Papers and Originals

Working-time in General Practice. How General Practitioners Use Their Time

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AND

THE MERSEYSIDE AND NORTH WALES FACULTY OF THE COLLEGE OF GENERAL PRACTITIONERS

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Better understanding of the work of general practice is needed because family doctors are not only acutely concerned about their purpose and how best to achieve it, they are also prisoners of their personal experience with difficulties in appreciating how this compares with that of their peers. The public also, as consumers, expect more from general practice as standards of living rise. For these reasons the Medical Care Research Unit in Manchester is conducting a series of studies in general practice, and its facilities were therefore made available to the College of General Practitioners, on request, to analyse data collected by the College. In this paper we present material which family doctors themselves so willingly recorded about a few aspects of their work ; the study concentrates on the numbers of patients seen in a week by the general practitioner and the way he apportions his time. The results have considerable interest, since the last large-scale investigation in this country, published in 1951, was in fact conducted in 1938–9 by Bradford Hill. Now that the National Health Service has been in existence for 18 years it is not too early to take a fresh look.

Method

The College of General Practitioners led the way in following up the Gillie Committee recommendations that studies on the organization and content of general practice were needed urgently. A study was made during one week in August 1964 to find the average time for a consultation. When reported on (College of General Practitioners, 1965) critics considered August a month when work was light. Because our analysis had shown that more information was needed, it was decided to repeat the survey during one week in February 1965, when the winter load is demonstrable and heavy ; also additional information could be obtained.

The Merseyside and North Wales Faculty of the College was invited and volunteered to carry out the February study ; this region includes a wide range of practices, from the crowded city of Liverpool to the sparse mountainsides of Caernarvonshire. Of the 309 members and associates 134 returned the fully completed sheets ; their readiness to participate was much appreciated. Each doctor was asked to fill in for each day of a specified week a form (see Appendix) which itemized the times of starting and finishing consulting sessions in the " surgery " and the numbers of patients seen each session ; the times of starting and finishing rounds of home visits and the numbers of patients visited ; the times of starting and completing sessions at hospital, industrial or other clinic, or medical board. For this second study additional information was obtained on times of starting and ending work on practice administration.

For the analysis two code sheets, each of 80 columns, were prepared for each participant to facilitate detailed analysis ; and extra details, such as postgraduate qualifications, were obtained from the *Medical Directory*.

We have not used practitioners' N.H.S. list size as a factor ; list size is not necessarily related to the amount of work done, nor does it give the composition of practice population in groups requiring different amounts of care. Nor can one determine accurately how much the 75% of doctors working together see each other's patients.

February Study : Respondents

The 134 doctors who responded were compared with those who did not ; the respondents included relatively more who had graduated since 1950 but less of those graduating between 1940 and 1949 ; older doctors were appropriately represented (Table I). More respondents had a diploma, commonly the D.Obst.R.C.O.G. ; fewer had licentiate qualifications only.

TABLE I.—*Respondents and Non-respondents (February 1965)*

	Respondents (134)	Non-respondents (175)
By Year of Graduation		
1930	9%	12%
1930–9	17%	18%
1940–9	29%	36%
1950–	41%	32%
?	4%	2%
By Qualification		
M.D., etc.	9%	6%
Diploma (e.g., D.Obst.R.C.O.G.)	22%	1%
M.B. only	53%	73%
Licentiate only	12%	19%
?	4%	1%
By Size of Community in which Practice is Located		
500,000+ (conurbation)	35%	36%
50,000–500,000 (large town)	34%	23%
5,000–50,000 (small town)	12%	22%
5,000 (rural)	15%	7%
?	4%	12%
By County in which Practice is Located		
Lancashire	58%	59%
Cheshire	21%	22%
North Wales	14%	14%
Isle of Man	2%	5%
Other	1%	
Not given	4%	

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Doctors practising in large towns and rural areas were over-represented, those in small towns were underrepresented; by county, both groups were equally distributed (see Fig. 1).

