses were attached to the practice or not. Amongst the attached nurses, a significantly smaller proportion (52 per cent) had a treatment room available. However, those who were attached to practices with employed nurses necessarily enjoyed the same facilities (78 per cent had a treatment room), whereas of

**Table 2c.** 'Technical' activities (traditional medical) of attached and employed nurses (percentages).

	Attached nurses		Employed nurses	
	Activities Done Ever	in last done month	Activities Done Ever	in last done month
Syringed ears	53*	40	82	79
Performed venepuncture for laboratory specimens	24*	22	47	43
Carried out specific desensitizing procedures	24	20	35	35
Incised boils and abscesses	16*	10	58	46
Applied plaster of Paris or cervical collar	13	9	20	18
Taken and prepared cervical smears	11*	5	39	37
Vaccinated against smallpox	11*	6	35	35
Performed electrocardiographs	9*	4	26	25
Cauterized warts, etc	9*	2	40	34
Carried out skin testing with allergens	8	4	13	9
Performed pregnancy tests	4*	2	20	19
Estimated haemoglobin	4	4	15	11
Inserted sutures after injecting local anaesthetic	4*	2	32	26
Set up and read ESR	4	2	16	11
Used peak flow meter	2*	0	18	18
Fitted IUCD	2	2	2	2

\*Differences between the proportion of nurses who had 'ever done' the activity are significant beyond the one per cent level.

**Table 3.** Average number of activities carried out by attached and employed nurses.

Type of activity	Total number of activities	Number of activities carried out		
		All nurses (median)	Attached nurses (median)	Employed nurses (median)
Caring	10	8.0	8.6	1.5
Intermediate	17	10.3	10.2	10.3
Technical	16	1.7	1.3	4.8
All activities	43	19.6	19.8	16.3

the nurses attached to practices without an employed nurse, only 42 per cent had a treatment room.

Table 4 shows that the total number of hours worked by employed nurses with a treatment room is greater by one third and the proportion of the time they spend in nursing activities is greater by two thirds. Amongst the attached nurses, those with a treatment room spend considerably more time on the practice premises than those without (Table 5).

Nurses who had no treatment room said they did their nursing work either in the general practitioner's consulting room when vacant or in other all-purpose rooms

**Table 4.** Time worked by employed nurses with and without a treatment room.

	With a treatment room (78%)	Without a treatment room (22%)	Significance level of difference	All employed nurses
	hours	hours	P	hours
Contracted hours	25.0	16.4	<0.01	23.1
Time spent on practice premises	23.9	16.1	<0.01	22.2
Nursing	18.6	6.3	<0.001	15.9
Reception	3.7	9.4	<0.01	5.0
Other work	2.8	0.9	NS	2.4

NS = not significant.

or areas on the premises. One fifth of the attached nurses had nowhere to treat patients and resorted to expedients such as treating them in premises belonging to other general practitioners. A few nurses were actively discouraged from doing nursing work on the premises either by the general practitioners or their employing area health authorities.

We also examined the effect of a treatment room on the nurses' caring and technical activities and Table 6 shows that, in premises other than health centres (in which there were too few nurses without a treatment room to allow an independent analysis), employed nurses working in a treatment room performed more technical activities and to a lesser extent more caring activities as well. This result was reinforced by the finding that the number of technical activities undertaken differed significantly between the nine area health authorities and were correlated with the proportion of practices with treatment rooms in each area health authority (Spearman's Rank correlation coefficient + 0.64;  $p < 0.05$ , one sided). For the attached nurses in non-health centre premises with treatment rooms, the difference in the median numbers of technical activities is significant at the 5 per cent level.

#### *Other variables affecting the nurses' clinical activities*

The differences in caring and technical activities between the attached and employed nurses did not depend on whether they were registered or enrolled nor whether they were trained in teaching or non-teaching hospitals. However, amongst the employed nurses who were state registered, more technical activities were undertaken by the youngest nurses (those aged about 30) with a slow decrease as age increased. No such trend was noted amongst attached nurses, possibly owing to the relatively small number of technical activities which they recorded.

