



Kent Academic Repository

Butler, J.R., Bevan, John M. and Taylor, R.C. (1971) *The Designated Areas Study*. Health Services Research Unit (CHSS), 443 pp.

Downloaded from

<https://kar.kent.ac.uk/5572/> The University of Kent's Academic Repository KAR

The version of record is available from

This document version

UNSPECIFIED

DOI for this version

Licence for this version

UNSPECIFIED

Additional information

Versions of research works

Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in *Title of Journal*, Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

Enquiries

If you have questions about this document contact ResearchSupport@kent.ac.uk. Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our [Take Down policy](https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies) (available from <https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies>).

THE DESIGNATED AREAS STUDY

A Report on factors affecting
the geographical distribution
of General Practitioners in England

by

J.R.Butler

J.M.Bevan

R.C.Taylor



**University of Kent at Canterbury
Health Services Research Unit**

1971

THE DESIGNATED AREAS STUDY

FINAL REPORT

University of Kent at Canterbury
Health Services Research Unit

November 1971

Contents

Chapter

Introduction

- 1 The history of the designated areas 1
The background to the National Health Service Act - 1948-61: post-war improvements - 1961-66: the formulation of a policy - 1966-69: dissatisfaction with the designated areas allowance - 1969-70: the search for improvements - Conclusions.
 - 2 Controls and incentives 33
The mechanisms of intervention currently in use - Criteria for evaluating the success of the mechanisms of intervention - Trends in the distribution of primary medical manpower: the extensiveness of the designated areas; the depth of the problem; the impact of the designated areas allowance - Entrance into general practice - Summary.
 - 3 The distribution of principals 62
Methods of measuring inequalities in the distribution of G.Ps. - The choice of area units - The analysis by standard regions - The analysis by geographical counties - The analysis by executive councils and medical practice areas - The concentration of designated areas in urban areas - The persistence of under-doctored areas - Summary.
 - 4 A survey of general practitioners 103
The sample - The pilot survey - The main survey - The follow-up survey - The presentation of survey data.
 - 5 The mobility of general practitioners 112
Professional mobility - Geographical mobility - Correlates of mobility: age; marriage and family responsibilities; post-graduate training; sex; birth place - Summary.
 - 6 An area analysis of mobility patterns 139
Migration patterns: the total net balance - The net net balance of internal migration - Outward migration to other parts of England - Inward migration from other parts of England - Internal migration: summary and implications - Inward migration from countries outside England - The effects of time - Migration patterns between counties - Migration between counties: summary and implications - Migration patterns at sub-county level - Summary.
 - 7 Community ties 176
Previous research - The influence of community ties: the national picture - The influence of community ties: the regional and county picture - The relationship to the distribution of manpower - Which doctors return home? - The capacity of areas to produce enough medical students and qualified practitioners - Community ties and residential mobility - Summary.
-

8	<u>The doctor as a person</u> Age - Sex - Social class and educational background - Marriage - Family responsibilities - Summary,	207
9	<u>The doctor as a professional</u> Qualifications and medical school - Time spent in general practice - Other current appointments - Direct access to hospital beds - Getting patients into hospital - Communications between hospitals and G.Ps. - Post-graduate and in-service training - Summary.	231
10	<u>The doctor and his practice</u> List size - Practice structure: partnership size; group practice allowance; clinics and health centres; ancillary help - Tools for the job - Night calls - Summary.	268
11	<u>The doctor and his area</u>	291
12	<u>The doctors speak</u> The designated areas allowance - Choice of area: social and family ties; professional contacts; practice facilities; chance and constraint; environmental factors - Some case histories - Mobility plans - Summary.	304
13	<u>Conclusions</u> The designated areas scheme: concepts and objectives - Influencing the spatial distribution of general practitioners by direct action: the designated areas allowance; other financial incentives; non-financial incentives controls - Influencing the spatial distribution of general practitioners by indirect action - Medical deprivation and the planning of health services - Summary of conclusions.	341
	<u>Appendix A. The Sample</u> The population sampled - The sampling frame - The sampling scheme.	365
	<u>Appendix B. The surveys</u> The pilot survey: methods of data collection; non- respondents; comparability of responses; conclusions - The main survey: the first mailing; the second mailing; the third mailing; response; non-respondents; costs - Processing the data: coding; training of coders; coding procedures; coding errors; punching and cleaning - Summary.	370
	<u>Appendix C. Survey materials</u> Covering letter sent with initial mailing in main survey - Covering letter sent with second mailing in main survey - Covering letter sent with third mailing in main survey - The questionnaire.	393
	<u>Appendix D. Areas designated at 1st January 1969</u>	402
	<u>Appendix E. Some descriptive regional statistics</u> Population - Employment - Housing - Education - Health - Cultural, recreational and environmental amenities - Economic and social	407
	<u>Appendix F. Some notes on list size and remuneration</u>	433

INTRODUCTION

In a National Health Service the responsibility for the proper distribution of medical and technical manpower lies ultimately with the government. The National Health Service Act of 1946, which gave legislative embodiment to the British health service, acknowledged this responsibility by creating a special committee {the Medical Practices Committee} and giving it the statutory duty of monitoring trends in the geographical distribution of family doctors, and of restricting the entry of G.Ps. into areas which are sufficiently well endowed with practitioners. In 1966 these powers of negative control were supplemented by a positive incentive {in the form of an addition to the basic practice allowance} to encourage practitioners to settle in areas with a history of large list sizes. In 1970, following widespread fears that the geographical imbalance of general practitioners was not only failing to improve but was actually worsening, the allowance was split into two levels and its value was increased substantially.

This is the report of a study made by the Health Services Research Unit at the University of Kent of the geographical distribution of family doctors in England, of their mobility and settlement patterns, of the factors influencing their decisions of where to practise, of the professional, social and environmental differences between areas with high and low doctor/patient ratios, and of the effectiveness of various controls and incentives which are built into the administration of the general practitioner services. It is a study of one aspect of health service policy. The data on which the study is based are drawn partly from published and unpublished statistics collected by the Department of Health and Social Security and the Medical Practices Committee, and mainly from the results of a postal survey conducted among a sample of about one in ten general practitioners in England in 1968. Throughout the report the aim has been to concentrate on furthering our understanding of the nature and causes of manpower shortages in certain parts of the country, and on exploring the range of available policy decisions which might rectify observed imbalances.

The structure of the report is simple. In the first three chapters we utilise existing statistics and information to trace the history of manpower policy in general practice since the beginning of the second world war, to describe and assess the impact of the range of controls and incentives which exist to influence the distribution of G.Ps., and to plot in detail the current dispersion of doctors

throughout the country. Chapter 4 describes the methods used in the survey of G.P.s., and the following eight chapters present and discuss the major findings from the survey. We focus first on the mobility patterns of family doctors and the pressures which bear upon them in selecting a practice location. We then describe some of the major characteristics (personal, professional and social) which distinguish doctors in different kinds of practice areas, and we also present some case histories of career patterns drawn from tape-recorded interviews. In the final chapter we draw together various strands of the report into a discussion of the policy implications of our findings.

Many people have contributed *in* various ways to the study and this report, and we gratefully acknowledge their help and assistance. The study was sponsored and financed by the Department of Health and Social Security, and several members of the Department's staff have provided continuous help, advice and encouragement. We wish to thank Dr. J.E. Struthers, Dr. T.S. Eimerl, Mr. F.W. Harris, Dr. A. Bryce Stewart, Dr. G. Sichel, Mr. K.M. Francis, Mr. J. Gallehawk and Mr. C. J. Nickless. In the regional offices we have received much valuable cooperation from Dr. J. Mackellar, Dr. E.D. Robb, Dr. H.A. Tuck, Dr. G.W. Whittall, Dr. R.W. Bone and Dr. A.W. Lilley. Dr. A. Maiden and Mr. L. Fisher of the Medical Practices Committee kindly supplied us with a lot of background information about the working of the Committee, and also made valuable criticisms of the early drafts of some chapters. To the 1,700 general practitioners who took precious time to complete our questionnaire we are especially grateful, but the cloak of anonymity (as well as the pressure of space) precludes us from naming them individually. Dr. D.L. Gullick of the B.M.A. gave us much help in drafting the questionnaire and in commenting on the drafts of parts of the report. Our colleagues at the University of Kent have contributed in many ways: thanks to Professor M.D. Warren, Dr. K.S. Dawes, Miss C. Marsh, Miss G. Baker, Miss G. Dyche and Miss J. Dobby. We are, finally, much indebted to many secretaries, typists and willing helpers who have contributed much to the practical business of doing research and writing a report: Pat Bevan, Gill Butler (and all the coders), Denise Matthews, Angela Lane, Kathleen Goldsmith, Jacquie Aldridge, Janet John, Cindy Rowe and Shirley Brazier. After all this expert help and advice all errors and omissions are our responsibility alone.

J. R. Butler
J. M. Bevan
R. C. Taylor
Health Services Research Unit
University of Kent at Canterbury

CHAPTER I

THE HISTORY OF THE DESIGNATED AREAS

"Neither the B.M.A. nor the Ministry of Health have ever seriously thought about places which don't attract enough doctors. They can't have!"

- G.P. in Yorkshire

The Background to the National Health Service Act

One of the prime objectives of the National Health Service Act (1946) was to achieve a more equitable distribution of medical care resources throughout the country than had existed under the pre-war system. There is some disagreement about the real extent of the maldistribution of doctors (especially general practitioners) in the decade before the war and of the redistributive impact of the National Health Service,¹ but most commentators agree not only that a wide gulf existed between the areas with the best and the worst provisions, but also that these differences corresponded roughly with the socio-economic structure of the community. Titmuss, in his official history of social policy during the second world war, notes that "a few areas of the country and a small section of the people were abundantly served with medical and nursing skills, but in many places, especially in the economically depressed areas, there were widespread shortages. The gross overcrowding of the London specialist population was also accompanied by an abundance of general practitioners in the well-to-do and supposedly healthier districts."² Eckstein is more specific. "Places like Harrogate were gorged with them (general practitioners) while working-class areas nearby, in cities like Wakefield, Leeds and Bradford were comparatively starved for them." "There is nothing peculiarly British in this state of affairs. Resort towns like Harrogate always attract doctors: they abound in upper middle-class diseases and particularly attract elderly practitioners who want to combine a small amount of lucrative practice with rest and self-treatment. Rural areas invariably suffer from shortages of doctors, despite the fact that they offer the family doctor a greater intellectual challenge than the city with its hospitals, clinics and specialties."³

Both Titmuss and Eckstein acknowledge as the source of their information the P.E.P. Broadsheet of 1944 on the theme of medical care for citizens.⁴ This document contains an undated map (probably 1938) of "the pre-war distribution of family doctors in England and Wales" which clearly shows that the lowest patient/doctor ratios were in the

South West, the South East and the home counties, whilst the highest ratios were in the North East, the North West and the Midland regions, particularly the West Midlands.* The Broadsheet commented that the distribution of medical resources is "at present haphazard," and "determined primarily by the income level or the rateable capacity of the locality." Figures are produced to give support to the claim. "The number of residents per G.P. (pre-war) was twice as great in Kensington as in Hampstead; thrice as great in Harrow; four times as great in Bradford, five times in Wakefield, six times in West Bromwich and seven times in South Shields." The point was also made that such figures, dramatic though they undoubtedly are, even tend to underestimate the real disparities in distribution, for the under-doctored districts were usually poor, with high rates of sickness and mortality and in special need of a good medical service. "The National Health Insurance scheme does not appear to have influenced the distribution of doctors since 1911 in more than a minor degree" and one of the 1944 White Paper's⁵ reasons for rejecting a mere extension of health insurance is that the N.H.I. scheme affords 'no effective means of ensuring a proper distribution of doctors'."

One of the few cautionary (if not actually dissenting) opinions on the pre-war distribution of manpower comes from the Jewkes'.⁶ They first clarify the different senses in which the term "distribution" might be used (distribution in relation to population, to socio-economic characteristics of areas, or to medical need) and then point out that to evaluate distribution solely in terms of relative population sizes is inadequate, for it assumes that equality of list size is the desirable optimum. "It is", they write, "only when gross disparities are to be observed that it can confidently be assumed that something is seriously wrong," but they evidently do not regard the figures contained in the P.E.P. Broadsheet as indicative of any "gross disparities". Whilst they are right to draw attention to the hazards of laying too much emphasis on doctor/population ratios for very small areas, it seems generally agreed that the situation revealed in the P.E.P. Broadsheet, in which some counties had fewer than 1,500 patients per G.P. whilst many parts of the country had average list sizes in excess of 3,000, was indeed one of "gross disparity". It is probably safe to conclude that the concern expressed from many quarters during the years leading up to the National Health Service Act in 1946 about uneven list sizes reflected a

*The map is reproduced on page of this report.

situation in which there was not only a substantial and indefensible geographical maldistribution of doctors, but also where the natural forces tending towards equalisation were at best very slight.

The increase in the number of doctors per 100,000 population between 1911 and 1931 was very similar for all counties irrespective of their doctor/patient ratios in 1911, indicating that the substantial increase in medical manpower during this period did not result in any selective improvement in the less well doctored areas.

The establishment of machinery to control the geographical distribution of G.Ps. seems first to have been embodied in the 1944 White Paper. In the discussions leading up to the publication of the Paper two main alternatives were presented about the possible mode of functioning of the machinery: it could either exercise control (positive or negative) or distribute incentives (Willcocks,7 p.74). The choice between the stick and the carrot was eventually resolved in favour of the stick, although the controls proposed were of a negative kind. The White Paper envisaged the establishment of a central executive body, composed mainly of doctors and to be known as the Central Medical Board. The Board would, amongst other things, control the entry of doctors into general practice, and would have powers of negative direction to influence the geographical dispersion of G.Ps. Shortly after the publication of the White Paper a detailed questionnaire was sent to all B.M.A. members, and the results showed that a majority of the profession as a whole (57 per cent) and also of G.Ps. (51 per cent) were in favour of the proposed measures of control; but the poll was repudiated by the B.M.A. leaders on such grounds that the rank and file had not understood the "hidden implications" of the scheme, that the Socialist Medical Association had stuffed the ballot boxes, and that salaried doctors should have been excluded because of their lack of experience of private practice (Eckstein, op.cit., p.148, 153).

In the ensuing discussions between the B.M.A. and the Minister of Health (Mr. Henry Willinck) the profession's negotiators seem to have persuaded the government to drop the idea of control by the Central Medical Board (Forsyth,8 p.19). In the revised Ministry plan the very existence of the Board was challenged, and its powers of direction were gone. Although the complex question of remuneration was left to a special committee (Spens, 1946⁹) the Minister did propose for the profession's consideration a part-salary element in the system of payment which could be varied to attract doctors to needy areas (Willcocks,

op.cit., p.51). The satisfaction which the B.M.A. leaders doubtless felt from their success in these negotiations was, however, short-lived, for in the general election in 1945 the Labour Party was returned to power, committed in very large measure to the 1944 White Paper and with a Minister of Health (Mr. Aneurin Bevan) whose ideas and actions were soon to place him at odds with the B.M.A. The National Health Service Bill, published in 1946, placed the local control of the general medical services in the hands of ad hoc Executive Councils, but created a new central Medical Practices Committee and reverted to the earlier idea of the 1944 White Paper by giving the Committee the power of negative control over the residential settlement of G.Ps. The Bill, understandably, displeased the B.M.A., and yet another plebiscite was organised; but the cause was hopeless, and after an uneventful passage through Parliament the Bill became law in November 1946. Section 34 of the Act required the Minister to constitute the Medical Practices Committee in accordance with the sixth schedule of the Act, and thus was institutionalised the means of controlling the distribution of family doctors.

