Factors Affecting Work Load in General Practice—II

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Summary

The second part of a survey studying factors that affect a general practitioner's work load considers the effects of age, sex, social class and time on list. Women, the old, and the young created the most work for the doctor and his paramedical team. Patients in the lower social classes also generated more work, even though a larger proportion of the higher social classes used the resources of the general practice—and more fully. Newly-registered patients generated slightly more work than the more permanent residents. Not only the size of a doctor's list, therefore, but also the demographic features of the community should be taken into account in determining the size and structure of the general-practice team needed for an area.

Introduction

In continuation of a survey of 3,137 patients carried out in Teesside in 1972 (see part I in this issue), we examined the effects a patient's age, sex, social class, and length of time on the list had on the work load of the general practitioner and his paramedical team. We also studied the effect these factors had on the rate of referral to hospital.

Other studies¹⁻³ have shown that women, the old, and the young cause the most work, though they have disagreed whether the higher social classes use the National Health Service more than the lower ones.⁵⁻¹⁰ There is an impression that mobile, or rootless, patients are more likely to use the services of a general practitioner than those in more stable communities.¹¹

In view of the different amounts of work caused by different sections of the population, the demographic structure of a community should be studied when the general-practitioner manpower needs of an area are being decided.

Methods

The methods we used were described in the first part of the study. In addition we divided all patients over 11 years of age

into three groups, according to their length of time on the doctor's list: those joining in 1960-4, in 1965-9, and in 1970-1. We also calculated that in terms of time one home visit by a member of the team was worth three attendances at surgery. For ease of comparison these "notional" work loads for the different age, sex, and social groups were calculated for 100 patients in each group. We looked not only at the proportion of patients who consulted from each group, but also at the average number of consultations per patient, and built up a picture of the demands made on the practice by different sections of the community. The rate of hospital referrals was also studied in each group.

Results

Female patients accounted for a significant higher proportion of the doctor's work load; of the 63% of female patients who attended each came more often than the 53% of male patients, and this was not merely confined to women of child-bearing age. The age group with the highest percentage of attendances was pre-school children, and that with the lowest was the 65 and over group. A significantly smaller proportion of patients in social classes IV and V attended the doctor, but they tended to have more consultations per patient than those in classes I and II, though this latter tendency was significant only in male patients.

Female patients also received a significantly higher proportion of the doctor's visits—17% of them were visited compared with only 11% of male patients—and again they tended to receive more visits. A significantly greater proportion of pre-school children and of the over-65s were visited, though patients in the older group received more visits per patient than those in the younger group. Apart from the men over 65, who received a greater proportion of visits in all classes, there was a general tendency to higher visiting of the lower social classes. For women in the lower social classes higher visiting was established at 15 years of age and continued for the rest of their lives. Nevertheless, there was no significant difference in the number of visits received per patient in any social class (tables I and II).

After giving these consultations their appropriate weightings—one visit corresponding to three attendances—we found that the heaviest part of the doctor's work load was caused by elderly patients of both sexes. Pre-school children also generated a heavy work load as did women over 15 years. Adolescents and social class I and II men aged 15-44 caused the least work. Social class did not have much effect on the total work load, though the higher social classes gen-

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TABLE 1—Percentage of Patients receiving Items of Service according to Sex and Age (Figures in Parentheses Indicate Average Numbers of Items Given).

Age	No. of Patients		Doctor				Nurse				Health Visitor				Referred to Outpatient Dept.		Referred to Inpatient Dept.		Attended Casualty Dept.	
			Attendances		Visits		Attendances		Visits		Attendances		Visits		M.	F.	M.	F.	M.	F.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0-4	111	129	75	81	19	26	20	7	9	6	44	40	13	16	3	5	3	5	3	3
5-9	151	157	62	57	15	8	11	10	10	4	7	4	—	1	7	3	5	2	4	2
10-14	144	125	51	58	5	5	6	7	1	5	1	3	—	—	4	5	1	1	4	6
15-44	631	659	49	67	5	15	5	14	3	6	2	2	1	4	5	10	4	8	5	1
45-64	332	292	53	58	10	15	9	16	5	8	6	1	—	—	5	4	5	4	2	2
≥65	159	247	48	55	31	34	13	16	16	25	1	2	—	—	10	9	12	9	1	1
Total	1528	1609	53 (3.0)	63 (3.6)	11 (2.4)	17 (2.9)	9 (2.0)	13 (2.2)	6 (3.7)	9 (6.0)	5 (3.4)	5 (2.8)	1 (1.1)	3 (1.1)	6	7	5	6	4	2

TABLE II—Percentage of Patients receiving Items of Service according to Sex and Social Class (Figures in Parentheses Indicate Average Numbers of Items Given)