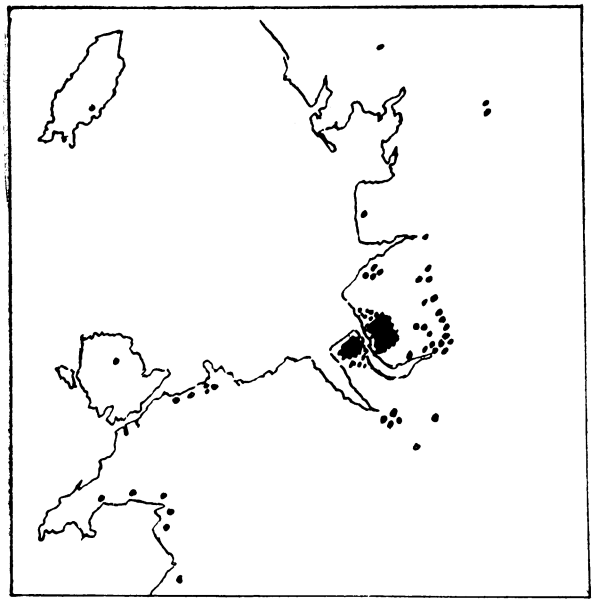

FIG. 1.—*Distribution of* 134 *respondents, February* 1965.

When the distribution by year of graduation of the respondent was compared with the national distribution by age (Ministry of Health, 1965) (doctors graduated since 1950 were presumed to correspond to doctors aged less than 40 and doctors graduated between 1940 and 1949 to those aged 40–50, etc.) we noted that the respondents included a greater percentage of young doctors than is found nationally and a smaller percentage of older doctors (Table II).

TABLE II.—*Age Range of the Doctors and Comparison with National Range* (1 *Week, February* 1965)

	Age					
	<40	40–49	50–59	60+	?	All
No. of doctors ..	55	39	23	12	5	134
%	41	29·1	17·2	9	3·7	100%
England and Wales %*	31·3	30·7	22·1	15·9	—	100%

* *Annual Report of the Ministry of Health for 1964.* G.P. principals.

The respondents were cross-tabulated by year of graduation and by size of the community they served; it was found that doctors of all ages were appropriately represented in each of the areas. Thus each variable may be considered independently without risk that the effect may have been caused by interference from the other variable.

February Study: Results

The February study gives some clear indications of the way the practitioners worked, most doctors holding an average of 10 consulting sessions in the week; the range was 4 to 13 sessions: 87% of them began between 08.30 and 09.30 hours, mostly around 09.00; 10% usually started after 09.30. In the seven days they worked an average of 43¾ hours, excluding time on call (on average, 210 patients consulted at the "surgery" in just under 19 hours; home-visiting 68 patients took 17½ hours), and they worked at hospital clinics or boards for three hours and spent nearly four and a half hours on administration (Tables III and IV). These averages cloak wide variation in times spent and numbers of patients seen. The distribution is given in Table V. Modal time spent in the week was between 35 and 40 hours, with many working between 40 and 45 hours and between 45 and 50 hours. More than half the doctors in the sample spent more time on this work than the current length of the national work week. Doctors working 50 hours or more form an interesting group, with proportionately more older doctors and those practising in small towns, and less in partnerships of three or more.

TABLE III.—*Time Spent "Face to Face" with Patients* (1 *Week, February* 1965)

	5½-day Week*		7-day Week
	Time	%	
In consulting-room	18 hr. 45 min.	44·7	18 hr. 51 min.
On home visits	16 „ 20 „	38·9	17 „ 35 „
Hospital, similar work	2 „ 45 „	6·7	2 „ 59 „
Administration	4 „ 7 „	9·7	4 „ 24 „
	41 „ 57 „	100%	43 „ 49 „

* From 08.00 Monday to lunchtime Saturday.

TABLE IV.—*Patients Seen and Visits Made in 5½-day and 7-day Weeks* (1 *Week, February* 1965)

Patients Seen	5½-day Week	7-day Week	Age Standardized (to National Age Distribution)
In consulting-room ..	209	210	203
On home visits	64	68	69
Totals ..	273	278	272

TABLE V.—*Doctors by Distribution of Time Spent and Patients Seen* (5½-*day Week*) (1 *Week, February* 1965)

Time Spent (hours)	?	<30	35	40	45	50	55	55+
Overall	8	7	18	34	26	25	12	4

Time Spent (hours)	?	<10	15	20	25	25+
Consulting-room ..	7	2	26	48	40	11
Home visits	10	18	35	42	21	8

No. of Patients Seen	?	<100	101–150	151–200	201–250	250+
Consulting-room ..	6	7	25	35	28	33