Amongst the attached nurses, those who had worked as ward sister or above performed significantly fewer caring activities whilst the employed nurses who had

**Table 5.** Time spent by attached nurses in practices with and without a treatment room (given in percentages).

Time spent on practice premises per week	Attached nurses		All attached nurses
	Without a treatment room (48 per cent)	With a treatment room (52 per cent)	
None	60	35	48
2 hours or less	40	29	35
More than 2	0	36	18

$P < 0.001$ .

**Table 6.** Median number of activities carried out by nurses in general practitioners' premises.

	Attached nurses		Employed nurses	
	Caring (median)	Technical (median)	Caring (median)	Technical (median)
Health centres	8.0	2.9	2.3	4.3
Other premises with treatment rooms	8.5	1.6	2.1	5.5
Other premises without treatment rooms	8.9	0.6	0.5	1.4

<sup>1</sup>Significant at 1 per cent level.

<sup>2</sup>Significant at 0.1 per cent level.

attended any in-service training during their present employment (36 per cent) performed significantly more of both kinds of activity. In addition, those whose title was 'nurse' (rather than 'nurse-receptionist') undertook significantly more technical activities.

#### *The nurses' opinions about their work and careers*

All the nurses were asked for their main reason for taking up their present form of nursing. Nearly half (49 per cent) of the attached nurses, but only 20 per cent of the employed nurses, stated or implied that it was the satisfaction of giving direct nursing care. Typical comments were: "I always wanted to do it" or "You can get to know people better; you get more involved, more satisfaction." In contrast, over half (59 per cent) of the employed nurses gave 'convenience' as their main reason, saying: "I didn't want something too time-consuming and it had to fit in with my other commitments."

Although 86 per cent of all the 'ever-married' nurses were in favour of married women engaging in paid employment, significantly more (83 per cent) of the employed than of the attached ever-married nurses (53 per cent) agreed with the statement: "A married woman cannot make plans for her career because they depend on her husband's plans for his."

The nurses were also asked about career development in nursing and a majority (60 per cent) both of attached

**Table 7.** Nurses' opinions about the location of their work (given in percentages).

		Attached	Employed	Both	Significance level of difference
In future, a district nurse's work will not be confined to district work alone: she will combine it with work in health centres and doctors' surgeries	Agree	87	75	85	NS
	Neither	2	14	4	
	Disagree	11	11	11	
It really is rather a waste of district nurses' training for them to spend time in doctors' surgeries and in health centres	Agree	11	22	13	NS
	Neither	8	8	8	
	Disagree	81	70	79	
I think it is a good thing that district nurses can now work in doctors' surgeries and health centres as well as on the district	Agree	95	80	92	p < 0.01
	Neither	0	10	2	
	Disagree	5	10	6	
If district nurses work in the surgery, then I don't see why practice nurses couldn't do some nursing in patients' homes	Agree	26	35	28	NS
	Neither	28	17	25	
	Disagree	46	48	46	
District nurses are busy enough as it is without having to spend time in doctors' surgeries and health centres as well	Agree	19	38	23	p < 0.05
	Neither	13	17	14	
	Disagree	68	44	63	

NS = not significant.

**Table 8.** Nurses' opinions about their professional relationships (given in percentages).

		Attached	Employed	Both	Significance level of difference
District nurses and practice nurses can work very well together as a team	Agree	62	91	68	p < 0.001
	Neither	34	6	28	
	Disagree	4	3	4	
General practitioners always treat nurses as colleagues	Agree	51	74	56	p < 0.01
	Neither	17	9	15	
	Disagree	31	17	28	
Attachment schemes don't really help to improve the relationship between doctors and nurses	Agree	3	9	4	p < 0.01
	Neither	4	18	7	
	Disagree	93	73	89	

and employed nurses agreed that nursing administration and training were less satisfying than caring directly for patients. Most of these nurses also agreed that promotion to senior grades should be available for those who wanted to continue with direct nursing care. However, there was a marked difference in the professional aspirations of attached and employed nurses. Whereas 41 per cent of the attached nurses would have liked to be promoted, very few (6 per cent) of the employed nurses would have liked promotion and the remainder were happy to stay in their present position.