1948-1961: Post-war Improvements

Right up to the appointed day in 1948 the B.M.A. continued to resist any threat to the general freedom of movement of doctors, and the Medical Practices Committee was constituted in an atmosphere of hostility and suspicion, even though seven out of its nine members were doctors. But by the end of 1948 the Association had begun to temper its hostility in the light of the experience of G.Ps. embarking upon National Health Service practice. As more and more people registered with their doctors before and after July 5th, the uneven distribution of family doctors became increasingly apparent. Some doctors found they had very small lists of N.H.S. patients, and within the first few months of the new service many of them were applying to the M.P.C. to have their areas declared over-doctored and thus closed to new applicants (Stevens, 10 p.85). Negative direction had begun, and on the initiative of the rank and file members of the profession; and the Practitioner, reviewing the first year's work of the new service, was able to say in 1949 that the M.P.C. had performed satisfactorily, giving no offence to the medical profession.¹¹ Yet still the B.M.A. was loath to endorse the principle of negative direction. Speaking at the Annual Conference of Local Medical Committees in 1948 the Chairman of B.M.A. Council (Sir Guy Dain) noted that doctors throughout the country were asking to have their areas closed, and he continued that "we are against the principle of closed areas, and I hope we shall not spoil our position in the

service by demanding the closure of areas".¹² Yet as the M.P.C.'s classification of practice areas continued to be discussed in the early years of the service the rigid attitude of the Association gradually softened, and by 1951 the profession's leaders had completed a fairly comprehensive turn-about, and were stoutly defending the activities of the M.P.C. The Chairman of the General Medical Services Committee (Dr. S. Wand), addressing the Annual Conference that year, expressed the hope that the job of the M.P.C. would not be made more difficult, and he remarked that "in the difficult situation in which that Committee has been placed it has acquitted itself in a way that would be expected of people nominated by the profession."¹³

The early fears of the B.M.A. about the role of the M.P.C. were in fact to prove groundless. When the Committee circularised the new local executive councils in 1948 almost all indicated that their G.P. services were adequate, and in its first report in June 1949 the Committee noted that the steady expansion in the number of doctors and the introduction of inducement and extended capitation payments had already begun to affect the redistribution of doctors. The Committee was not therefore called upon to take drastic redeployment action, and instead it began to develop criteria of classifying practice areas (Stevens, *op. cit.*, p.223). The classification was based upon data and recommendations from the local executive councils, and was determined by a flexible standard of measurement, subject to the changing needs of the service. Four area grades were originally devised, but following the Danckwerts award in 1952 (one element of which was to discourage large list sizes) the M.P.C. was asked to revise its classifications, and three grades were defined: restricted (average list size of less than 1,500), intermediate (1,500 - 2,500), and designated (over 2,500). A fourth grade was re-added in 1962 when part of the intermediate grade was reclassified as open (which in 1962 included areas with list sizes of 1,900 - 2,500). The current classification criteria were introduced in 1964 with the raising of the upper limit in restricted areas from 1,500 to 1,800.

In the designated areas the right of practice was automatically recognised, and doctors wanting to set up new practices in these areas were encouraged to do so through a financial grant known originally as the fixed annual payment, but changed in 1952 to the initial practice allowance.* The allowance was paid, subject to certain minimum qualifications, on a reducing four-year scale, and was quite additional to the usual capitation fees. In open areas admission to the medical list was usually automatic, but initial practice allowances were not

*See page 37 for an outline of current regulations governing the payment of this allowance.

paid; in intermediate areas applications for admission might be refused; and in restricted areas applications were normally refused, even when they were for replacements of outgoing practitioners.

The combination of negative direction and positive financial incentives (such as capitation loadings, introduced in 1952, the initial practice allowance, and certain inducement and hardship payments) worked well in the early years of the service while the number of incoming doctors increased. In 1949 the Medical Practices Committee had noted in its first report that the extended capitation system was already beginning to affect the distribution of G.Ps., and by 1951 the question was being raised of whether too many doctors were entering general practice. A Lancet editorial in August of that year asked Whether there was any justification for maintaining the intake of medical students at the existing level. The evidence showed that a permanent position - i.e. as a principal or assistant with a view to partnership - was difficult to achieve, and the editorial concluded that England and Wales had an annual surplus approaching 200 general practitioners. "The evidence of a continued excess is disturbing."¹⁴ Partnerships were indeed hard to come by, with as many as 100 applicants for each vacancy, but the effect of such competition was to hasten the movement of practitioners to the most needy places. In its fourth report, in January 1953, the M.P.C. noted that by 1952 there had been an increase since 1948 of 11 per cent of doctors practising in areas officially classified as under-doctored and a corresponding decrease of almost 10 per cent of doctors in relatively over-doctored areas. Following the Committee's revised classification of practice areas in 1952, statistics were published for the first time showing the numbers of doctors and patients in different kinds of areas (Tables 1.1 and 1.2). The figures for 1952 do not, as the Ministry's Annual Report for that year pointed out, take account of all the revisions that followed in the wake of the reclassification, but the decade between 1952 and 1961 unquestionably saw a dramatic reduction in the extensiveness of the designated areas in England and Wales. The percentage of N.H.S. patients in these places fell from 52 to 17 in this period, and the number of principals in them fell from 7,596 in 1952 to 2,888 in 1961 (a decrease of 62 per cent). The total net increase to the stock of G.Ps. in England and Wales during this time was 2,916 (Table 1.3).

By the mid-point of this ten-year period (1957) all the statistical indications were favourable, and there was hardly any public or professional concern about the distribution of G.Ps. Indeed, the dominant

concern was with the increasingly large number of doctors entering general practice, and with the consequent fear that the market might soon become over-loaded. In 1954 the Annual Meeting of the B.M.A. had passed a resolution that "*in view of the saturation of certain branches of the medical profession the Minister should be impressed with the extreme urgency of the situation,*"; and even the Medical Practices Committee had raised the question of whether an excess of general practitioners might not be in sight. In the same year (1954) the Cohen Committee on General Practice¹⁵ suggested that an enquiry should be made into the need for controlling the intake of medical students, and a further committee, under the chairmanship of Sir Henry Willinck, was duly constituted the next year. The Committee reported *in 1957* and, after a very extensive review of all the factors likely to affect the future demand for doctors (including even the potential demand for medical missionaries), the majority proposed a 10 per cent decrease *in the intake of medical students from the earliest possible date.* There appeared at the time to be many cogent reasons for accepting this recommendation, for all the evidence seemed to point to a tailing off in the demand for medical manpower, but within a short period of time it had become clear that the findings of the Committee were unsound,¹⁷ and were based on population projections and forecasts which were seriously inaccurate. In any case the intake of medical students had been declining in the years leading up to 1957, and the medical schools made no move to accelerate the rate of decrease. Although the intake of students continued to drop until 1961 the direct impact of the Willinck Report seems to have been slight.

1961-1966: The Formulation of a Policy

For a few more years the situation continued to improve, and, as the total number of G.Ps. increased, so the proportion of patients and principals in the designated areas of England and Wales continued to fall until 1961-62. Even *in 1960* the Pilkington Commission, commenting on the shortage of general practitioners in certain places, remarked that the situation was not such as to cause any great disquiet.¹⁸ But the effect of the reduced intake of medical students in the latter half of the 1950's began to appear in the early 1960's in the dwindling output of British graduates.¹⁹ The nadir was reached in 1963-64, when only 1,511 British students graduated, and at the same time an increasing proportion of doctors were choosing careers *in hospital medicine* (the number of doctors in the hospital service increased by 25 per cent between 1957 and 1966).²⁰ Many young doctors, on finding insufficient

opportunities in the hospital specialties for which they were trained, probably chose to emigrate rather than enter general practice,²¹ and doubts were expressed about the quality and experience of those who were appointed.²² The outcome of these trends was that the supply of general practitioners failed to keep pace with population growth, and from 1958 onwards the average number of patients per principal in England and Wales rose steadily. By 1966 it had passed the high point of 1952, and by 1969 the average list size for the country as a whole was only 21 short of designation. The trend was also reflected in the spread of the designated areas: more and more areas of the country were becoming designated as list sizes crept up everywhere. Between 1961 and 1969 the proportion of patients in these areas increased from 17 per cent to 37 per cent (Table 1.1), and of principals from 14 per cent to 32 per cent (Table 1.2). The total net increase in the number of designated doctors during this time was 3,614, compared with an increase of 748 doctors in restricted areas, and a decrease of 52 principals in all areas of England and Wales (Table 1.3). The increases in list sizes were not, however, evenly distributed throughout the country, and in fact it was the restricted areas which experienced the greatest proportional increase in average list sizes between 1958 and 1969 (17 per cent). In designated areas and in open and intermediate areas combined the proportional increase was less than half as great (7 per cent). Thus, although the designated areas were rapidly becoming more extensive throughout the 1960's, there was some compensatory reduction between the extremes of well-doctored and poorly-doctored areas, and in fact the range in the ratios of average list sizes to the national mean (England and Wales = 100) between designated and restricted areas was narrower in 1969 than it had been in 1952.* These trends, however, are viewed from the vantage point of the 1970's. In the late 1950's and early 1960's the distribution of G.Ps. was beginning to worsen from the patient's point of view, and the medical profession was also becoming increasingly concerned about the situation.

In January 1961 the General Medical Services Committee discussed a suggestion from the M.P.C. that extra money should be used from a supplementary fund to attract more doctors to designated areas, for example by introducing an additional loading in these areas, or by lowering the starting point for the application of loadings; but the Committee failed to reach any definite decisions on the proposal. In

*See page for a more detailed discussion of these figures.

February 1962, as noted, the M.P.C. made changes in the classification of areas, and later that year the distribution of G.Ps. was debated by Council of the B.M.A. Council noted with concern that the substantial improvements made between 1948 and 1957 had not been maintained, and that the situation had actually deteriorated in the previous three years. The results of an analysis by the M.P.C. of the Provisional Register for 1960 were presented to Council, showing that whilst doctors normally settled in and about the areas where they had been educated, the areas with the fewest doctors were not generally within easy reach of medical teaching centres.²³ The same theme was taken up again in 1963 by the Gillie Committee on the Field of Work of the Family Doctor,²⁴ which noted that the post-war improvement in the distribution of general practitioners had apparently stopped, and expressed the view that "more should be done to distribute doctors more evenly throughout the country, not only by the work of the Medical Practices committee, but by greater financial incentives to practise in under-doctored areas and by the provision of premises by local housing authorities in those areas" (para. 120). In the following year (1964) the Working Party on General Practice²⁵ "could not escape the conclusion that further redistribution is desirable, and that measures must be considered not only to increase the relative attractiveness of the under-doctored areas but also to restrict further the possibility ••• of entry into practice in the most favoured areas" (para. 1.6). The Working Party suggested several measures, direct and indirect, which might be considered, including a variety of professional and financial inducements. It was clear that the Medical Practices Committee would need to exert a greater pressure on new entrants to general practice if the overall position were not to regress further, and in June 1964 it informed the medical profession that it proposed to increase the number of restricted and intermediate areas.²⁶ The upper limit of restricted areas was increased from 1,500 to 1,800, and of intermediate areas from 1,900 to 2,100. The changes were designed to strengthen the directive power of the Committee by diverting new applicants away from a greater number of desirable areas. Admissions of applicants to many of the restricted and intermediate areas, even as replacements for out-going practitioners, were in future to be the exception, and only areas in which the average list size exceeded 2,100 would be open to all new applicants.

The reaction of the S.M.S.C. was to reaffirm the profession's abhorrence of any form of direction (the restrictions placed on the

right of G.Ps. to nominate their successors were particularly condemned), and to argue instead for the selective use of positive financial incentives to encourage practice in areas with large lists and high morbidity rates.²⁷ The threat of even greater control as the situation worsened spurred the B.M.A.'s advocacy of financial incentives during the discussions leading up to the Family Doctor's Charter in 1965. At the annual conference of L.M.C. representatives in June 1964 the motion was carried that "this conference believes ••, it is both necessary and desirable to establish ••• financial inducements, available exclusively to doctors who practise within such areas" 28 By November the principle of financial inducements was generally accepted; the debate switched to the method of payment, Whether it should be a lump sum or recurrent. In December the G.M.S.C. heard the results of a survey of 2,500 G.Ps. in Lancashire in which 89 per cent of the sample replied and 82 per cent were in favour of direct financial inducements to practise in unattractive areas; and again the main concern was not with the principle of such a payment, but with whether or not it should come out of the pOol.29

The question was resolved in the Charter for the Family Doctor Service in March 1965, which heralded the most fundamental change in methods of remuneration and terms of service of general practitioners since the inception of the National Health Service. Dealing with the problem of under-doctored areas the Charter stated in paragraph 22(b) that "it is essential that the Government should provide greater inducements in under-doctored areas and special areas. We favour such a method rather than any form of direction of doctors".³⁰ The wording of the paragraph was terse and the intention vague, and when later in the month the Ministry published its estimate of the increase in remuneration implicit in the Charter, it was unable to put a specific figure on this item. The Ministry commented that "the Association gives no indication of the form they consider the proposed inducements should take", and went on to remark that if the intention was merely to extend the current initial practice allowances, then the cost would be quite low.³¹ Assuming, however, that the proposal was more far-reaching than this, the Ministry put a tentative figure of £1 million on the item - an estimate that proved to be very close to the actual cost in the first full year of the scheme.

The local medical committees and the B.M.A. agreed in March 1965 to accept the Ministry's offer to negotiate on the Charter, and agreed also that the new contract of service should be priced by the Review Body. The negotiations Which followed included detailed discussions of

paragraph 22(b), The first report of the negotiations, in June 1965, emphasised that repeated references had been made in the discussions to the problem of under-doctored areas.³² The report contained examples of the progressive worsening of the distribution of doctors. Between 1963 and 1964 the proportion of people living in designated areas rose from 19 per cent to 21 per cent and the number of executive councils with average list sizes above 2,700 increased from 9 to 15. All 15 areas were industrial, and all but two were in the Midlands or the North. The report stated the opinion of the negotiators that there was no single or simple solution, and stressed that the discussions had ranged over various possible incentives. The use of financial incentives was the most obvious choice, but the negotiators were also concerned that doctors in these areas could look forward not simply to proper financial reward but to "conditions of work which are professionally satisfying both in their own practices and in their relationships with other services".