No. of Patients Seen	?	<40	41–80	81–120	121–160	161+
Home visits	7	19	82	22	3	1

Although the average number of patients seen in the consulting-room was 210, 26% of the doctors saw 151–200 patients each and 26% saw more than 250 patients each; one doctor saw 553 patients and two others each saw more than 400. Two-thirds of the doctors spent between 15 and 25 hours and about one-third more than 25 hours in the consulting-room; two-thirds saw between 40 and 80 patients in their homes and 60% spent between 10 and 20 hours on home visits. One-fifth of the doctors spent more than 20 hours home-visiting in the week; these included half of those with country practices and one-third of those qualifying before 1940.

The 5½-day Working Week.—All except a tiny percentage of the time spent and the patients seen were during a 5½-day week, starting at 08.00 hours on Monday and ending Saturday lunch-time. This 5½-day week covered 99.5% of patients seen in the consulting-room and of the time spent there, 94% of home visits, and 93% of the time spent on them. In all, 98% of the patients seen and 96% of the time spent on them were during the 5½-day week.

Week-end Duties.—Seventy-nine doctors did some work at the week-end, 39 were fully on call. The time spent on week-end work can be calculated in several ways: averaged for all 134 doctors, it was just under two hours each; averaged for the 79 who did some work, it was just over three hours each; the 39 who were fully on call spent an average of four and a half hours in face-to-face contact, almost wholly on home visits.

Night Calls.—This is defined here as one made after 7 p.m. and before the usual time of that doctor's start next morning (some start and finish earlier or later than their colleagues and an arbitrary time introduces possible error). One hundred and three doctors reported making one or more night calls ; the average time they took for such visits was a little under two hours. The overall average was one and a half hours per doctor. Night calls were made by doctors practising in large and small communities, but doctors in small towns were called out less often than colleagues elsewhere during the week studied ; when called out they spent less time per visit.

Rhythm of Consultation.—Monday morning, Monday evening, and Wednesday evening surgeries were the most busy ; next was Thursday evening. On Monday almost twice as many patients were seen as on any other day, because nearly all doctors held surgeries on Monday morning and evening, whereas only half of them did so on Wednesday evening and 40% on Thursday evening. The shortest average patient-consultation times were also on Monday morning and evening, followed by Wednesday and Friday evenings, then Thursday evening.

Urban-rural Variations.—When the doctor's week is measured by sizes of the community in which he practises, the larger the community the more patients he saw in the consulting-room and the greater proportion of time he spent there, also the fewer patients he saw and the less time spent on home visits. In the conurbation the doctor spent 40% of time travelling to and face-to-face with patients at home, the rural doctor 56% ; the city doctor saw 17% of his patients in their homes, the rural doctor 35%. As the size of the community in which the doctor practised grew larger relatively less time was spent face to face with patients. Doctors in the conurbation had the shortest consulting-time per patient seen in the consulting-room.

The Older Doctor.—The older the doctor the less time he spent in the consulting-room and the fewer patients he saw there—that is, there was a trend towards older doctors seeing proportionately more patients on home visits, and spending more time on them. There was no clear trend in the time the doctors of different age spent in hospital and other sessions, nor in the time spent on administration.

Discussion

This survey gives some clear indications of the number of patients seen and the time spent seeing them. But there are two important limitations: the participants were all volunteers, therefore these results may not be representative for all practitioners ; also the information was collected by the doctor while at work and has not been validated—that is, we took at face value the details recorded. Even when counting noses against the clock errors in arithmetic can arise. Yet the information can be assessed more objectively in relation to the way general practice is conducted, by comparing like with like, the August with the February study, and by comparing studies of general practice here and abroad.

Since 1948 internationally there have been four outstanding studies into general practice—outstanding for high-quality investigation of representative samples of general practitioners. Peterson *et al.* (1956) reported upon a detailed analytical study of 94 general practitioners in North Carolina, U.S.A., focusing on methods of practice of these doctors and the quality of care provided. The Canadian College of General Practitioners authorized similar field work by Clute (1963) with the help of two doctors ; this took six years and covered 88 practices in urban and rural areas. In Holland Querido (1963), with the help of a doctor experienced in general practice, conducted personal interviews of the circumstances and mode of practice of 270 general practitioners in Amsterdam ; the field work was carried out in 1951–2, but the report in English was not published until 1963. In 1955–6, for the Netherlands Medical Research Council, van der Wielen (1960) and four physicians with experience of general practice visited each of 268 general practitioners for two days, gathering information about the doctors and what they did.