The nurses' opinions about trends in the location of their work were explored by means of their responses to the five consecutive statements shown in Table 7. Most of the nurses (85 per cent) agreed that district nurses would in future combine their work in patients' homes with work in general practitioners' surgeries and health centres. The attached nurses in particular saw this as a worthwhile development and not a waste of their training. Whilst only a minority agreed with the statement that district nurses are busy enough as it is without spending time in general practitioners' premises, the

employed nurses formed a significantly larger part of that minority. Conversely, the proposition that practice nurses could do more nursing in patients' homes was favoured by only 28 per cent of all the nurses and 46 per cent positively disagreed with this suggestion.

We explored the nurses' views of their relationships with each other and with the general practitioners by means of the statements shown in Table 8. Whilst the majority (68 per cent) agreed that district and practice nurses can work well as a team, a significantly larger proportion (34 per cent) of the attached nurses gave a neutral response. The attached nurses were also more likely to disagree that general practitioners always treat nurses as colleagues. Whereas only 26 per cent of the employed nurses disagreed or were neutral about this, 48 per cent of the attached nurses were neutral or positively disagreed with the statement. This opinion was particularly prevalent amongst the attached nurses aged under 40, amongst whom 52 per cent positively disagreed that nurses were treated as colleagues. In contrast, Table 8 shows that there was strong disagreement, particularly marked amongst the attached

nurses, with the statement that attachment schemes do not help to improve their relationships with doctors.

At a different stage of the interview, the attached nurses were asked if they felt that attachment was working out in practice for themselves. A majority (73 per cent) said "Yes" and were emphatic when expanding this reply, whilst most of those who said "No" blamed various barriers to communicating with their general practitioners.

### Discussion

During their present employment, attached and employed nurses had carried out a wide range of procedures, all of which were current during the month before our survey. Their scores were similar for intermediate activities (most of which are part of the usual training of nurses) but were different for caring and technical procedures which tend to be peculiar to the home or treatment room, respectively. However, the technical activities also form one aspect of the so-called 'extending role' of the nurse. In the past, they have not been taught to nurses in training and those who undertake them ought to be trained until they feel and are judged to be competent (DHSS, 1977a). At present, general practitioners do not have the institutional resources to provide this training, although these are the activities which might give rise to difficulty in the case of negligence. The relatively small number of technical activities undertaken by attached nurses did not differ significantly between the nine area health authorities in our sample. Nevertheless, area health authorities differ in their attitudes to an extended role for their community nurses (Turner, 1977; *Nursing Times*, 1977) and are encouraged to formulate their own policies locally in this respect (DHSS, 1977a; Joint Board of Clinical Nursing Studies, 1978). Thus, in general, the commitment of attached nurses to technical activities may differ in some area health authorities.

In-service training increased the range of the employed nurses' activities in all respects but the availability of a treatment room was even more decisive in changing their work and had a similar effect on the attached nurses. The accompanying reduction in reception work by employed nurses could be seen as a gain in terms of their professionalization but it also removes them from the triage decisions at the reception desk. The attached nurses with a treatment room spent more time on practice premises and carried out more technical activities and it must be assumed that this increased their opportunities for collaborative work with other professionals. All the nurses recognized and appeared to welcome these trends although some employed nurses had their reservations.