Social Class	No. of Patients		Doctor				Nurse				Health Visitor				Referred to Outpatient Dept.		Referred to Inpatient Dept.		Attended Casualty Dept.	
			Attendances		Visits		Attendances		Visits		Attendances		Visits							
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
I and II III IV and V	383	429	55	64	9	16	13	16	5	6	6	6	1	4	6	7	8	6	4	2
	866	874	54	65	11	17	8	12	6	9	5	5	1	1	5	7	4	6	4	2
	279	306	47	57	13	21	6	12	7	12	4	4	4	2	6	7	4	7	3	2
Total	1528	1609	53 (3.0)	63 (3.6)	11 (2.4)	17 (2.9)	9 (2.0)	13 (2.2)	6 (3.7)	9 (6.0)	5 (5.4)	5 (2.8)	1 (1.1)	3 (1.1)	6	7	5	6	4	2

erated slightly more work in the younger age group in girls, and in both the younger and oldest age groups in male patients (table III).

TABLE III—Notional Doctor Work Load Indices per 100 Patients according to Age, Sex, and Social Class

Age	Social Class					
	I and II		III		IV and V	
	M.	F.	M.	F.	M.	F.
0-4	395	403	312	387	334	388
5-9	266	171	261	155	83	130
10-14	191	156	107	124	120	112
15-44	123	373	176	421	185	441
45-64	198	268	245	374	318	355
≥ 65	645	554	496	554	404	586

The pattern for women was much the same in the nurse's consultation figures: more female patients attended a nurse and more were visited by her. In both sexes, however, there was a significant increase in nurse attendances and visits in the over-65 age group. A slightly higher proportion of patients from classes I and II attended the nurse, but only the figures for male patients were significant. On the other hand, patients from social classes IV and V were visited more by the nurse (tables I and II).

The health visitor was concerned almost exclusively with paediatric care, and pre-school children of all sexes were the highest-attending and most-visited group, though significantly more of these were from social classes I and II. Female patients tended to receive more visits from the health visitor with rise in social class, though the reverse occurred in male patients (tables I and II). The paramedical team as a whole came into contact with a higher proportion of households in social classes I and II than in any other social class (table IV).

TABLE IV—Household Contact according to Social Class. Results expressed as Percentages

Social Class	No. of Households	Doctor Contact (%)	Nurse Contact (%)	Health Visitor Contact (%)	Contact with Team (%)
I and II	333	73.3	31.2	11.7	73.6
III	840	67.5	23.9	8.8	68.6
IV and V	309	63.8	24.9	6.8	64.4
Total		68.0	25.8	9.0	68.6

The greatest proportion of referrals to hospital inpatient departments came from the over-65; and there were significantly more inpatient referrals among male patients from social classes I and II. Inpatient referrals in children were well below the national average. The over-65 age group also accounted for the highest proportion of outpatient referrals in men, though the highest outpatient referral rate in women

was in the 15-44 age group. This reflected the obstetric, gynaecological, and contraceptive procedures needed by women of childbearing age (tables I and II).

The length of time that a patient had been on the doctor's list had no significant effect on the team's work load in the case of male patients, and, even though a slightly higher proportion of recently joined patients of both sexes were visited, the figures did not reach statistical significance. On the other hand, women who had only recently joined did attend more often than those who had been on the list for some time (table V).

TABLE V—Effect on Doctor's Work Load of Patient's Length of Time on List

Date of Joining List	Patients in Group		Percentage Attending		Percentage Visited	
	M.	F.	M.	F.	M.	F.
1960-64	227	190	53	61	8	15
1965-69	168	174	55	56	10	17
1970-71	204	254	56	67	11	21

Of the 10 conditions that generated the most consultations, six were common to each sex, and nine out of the top 10 diagnoses (see table VI) had more consultations from women than from men. The much higher proportion of female consultations for the two commonest psychiatric conditions—anxiety state and depression—was especially noticeable.

TABLE VI—Number of Consultations according to Sex and Diagnosis

Diagnosis	No. of Consultations		Male:Female Ratio
	Male	Female	
Antenatal care	—	413	
Depression	97	401	1:4.1
Upper respiratory tract infection ..	314	378	1:1.2
Anxiety state	77	209	1:2.7
Congestive heart failure	85	146	1:1.7
Acute bronchitis	185	124	1:0.7
All contraceptive advice	9	119	1:13.2
Acute pharyngitis and tonsillitis ..	75	115	1:1.5
Osteoarthritis	72	103	1:1.5
Iron deficiency anaemia	15	85	1:5.4
Superficial injuries, lacerations, contusions, abrasions, etc. ..	79	77	1:1.0
Epidemic influenza	89	74	1:0.8
Non-specific eczema	80	61	1:0.8
Acute myocardial infarction	80	18	1:0.2

Discussion

As we expected, women, the old, and the young caused the most work. Most workers agree that women cause more work than men,¹⁻³ and only in mining practices do men cause as much work.¹² The notional work load table showed that women in the 15-44 age group created the most work among women, and of course this was mainly due to pregnancy. Nevertheless, the trend towards more attendances and visits was present in all age groups except children, where presumably sexual differences have not been fully established.