From all these reports the same pattern appears—the occupational burden and perennial problem of the general practitioner: too many patients, plus lack of adequate organization, leading to insufficient time for listening to and examining patients ; with the result that diagnosis and treatment are not soundly based. Significantly, each of these four reports drew strong criticism from the ranks of general practitioners in the different countries. The College of General Practitioners (1965) Report drew the same fire. Such reactions occur when published results of studies appear to be in conflict with firmly held, deeply felt beliefs. Nevertheless, some hard facts are needed for effective planning in the future.

Some International Comparisons

Comparison of results obtained from the sample of 500 fully complete records in the August and February surveys with the four studies abroad shows that British doctors see more patients during a week (Table VI). Querido (1963) states that Amsterdam doctors having large practices spend on average three minutes with each patient, and van der Wielen (1960) estimated the average consulting-time per patient, whether in office or home, was between four and five minutes. The British doctor, with wide variation between two and ten minutes per consultation, averaged over six and half minutes per patient in August and five and a half minutes in February. Neither Peterson *et al.* (1956) nor Clute (1963) reported on times for a consultation, but both gave an average length for the North American doctor's week. Peterson *et al.* estimated this as 51.2 hours for a 5½-day week, and Clute gave 50.5 hours for Ontario doctors and 60.2 hours for Nova Scotian doctors. Times quoted include

TABLE VI.—*Some International Comparisons : Number of Patients Seen and Average Time Per Consultation*

	Peterson *et al.* 1953–4	Querido 1951–2	van der Wielen 1955–6	C.G.P.	
				August 1964	February 1965
No. of patients seen a week:					
Mean	165	—	185	201	272
Mode	150–199	—	—	—	200–250
Range	—	160–370	—	—	139–610
Average time spent:					
On consultation	—	3 min.*	4–5 min.	6–7 min.	5·5 min.
On home visits	—	—	4–5 min.†	17·6 min.	15·3 min.

* For the busiest G.P.s only.
† Actual time in the home seeing patient.

administration and hospital and other work, and so are broadly comparable with our studies, but they exclude consultations or visits outside office hours. North American doctors appear on average to spend more time face to face with patients.

The 5½-day Week and Monday Pressure

Almost the whole of the week's work was handled in five and a half days. This is an important change from the results reported by Bradford Hill (1951) in 1938–9. Saturday, with evening surgeries, was then the second busiest day for consultation and only slightly less busy than Monday. In 1965 the number of patients consulting on Monday was almost double that for the next busiest day and nearly four times that for Saturday. Such pressure on Monday cannot bring advantages to either patient or doctor ; further study is indicated.

Home Visits

Home visits still take up a surprising amount of the doctor's working-day. Our results show that between 40 and 60% of working-time is taken up with seeing only one-sixth to one-third of patients. Can the community afford the luxury of having the doctor acting merely as a chauffeur for so much of his time? Comparing home-visiting under different systems of medical care, it is significant that the British cling to their habit of home-visiting more than other countries do (Fig. 2).

The larger the community in which the doctor practises the more patients he sees in his consulting-room and the fewer