The final proposal relating to unattractive areas appeared in Appendix C(i) of the second report of the joint discussions in October 1965.³³ "The basic practice allowance for doctors in areas where there is a long-standing shortage of G.Ps. will be increased. This will include all doctors whose main surgery is situated in the defined area, and all the patients on such a doctor's list will be counted in determining eligibility. The appropriate areas will be those which have been 'designated' by the Medical Practices Committee for a continuous period of three years up to the date of payment. This criterion will be kept under review". The report stressed the need for continuous improvement in the conditions under which general practice was carried out in these areas, and stated that the payment could therefore be reconsidered in the case of doctors who unreasonably refused, opportunity for such improvement - for example, a move to suitable premises where they could practise as members of a group. This Appendix to the second report of the joint discussions laid down the framework of the "designated areas scheme".

Following the negotiations between the B.M.A. and the Ministry the new contract was priced by the Review Body in its much-heralded seventh report in May 1966.³⁴ The additional allowance for practice in designated areas was covered in paragraph 206. The Review Body considered the allowance to be a straight inducement payment which, since it was an entirely new factor in thinking about levels of

remuneration could not be fixed precisely. The report acknowledged ignorance of what figure would act as an inducement, or even of how far a reluctance to practise in these areas could be overcome by financial payments; but the Review Body was concerned that the level should be sufficiently low to prevent a catastrophic loss of earnings when an area ceased to be designated. The proposal by the Health Departments that the amount of the allowance should vary with the character of the area was rejected, but the suggestion expressed by the negotiators (in their second report) that the allowance should not be payable unless an area had been continuously designated by the M.P.C. for a period of three years was accepted. The rate of payment was fixed at £400 per annum.

1966-1969: Dissatisfaction with the Designated Areas Allowance

The profession's reaction to the Review Body's report was generally favourable (most of the dissent centred on the Prime Minister's decision to phase the new allowances in two stages instead of giving them all at once), but the introduction of the designated areas allowance was less well received. Less than a month later, at the annual meeting of representatives of L.M.Cs., and in the course of a debate on the motion accepting the report as the basis of a new contract, four amendments were proposed relating to the allowance.³⁵ In the discussion that followed, several detailed criticisms and suggestions were made: that payment should not be tied absolutely to a three-year qualifying period; that G.Ps. in under-doctored areas might not want to improve the position because it would hasten the day when they lost their allowance; and that doctors would not be attracted by £400 since the areas might lose their designation as soon as they arrived. The important suggestion was made at this meeting that the criterion for designation should extend beyond that of doctor/patient ratios to include the existence of social and cultural activities, educational facilities, physical characteristics, population density, morbidity patterns and the incidence of chronic occupational disease, and the adequacy of supporting **medical services.**

This latter suggestion, which had been of concern to the medical profession for some years, was later taken up by the G.M.S.C. at meetings in January and February 1967.^{36,37} The Committee was considering a complaint that, whilst the Rhondda Valley was not a designated area, Abingdon (Berkshire) was designated; and the Glamorgan L.M.C. argued that such factors as morbidity, educational and cultural facilities, and the number of items of service rendered per £1,000 paid should be taken into account in defining an area as designated. The L.M.C. considered that a large

average list size was the least difficulty in filling vacancies in the Rhondda: the real deterrents included excessive work loads, high morbidity, the forbidding nature of the Welsh mining valleys, difficulties in obtaining building sites, and the absence of cultural and other amenities. The short-term solutions suggested were that Rhondda (and other similar areas) should have an increase in capitation fees and should count for superannuation purposes as $1\frac{1}{2}$ times the service in other areas; but the long-term solution should be for medical assessors to visit such areas and assess their true circumstances and needs in depth.

By June 1967 the Minister had acknowledged that the problems of chronically designated areas could not adequately be met merely by special payments for practising in them. As an interim measure he proposed that a doctor whose main surgery was outside a designated area should receive 5 per cent of the allowance for each 1 per cent of patients over 60 per cent of his list who lived in a designated area. Thus full payment would be made if 80 per cent or more of the patients of such a doctor lived in a designated area, with a proportionally smaller payment down to 60 per cent of such patients, and no payment at all below this figure.³⁸ The L.M.Cs. approved the proposal as an interim measure, but stressed once again that an entirely new scheme should be devised to attract doctors to these areas. A motion to this effect was carried at the 1967 annual meeting of L.M.C. representatives, and three weeks later at the annual representative meeting of the B.M.A. a further motion was carried that "the criteria at present laid down for inducement payments are wrong, and should include unattractive industrial areas where the doctor/patient ratio remains constantly high".³⁹ The aim of this motion, to substitute work-load and area-unattractiveness for doctor/patient ratios as criteria deserving of extra payments, again reflected the profession's view that the equal provision of general medical services throughout the population should not be accepted uncritically as the sole objective of manpower policies. An equally important aim should be to ensure that the greatest concentration of doctors occurred in areas where the actual work-load was high, whether or not they had high doctor/patient ratios. The repeated reference to unattractive areas is less understandable. In the second report of the joint discussions a passing reference was made about extra payments for doctors practising in "unattractive" areas, but in the Review Body's report the allowance was carefully restricted to designated areas only (which may or may not be unattractive). To introduce an extra payment for areas which are socially or culturally unattractive, regardless of their medical needs or whether

they are under-doctored, would be akin to a straight compensation payment of a kind that was not intended by the Review Body at all, and that would not necessarily improve the distribution of doctors on any criteria that are relevant to medical care.

Towards the end of 1967 the Review Body received a further memorandum of evidence from the B.M.A., which reflected the profession's desire to devise a radically new system.⁴⁰ In it, the Association pointed out that the designated areas allowance was not having the intended effect, although the B.M.A. did not consider whether sufficient time had elapsed for such a judgement to be reasonably made. The evidence in the memorandum showed that the number of chronically designated areas had increased by 13 in the previous year, and that the number of patients on the lists of principals in designated areas was rising at an ever faster rate. Discussions with the Ministry had not substantially changed the criteria for payment. The B.M.A. then restated its view that the basis of the allowance should be "to recompense the doctor for the disadvantage of practising in an unattractive area", and proposed two interim measures pending a full review of the entire schema: first, that the allowance should be increased and payable over a longer period; and secondly that de-designation should not occur until the average list size of the area fell below 2,500.

Prior to the publication of the Review Body's next report the G.M.S.C. approved a draft Ministry circular to executive councils early in 1968 that "for the purpose of determining continuing eligibility for additional payments ... once an area has been continuously designated for a period of at least three years, a single break in designation occurring subsequently and lasting for not more than 12 months will be ignored ••".⁴¹ The B.M.A., in the annual report of Council in April 1968, noted this and other small changes with approval, but endorsed the general view of the profession that current rewards were insufficient to improve the manpower situation.⁴² Council was doubtless hoping that the imminent report of the Review Body would, in response to the growing pressures since 1966, substantially increase the amount of the allowance; but this was not to be. In its ninth report in May 1968 the Review Body reo-emphasised the experimental nature of the scheme and restated the case for keeping the level of the payment low, but it did not alter the amount of the payment, and it made no proposals to change the eligibility rules for it.⁴³ In fact the only concessions made in the report with respect to under-doctored areas were that the three year period of qualification should be kept under continuous review, and that the Health Departments and the profession's

representatives might jointly take the initiative in working out arrangements for an increase in the allowance, and in submitting any such proposals to the Review Body. It seems, however, that the members were thinking in terms of fairly small increases, for they specifically commented that "there would be no difficulty of justifying an increase of, say, £100 under the 'manpower' criterion of current incomes policy" (paragraph 66).

The reaction of the profession was, expectedly, swift and derogatory. At a special conference of representatives of L.M.Cs. in June 1968 the motion was carried that "this conference is of the opinion that following receipt of the Review Body's report, under-doctored areas can only look forward to a further deterioration in manpower, and that further additional payments should be sought to attract practitioners to these areas. This should be a realistic inducement to the order of, say, £1,000 per annum. The return of emphasis to the notion of under-doctoring as the major problem was perhaps an indication of the profession's exhaustion with the complexities of the issue, and when at the subsequent annual representative meeting of the B.M.A. in June a motion was proposed that part-payment should continue for a further three years beyond the point where it at present ceased, the chairman dealt firmly with it and refused to allow any extensive discussion. He pointed out that it was a continuing problem, that a multitude of solutions had been proposed in the previous few years, and that negotiations were under way with the Ministry on the whole future of the scheme.⁴⁵

1969-1970: The Search for Improvements

The outcome of the negotiations was first seen in July of the following year (1969), when the G.M.S.C. considered a paper by the Health Departments containing new proposals for a two-tier scheme of payments, but which did not suggest any alterations to the fundamental principle of attracting doctors by means of financial inducements.⁴⁶ The Health Departments proposed that the existing allowance of £400 per annum should continue to be paid to doctors in designated areas for as long as they remained in the same practice, or until they became entitled to a new and higher payment of £550 to designated areas with average lists of 3,000 patients or more. The higher rate would be paid to areas continuously designated for two years, and would continue for a further two years after de-designation. A third allowance of £350 was proposed for doctors in continuously designated areas with list sizes of less than 3,000 who were not eligible for the full £400. This would include, for example, doctors who moved into such an area after an agreed date, or who were already in

an area which became designated after that date.

In discussing the paper the Committee again ranged across the whole question of designated areas payments. Several members pointed out that the only long-term solution was to increase the number of G.Ps. (one figure suggested was 3,000), and that the profession ought consequently to be making the public aware of the deficiencies of the service rather than helping the Government to relieve the under-doctored areas. The principle of designation was also attacked, and the desirability was stressed of channelling extra resources into areas where work loads and morbidity rates were high rather than areas which simply had high average list sizes. The need to improve services and facilities in these areas was also emphasised as a more important goal than the payment of extra allowances, but the Committee nevertheless approved the Health Departments' proposal for a two-tier system of payment, with the reservations that doctors in the same areas should not receive differential allowances; that there should be a reduction in the interval between the date on which an area became designated, or super-designated, and the date on which the allowances became payable; and that payments should continue for a longer period after de-designation. Significantly, the Committee rejected the Health Departments' argument that improvements in the organization of general practice had increased the number of patients who could be cared for without imposing an undue work-load on the doctor.

Eventually a "limited agreement" was reached between the Health Departments and the profession's representatives, and the proposal was put to the Review Body in October 1969 for a two-tier system of payments.^{47,48} The first allowance would be for doctors in designated areas with average list sizes of between 2,500 and 2,999 patients, payable after the area had been continuously designated for three years and continuing for three years after de-designation. The higher allowance would be payable to areas which had been continuously designated for one year with average list sizes of 3,000 or more, and would continue for two years after the list fell below 3,000 when the lower rate would be payable in the normal way. This proposal sprang from the declared mutual belief that the existing arrangements had served a useful purpose, but that modifications were needed to offer an even greater inducement to doctors to move into the most seriously under-doctored areas, where there was most risk of retirements or deaths. There was, however, no agreement between the two sides on the levels of the allowances. The profession claimed that the new system would come into effect four years after the inception of the scheme (that is, at 1st April

1970), and that the payments should therefore be increased to £500 and £700 if they were to continue to serve as material inducements. The Health Departments, on the other hand, took the view that the designated area payments had already proved effective, and that the need to persuade doctors to move to areas with lists just above 2,500 was comparatively less than it had been. Whilst the Departments accepted the profession's argument that any decrease in the existing allowance of £400 (as proposed originally) would have a discouraging effect on doctors in designated areas, they nevertheless felt that the sum of £400 should be retained at the lower rate, and that £550 should be payable as the higher rate. Two factors which the Departments considered to be important in fixing the allowances at a lower rate than that suggested by the profession were the need to prevent a sudden outflow of doctors from areas which were currently far from being over-doctored, and the undesirability of large reductions in income for doctors who ceased to be eligible.

The twelfth report of the Review Body⁴⁹ was published in June 1970 together with the Departments' response to it, and immediately another medico-political storm Whipped up. The Review Body had recommended across-the-board increases of 30 per cent for the whole profession; the government agreed to pay the full amount only to the junior hospital doctors, and in the case of other grades to pay half the increase (15 per cent) immediately and to refer the other half to the National Board for Prices and Incomes. The members of the Review Body instantly resigned en bloc. The fury of the B.M.A. was probably even greater than in the earlier comparable situation in 1966, and a British Medical Journal leader commented that "the doctors are more angry at the treatment of the Review Body than those with long memories can remember them ever being over any other issue before.",⁵⁰ But the focus of the storm, as the B.M.A. leaders repeatedly stressed, was on the principle of the government's action rather than the detailed policies or payments contained in the report. This is, for our purposes, a matter of regret, for there is virtually no evidence at all of how the profession reacted to the substantial increases recommended to the designated areas allowance. The Review Body, in considering the question of the designated areas, first summarised the agreement reached between the B.M.A. and the Health Departments on the need for a two-tier system of payment, and then set out the arguments which each side had presented to justify the levels at which the payments should be made. But the members must have concluded that even the B.M.A. had under-stated its case, for they finally recommended that "the upper level of the allowance be fixed at £849 and

that the lower level should be increased to £519" (paragraph 150). These were indeed substantial increases on the existing flat-rate level of £400, and they represented the first ever recommended increase in the level of the allowance. The report argued that the upper level was justified by virtue of the very high list sizes in some areas ("where average lists are 3,000 or more, the average is as high as 3,500"*), and the old argument that too high a level would cause substantial losses when it ceased to be payable was rebutted on the grounds that, as the prospect of the withdrawal of designation from such areas was remote, "we need not be seriously concerned about the financial consequences of such withdrawal, or of a reduction from the upper to the lower level, for the doctors involved" (paragraph 150).

Events moved swiftly following the publication of the report. The remuneration of doctors was an important element in the general election campaign currently under way, and in the election itself a new government was returned to power. In July the new Secretary of State for Social Services (Sir Keith Joseph) informed the B.M.A. that, in return for full cooperation by doctors in fulfilling their N.H.S. contracts, the government was prepared to withdraw the reference to the N.B.P.I. ;51 but, for "compelling reasons", only a further 5 per cent increase would be paid to general practitioners (amounting to 20 per cent altogether), and would stand for one year only. Under the new regulations a type 1 allowance (of £490 per annum) was payable from 1st April 1970 under the same conditions that governed the payment of the old allowance. In addition, a new type 2 allowance (of £750 per annum) was paid to practitioners whose surgeries were in areas continuously designated for one year with average lists of 3,000 or more patients. The allowance was paid as long as the area maintained a list size as large as this, and it continued thereafter for a concessionary period of two years. No doctor could be in receipt of both allowances at once, but a type 1 allowance could be paid as soon as the concessionary period for a type 2 allowance had ceased, provided of course that the area fulfilled the necessary conditions for type 1.

