The relationship between year of registration and morbidity in general practice

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IT is generally accepted that patients over the age of 65 cause the general practitioner more work than do other groups of patients on his list. The morbidity study in general practice showed that elderly patients (over 65) had about twice as many consultations as children and young adults. (Logan and Cushion, 1958.)

This workload in the elderly has been recognised by the Department of Health and Social Security in the payment of an increased capitation fee for such patients. No other group of patients attract an increased capitation fee. An opportunity arose in our practice to study the work caused by recently registered patients and to see whether this differed in any way from patients who had been registered with the practice for some time.

Method

The date of admission of all patients to the practice was obtained from the front of the record envelopes, EC6 or EC7; or failing this, from the executive council files. This information was transferred to a punched card together with identification data for each patient including surname, forename and date of birth. A list of patients registering during the years 1955–59 and during 1970 was obtained from these cards and classified by sex. Random numbers were used to identify 50 males and 50 females who registered during 1955–59. From the list of patients who registered during 1970, 50 males and 50 females were identified to match as closely as possible by date of birth with those identified by random numbers from the 1955–59 registrations.

All consultations by the selected patients during the year 1 September 1970 to 31 August 1971 were recorded.

TABLE I

AGE DISTRIBUTION OF PATIENTS

Year of registration	*Year of birth*							
	1880–89	*1890–99*	*1900–09*	*1910–19*	*1920–29*	*1930–39*	*1940–49*	*1950–59*
Males 1970	–	2	7	11	9	3	7	11
Males 1955–59	2	2	7	8	10	4	6	11
Females 1970	3	5	5	12	6	8	3	9
Females 1955–59	4	4	5	9	10	7	2	9

The age distribution in the two groups of registrations were approximately equal (Table I). The number of consultations by both males and females were greater in those registering in 1970—the number of female consultations being nearly double. There was little difference in other factors measured except that slightly more visits were made to patients who registered during 1955–59 (Table II).

There is little difference in the male samples between those who consult during the year and those who do not, but there is a marked difference between the female samples ($x^2=9{\cdot}0$ D of $F=1$ $P>0{\cdot}01$) (Table III).

TABLE II
NUMBER OF DOCTOR CONTACTS DURING THE STUDY YEAR

	Males		*Females*	
	1955–59	*1970*	*1955–59*	*1970*
Consultations	101	125	132	225
Repeat prescriptions issued	3	4	14	7
Visits	6	2	15	10
Consultations with nurse	—	2	3	4
Number of patients in each group ..	50	50	50	50

TABLE III
NUMBER OF PATIENTS WITH NO CONSULTATIONS DURING THE YEAR

	Number with no consultations during year	*Patients consulting during year*	*Total*
Females 1955–59	22	28	50
Females 1970	10	40	50
Males 1955–59	17	33	50
Males 1970	16	34	50

Twelve of the female patients who registered in 1970 consulted during the first week of registration; only two of the males who registered in 1970 consulted in the first week. This indicates the tendency of patients to register only when they are ill.

The diagnostic classification of the reasons for consultation shows that the only marked difference in the males between the two groups is in respiratory disease. The female differences are marked in the psychiatric and genito-urinary disease groups (Table IV).

TABLE IV
NUMBER OF CONSULTATIONS BY DIAGNOSTIC CATEGORY DURING THE STUDY YEAR

	Males		*Females*	
	1955–59	*1970*	*1955–59*	*1970*
Infective and parasitic disease ..	—	—	—	7
Allergic/metabolic disease	3	1	8	—
Mental disorder	23	29	33	100
Nervous system and sense organs ..	14	21	7	15
Circulatory system	10	1	13	4
Respiratory system	16	29	21	21
Digestive system	3	12	7	5
Genito-urinary system	5	1	6	24
Pregnancy and complications ..	—	—	6	3
Skin and cellular tissue	17	14	12	15
Bones and organs of movement ..	21	11	26	23
Ill defined conditions	—	—	—	5
Accidents	1	7	9	4
Prophylactic	—	3	4	14

The turnover of patients in different parts of the country and in different parts of individual areas varies considerably for many reasons. As has been shown the recent registrations cause considerably more work than do those who have been registered for longer periods.

Practices selected at random in Bristol in different areas of the city showed the

following changes during the year ended June 1971 (Table V). In Bristol the percentage of the total list who register during the year varies from 11 to 21. This is clearly related to special areas of the city: practices with patients in 'flat and bedsitter' land have a greater turnover than those elsewhere.