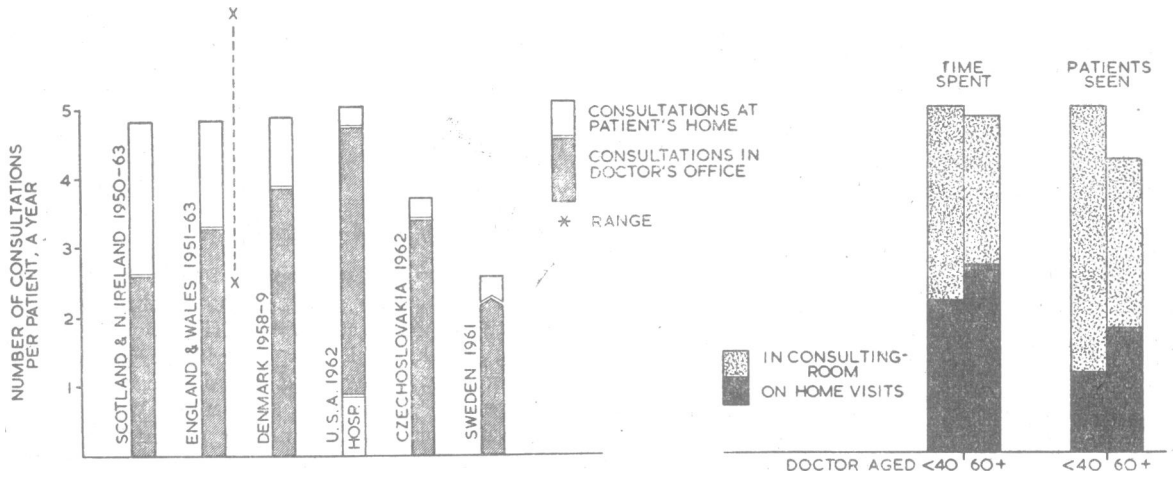

FIG. 2

FIG. 3

FIG. 2.—Home visiting by the doctor (Danish Medical Association, 1962; Logan and Eimerl, 1965). FIG. 3.—Time spent and patients seen in consulting-room compared with home visits.

at home. Also younger doctors, under 40, spend more time and see more patients in the consulting-room, devoting less time to home visits and seeing fewer patients there (Fig. 3). We consider this trend rational, needing wide encouragement, because it makes better use of scarce professional skills by increasing diagnostic capacity when working with all equipment at hand.

August and February Weeks Compared

Direct comparison between the August and February studies requires caution because different doctors practising in different areas took part in these two studies. It was possible, however, to age-standardize the overall results for a seven-day week for the February doctors and for a sample of 92 of the August

TABLE VII.—*Number of Patients Seen, Times Per Consultation (Age-standardized to National Distribution of General Practitioners) (1 Week, August 1964 and February 1965)*

	August 1964	February 1965	Increase
Average No. of patients seen:			
In consulting-room	152	203	34%
On home visits	59	69	17%
Average time spent:			
In consulting-room	16 hr. 53 min.	18 hr. 32 min.	9·5%
On home visits	17 „ 18 „	17 „ 34 „	1·5%
Average time per consultation:			
At surgery	6·7 min.	5·5 min.	−18%
On home visits	17·6 „	15·3 „	−13%

doctors (Table VII). One-third more patients were seen in the consulting-room in February, in only one-tenth more time; one-sixth more home visits were made with no appreciable increase in time spent. The work week face to face with patients was only some two hours longer in the winter sample period, although 29% more patients were seen.

Rigidity

That the pattern of practice should be so rigid is of great interest and significance. Individual practitioners spent much the same time whether seeing 20 patients or 40. Some spent on average two minutes per patient in the consulting-room in order to make all the consultations within the self-imposed time-table. Doctors might surely do better for themselves and for their patients if they had appointments arranged for a much longer part of the working-day.

This demonstrable rigidity in timing of hours of consultation has hardly changed in the past 50 years; though the five-day week is now established, working-hours per day are less and working-hours a week have been nearly halved. In other Western countries doctors have kept pace with the times, and commonly see patients by appointment, with emergencies fitted in, or handled by telephone; evening consulting sessions have largely disappeared. Individual practitioners need to reappraise how they spend their time.

General Practitioner as Manager

These studies suggest that general practitioners are working a long enough week. Few outside the profession realize the degree of pressure the work has; with no one to delegate to and no sharing of responsibility, the doctor has to make decisions every few minutes of the working-day; these decisions are often based on less than complete evidence, and thus are the hardest to make for correctness. Often the decision is to temporize, to wait and watch—which can be in effect a decision to do nothing. The practitioner will have seen many hundreds of patients before the next consultation with that particular patient, and often the link with the earlier consultation is only through fallible memory. No executive or manager in business has to make so many decisions—some of them of considerable and even potentially life-saving importance to the individual patient—on so little evidence in so short a time. Nor do doctors in other specialties. In these circumstances it may be suggested that the working-week is already too long.

Moreover, public pressure is developing for the family doctor to take on additional duties—for example, family planning, to use cytological screening tests, and to give periodic examinations in middle life. With no expectation that the number of practitioners will increase in the near future, there are two alternatives: either such work is done elsewhere, or the family doctor will reorganize by dropping some present work or delegating it.