The Closing scenes of the battle of the twelfth Review Body report came early in September 1970, when it was reported to a meeting of Council of the B.M.A. that "both the Central Committee for Hospital Medical Services and the General Medical Services Committee had authorised their representatives to agree to the appropriate increase in salary scales and fees and allowances consequent on the government's decision on the

* The actual figure in 1969 was 3,461.

twelfth report".⁵² Thus, for a while, the storm abated and the anger of the B.M.A. calmed; and this brings the story up to date. It will not end here, and the designated areas scheme will not cease to be the subject of much debate; but it is at this point in history that our research is set - research that may itself be instrumental in determining the future course of events - and it is here that our historical review **finishes.**

Conclusions

There are many implications of this historical background for the present concern about the designated areas. Many of them will be taken up at various points in the report and in the concluding chapter, but some are worth stating at this initial stage of the report, before the research findings are presented.

The first conclusion is that because the assumptions and objectives underlying policies concerning the distribution of G.Ps. have not always been stated clearly, there has been some confusion and misunderstanding about the purpose and administration of the designated areas allowance. The scheme that eventually emerged from the negotiations in 1965-66 explicitly rewarded general practitioners in areas which were under-doctored solely in terms of doctor/patient ratios, and the revisions in 1970 did not depart from this basic principle. Certain assumptions are inherent in the scheme, even though they are not necessarily held by those responsible for implementing it. The first general assumption is that "very large lists are undesirable", or, more specifically, that a list of about 2,500 roughly represents the maximum number of patients for which a G.P. can reasonably care (because the allowance would cease to be paid entirely if all practitioners had lists below this figure). Secondly, the scheme assumes that the average list size of an area is a necessary and adequate indicator of the work-load of doctors in it. There would be no point in trying to attract more doctors to areas with high average lists unless it was also assumed that the large lists were indicators of a high work-load and hence of the need for extra manpower; and, although practitioners and planners are well aware that many other factors (in addition to the number of patients) contribute to the work-load of an area, the administration of the allowance takes no account of these additional considerations. An area attracts the allowance almost exclusively on its doctor/patient ratio, and other attributes of the area, its doctors, or its patients are, as far as we can tell, ignored in the act of designation.* Thirdly, the scheme assumes that by paying the

*There are other items in the remuneration of general practitioners which take account of additional factors likely to influence work-load, e.g. the higher capitation fee for patients over 65.

allowance according to the average list size of an area, G.Ps. will be treated more or less fairly with respect to their own individual lists. It is, in other words, expected that most individual G.Ps. with large lists will be eligible for the payment, and that most doctors with smaller lists will not. Finally, it is assumed that the medical practice area is the most suitable unit on which to base eligibility.

All these assumptions seem to us to be inherent in the designated areas scheme, but there appears to have been very little attempt to assess their validity. The historical review in this chapter highlights the conflict and misunderstanding resulting from the failure to justify these basic assumptions. For example, the assumption that a list of about 2,500 roughly represents the maximum number of patients for which a G.P. can reasonably care has been perpetuated almost unchallenged since at least the early days of the N.H.S. The designated areas allowance is paid to areas where the average list size is a little above 2,500, and this figure has remained as the threshold of designation from the time it was first laid down by the Medical Practices Committee. Yet the organisation and technology of medical care has changed so much in the last two decades that it is far from obvious that this figure should remain a valid criterion (if it ever was), or that it should be applied uniformly to all areas regardless of their size, population density, demographic or epidemiological characteristics, etc. Moreover, the isolated argument that each area must have sufficient G.Ps. to ensure an average list of under 2,500, even if technically sound, is of little value for planning purposes because it ignores the economic constraints in the situation.⁵³ Resources are always scarce and needs are always infinite, and the planner must constantly weigh up the cost of meeting specified targets (measured in such terms as **resources** foregone by other parts of the system) against the benefits of doing so. As Beckerman puts it, "it is really pointless to argue the pros and cons of some target for, say, education or health, in the absence of a complete picture of the economy within which the opportunity costs of alternative targets can be assessed".⁵⁴ To argue that certain ratios must be achieved regardless of the impact on other parts of the system is to contribute little to the debate.

The assumption that the average list size of an area is a necessary and sufficient indication of the work-load of doctors in it can likewise be challenged, but the problem in this case probably lies more in operational difficulties than in the failure to recognise its weaknesses.

There is, obviously, some association between list size and work load, but it would presumably be agreed that many other factors, varying in nature and intensity from place to place, also affect the demands made upon the G.P. That these factors have not so far been incorporated into the definition of a designated area is an indication of the difficulty involved in identifying, measuring and monitoring them throughout the country, but there is abundant evidence from our research (discussed mainly in Chapter 12) that the failure of G.Ps. to accept the assumption has resulted in fairly widespread scepticism about the allowance. Doctors in non-designated areas pointed out, for example, that they were as hard pressed as their colleagues in designated areas sometimes only a hundred yards down the road, or that their localities were just as deprived and unattractive as those which qualified for the payment - often more so. This is indeed true, and it helps little to point out to such doctors that what their areas lack, and what precludes them from receiving the allowance, is a high average list size.

A similar resentment among the G.Ps. in our survey occurred over the discrepancy between individual and area list sizes. Many doctors accepted that list size was the most practicable indicator of workload, but complained that, although their personal lists exceeded 2,500, they were ineligible for the allowance because their areas were not designated. The assumption that most doctors in designated areas will have large personal lists, and conversely that those in non-designated areas will generally have smaller lists, is perhaps less valid than policy-makers have assumed. We show in Chapter 10, for example, that the allowance in 1968 was paid to some 800 doctors whose personal lists were below 2,500 and withheld from some 5,500 G.Ps. with lists above this size. It is not known whether these figures have ever been drawn to the attention of those involved in policy processes, but it is clear that they cast a considerable doubt upon the effectiveness of the scheme relative to its aim. Similarly, the assumption that the medical practice area is the most appropriate unit of administration in the scheme has apparently never been explicitly justified. It would be difficult to do so, at least while the boundaries of these areas continue to be drawn on ad hoc and arbitrary lines. The difficulty was understood with remarkable foresight by the Working Party on General Practice in 1964⁵⁵ Which, anticipating the possibility of a separate allowance for practitioners in designated areas, commented that "it would probably be necessary to base a scheme on areas other than those separately classified by the Medical Practices Committee."⁵⁶ We return to the theme at several points in the report, but an illustration of the

argument is appropriate here. On the one hand several large cities, containing 100,000 or more people, are single medical practice areas; on the other hand small housing estates, with perhaps only a few hundred people, are also single areas. With such gross disparities of size it is possible to increase or decrease the number of such areas at will simply by redrawing their boundaries; but such an exercise would obviously have little value for planning purposes. It is pointless and positively misleading to enlarge or reduce the dimensions of a problem by juggling with definitions which are themselves arbitrary, yet this is precisely what happens, and it is upon the results of such juggling that crucial decisions are based. The strange results produced are typified by the case of Manchester and Liverpool, two nearby and in many ways similar cities which in 1969 had identical average list sizes and which needed the same number of additional G.Ps. to reduce their average lists to 2,500. Yet whereas Manchester had 45 per cent of *all* its doctors in designated areas Liverpool had none!*

Our first conclusion, therefore, from this historical review is that the confusion and disagreement over the basis on which an optimum distribution of family doctors should be sought, and the associated failure to critically examine and justify the assumptions, methods and Objectives of the designated areas allowance has hindered the development of the best possible policy. The second conclusion is that in the post-war years there has been a close relationship between the national average list size and the spread of designated areas. During the first decade of the National Health Service the annual additions to the total stock of G.Ps. in England and Wales more than offset the rate of population growth, and average list sizes consequently fell - both in the country as a whole and, particularly, in the designated areas. But the size of the annual increment of family doctors was steadily diminishing (Table 1.3), and by 1958-59, the year in which a large number of G.Ps. retired with full superannuation after ten years in the service, it had dwindled to a mere 60. Net recruitment picked up again in the next two or three years, but by then the effects were beginning to be felt of the reduced student intake to the medical schools in the mid-1950's, and the first half of the 1960's saw very substantial overall losses of G.Ps.,

*These are the official figures supplied by the Department of Health and Social Security. There may be special arrangements between the Medical Practices Committee and the local executive councils and medical committees which account for the extreme disparity between the two cities.

with an increasing average age of those still in practice. It is true that steps were taken in the early 1960's to halt and then reverse the Willinck policy of a reduced intake of medical students,⁵⁶ but such is the time lag in the production of G.Ps. that the effects were only just beginning to appear by the end of the decade. These trends were inevitably reflected in the national average list size, which took an upward turn in 1958-59 (Table 1.1) and has been climbing ever since; and they were also reflected, after a delay of a few years as the effects spread through the system, in the spread of designated areas.

The relationship between an increasing national average list size and the spread of designated areas is illustrated by the turn of events in the 1950's, for as the total number of G.Ps. rose so the competition for vacancies became more intense, and doctors who wished to establish themselves as principals could not afford to be fussy about where they went. Even assistantships without view were hard to come by, and posts were accepted in designated areas with a sense of relief that at last a living had been obtained. Hundreds of doctors in our survey who were either entering general practice for the first time or seeking a partnership in the 1950's recounted stories of trekking from practice to practice in the hope of being successful, and many told of vacancies for which 80 or even 100 doctors had applied. Altogether almost a quarter of the survey respondents who were practising in designated areas at the time of receiving the questionnaires gave as their reason for choosing the area that they had "little or no choice in the matter" - or a reply to that effect. The proportion was obviously lower among doctors in other types of practice areas, but even in the restricted areas 13 per cent of the doctors gave this as a reason.*

The fierce competition for vacancies continued through to the early 1960's, and then, as the pressure gradually eased, incoming doctors could once again afford to be selective about their choice of practice area, and about the terms under which they became partners. Many older doctors told us ruefully of young men coming into general practice nowadays on terms which it took them perhaps ten years to achieve, and fewer doctors are now willing to accept assistantships. The trend is well illustrated in recently-published figures from the Kent Executive Council,⁵⁷ and whilst we do not know how representative they are of the country as a whole we may assume that what is happening in a reasonably attractive county represents the more favourable end of the spectrum (Table 1.4). In 1955 five advertisements for single-handed practices attracted a total

* See Chapter 12 for illustrations of the difficulty of obtaining posts at this time.

of 432 applicants; two years later four such vacancies drew 226 applications; in 1960 the number of applicants for four single-handed vacancies was down to 186; by 1963 it had fallen still further to 63; and in the first half of 1970 two such advertisements attracted only 28 candidates. Doubtless the trend is accentuated by the decreasing popularity of single-handed practice over the past fifteen years, but the figure revealed each year by the Medical Practices Committee of applicants for E.C. vacancies substantiates the impression that the competition for vacant posts during the 1960's became much less fierce. In 1968 there were, on average, 9 applicants for every vacancy considered by the Committee, compared with an average 24 applicants ten years earlier and 43 in 1956.*

Historically, then, we can identify the process by which the growing ratio of patients to doctors throughout the country has resulted in the growth and spread of designated areas. A similar relationship would be expected on theoretical grounds, for in order to prevent an extension of the designated areas during a period when the national average list size is steadily increasing the whole system must become ever more efficient and egalitarian; yet until the introduction of the designated areas allowance in 1966 there were no substantial policies other than the initial practice allowance to ensure that this would happen. Naturally, as long as the national average list size does not actually exceed 2,500 it is theoretically possible for all medical practice areas to be non-designated, although the nearer the national list approaches to this criterion the more finely distributed the doctors must be in relation to population, until the point would eventually be reached where every single area had an average list of exactly 2,500. In practice, such a situation could never be achieved unless there was a policy of absolute central direction of labour; and thus, however elaborate a system of incentives might be constructed, there will always be a residual imbalance in the system. If it is accepted that the imbalance which currently exists in England is as small as can reasonably be achieved, then it follows that there will be no improvement in the position of the designated areas until the overall patient/doctor ratio falls.

Our third conclusion from the historical review is that political considerations have sometimes tended to obscure a rational debate of the problem, and that consequently the form of agreement eventually agreed upon (a uniform cash payment) was by no means the most imaginative or flexible of several that were suggested. Various proposals have been put

*Since 1968 the average number of applications per vacancy has shown a steady increase to 10.5 in 1969 and 13.9 in 1970. The latest figure (for the quarter ended 31st March, 1971) is 16.1.

forward in B.M.A. committees and meetings to attract doctors by means of improved practice facilities, and the Gillie Report in 1963 had recommended several non-financial measures to improve the distribution of family doctors, including the provision of premises, the careful siting of new centres of training, and the provision of opportunities for hospital practice, public health work and medical administration. In 1964 the Working Party on General Practice had discussed the possibility of attachment schemes for health visitors and district nurses in under-doctored areas, the systematic dissemination of advice and information about such places, the provision of purpose-built practice premises, and the provision of adequate living accommodation for married junior hospital doctors in under-doctored areas in the hope of encouraging them to settle and to seek openings in general practice in them. Yet all these suggestions, and others relating to financial incentives, were eventually disregarded in favour of a simple, flat-rate allowance. The paradox is that although the profession's leaders have been well aware that a simple cash incentive of a size that is politically feasible does not do much to relieve the gross deprivation of medical manpower in certain areas, they have nevertheless been obliged continually to press for an increase in the allowance to as high a level as they can get. It is a legitimate function for trades unions to get as much money as they can into the pockets of their members, and from this point of view the B.M.A. must consider the designated areas allowance as one of the most highly successful innovations for many years - especially following the Review Body's partial acceptance in its twelfth report of the argument that more money should mean more doctors in the most deprived areas. Yet although its role (though not its legal status) as a trade union will obligate the B.M.A. to support this kind of argument (as it has done in the past) there is clear evidence, presented in this chapter, of an awareness in the Association that such reasoning is suspect. It is not simply that cash incentives have inherent limitations (for that is only partially true) or that the payment of a realistic amount would be politically and economically improbable (as the most recent award indicates), but also that the administration of this particular scheme involves increasing disincentives as the value of the allowance rises.

References

1. S.L. Morrison. "Medical Manpower in the National Health Service" Chapter 2 in Problems and Progress in Medical Care, (ed. G. McLachlan), Third Series. Nuffield Provincial Hospitals Trust, O.U.P., 1968.
2. R.M. Titmuss. Problems of Social Policy H.M.S.O. and Longmans, Green and Co., 1950.
3. H. Eckstein. The English Health Service Harvard University Press, 1958.
4. Planning. P.E.P. Broadsheet No. 222. June 30th, 1944.
5. A National Health Service. (White Paper), Cmd. 6502. H.M.S.O., 1944.
6. J. and S. Jewkes. The Genesis of the British National Health Service. Basil Blackwell, 1952.
7. A.J. Willcocks. The Creation of the National Health Service. Routledge and Kegan Paul, 1967.
8. G. Forsyth. Doctors and State Medicine. Pitman Medical Publishing Co., 1966.
9. Report of Inter-Departmental Committee on the Remuneration of General Practitioners. (Spens Report), Cmd. 6800. H.M.S.O., 1946.
10. R. Stevens. Medical Practice in Modern England. Yale University Press, 1966.
11. "The National Health Service Act in Great Britain: a Review of the First Year's Working." The Practitioner, 1949.
12. Personal communication from Dr. D. Gullick.
13. Personal communication from Dr. D. GULlick.
14. Lancet (1951), **ii**, 331-332.
15. Report of the Committee on General Practice within the National Health Service. (Cohn Report), H.M.S.O., 1954.
16. Report of the Committee to Consider the Future Numbers of Medical Practitioners and the Appropriate Intake of Medical Students. (Willinck Report), H.M.S.O., 1957.
17. F. Lafitte, and J.R. Squire. "Second Thoughts on the Willinck Report." Lancet, (1960), **ii**, 538-542.
18. Report of the Royal Commission on Doctors' and Dentists' Remuneration: (Pilkington Report), Cmd. 939, H.M.S.O., 1960. (para. 301).
19. Report of the Royal Commission on Medical Education (Todd Report), Cmd. 3569, H.M.S.O., 1968. Appendix 9, table 3, p.271).