TABLE V

NUMBERS OF PATIENTS JOINING AND LEAVING SELECTED PRACTICES IN BRISTOL, JUNE 1971

Area of Bristol	*Approximate list size, June 1971*	*Additions*	*Percentage additions to total list size*	*Deductions*	*Percentage deductions to total list size*
Bristol East ..	5000	650	*13·0*	459	*9·2*
Bristol Central ..	7200	916	*12·7*	1048	*14·5*
Bedminster ..	8700	938	*10·8*	609	*7·0*
Knowle	9200	769	*12·0*	769	*12·0*
Clifton and Redland	9700	2075	*21·4*	1529	*15·8*
Bishopston ..	4200	427	*10·7*	407	*9·7*
Westbury-on-Trym	4600	782	*17·0*	426	*9·3*

Discussion

There are many factors which influence the work load of a general practitioner. These include his attitude to his work and the amount of time he is prepared to take over individual problems. However, certain factors are not related to attitudes. The age of patients influences work load considerably and patients older than 65 years have twice as many consultations as others. Female patients over the age of 15 consult nearly twice as often as men up to the age of 45. (Logan and Cushion, 1958.)

The consultation rates per patient also vary considerably from region to region throughout England, varying from 4·4 consultations per year in the South-western region to 2·9 in the Eastern region. The number of patients registered with an individual doctor is also a factor, the greater the number of patients registered, the lower the consultation rate (Wright, 1966). The older and more experienced the doctor the lower the consultation rate he has. (Royal College of General Practitioners, 1970.)

This study indicates that patients who have recently registered with a doctor cause him more work than do patients who have been registered for over ten years. There are several possible reasons. The most important is that patients tend to register when they are ill. This is partly supported in this study. Another factor some doctors would claim is that over the years they manage to 'train' their patients to be more self-sufficient in their medical care. This is a questionable concept.

An examination of the rate at which patients register with individual practices has shown that in one city there is a considerable variation in numbers registering with different practices in a year.

It seems that some practices, because of their situation, have an increased work load. It would seem logical that a weighted capitation fee be introduced for patients during the first year of registration to compensate those doctors who have a high rate of turnover for the added work involved. This is not a difficult calculation to make. It would seem desirable that a larger survey be organised to verify these conclusions.

Summary

The number of patients who register with general practitioners each year as a proportion of the total list varies considerably. It is shown that the work caused by patients,

particularly females, during the first year of registration is considerably greater than when they have been registered in the same practice for over ten years.

The suggestion is made that an increased capitation fee be paid for all patients during the first year of registration to compensate doctors who practise in areas of high patient mobility.

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FAMILY HEALTH CENTRES IN THE UNITED STATES

Regulations were approved on 31 March 1972 for project grants to be awarded through the Family Health Center Program to improve delivery and health care services to areas where they are needed.

'Family Health Center projects will provide ambulatory services to enrolled populations of between 5,000 and 20,000 people living in areas where health services are scarce. Services provided by the project will be financed on a pre-paid capitation basis to enable them to co-ordinate with the health maintenance organisation concept—one of the principal elements of the H.E.W.'s national health strategy.

'The Family Health Center Program will also build upon the experiences of other federally-supported services delivery programs. The projects will serve as a community focus for co-ordination with other health services' delivery projects and represent an important feature of the four principles of the H.E.W. health strategy. This calls for assuring equal access, balancing the supply and demand of health resources, organising for efficiency, and building on existing strength.'

Medical Care Review (1972). **29**, 391–392. (*See Primary care in big cities*).

MEASURING THE QUALITY OF THE HEALTH SERVICE

It was sometimes suggested that the quality of the service precluded quantitative measurement and it was interesting to learn that this comment was not restricted to medicine. Professional offices in other disciplines have made similar statements where in practice it was perfectly possible. Warren (1966) has shown that even the quality of the Health Service can be measured. This does not mean that efficient management of the organisation depends upon control of the clinical management of the individual patient. Although many standards of performance were introduced, none of them implied clinical direction of the service and all the professional field workers continued to enjoy complete autonomy in the clinical care of individual patients.

Similarly, in the reorganised National Health Service the work of the community physician is entirely different from the activities of the medical superintendent as Elliot (1971) makes clear.

Warner, J. S. (1972). *Community Medicine,* **128**, 331.