Which of these alternatives can most easily, with least disturbance, be dropped ? About one-quarter of all practitioners have hospital sessions ; these might be dropped, but they are activities which tend to enrich general practice and aid in keeping it up to date. Home-visiting could be reduced ; wider use of appointments systems leads to appreciable reduction in home visits, because patients who know they have to wait prefer nowadays to do so at home rather than in crowded waiting-rooms. Also, as in other countries, consultation by telephone may become more acceptable ; this is a suitable method for minor conditions, and the doctor may spend time in training patients to look after minor ailments for themselves. Earlier studies by one of us (Eimerl, 1965) into the work of general practice confirm that much attention is for minor upper-respiratory-tract conditions in women and children, and suggest that certification for purposes of social security is not itself a large part of the demand, though attendance to obtain such certificates often triggers off additional requests for attention for much minor illness that is short-lasting and self-limiting. Logan and Cushion (1958) found that such illness amounts to 15% of all diagnoses ; all this could well be handled by someone other than the doctor without loss to the patient.

Which duties currently undertaken might be delegated to appropriate levels of skill ? There is a slowly—too slowly ?—increasing trend for the work of the nurse, the midwife, and the social worker to be integrated with that of the general practitioner. With such integration can come delegation of duties. The doctor would manage the team and retain responsibility for his patients but have time freed for accepting and coping with new challenges as they are presented.

Conclusion

This small simple study of some aspects of the general practitioner's work gained its first objectives: to ascertain the average time for a consultation, the length of the doctor's working-week (excluding time spent on call), and how he apportions this. The method was feasible for this limited purpose, and its possibilities have been partly explored, though it did not cover the content of the week's work. Though the results must be interpreted with caution, because the study is based on volunteers and covered only two separate weeks, the February study broadly confirms the August results. Comparison of them shows there is a surprising and unexpected and puzzling rigidity in the way doctors use their time. At this very simple level such rigidity is apparent by day of the week, hours of the day, and whether the doctor works in town or country. It would help to know more about this. A large proportion of the practitioners spent more time face to face with patients than the length of the national work-week, and though family doctors in Britain spend more time on home-visiting than do their colleagues in other Western developed countries, there are signs of change in the way younger men practise here ; but we wonder if this is fast enough for the challenge of our time.

Attempting interpretation of the complex of the practitioner's work is full of hazards and pitfalls, yet some clear indications do emerge. There are wide variations in the ranges of numbers of patients seen and time thus spent, which averaging may cloak ; there is no disguising the extensive responsibility carried, usually alone, by the very nature of the work as performed today. In modern medical care there is obvious need for the general practitioner to learn to use management skills in deploying the resources he should have: supportive staff adequate in quality and quantity to carry out the work, and suitable premises to allow this to be done effectively. There is now more general agreement to provide suitable premises but inadequate knowledge of what to put in them to meet the requirements of modernized general practice. To help provide such knowledge what now requires examination are other relevant aspects of the work—what tools for the job the general practitioner has. How does he see their value and use to him ? What does he do during the few minutes of consultation ? What are the levels of skill deployed, ranging from simple first-aid through to management ?

This small probe into one sector pinpoints the need for more operational studies into the provision of medical care in general practice. With increasing population, with more young and more aged, we must learn how to use scarce medical skills to full advantage. It is disturbing that there are still no operational study units examining general practice, in which nearly half our doctors are employed, in a national medical service now 18 years old. There is therefore no feedback of knowledge of what is done to those who actually do the work ; and so general practitioners remain prisoners of their personal limited experience ; the profession generally does not have full knowledge of this major field of professional endeavour ; and the public does not have the best possible personal doctor-service which could be provided with present resources. Operational studies are essential to help doctors deliver modern medical care through to the public.

Summary

A study of patients seen and time spent during one week in February was carried out by volunteers from the Merseyside and North Wales Faculty of the College of General Practitioners, to complement a similar inquiry during one week in August undertaken by the College.

The findings show that 98% of patients were seen and 96% of time was spent during a 5½-day week. On Monday almost twice as many patients were seen as on any other day. This is a substantial change from the results reported by Bradford Hill. Home-visiting took 40 to 60% of time to see one-sixth to one-third of patients ; the consulting-room is used more by younger and by city doctors. Comparison of the February with the August week shows that 29% more patients seen took only 16% more time. However, international comparison shows that the British doctor sees more patients, without spending less average time per patient.