20. Review Body on Doctors' and Dentists' Remuneration, Ninth Report Cmnd. 3600, H.M.S.O., 1968 (para. 100).
 21. S.L. Morrison, *op.cit.*
 22. Review Body on Doctors' and Dentists' Remuneration, Twelfth Report, Cmnd. 4352, H.M.S.O., 1970. (para. 60).
 23. British Medical Journal (Supplement). (1962), 7th July, 2-3.
 24. Report of the Sub-Committee on the Field of Work of the Family Doctor. (Gillie Report), H.M.S.O., 1963.
 25. Working Party on General Practice, (Commentaries), H.M.S.O., July 1964.
 26. British Medical Journal. (Supplement). (1964), 27th June, 262.
 27. *Ibid.*
 28. *Ibid*, (1964), 11th July, 24.
 29. *Ibid*, (1964), 5th December, 201.
 30. *Ibid*, (1965), 8th March, 89-91.
 31. *Ibid*, (1965), 20th March, 101.
 32. *Ibid*, (1965), 5th June, 241.
 33. *Ibid*, (1965), 16th October, 157.
 34. Review Body on Doctors' and Dentists' Remuneration, Seventh Report Cmnd. 2992, H.M.S.O., 1966.
British Medical Journal (Supplement) •
 36. *Ibid*, (1967), 21st January, 22.
 37. *Ibid*, (1967), 25th February, 60-61.
 38. *Ibid*, (1967), 24th June, 177-178.
 39. *Ibid*, (1967), 15th July, 39.
 40. British Medical Association, Memorandum of Evidence to the Review Body on Doctors' and Dentists' Remuneration, November, 1967.
 41. British Medical Journal (Supplement) (1968), 3rd February, 30-31.
 42. *Ibid*, (1968), 20th April, 77.
 43. Review Body on Doctors' and Dentists' Remuneration, Ninth Report, Cmnd. 3600, H.M.S.O., 1968.
 44. British Medical Journal (Supplement). (1968), 29th June, 234.
 45. *Ibid*, (1968), 6th July, 43.
 46. *Ibid*, (1969), 5th July, 3.
-

47. British Medical Association, Memorandum of Evidence to the Review Body on Doctors' and Dentists' Remuneration, October, 1969.
48. Evidence by the Health Departments to the Review Body on Doctors' and Dentists' Remuneration, 1969. Personal communication from the Department of Health and Social Security.
49. Review Body on Doctors' and Dentists' Remuneration, Twelfth Report, Cmnd. 4352, H.M.S.O., 1970.
50. British Medical Journal. (Supplement) (1970), 13th June, 616.
51. Ibid, (1970), 4th July, 39.
52. Ibid, (1970), 12th September, 87.
53. R. Shannon. "Manpower Planning in the National Health Service" Chapter 3 in Problems and Progress in Medical Care, (ed. G. McLachlan), Third Series. Nuffield Provincial Hospitals Trust, O.V.P., 1968.
54. W. Bed'erman • Planning Education for Economic and Social Development, O.E.C.D., 1962, (p.97)
55. Working Party on General Practice, (Commentaries), H.M.S.a., July, 1964. (para. 17)
56. K.R. Hill. "The Need for More Medical Schools" Lancet, (1964), ii, 517.
57. "Kent'S Shortage of S.Ps. May Pinpoint a National Trend" Pulse, (1970), 21, 3.

TABLE 1.1: DISTRIBUTION OF NATIONAL HEALTH SERVICE PATIENTS

AND AVERAGE LIST SIZES, BY TYPE OF PRACTICE AREA, 1952 - 1969

(England and Wales)

Source: Annual Reports, Ministry of Health

Year	Percentage of patients in areas:			Average number of patients per principal in areas:			
	Designated	Open and Inter-mediate	Restricted	Designated	Open and Inter-mediate	Restricted	All Areas
1952	51.5	44.1	4.4	2,851	2,184	1,581	2,436
1953	38.9	56.4	4.5	2,726	2,183	1,594	2,324
1954	27.3	67.5	5.2	2,741	2,228	1,546	2,293
1955	23.4	72.0	4.6	2,736	2,229	1,554	2,283
1956	21.7	73.4	4.9	2,711	2,234	1,548	2,272
1957	19.4	75.6	5.1	2,659	2,264	1,517	2,273
1958	18.6	76.4	5.0	2,627	2,247	1,594	2,267
1959	19.9	74.9	5.2	2,745	2,251	1,575	2,282
1960	20.1	74.5	5.4	2,723	2,257	1,603	2,287
1961	17.1	78.3	4.6	2,742	2,272	1,563	2,292
1962	17.6	76.4	6.0	2,744	2,297	1,608	2,304
1963	19.2	74.6	6.2	2,748	2,313	1,652	2,326
1964	20.9	70.6	8.5	2,768	2,359	1,747	2,362
1965	24.7	67.0	8.3	2,826	2,393	1,758	2,412
1966	29.7	62.2	8.1	2,845	2,407	1,807	2,453
1967	33.7	58.0	8.3	2,840	2,410	1,837	2,472
1968	37.9	54.6	7.4	2,819	2,395	1,811	2,477
1969	36.7	55.5	7.8	2,817	2,401	1,865	2,479

Note: the upper limit of restricted areas was raised in 1964 from 1,500 to 1,800.

TABLE 1.2: DISTRIBUTION OF PRINCIPALS PROVIDING UNRESTRICTED SERVICES BY TYPE OF PRACTICE AREA, 1952 - 1969
(England and Wales)

Source: Annual Reports, Ministry of Health

Year	Designated		Open and Intermediate		Restricted		All Areas	
	No.	%	No.	%	No.	%	No.	%
1952	7,596	44.0	8,496	49.2	1,180	6.8	17,272	100
1953	5,983	33.2	10,861	60.1	1,200	6.7	18,044	100
1954	4,224	22.8	12,863	69.5	1,426	7.7	18,513	100
1955	3,671	19.5	13,862	73.7	1,284	6.8	18,817	100
1956	3,484	18.2	14,323	74.7	1,373	7.1	19,180	100
1957	3,218	16.6	14,748	75.9	1,471	7.5	19,437	100
1958	3,101	15.7	15,181	77.1	1,403	7.2	19,685	100
1959	3,269	16.6	14,988	75.9	1,488	7.5	19,745	100
1960	3,340	16.8	15,049	75.5	1,539	7.7	19,928	100
1961	2,888	14.3	15,946	79.0	1,354	6.7	20,188	100
1962	2,997	14.7	15,571	76.6	1,757	8.6	20,325	100
1963	3,305	16.2	15,268	75.0	1,776	8.7	20,349	100
1964	3,619	17.9	14,130	70.7	2,317	11.4	20,246	100
1965	4,225	21.1	13,510	67.5	2,292	11.4	20,027	100
1966	5,078	25.6	12,578	63.4	2,188	11.0	19,844	100
1967	5,829	29.4	11,808	59.5	2,212	11.1	19,849	100
1968	6,656	33.3	11,284	56.5	2,030	10.2	19,970	100
1969	6,499	32.3	11,532	57.3	2,102	10.4	20,133	100

Note: the upper limit of restricted areas was raised in 1964 from 1,500 to 1,800.

TABLE 1.3: ANNUAL NET VARIATIONS IN THE NUMBERS OF PRINCIPALS
PROVIDING UNRESTRICTED SERVICES BY TYPE OF PRACTICE AREA, 1952 - 1969

(England and Wales)

Source: Annual Reports, Ministry of Health

Year	Designated	Open and Intermediate	Restricted	All Areas
1952-53	-1,613	+2,365	+ 20	+ 772
1953-54	-1,759	+2,002	+226	+ 469
1954-55	553	+ 999	-142	+ 304
1955-56	- 187	+ 461	- 89	+ 363
1956-57	266	+ 425	+ 98	+ 257
1957-58	117	+ 433	- 68	+ 248
1958-59	+ 168	193	+ 85	+ 60
1959-60	+ 71	+ 61	+ 51	+ 183
1960-61	- 452	+ 897	-185	+ 260
1961-62	+ 109	375	+403	+ 137
1962-63	+ 308	303	+ 19	+ 24
1963-64	+ 314	958	+541	103
1964-65	+ 609	800	- 25	219
1965-66	+ 853	- 932	-104	183
1966-67	+ 751	770	+ 24	+ 5
1967-68	+ 827	524	-182	+ 121
1968-69	157	+ 248	+ 72	+ 163
1969-70*				+ 225
Sub-totals:				
1952-61	-4,708	+7,450	+174	+2,916
1961-69	+3,614	-4,414	+748	52

*Estimate by the Under-Secretary, Department of Health and Social Security, in a written reply on January 14th, 1971. (Source: The Times, January 15th, 1971). The figures for each type of area are not known for this year.

TABLE 1.4:
APPLICATIONS FOR ADVERTISED VACANCIES (SINGLE HANDED PRACTICES
ONLY) IN THE SOUTH EAST LONDON AND KENT EXECUTIVE COUNCIL

Source: Pulse, (1970) Vol. 21, No. 17, p.3

Year	Number of Vacancies	Number of Applicants
1955	5	432
1956	4	348
1957	4	226
1958	4	157
1959	6	107
1960	4	186
1961	9	190
1962	5	113
1963	4	63
1964	2	23
1965	10	96
1966	12	84
1967	11	42
1968	9	45
1969	5	42
1970*	2	28

*Up to July 3rd.

CHAPTER 2

CONTROLS AND INCENTIVES*

"£400 wouldn't lure me to Gateshead. By the time they've knocked off $\frac{8}{3d}$, in the pound, what's left isn't worth two hoots."

- G.P. in Derbyshire

A number of different processes in the primary medical care system may affect the distribution of family doctors. Gross gains to the total stock of principals in England may be received from various other stocks. These include: (1) established practitioners in other branches of the medical profession in England, such as hospital doctors or those engaged in public health; (2) younger doctors, including those in pre-registration and junior hospital posts, who are either preparing for a career in general practice or who must shortly make a career decision; (3) established doctors in areas outside England, including N.H.S. principals elsewhere in the United Kingdom as well as doctors in foreign countries; and (4) doctors holding assistantships in general practice in England who aspire to principal status. In 1967-68 a total of 1,063 doctors were admitted as principals to the Medical List in England and Wales,¹ of whom 384 entered from source (4) above. Gross additions to the number of principals in any sub-area of England derive from the same sources as for the whole country, as well as from the inflow of principals from other parts of the country. Depletions to the stock of principals in England may result from losses to (1), (3) and, exceptionally, (4) above, and also from deaths and retirements. Losses from sub-areas of the country may also occur to each of these destinations, as well as to other parts of the country. In 1967-68 a total of 975 withdrawals from the Medical List were recorded.²

The net result of these gains and losses determines the number of principals in the country as a whole and in defined sub-areas of it. The failure of certain areas to achieve or maintain a minimum number of principals, relative to population size, is therefore to be found in the inter-play of these processes; and, likewise, the solution to the maldistribution of practitioners must be sought in the selective manipulation of one or more of them. The post-war history of manpower policy suggests that greater effort has been expended, at national and regional level, on

*All regulations, fees, allowances etc. quoted in this chapter are correct at 31st March 1971.

stimulating the gains rather than controlling the losses. Nationally it has been found easier to increase the output of the medical schools³ and to adjust the quota of immigrant doctors⁴ than to restrict emigration,⁵ and at the local level the designated areas and initial practice allowances were justified originally as incentives for encouraging movement into under-doctored areas rather than motivating doctors to remain in them. Some of the components of loss (notably death, but also retirement) are either impossible or very difficult to control, but it seems that the potential benefits to be derived from restricting rather than encouraging mobility have not received the consideration they merit. The desired doctor/population ratio can be maintained in any area either by having a relatively static group of principals with low rates of input and output, or by accepting a relatively mobile population of doctors and maintaining the level by a higher rate of input to balance the correspondingly high losses. Quite apart from the medical and social consequences of the latter solution, there are general grounds for considering that such a system of high mobility is potentially liable to instability and may be costly to monitor and correct. It follows also that, if it is regarded undesirable for doctors to be highly mobile, we cannot look to internal migration of principals within England to provide rapid corrections for deviations from desired area levels. The failure to achieve or maintain the desired stock of principals in any area may thus lie as much in the inability to retain those who once practise there as in the incapacity of the area to attract principals in the first place, and there are consequently good grounds for encouraging existing principals and assistants within an under-stocked area (as defined) to remain there. That this is the case in many parts of England is demonstrated in Chapter Six, where it is shown that *all* the standard regions and geographical counties in the country have in the past attracted enough doctors to ensure current average lists of less than 2,500 if they had only been able to retain a sufficiently large proportion of them.

This chapter is concerned with the mechanisms of intervention, available either to central government or to a specially constituted body, which may be used to stimulate the supply and to control the losses of practitioners at the local level, and with the extent to which these have succeeded in effecting a desired redistribution of family doctors,

The Mechanisms of Intervention Currently in Use

The entry of doctors into general practice in any area is under the statutory control of the local executive council (which usually work in these matters in close collaboration with the local medical committee) and

the Medical Practices Committee, and may take one of several forms depending upon the situation. In the case of the death or resignation of a practitioner the executive council must **immediately** inform the M.P.C. of the vacancy, and report on the need for filling it. If the council considers that a successor is not needed the report may recommend that the practice should be dispersed (in the case of a single-handed practice) or that the remaining partners should succeed to the practice (in the case of partnerships). If, however, the council feels that the vacancy should be filled, then either the existing partners appoint a successor to the vacant partnership, or, in the case of a single-handed practice, the Medical Practices Committee appoints a successor after receiving the views of the executive council and the local medical committee. The M.P.C. retains control over the admission of new partners to the medical list in restricted and intermediate areas, but provided the proposed partner is fully qualified the Committee would never influence existing partners in their choice of a new colleague.

Another type of entry into general practice is created when an executive council, in consultation with the L.M.C., considers that another doctor is needed in the area. The procedure for giving public notice of the vacancy and for the selection of candidates is the same as that for the replacement of single-handed practitioners, with the M.P.C. making the final selection of the doctor appointed. In addition, a doctor may himself apply for admission to the medical list of an executive council, and in such cases the council, again in consultation with the L.M.C., considers the application and recommends to the M.P.C. whether or not it should be allowed. The Committee is not bound to accept the council's recommendation, but the only statutory ground for refusing is that it considers that the area already has an adequate number of doctors - that is, when the area is classified as restricted or intermediate.