It is arguable that the increase in treatment rooms since 1971 underlies some of the phenomena we have recorded. This increase also coincides with the growth of first treatments carried out by attached nurses on

practice premises and particularly in health centres. The DHSS (1977b) has consistently encouraged attached nurses to use these treatment rooms and Gilmore and colleagues (1974) have suggested that attached nurses prefer to combine surgery and home nursing, providing this does not affect their strategies for coping with their domestic commitments. So far it appears that the differences between attached and employed nurses are entirely circumstantial, but this may not be the whole explanation. We began our research with the hypothesis that the difference in the nurses' choice of employer suggested differing orientations towards doctors and this is particularly supported by the implications of the difference in the type of hospital in which they trained (Reedy *et al.*, 1980).

The consequences of this choice are revealed by Dodd's (1973) study of the careers of two cohorts of nurses in training. Those in the medical teaching hospital valued its prestige and tended to see nursing as an interim event in a socio-cultural nexus which emphasized marriage and motherhood rather than a career. They judged their status and progress by their access to increasingly senior grades of doctor rather than by nursing or patient-orientated criteria. This access was effected by assisting doctors in ritualized technical activities which the nurses came to see as an end in themselves.

The nurses in the non-teaching hospital were most concerned with gaining competence in generic nursing skills and saw a career in nursing as their main objective. They also had more nursing responsibility on the wards and relatively infrequent contact with doctors, whom they tended to see as being on an equal but neutral footing.

These observations allow us to extend the interpretation of our own data. The attached and employed nurses who trained at teaching hospitals each had the same 'technical' scores as the nurses from non-teaching hospitals. Thus we infer that these activities depend primarily on circumstances or opportunity rather than differences in training. However, we suspect that the employed nurses' choice of less orthodox forms of nursing employment, including their willingness to be employed by general practitioners, may for some have been influenced by their socialization with doctors in a teaching hospital. The employed nurses gave higher priority to their husbands' careers and did not seek promotion for themselves and it is probable that their higher marriage rate and occupational histories (Reedy *et al.*, 1980) also reflect values concerning marriage and career which differ from those of the attached nurses. The same sets of values may determine a preference for part-time or full-time work although the latter decision may also be affected by the resulting demands on a nurse's family and friends (Hockey, 1976).

Finally, the reasons given by the attached and employed nurses for their choice of employment, and the anecdotal material from our discussions with them, lead

us to suggest that their predominant ethic differs. Attached nurses often imply that they are independent caring agents and they use phrases such as "The patient needs (our) care", whereas employed nurses sometimes say that their job is "to help the doctor to help the patients" (Saltman, 1977). This phraseology implies different orientations towards doctors and although the latter appears to be more compatible with inter-professional teamwork, the former accords with the current aspirations towards clinical autonomy amongst nurses.

There is also a close analogy between the role and organizational position of the employed nurse in Britain and the physician's assistant in America and elsewhere (Reedy, 1978). British general practitioners, and the British Medical Association in particular, have always repudiated the 'feldsher' as an archetype of the physician's assistant (Grey-Turner, 1977) but it now seems as if this role is being occupied in Britain in the guise of the presumably more acceptable female nurse. An equally important trend is the movement of attached nurses into general practitioners' treatment rooms. It remains to be seen if their apparent acceptance of technical activities becomes associated with the dependence on doctors which characterizes the physician's assistant role, or if these nurses maintain a more independent type of colleague relationship which tends to preserve their professional autonomy.