The factors of surprising rigidity in ways of working, professional loneliness and exposure of the general practitioner, pressure of work, and changes in public expectation of what can be provided combine to produce marked stress in general practice today. This is one collaborative study where there should be many after 18 years of a national medical service. Individual practitioners need to reappraise how they spend time. There is greater need for operational study units investigating general practice, to help doctors deliver modern medical care through to the public.

We wish to thank the College of General Practitioners for inviting us to undertake a more detailed examination of the material collected, and those members and associates, totalling more than 500, on whose individual returns the analysis is based.

We have had many companions on this minefield of emotions, but in particular we would like to thank Dr. Stuart Carne, London, for his work with the August 1964 phase ; Dr. R. Hardman, Liverpool, for his work with the February 1965 phase ; the Research Foundation Board of the College for a grant to cover expenses ; Dr. R. F. L. Logan, Director, Medical Care Research Unit, University of Manchester, for his guidance and help in preparing this paper ; and Mrs. Joyce Pearson and Mrs. Doreen Irving for their work with the tabulations.

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Appendix

Instructions

There is a separate form for each day; please note the day in the marked space on both sides of each form. Please note in the appropriate "box" the times of starting and of finishing a consulting session, round of visits, a particular visit—for example, night call, other work. To indicate number of patients seen during a session please mark the numerals (1–50 for that session) as each patient consults; follow the same procedure for home visits.

Day of Week CONSULTING-ROOM

	Morning	Afternoon	Evening
	1 26	1 26	1 26
	2 27	2 27	2 27
Time of starting	3 28	3 28	3 28
	4 29	4 29	4 29
	5 30	5 30	5 30
	6 31	6 31	6 31
	7 32	7 32	7 32
	8 33	8 33	8 33
	9 34	9 34	9 34
	10 35	10 35	10 35
	11 36	11 36	11 36
	12 37	12 37	12 37
	13 38	13 38	13 38
	14 39	14 39	14 39
	15 40	15 40	15 40
	16 41	16 41	16 41
	17 42	17 42	17 42
	18 43	18 43	18 43
	19 44	19 44	19 44
	20 45	20 45	20 45
	21 46	21 46	21 46
	22 47	22 47	22 47
	23 48	23 48	23 48
	24 49	24 49	24 49
Time of finishing	25 50	25 50	25 50

Side 1 of Appendix.

Day of Week

VISITS

From to
From to
From to
From to

1	11	21
2	12	22
3	13	23
4	14	24
5	15	25
6	16	26
7	17	27
8	18	28
9	19	29
10	20	30

HOSPITAL OR OTHER SESSIONS

From to
From to

OTHER PROFESSIONAL DUTIES

Total time spent on other professional duties (other than that included above), e.g. telephoning, correspondence, contact with other health workers.

minutes

Side 2 of Appendix.

Methoxyflurane as an Obstetric Analgesic: a Comparison with Trichloroethylene

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The search for new methods and drugs to provide relief of pain in childbirth continues. From the large number of new techniques advocated (Lamaze, 1958; Bullough, 1959; Heyns, 1959; Cahal *et al.*, 1961; Hingson *et al.*, 1961; Davidson, 1962; Crawford, 1963) it is clear that none is ideal and there is yet room for improvement. Some methods, such as psychoprophylaxis, depend on adequate preparation in the antenatal period; others, such as caudal block, require the facilities of a hospital and the presence of a specially skilled doctor during labour—conditions which are unlikely to be fulfilled on all occasions. Analgesic drugs are still widely used, either in addition to these methods or as the sole means of providing pain relief. Inhalational agents fulfil a particular role because of their evanescent effects and because they can be self-administered.

The two inhalational agents widely used, nitrous oxide and trichloroethylene, are of great value, though both possess certain disadvantages. Since this is so, any new inhalational agent deserves to be examined as a possible improvement. Preliminary clinical reports (Boisvert and Hudon, 1962; Romagnoli and Korman, 1962; Johnstone, 1963) suggest that methoxyflurane is a useful and safe obstetric analgesic, though these reports do not show whether methoxyflurane has any advantage over the established agents. Our own trial was therefore designed to compare methoxyflurane with trichloroethylene. Trichloro-

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