The power of the Medical Practices Committee to refuse the admission of new (and sometimes replacement) doctors in any area has, from time to time, been the cause of disquiet among the medical profession, especially when the criteria defining the different types of practice areas have been changed to increase the number of areas over which the Committee has some control. It was shown in Chapter One how the British Medical Association took some time to become reconciled to the existence of the Committee in the early years of the N.H.S., and even in 1970 the same concern has been expressed.⁶ In fact the legal powers of the Committee have not changed since its inception in 1948, but as the number of restricted areas has increased during the last two decades so its effective territory of control has widened.

Yet it is, of course, only in this way that the M.P.C. can exert an influence on the dispersion of doctors, and it will be shown later in this chapter that, if anything, the Committee has probably not been rigorous enough in its application of negative control.

Turning from the controls to the incentives, the most important inducement which is employed to stimulate doctors into moving to the areas with the greatest manpower difficulties is the designated areas allowance, and in Chapter One we traced the background history of events which culminated in the introduction of the allowance following the Family Doctor Charter of 1965. The allowance was priced at £400 by the Review Body in May 1966, and was paid from 1st October of that year, albeit at a reduced rate of £200 for the first six months. The full rate of £400 was paid from 1st April 1967, and three years later the new two-tier system came into effect, with amounts of £490 and £750 per annum. A doctor qualifies for the allowance if he is eligible for a basic practice allowance, and if he practises from a main surgery in an area that has been continuously designated for at least three years (or one year in the case of the higher - type 2 - allowance). Special regulations introduced since 1966 enable the allowance to be paid in full to a doctor whose main surgery is outside a designated area but who has at least 80 per cent of his patients living within such an area, and the allowance is scaled down pro rata to a minimum of 60 per cent. The payment continues for a concessionary period of three years after an area ceases to be designated (two years in case of a type 2 allowance, after which doctors may continue to be eligible for the lower rate), and, once an area has qualified for the payment, a single break in the relevant form of designation for a period of not more than 12 months will be disregarded for the purposes of continuing eligibility. As a result of these rather complex conditions of payment it is, at anyone time, possible for some designated areas to be ineligible for the allowance and, conversely, for doctors in some non-designated areas to be in receipt of it. These discrepancies are quantified later in the chapter. They are important in assessing the effect of the payment upon the distribution of doctors, for it can have had only a slight effect upon areas which did not immediately qualify for the allowance, and virtually none upon those which had only just qualified three years after its introduction.

An area is designated almost entirely on its average list size - that is, when the overspill of patients above an average of 2,500 per

doctor in the area exceeds 2,500 (which is the point at which one incoming doctor could set up a new practice).^{*} It is not, of course, known how individual decisions are taken, but the official reports give the impression that the M.P.C. in England and Wales is somewhat less inclined to take account of the total situation than its counterpart in Scotland.⁷ In deciding whether or not to designate a district, the Scottish M.P.C. considers many factors which vary from district to district. There is no rigid formula, and each case is considered on its merits. As in England, the basic factor in deciding whether or not to designate a Scottish district is the average number of patients per principal in the district, but an adjustment is made for travelling time, and other factors which the Committee takes into consideration include the number of maternity cases dealt with, the number of temporary residents treated, the size of the partnerships, and the amount of time spent on work other than general practice.

In addition to the designated areas allowance, a further financial inducement exists for doctors to move to designated areas - the initial practice allowance, which is payable whether or not the area also attracts the designated areas allowance. Four types of initial practice allowances are paid. Type A is available to doctors who set up a new practice or fill a vacancy in a small single-handed practice; type B is available only for the setting up of a new practice in an area where average lists exceed 3,000; type C is available to a doctor who joins as an extra member of an existing partnership whose average list before his arrival was at least 3,000, and all of whose members qualify for a full basic allowance; and type D is paid only in specific areas, selected by the Department of Health and the Medical Practices Committee, in which rapid development is expected with a considerable influx of population.

The basic purpose of these allowances is to provide an income cushion (for a period of between two and four years, depending upon the type of allowance) for doctors establishing themselves in a designated area, but although the amount of the allowance varies in a complex way from type to type, all except type D are based upon a "reckonable income" of at most £4,000 per annum. The number of doctors in England and Wales in receipt of an initial practice allowance is small

*Although an area is classified almost entirely on list size, The Medical Practices Committee will consider the effect of other relevant factors when these differ significantly from average, and when the classification is borderline on the basic criterion. When considering an individual case the Committee invariably takes account of a wide range of qualitative factors, thereby modifying to some extent the rigidity of the classification, (Personal communication from the Secretary of the Medical Practices Committee.)

In October 1969, for example, only 30 G.Ps. were receiving type A allowances, 2 were in receipt of type B allowances, 150 were receiving type C allowance, and type D was paid to only three G.Ps. Only 35 doctors altogether were thus getting an extra allowance for setting up new practices in designated areas (i.e. types A, B and D combined), and in 1969 the total cost of paying the allowances in England and Wales was only £219,000 - little more than one tenth the cost of the designated areas allowance. The effect of the I.P.A. on the overall distribution of doctors is consequently probably quite small, although a survey conducted by the Health Departments indicates that the type A allowance (which is of much longer standing than the others) has been effective in establishing a number of practitioners in single-handed practice in designated areas.⁹ It is possible that in future the allowance, taken in conjunction with the new levels of the designated areas allowance, will be a realistic inducement to young doctors who wish to establish themselves; but as the B.M.A. pointed out in its Memorandum of Evidence to the Review Body in 1969 the levels of payment are sufficiently low to constitute a considerable risk, and the 'reckonable income' of £2,785 (as in types A and B) is considerably less than the average net income of a general practitioner in the N.H.S.¹⁰

Criteria for Evaluating the Success of the Mechanisms of Intervention

In the previous section we have outlined the existing administrative and financial devices through which some degree of control can be exerted over the geographical distribution of G.Ps. In the remaining part of this chapter we shall attempt to show how effective they have been in bringing about the desired kind of redistribution.* First, however, we must briefly consider what might be meant by an 'improvement' or a 'worsening' in the distribution of family doctors, and what indices might be used to see whether any such changes have in fact been taking place. (It was suggested in Chapter One that virtually no work had been undertaken on the impact which the National Health Service has had on the geographical distribution of medical manpower.)

Even if it could be shown that regional inequalities in geographical distribution are smaller now than they were before the war, it would not necessarily follow that the change was due to the service itself. We do not know what would have happened if the old system had continued. People are more mobile now than they were 30 or 40 years ago,

*The data presented in this chapter are aggregates for the country as a whole. In Chapter Three the analysis is continued for sub-areas of the country.

and it is arguable that some spontaneous improvement would have occurred even if the various controls and incentives had not been introduced. However, by a combination of the analysis of available evidence and common sense judgements on matters where there is an absence of information, it is possible to form some impression of how well the mechanisms have been working. One way of doing this is by looking at the selected indices of distribution for each year since 1948, to see whether any long-term trend towards the equalisation of list sizes is apparent. If such trends can be seen this would be consistent with the proposition that some forms of intervention are at least doing no harm and are probably contributing to the trends. Our belief in the validity of this would be further strengthened if, on examining other professions not subject to the same incentives (e.g. teachers, dentists or hospital doctors), we observed that the equalisation of the ratio of patients to family doctors had proceeded at a greater rate than comparable ratios in these other professions. Another way of assessing the effectiveness of the controls and incentives is by looking in some detail at the changes which have followed the introduction or modification of a particular administrative device, and comparing them with the situation in the period leading up to its introduction. If some significant changes are then observed from about the time of the introduction or modification we could conclude that the innovation itself had probably been instrumental in bringing them about, although once again this could never be proved in any rigorous way. Both of these methods of assessment are used in this chapter, the latter in attempting to trace the effect of the introduction of the designated areas allowance in 1966.

The question of how one can actually gauge the shift in the distribution of doctors is more complex, and it is apparent that by using different methods one can reach different conclusions about what is happening. For even within the very broad aim of securing an equal distribution of doctors in relation to the population (without looking at other factors which may affect workload) there are two major interpretations of what an "equitable distribution" may be, each implying different goals and using different criteria of success. In the first case the goal would be to secure a distribution in which the largest possible number of patients was on lists of less than 2,500. A policy of this kind would aim to limit the extent or spread of the designated areas to as small an area as possible, and hence the evidence for its success would be a decline in the number of such areas, and in the proportions of doctors and patients in them. Even when the ratio of doctors to patients remains

constant throughout the country there is some risk, in pursuing this goal, that the list sizes in those areas that remain designated would increase; and the risk is greater still if, as has been the case in recent years, the national average list size is growing. There is, in other words, a danger that a reduction in the extent of the problem will result in an increase in the depth or intensity of it in the remaining under-manned areas.

In the second interpretation of an "equitable distribution" the goal would therefore be to reduce the range in average list sizes between the best and the worst areas to the smallest possible distance, regardless of the extra number of patients which such a policy would bring within designated areas. The criterion used to judge the success of this policy would be a statistical measure of area variability in average list sizes, ignoring for this purpose the total number of designated areas and the proportions of principals and patients in them.

An ideal policy would seek to eliminate inequalities in both the extent and depth of distribution, but this is only feasible when the national average list size is considerably less than the threshold of designation. If, as in recent years, the national average is hovering just below the threshold, then one's evaluation of the problem of maldistribution may vary quite considerably depending upon which of the two alternative interpretations of an equitable distribution one adopts. The following examples illustrate the point.

Assume first a patient population of 49 million, served by 19,000 doctors. The mean list size would be 2,579. In this situation the aim of the first approach would be to reduce the proportion of patients on lists of 2,500+ to as low as possible, whilst accepting very large lists as the probable price in those areas which are designated. On the other hand, it is arguable that a fairer distribution would be one in which all medical practice areas had an equal list size of 2,579 (or as near to this target as possible), even though it would mean that every practice area was designated and that all patients were on lists above 2,500. The problem would then be extensive throughout the entire country, but no deeper in some areas than in others. It would be theoretically possible, for example, to satisfy the first aim (i.e. to reduce the extent of the problem) by having 95 per cent of the population on an average list size of 2,475 and the remaining 5 per cent on an average list of 12,760. At the other extreme, each medical practice area could have an equal list size of 2,579. By rearranging the existing resources

in these ways either 5 per cent or 100 per cent of the population would be in designated areas; or any number of mid-way points could be specified.

In this example we have taken an **overall** average list **size** in excess of 2,500. If, as actually exists, the average list for the nation is less than this **figure**, then We could in principle distribute the doctors throughout the country in such a way that all patients would be on lists below 2,500, and that all areas would be non-designated. As long as the national average list size remains below the threshold of designation then the goal of equalisation of list sizes can theoretically be achieved without threatening an increase in the extent of the under-doctored areas. However, the nearer the national average list is to the specified threshold, the more perfectly distributed the doctors must be in order to achieve this balance, and in practice a perfect distribution would not occur unless the government assumed totalitarian powers of direction. Since such an acquisition of power is out of the question there will always remain a certain imbalance, and hence the two alternative interpretations of an equitable distribution become relevant. For example, at a time when the national average list size is rising (but assuming that it still remains below the threshold) a reduction in the proportion of principals in designated areas (a desirable goal relative to the first policy) may only be achieved at the cost of increasing the disparity between list sizes in the remaining designated areas and those elsewhere in the country (an undesirable outcome relative to the second policy).

The interest in relating resources to population in this way is not merely academic, for different interpretations of a desirable distribution lead to different conclusions about the existing state of affairs, and it is easy to confuse the two alternatives. As but one example, the B.M.A. has consistently interpreted the increasing number of patients in designated areas as evidence of the failure of the allowance, but in fact it is evidence only of the failure to control the extent of the problem, which, as we have seen, may not be the best aim at a time when list sizes are increasing across the country as a whole. The Review Body, on the other hand, were clearly concerned in their most recent (twelfth) report with the depth of the problem, and indeed the introduction of a two-tier level of payment can only be justified in terms of this particular interpretation of the nature of the problem.* Yet the effect of reducing the number of areas with very high average lists

*There are other disincentives involved in the allowance which may in practice frustrate the aims. See Chapter 12, page

may, in certain circumstances, be to increase the overall number of designated and open areas. Here, then, is the dilemma. Of the two extreme situations illustrated in the first example above it would presumably be preferable for all patients to be on lists of 2,579 (i.e. for all areas to be designated) than for 95 per cent to be on average lists of 2,475 and the remaining 5 per cent on lists of 12,760. These are, of course, the extreme cases, but they illustrate the point that an increase in the number of patients in designated areas at a time when the national average list size is rising is not necessarily evidence of a worsening distribution of manpower.

These alternatives can now be applied to the actual situation in England. The extent of the problem of designated areas can be measured simply by counting the numbers of such areas at different dates, and also the numbers of doctors and patients in them. Such a count, however, reveals nothing about the relative depth of the problem in different areas, for some areas require proportionally more doctors than others in order to become de-designated. For example, at 31st March 1967* there were 286 designated areas in England, and we have calculated, for each one, the number of extra principals required per million patients in order to reduce the average list size for each area to 2,500. (By expressing the number of extra principals as a rate per million patients the problem of the differential size of the areas is overcome.) The range was very wide - from 2.2 per million patients in Ilkeston, Derbyshire to 198.7 in Stockbridge, Yorkshire, confirming that the general assignation "designated area" conceals substantial quantitative variations from one area to another. If we then take the "worst" 20 per cent of these designated areas (i.e. the 57 areas with the largest shortfalls of doctors per million patients) we find that, at the time in question, they contained a total of 1.7 million patients and required an extra 156 principals to bring the average list in each area down to 2,500. The "best" 20 per cent of the areas (those with the smallest shortfalls per million patients) contained 4.2 million patients and required an extra 89 doctors. If, therefore, these additional 89 doctors had been optimally distributed throughout these "best" areas the effect would have been to remove 4.2 million patients from the total number of those living in designated areas. However, the same number of doctors (89) optimally distributed throughout the "worst" areas would have similarly affected only 1 million patients - less than a quarter as many -

*This is the most recent date for which figures relating to individual practice areas are available. Although the actual figures have undoubtedly changed since then the principle which they are illustrating remains wholly valid.

although they would have helped to reduce the very large lists in these places. Would the additional doctors be preferred in the former areas (aiming to control the extensiveness of the designated areas) or in the latter places (aiming to reduce the depth of the problem over a much smaller geographical area)? Should a redistributive policy seek to reduce the burden in those areas with the largest lists, or to ensure that the greatest possible number of patients is on the lists of doctors in non-designated areas? Is the success of redistribution to be measured in terms of what happens to the "worst" 20 per cent of areas, or to the designated areas as a whole? There are, obviously, no right or wrong answers to these questions; the answer one gives depends upon one's interpretation of an "equitable distribution". The purpose of this section has been to clarify alternative possible interpretations, and to show the differential outcomes of each.