Many reasons might account for this preponderance of female consultations. Women are encouraged to have a cervical smear test as part of a cancer-screening programme and they become used to surgery attendance during pregnancy and when they bring their children for vaccinations and illnesses. This familiarity with the doctor and his team may encourage them to come more readily with other problems. As women consult the doctor about contraception more than men, this also brings them to the surgery more often.

Though men are far more likely to suffer acute bronchitis and acute myocardial infarctions, some common respiratory infections are more usual in women. Congestive heart failure is also diagnosed more often for women, but this is probably due to their greater longevity. Certainly the need for certification—a predominantly male need—does not make the doctor's work load equal. One of our most striking results was the predominance of psychiatric illness in women: depression caused four times as many, and anxiety states three times as many consultations in women as they did in men. Possibly the social position in which they find themselves causes this disproportionate amount of psychiatric illness in women. In the industrial North East of England, male-oriented pubs and working men's clubs may offer group therapy to men which is neither available nor acceptable to women. Women often prefer to consult doctors of their own sex, and this may cause disproportionately heavy work loads for women doctors, especially if they look after their patients during pregnancy.

Though both extremes of age caused heavy work loads, the notional work load table (table III) showed that patients over 65 caused the greatest work loads because, though they attended comparatively rarely, they received the greatest number of visits both from the doctor and from the nurse. In towns where the over-65 age group makes up about 30% of the population—such as Eastbourne—the size of the general practitioner's list must be smaller than normal and the number of nurses higher to cope with the increased visiting. Alternatively, some means of transporting geriatric patients to the surgery could be developed in these areas.

SOCIAL CLASS DIFFERENCES

Though a higher proportion of patients from social classes I and II attended, those from classes IV and V created a heavier work load, both because each patient attended more often, and because they received more visits. In the development of team care there has always been some anxiety that the paramedical workers would be used more by patients from classes IV and V while those from higher social classes would insist on seeing the doctor, and that the doctor would in fact find it easier to delegate his lower class patients to his team. The figures are reassuring, however, in showing that this did not occur, though the overall impression was that the higher classes used the resources of the whole team more than classes IV and V. It is hard to believe that patients in classes I and II are more ill, and the difference probably reflects their higher expectations of health, and their greater response to health education. Patients in the lower classes, who do not own cars, may not find it as easy to reach the surgery hence the higher visiting work load. In addition they may not be able to express their problems as cogently as those in classes I and II, and this would account for their taking up more consultations when they do see their doctor. The considerably smaller work load caused by men of working age in classes I and II probably also reflected greater job satisfaction, greater incentives to work, less physically arduous employment, and less need for certification. The higher

expectations for the health of their children is reflected in the falling work load in both sexes from social classes I and II to IV and V (table III).

More patients from classes I and II attended the health visitor and they attended more often than those from IV and V, but it is the children in the lower social classes, where infant morbidity and mortality rates are higher, who need her services more. This problem has been inherited from the local authority child welfare clinics, and the health visitor might in future have to exercise some discrimination in the patients she sees in order to see those at greater risk.

Like Whitfield we found that female patients who had recently joined the list did cause more work, though some have disagreed;¹³ the same, but slightly less significant, trend was observed in male patients. Usually the mother registers the family with a general practitioner and she may consult the doctor for herself or for one of her children more to meet and assess him than for purely clinical reasons. The doctor too is more willing to initiate return consultations in order to get to know the family better. Visiting usually implies more serious illness, but unfamiliarity with surgery routine, and the fact that for new families in strange surroundings minor illnesses can assume graver proportions, may have accounted for the higher proportion of visits paid to new patients. Because new patients cause more work for the doctor and his team, more medical staff may be needed in areas of shifting population where patients are constantly joining and leaving the general practitioner's list.

In part I of our study we showed how a general practitioner can reduce his work load considerably by working closely with a well-equipped primary medical care team. Here we have shown how various demographic features of a community can affect his work load. In the past list size has been taken as the main yardstick for determining the medical manpower needed in an area, but this paper illustrates that this is only one factor. With a stable community of a favourable demographic pattern, and a good team, one doctor could look after a very large list, whereas if the demographic pattern was unfavourable and the team ill-developed, the doctor could only cope with a small list.

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