## References

- Cartwright, A. & Scott, R. (1961). The work of a nurse employed in a general practice. *British Medical Journal*, 1, 807-813.
- Cartwright, A. & Anderson, R. (1979). General practice revisited—a second study of patients and their doctors. London: Institute for Social Studies in Medical Care. Unpublished.
- Department of Health and Social Security (1973). *Annual Report 1972 Cmnd 5352*. London: HMSO.
- Department of Health and Social Security (1976). *Health and Personal Social Services Statistics for England 1975*. London: HMSO.
- Department of Health and Social Security (1977a). Health circular HC(77)22.
- Department of Health and Social Security (1977b). *Nursing 1974-76*. Report of the Chief Nursing Officer, DHSS. London: DHSS.
- Dodd, A. P. (1973). Towards an understanding of nursing. Ph.D thesis. University of London.
- General Medical Council (1977). *Annual Report 1976*. pp 3-4. London: GMC.
- Gilmore, M., Bruce, N. & Hunt, M. (1974). *The Work of the Nursing Team in General Practice*. London: Council for the Education and Training of Health Visitors.
- Grey-Turner, E. (1977). Doctor manpower. Letter to *The Times*, 23 March.
- Hockey, L. & Buttimore, A. (1970). *Co-operation in Patient Care*. London: Queen's Institute of District Nursing.
- Hockey, L. (1972). *Use or Abuse? A Study of the State Enrolled Nurse in the Local Authority Nursing Services*. London: Queen's Institute of District Nursing.
- Hockey, L. (1976). *Women in Nursing*. London: Hodder and Stoughton.
- Irvine, D. H. & Jefferys, M. (1971). BMA planning unit survey of general practice. 1969. *British Medical Journal*, 4, 535-543.
- Joint Board of Clinical Nursing Studies (1978). The extending role of the clinical nurse. *Bulletin No. 18*, Summer, 1978. *Nursing Times* (1977). In practice. 74(37), 1424-1425.
- Reedy, B. L. E. C. (1978). *The New Health Practitioners in America—a Comparative Study*. London: King Edward's

Hospital Fund for London.

- Reedy, B. L. E. C., Metcalfe, A. V., de Roumanie, M. & Newell, D. J. (1980). The social and occupational characteristics of attached and employed nurses in general practice. *Journal of the Royal College of General Practitioners*, 30, 477-482.
- Saltman, B. M. (1977). Group practice nurse. *Nursing Times*, 73(12), Suppl. 16-20.
- Smith, J. W. & O'Donovan, J. B. (1970). The practice nurse—a new look. *British Medical Journal*, 4, 673-677.
- Taylor, S. (1954). *Good General Practice*. London: Oxford University Press for Nuffield Provincial Hospitals Trust.
- Turner, M. (1977). Point for doctors. *Nursing Times*, 73(30), 1144-1145.

## Acknowledgements

We are most grateful to the Nuffield Provincial Hospitals Trust for supporting the research and to the Department of Health and Social Security for their support for the Medical Care Research Unit. We are also grateful to the nurses, general practitioners, and administrators in the nine area health authorities and to Senga Bond and others who advised us about nursing aspects of the study. Finally, we thank our own staff, and in particular Ms Freda Bolam and Ms Jessie Rogers to whom we owe a great deal.

## Antiemetics in patients receiving chemotherapy for cancer

Delta-9-tetrahydrocannabinol (THC) is an effective antiemetic as compared with placebos in patients receiving chemotherapy for cancer. In this study we compared THC with prochlorperazine (Compazine) in a randomized, double-blind, crossover trial with patients who had failed to benefit from standard antiemetic therapy. Regardless of the emetic activity of the chemotherapeutic agents, there were more complete responses to THC courses (in 36 of 79 courses) than to prochlorperazine (in 16 of 78 courses). Of 25 patients who were treated with both drugs and who expressed a preference, 20 preferred THC ( $p=0.005$ ). Among patients under 20 years of age there was a higher proportion of complete responses to THC courses (15 of 20) than among older patients (21 of 59 courses;  $p=0.004$ ).

Increased food intake occurred more frequently with THC ( $p=0.008$ ) and was associated with the presence of a 'high'. Of 36 THC courses resulting in complete antiemetic responses, 32 were associated with a 'high'.

We conclude that THC is an effective antiemetic in many patients who receive chemotherapy for cancer and for whom other antiemetics are ineffective.

## Reference

- Sallan, S. E., Cronin, C. *et al.* (1980). Antiemetics in patients receiving chemotherapy for cancer. *New England Journal of Medicine*, 302, 135-138.