Trends in the Distribution of Primary Medical Manpower

The Extensiveness of the Designated Areas

Tables 1.1 and 1.2 showed that from 1952 onwards the numbers and proportions of patients and principals in designated areas in England and Wales fell steadily each year, until by 1961-62 fewer than a fifth of G.Ps. and patients were in these areas. That year, however, represented the turning-point, and from then onwards the extent of the problem spread rapidly, until by 1968-69 it was more extensive than in any year since 1952. The introduction of the designated areas allowance in 1966 had no immediate affect upon the trend, for between 1966 and 1969 the number of principals in these areas increased by 1,421 (28 per cent) and the number of patients increased by 3.9 million (27 per cent). Neither figure is consistent with an effective control over the extent of the problem, but there are signs within the last year that the trend may have been halted if not actually reversed, for between 1968 and 1969 the numbers and proportions of principals and patients in designated areas actually fell for the first time for eight years. It is, of course, unwise to place too much emphasis upon a single year's figures, and in any case the decrease is only of a small order (about 2 per cent), but it nevertheless represents a disruption of what had been up to that point a regular and steady upward trend for several years.

The same conclusion can be drawn from a simple count of the number of designated areas. Table 2.1 shows the classification of practice areas in England at the start of each year between 1966 and 1970. The total number

of practice areas decreased from year to year due to the amalgamation of several areas into larger units, but notwithstanding this fact the number of designated areas rose from 241 in 1966 to 323 in 1970, and from 14 per cent to 20 per cent of the total number of medical practice areas. The increase is not related to changes in the threshold of designation since none have been made. As before, however, a halt in the upward trend is clearly seen over the last year of the table (1969-1970), during which the number of designated areas decreased, even though the proportion remained constant at 20 per cent. All the signs therefore point to a recent pause in the expansion of the designated areas, although whether or not it will prove to be permanent cannot be determined at this stage.

The figures in Table 2.1 show net annual changes, and give no indication of the gross changes of classification from one year to the next. It is consistent with these figures, for example, for a large number of designated areas to attract sufficient doctors to become de-designated, but for a greater number of open areas to lose doctors and become designated. The problem might then be one of retaining doctors in marginal areas, and different policies might be appropriate. Table 2.2 shows how the English practice areas changed classifications over the period from 1st January 1968 to 1st January 1969. The figures in the table are confined to those areas which could be commonly identified at both dates, and the number of areas in the table is therefore less than the actual number of practice areas in either year. Altogether 249 areas (16 per cent) changed their classification during the year, but twice as many open areas became designated as vice-versa. There was thus a slight interchange between open and designated areas, but there is no evidence in the table of substantial numbers of designated areas becoming de-designated, only to be replaced by newly designated areas. Indeed, of the 289 designated areas at the beginning of 1968, 262 (91 per cent) were still designated by 1969, whereas of the 324 designated areas at 1st January 1969, 62 (19 per cent) had become designated during the course of the year.

The steady annual accumulation of designated areas has meant that areas which were designated when the allowance started in 1966 have generally remained designated, with an increasing proportion becoming eligible for the payment. Table 2.3 shows the classification at 1st January 1970 of areas which were designated at 1st October 1966.* A distinction is made

*1st January 1967 in the case of those areas which were not eligible for the allowance.

--

between those which were and were not eligible for the allowance at each date, and again the figures are limited to areas of England which could be commonly identified at both dates. Of the 242 designated areas at the start of the scheme which could be traced in 1970, a total of 193 (80 per cent) were still designated some three years later; 45 (19 per cent) had become open areas; three were classified as intermediate, and one as restricted. A higher proportion of areas qualifying for immediate payment of the allowance *in* 1966 had remained designated than those not qualifying (88 per cent against 74 per cent), but this does not necessarily reflect badly upon the allowance itself. It is probable that areas which were immediately eligible *in* 1966 presented more chronic and intransigent problems than the remainder, and would therefore not be expected to show the same degree of improvement in the following years. Whether or not even the 12 per cent of these areas which subsequently became de-designated would have done so in the absence of the allowance is a point upon which we can only speculate, but what does not seem to be in dispute is the fact that over the past four years as a whole the designated areas allowance has had little apparent success in controlling the extent of the maldistribution of family doctors.

The Depth of the Problem

In spite of the general and substantial increase since 1966 *in* the numbers of doctors and patients in designated areas, (which we have interpreted as a failure to control the spread of the problem), it nevertheless remains possible for an effective degree of redistribution to have taken place if there is evidence of a trend towards the equalisation of list sizes between different areas. It may be held, in other words, that to stress the extent of the problem is inappropriate at a time when list sizes are creeping up everywhere, and that a more suitable approach would be to examine variations in its depth. In a situation where more and more patients and doctors each year are finding themselves in designated areas it would be an indication of some form of redistribution that the gap between the very best and the very worst areas was narrowing. Unfortunately, the best data are not available to test this. Ideally one would need the range of list sizes for each type of practice area each year, but whereas these figures are available for the country as a whole, it is only the average (mean) list sizes which are known for each class of area. It is, however, possible to use these data to construct a reasonably good picture of what has been happening over the past twenty years.

The general movement in average list sizes since 1952 has been discussed

in Chapter 1, and the full figures are set out in Table 1.1. These show that over the country as a whole (England and Wales) the average list size fell until 1958, and has since been rising; but in the designated areas the trend is different, for in the last four years the average list size in these areas has been falling. This finding may at first seem inconsistent with the earlier discovery that these areas became much more extensive throughout the country during this period, but it well illustrates the two alternative definitions of an "equitable distribution". Whilst the extent of the problem has worsened considerably over the last few years, the situation in those areas which are designated has improved somewhat. The reduction of the average list size in such places is evidence of this improvement, and, although the figures are not available, we would expect to find a reduction also in the proportion of principals with very large lists (say above 3,000). An indication of the trend is to be seen by comparing 1953 and 1969 in Table 1.1. In the earlier year the average list size in England and Wales was 2,324, and 38.9 per cent of the population were in designated areas. By 1969 the national average list size had increased by 155, yet the proportion of patients in designated areas had fallen to 36.7 per cent. At a time when the increase in general practitioners fails to keep pace with population growth this kind of improvement is valid evidence of a movement towards a more equal distribution of available manpower.

An alternative way of plotting the trend towards the equalisation of list sizes is to express the average list sizes in the different types of practice areas as a ratio of the national size (England and Wales = 100), and this is done in Table 2.4 for the years between 1952 and 1969. From about 1953-54 onwards the ratios remained more or less constant for a period of seven or eight years, even though during this period the percentages of doctors and patients in the designated areas were steadily falling. Thus although the extent of the problem was gradually shrinking, the difficulty of large list sizes in those areas which remained designated was not eased. Fewer patients were on large lists, but where such lists continued to exist they were, relatively, as large as ever. In recent years, however, the trend towards equalisation is seen in Table 2.4 as a reduction in the range between the designated and restricted areas. Between 1961 and 1969 the ratio in designated areas fell from 120 to 114, and there was a corresponding increase in the ratio for restricted areas from 68 to 75. In this latter case, however, it must be remembered that in 1964 the Medical Practices Committee changed the upper limit of a restricted area from 1,500 to 1,800 and this fact alone probably accounts for the big jump

between 1963 and 1964 in the ratio for these areas. Nevertheless the trend in the designated areas alone (which have not been affected by changes of definition) is sufficient indication that a gradual movement towards the equalisation of list sizes between different types of practice areas has been underway since about 1961. In that year, for instance, the average list size in designated areas was 75 per cent greater than in the restricted areas, but by 1969 the excess had fallen to 51 per cent. Over the same period the average list size increased by 3 per cent in the designated areas, but by 19 per cent in restricted areas. This trend, which has intensified in the last two years, has now been going for long enough to encourage the hope that it is not a short-lived phenomenon, and that a real process of change is under way to bring about a more equal distribution of family doctors even at a time when there is a national shortage.

The Impact of the Designated Areas Allowance

Our conclusion from the preceding analysis is that although some improvement in the distribution of doctors has occurred since the early 1960s, it is only the changes in the last year which might possibly be attributed to the introduction of the designated areas allowance in 1966. The current movement towards the equalisation of list sizes between practice areas, which started in about 1961, was not noticeably disturbed in 1966, and the spread of the designated areas continued unabated until 1969-70. Even then, we cannot be sure whether the improvement noted in 1969 was due in any way to the allowance, or whether it resulted entirely from the net increase in the number of G.Ps. in 1968 and 1969. There remains, however, the important question of whether the allowance had been in existence for long enough to have any effect upon the most recent figures quoted in this section. Is it too early in 1970 to make a realistic assessment of the impact of the scheme?

We can answer the question by considering what has happened to the areas which were designated at the start of the scheme. Of the 274 designated areas at 1st January 1967, 105 (38 per cent) qualified for the allowance. The figures in Table 2.3 showed that 88 per cent of these areas which could still be traced three years later continued to be designated, and the conclusion is consequently drawn that the effect of the payment was insufficient to actually de-designate any more than a very small proportion of them. However, these areas are by definition chronically under-doctored, and even with the allowance they are unlikely

to become de-designated within a short time. They are for this reason a very stringent measure of success. What of the 169 designated areas in 1967 which did not attract the allowance, and on which the payment could therefore have exerted little influence? Of those which were still designated two years later (i.e. at 1st January 1969) 63 per cent had become eligible for the allowance, and three years later (1st January 1970) the proportion had risen to 89 per cent. If, therefore, we assume that it will in any case take a few years for the inducement to affect the mobility patterns of a significant number of doctors, it is clear that even by 1970 the full impact of the allowance had yet to be felt. It is estimated that only a little over half (55 per cent) of all the designated areas in the country were eligible to receive the allowance in 1970 (Table 2.5), and whilst this is a higher proportion than in 1967 it nevertheless means that for a large number of designated areas the allowance has not yet had time to act as an effective inducement.

Entrance into General Practice

So far in this chapter we have tried to assess the effect on the distribution of G.Ps. of the various forms of control and encouragement which are built into the administration of the National Health Service. This has been done by plotting the changes in the extensiveness and intensiveness of the designated areas since 1952, and also by studying in detail what has happened to these areas since 1966, when the allowance was first introduced. We conclude this chapter by examining the entry of doctors into general practice, and the negative control exercised in this matter by the Medical Practices Committee. How is this control actually exercised, and is it used to the fullest extent to divert incoming doctors away from the restricted and intermediate areas?

A first glance at the number of principals admitted to the Medical List each year might give the impression that the whole problem could in principle be solved by channelling all of one year's intake into the designated areas. During the year ending 30th September 1968, for example, 1,063 principals were admitted to the List in England and Wales, 11 and this compares with the figure of 623 extra doctors needed at that time to bring the average list size of all executive councils in England down to 2,500 (see Chapter 3, page). However, many of these new principals were in any case going into designated areas as replacements for doctors who had died or retired, and cannot therefore be included as part of the potential "pool" from which these areas could be stocked. Many more were going as replacements into open areas, and it would have been pointless if the channelling of these doctors into the designated areas had merely

resulted in many of the open areas themselves becoming designated.

Table 2.6 shows the breakdown of these new admissions in 1967-68 by types of practice (new/replacement) and classification of area. The figures are drawn from the 1967-68 report of the Medical Practices Committee, and they include first admissions and re-admissions of restricted and unrestricted principals.* A total of 403 doctors (38 per cent of all admissions) were admitted to designated areas, almost all of them as replacements for outgoing practitioners. A further 458 (43 per cent) were admitted to open areas, most of them also as replacements. Assuming that a failure to replace doctors in open areas would have resulted in their becoming designated, thereby defeating the object of the exercise, there were at most 201 extra doctors available to go into the designated areas (that is, all those who in fact went into intermediate and restricted areas). The M.P.C.'s control over admissions to these areas may have meant that each admission was justified on the circumstances of the case, and it is therefore possible that a more effective distribution of new principals could not have been achieved by the use of this particular device.** Evidence of the Committee's deliberate bias in favour of the designated areas is to be seen in the greater proportion of admissions to these areas (relative to the total stock of principals) and in the refusal to sanction any new practices in the restricted areas. Yet it is worth noting that if the Committee had refused to accept any replacements in intermediate and restricted areas the effect would have been to redistribute up to 200 doctors from these areas to the designated or open areas, which is precisely the aim behind the designated areas payments. The failure to replace doctors in restricted and intermediate areas would mean either that the practices must be dispersed, or that the remaining partners must take on the extra patients, or that some internal mobility must take place within the areas. In each case the average list sizes of the areas would increase, but this is an inevitable consequence of any redistribution of doctors from restricted and intermediate areas to open and designated areas. Naturally, the designated areas would not have disappeared overnight even if *all* 201 admissions had been diverted into them, but it would obviously have made a significant contribution to the problem, and it seems possible that the control over admissions of new principals to restricted and intermediate areas could be exercised with greater rigour.

*Of the total of 1,063 admissions, 997 were first admissions, mostly of doctors who were formerly in hospital or assistant posts; and 965 of the admissions were of unrestricted principals.

**For example, failure to replace these doctors in intermediate and restricted areas might have resulted in their becoming designated or open (for example, in areas with only two or three doctors), in which case the right to the admission of a replacement would be assumed.

A second route into general practice is as an assistant, but this route is not directly controlled by the Medical Practices Committee: a doctor wishing to employ an assistant for more than three months merely requires the approval of his executive council, although he may subsequently appeal to the M.P.C. if his request is refused.* The salaries of assistants are paid directly by the principals who employ them, and an allowance of £640 is paid (as from 1st April 1970) to principals employing full-time assistants who have list sizes above 3,000. The allowance is raised to £895 if the principal is also receiving a designated areas allowance. Although fewer doctors nowadays are prepared to accept positions as an assistant because of the ease with which ordinary and salaried partnerships can now be obtained, an assistantship remains the route of entry into general practice for a significant number of doctors. In most cases, however, it is now a short-term appointment before entering the Medical List. No figures are available of the average length of time spent as an assistant, but between October 1967 and October 1968**395 doctors became assistants and 209 assistants became principals out of a total number of 758 assistants in October 1967. Although this total contained an equal number of men and women, the male assistants who became principals during the year outnumbered the females by three to one, and it would therefore be safe to assume that at least for men aiming to make a full-time career as a principal the average time spent as an assistant is quite short.

The normal approval of the executive council and, where necessary, the Medical Practices Committee, must be obtained before an assistant can be admitted to the Medical List, and by this means an indirect entry to practice in well doctored areas is avoided. Nevertheless, it seems that the geographical distribution of assistants might be an important link with the ultimate distribution of principals entering the List. In 1967-68, for example, just over a third of the doctors who became assistants were under 30 years of age and almost two-thirds were under 35. These younger doctors have a greater potential for geographical mobility than older established doctors (Chapter 5), and if they can be encouraged to move to assistantships in the less well doctored areas the prospects

* Paragraph 8(4)(b) of the Terms of Service (Schedule I to SI 1210), 1966. It is understood that this appeals procedure is rarely used (personal communication from the Department of Health and Social Security).

**Information for the year 1968-69 was not included in the Annual Report of the Department of Health for 1969.

of their becoming principals in those areas seem good. Whatever one may feel about an area before living in it, most people seem to be reasonably attached to their localities after living there for a while.¹³ In 1967-68 almost 400 doctors became assistants, and whilst this number alone would not completely eliminate the designated areas it would make a substantial improvement if they were all eventually to become principals in designated areas. Where, then, are the assistants practising?

Figures are not available of the distribution of assistants by type of practice area, or of the executive council areas into which they move, but the total number of assistants in practice each year is analysed in this way. Table 2.7 shows the distribution by standard regions of the 657 assistants employed in England at 1st October 1969, including the 17 who were also practising as principals. Over half of all the assistants were in the South Eastern region and 93 of them were in Inner London - an Executive Council which in 1969 contained no designated areas. South East London, South West London and Middlesex together accounted for a further 135 assistants in the South Eastern region, and these three Councils each had a lower than average proportion of principals in designated areas in 1969. By contrast the West Midlands, which in 1969 had the highest proportion of principals in designated areas, contained only 50 assistants, and the two "worst" counties of the region, Staffordshire and Warwickshire, between them had only 29 assistants. A similar picture obtained in other regions and counties with heavy concentrations of doctors in designated areas. The East Midlands had 35 assistants, of whom only 9 were in Leicestershire, 5 in Northamptonshire, and 6 in Derbyshire; the Northern region had 38 assistants, of whom only 16 were in Durham; and Yorkshire/Humberside had 50 assistants. East Anglia contained few assistants, but the South West, which has no regional manpower problems, had as many assistants as any region except the South East. When the assistants are expressed as a percentage of all principals in each region (last column, Table 2.7) the three Southern regions are seen to have had the highest proportions, even though they each had regional list sizes below 2,500 in that year. These figures probably reflect the greater difficulty of moving from assistant to principal in the South of England, and the consequent tendency for doctors to spend more time as assistants in these regions. This would explain the greater number of assistants at any moment in time, but it reinforces the fact that these doctors tend to be located in regions which have the least need for them, and which offer fewest opportunities for promotion.

The significance of the geographical distribution of assistants is two-fold. In the short-term, assistants provide an extra pair of hands and ease the workload of principals. In the longer term, assistants become principals themselves in a fairly short time, and, as we have suggested, the more assistants that can be employed in the chronically under-doctored areas the more are likely to become principals there. On both counts the geographical distribution of assistants is seriously discrepant with an optimum distribution. In general, regions and counties with the greatest shortages of doctors have the lowest numbers of assistants, and conversely areas with the most assistants (particularly the South East) are relatively well supplied with doctors. Unlike the admissions to the Medical List, we have no clear idea of the general grounds on which an executive council (and, on appeal, the Medical Practices Committee) decides either to accept or reject an application to employ an assistant, and since the distribution of assistants by type of practice area is not published we do not even know whether any serious attempt is made to control the number of assistants going into restricted or intermediate areas. In the absence of such knowledge it would be unwise to place too much emphasis on the possible benefits which might result from a more rigorous control by the M.P.C. over the location of assistants, but the situation outlined in this section at least gives rise to the question of whether decisions about the employment of assistants take sufficient account of national manpower requirements.

Summary

A number of different processes in the primary medical care system may affect the distribution of family doctors. Changes in the number of doctors in any defined area are the net result of gains and losses to and from various other sources (including other areas of the country), but current manpower policy aims more to stimulate the gains than to control the losses. In fact, however, the failure to achieve or maintain the desired number of principals in an area may lie as much in the inability to retain those who **once practise** there as in the incapacity to attract new principals in the first place, and there are general grounds for holding that an equal distribution **is more** likely to be achieved if mobility is kept at a low level.

The movement and settlement of doctors is thought to be influenced in part by the controls and incentives manipulated either by government or by specially established bodies. The element of control is exercised by the Medical Practices Committee, whose members have the statutory

power to refuse doctors' applications for admission to the Medical List in areas which, in the Committee's opinion, already have a sufficient number of doctors. The incentives take two main forms: the first, an Initial Practice Allowance to provide an income "cushion" for doctors setting up practice in designated areas, and the second, the Designated Areas Allowance, first introduced at a flat rate in 1966, and amended in 1970 to a two-tier payment providing an increased incentive in areas characterised by very high average list sizes. In assessing the impact of these controls and incentives on the distribution of medical manpower, two methodological problems must be noted. First, there is the difficulty of deciding whether any observed changes in the distribution of doctors can really be attributed to these measures, or whether the changes would have happened in any case. The question can never fully be resolved, but some insight can be gained by tracing area trends since the inception of the National Health Service, and also by examining in detail the rate of the designated areas following the introduction of the allowance. The second difficulty concerns the measures used to plot changes in the distribution of doctors, and the different perspectives created by different measures. A distinction is drawn between the extensiveness of the designated areas (measured by such indices as the number of these areas and the proportions of principals and patients in them) and the intensiveness or depth of the problem (measured by the range between the highest and the lowest average list sizes). It is possible for the spread or extensiveness of the designated areas to be confined to quite a small area whilst accepting some extremely large list sizes as the price in those places which are designated; and conversely, the price of eliminating these very high list sizes at a time when the population is growing at a faster rate than the total stock of doctors may be an increase in the number of designated areas and of patients and doctors in them (depending upon the average list size for the country as a whole).

Using these two alternative definitions of an "equitable distribution", the evidence shows that the extent and coverage of designated areas diminished each year between 1952 and about 1961, but that there has since been a reversal of the trend, with fairly large annual accretions to the total number of designated areas, and to the proportions of doctors and patients contained in them. There are, however, some recent signs (first glimpsed in 1968 and repeated in 1969) that this upward trend may have been arrested, although it will be several years before any permanent change can confidently be assumed. The introduction of the designated areas allowance in 1966 does not seem to

have had much effect upon the extent of the problem, for almost nine out of every ten areas which attracted the allowance in 1966 were still designated at the beginning of 1970. The slight improvement since 1968 may have been due in part to the effects of the allowance, but it is impossible to say with any certainty how much is also due to the net increase in general practitioners during the last two years. It is, in any case, too soon after the introduction of the allowance to expect any dramatic improvements, not only because the situation is too complex to be changed overnight, but also because even by 1970 the full impact of the allowance had yet to be felt. Because an area must be continuously designated for three years before becoming eligible for the allowance there has always been a gap between the total number of areas and those eligible for the allowance, and even by 1970 only a little over half (55 per cent) of all the designated areas in England were attracting the allowance.

In spite of the substantial increase in the numbers of doctors and patients in designated areas since about 1962 (which we have interpreted as a failure to control the spread of the problem), there has nevertheless been a slight improvement in the depth of the problem during this period. In other words, although a greater area of the country is now designated than in 1962, the range between the average list sizes in designated and restricted areas has narrowed over this period, having remained more or less constant during the previous decade. Indeed, the average list size in designated areas has actually been falling in the last four years, in contrast to an above-average rate of increase in restricted areas. The reclassification of restricted areas in 1964 doubtless added a spurious semblance of acceleration to the process, but the trend has now been going for long enough to encourage the hope that it is not a short-lived phenomenon, and that a real process of change is under way to bring about a more equal distribution of family doctors even at a time when there is a national shortage.

Finally, there is some evidence that doctors entering general practice, whether as new principals or as assistants, could make a significant contribution to the under-doctored areas if they could be persuaded to practise in them. In the case of admissions to the Medical List, we merely point to the apparent lack of consistency between the policies of the Department of Health and the practices of the M.P.C. in this respect. In the case of assistants entering general practice, the evidence suggests that more could be done to help the under-doctored

areas by encouraging new assistants to go to them. This would not only provide immediate relief to the doctors in such areas, but might also encourage more assistants to become principals in them. At present a doctor who wishes to employ an assistant for more than three months does not require the consent of the M.P.C. (which only acts as a court of appeal), but the only direct financial inducement for doctors in designated areas to take an assistant is an extra £255 on the assistant's allowance. There seems to be a good case for further encouraging G.P.s. in designated areas to employ assistants, both by increasing the allowance in those areas, and by tightening the control of the Medical Practices Committee over the location of assistants.

References

1. Annual Report of the Department of Health and Social Security 1968
Cmnd. 4100, H.M.S.O., 1969. (Table 7, page 91 •
2. Ibid.
3. K.R. Hill. "The Need for More Medical Schools" Lancet, (1964),
ii, 517.
4. O. Gish "Alien, Old Commonwealth and New Commonwealth Workers"
Race, (1968), 9, 520-522.
5. B. Abel-Smith and K. Gales British Doctors at Home and Abroad.
Codicote Press, 1964.
6. British Medical Journal (Supplement). (1970), 4th July, 33.
7. Twentieth Report of the Scottish Medical Practices Committee
Reprinted as Appendix III in the British Medical Association
Memorandum of Evidence to the Review Body on Doctors' and Dentists'
Remuneration, October 1959.
8. Unpublished data, Department of Health and Social Security.
9. Quoted in the Review Body on Doctors' and Dentists' Remuneration,
Twelfth Report, Cmnd. 4352, H.M.S.O., 1970. (Para. 151).
10. British Medical Association, Memorandum of Evidence to the Review
Body on Doctors' and Dentists' Remuneration, October 1969.
(Para. 50).
11. See 1.
12. Ibid, Table 5, page 89.
13. Community Attitudes Survey I: England Research Report for the
Royal Commission on Local Government in England. H.M.S.O., 1969.

TABLE 2.1:
CLASSIFICATION OF PRACTICE AREAS AT 1st JANUARY 1966-1970
(England)

Source: Medical Practices Committee Lists

Year	TYPE OF AREA:								All Areas	
	Designated		Open		Intermediate		Restricted			
	No.	%	No.	%	No.	%	No.	%	No.	%
1966	241	14	662	38	253	15	572	33	1,728	100
1967	274	16	612	36	278	16	557	33	1,721	100
1968	318	19	534	32	289	17	517	32	1,658	100
1969	332	20	467	29	329	20	493	31	1,621	100
1970	323	20	425	27	330	21	508	32	1,586	100

TABLE 2.2:
COMPARATIVE CLASSIFICATION OF PRACTICE AREAS AT 1st JANUARY 1968 AND 1969
(England)

Source: Medical Practices Committee Lists

Classification at 1st January 1968	CLASSIFICATION AT 1st JANUARY 1969:				All Areas
	Designated	Open	Intermediate	Restricted	
Designated	262	26	1	-	289
Open	57	394	58	1	510
Intermediate	5	40	222	13	280
Restricted	-	4	4	463	511
All Areas	324	464	325	477	1,590

Note: the figures in this table are confined to areas which could be commonly identified at both dates.

TABLE 2.3:
CLASSIFICATION AT 1st JANUARY 1970 OF ALL DESIGNATED AREAS
AT 1st OCTOBER 1966
 (England)

Source: Medical Practices Committee Lists

Areas Designated at 1st October 1966	CLASSIFICATION AT 1st JANUARY 1970:										All Areas	
	Designated				Open		Inter- mediate		Restricted			
	Eligible for Allowance		Not elig- ible for Allowance		No.	%	No.	%	No.	%	No.	%
Eligible for allowance	80	86	2	2	10	11	1	1			93	100
"Not eligible for allowance	99	66	12	8	35	23	2	2	1	1	149	100
All designated areas	179	74	14	6	45	19	3	1	1		242	100

Note: the figures in this table are confined to areas which could be commonly identified at both dates •

... As at 1st January 1967

TABLE 2.4:
AVERAGE LIST SIZE BY TYPE OF PRACTICE AREA AS A RATIO
OF THE NATIONAL SIZE, 1952-1969
 (England and Wales = 100)

Source: Annual Reports, Ministry of Health

Year	Designated	Open and Intermediate	Restricted
1952	117	90	65
1953	117	94	69
1954	120	97	67
1955	120	98	68
1956	119	98	68
1957	117	100	67
1958	116	99	69
1959	120	99	69
1960	119	99	70
1961	120	99	68
1962	119	100	70
1963	118	99	71
1964	117	100	74
1965	117	99	73
1966	116	98	74
1967	115	97	74
1968	114	97	73
1969	114	97	75

TABLE 2.5:
DESIGNATED AREAS ELIGIBLE FOR THE ALLOWANCE, 1967-1970
(England)

Source: Medical Practices Committee Lists

Date	Total Number of Designated Areas	Areas Qualifying For Allowance No. %
1st January 1967	274	105 38
1st January 1968	318	125 39
1st January 1969	332	184 55
1st January 1970	323	178 55

TABLE 2.6:
ADMISSION OF PRINCIPALS TO THE MEDICAL LIST BY
NEW/REPLACEMENT PRACTICES AND TYPE OF PRACTICE AREA, 1967-68
(England and Wales)

Source: Annual Report of Medical Practices Committee, 1967-68

Type of Practice Area	TYPE OF PRACTICE			Admissions as Percentage of All Principals at 1st October, 1969
	New Practices	Replacements	Total	
Designated	27	376	403	6.1%
Open	22	436	458	5.7%
Intermediate	5	117	122	3.7%
Restricted	-	79	79	3.9%
Total	54	1,008	1,062{c	5.3%

*The total number is given as 1,063 in the annual report of the Department of Health (1968).

TABLE 2.7:

NUMBER OF ASSISTANTS AT 1st OCTOBER 1969 BY STANDARD REGIONS

(England)

Source: Unpublished data. Department of Health and Social Security

Standard Region	Assistants No. %		Assistants as Rate Per Thousand Principals
North	38	6	29.0
Yorkshire/Humberside	50	8	26.1
East Midlands	35	5	26.5
East Anglia	21	3	30.1
South East	334	51	45.4
South West	66	10	38.6
West Midlands	50	8	25.4
North West	63	9	24.1
Total. England	657	100	34.8

CHAPTER 3

THE DISTRIBUTION OF PRINCIPALS

"Where are the designated areas? I just always think of Birmingham."

- G.P. in Wiltshire

"Lord knows. In Wigan, I suppose."

- G.P. in Sussex

In the previous chapter we attempted to operationalise the concept of "the distribution of doctors" by describing alternative ways of defining inequalities of distribution.* On the one hand we may be concerned with the geographical spread of designated areas and seek to contain them to as limited an area as possible; on the other hand we may regard the depth of the problem in some areas as being the more salient, in which case the primary aim would be to reduce the very high list sizes in them. Ideally both types of maldistribution should be eliminated, but as long as the national average list size remains close to 2,500 (and as long as this continues to be regarded as the maximum list "which a doctor can adequately handle) then the effect of securing an improvement along one dimension may be to worsen the other dimension. A very broad summary of the trends examined in the previous chapter is that when the total stock of principals in England started to fall in the early 1960's a reduction in the number of areas with very high list sizes was only achieved at the expense of a rapid increase in the total number of designated areas. Conversely, had it been possible to control this increase, the probable outcome would have been very high list sizes in those places which did remain designated.

The next step must now be taken of applying the analysis to sub-areas of the country, to show exactly where G.Ps. are practising and where the shortages are most acutely felt. At 1st January 1970, a fifth of all medical practice areas were designated, and they contained some six and a half thousand doctors and over eighteen million patients. Where were these areas located, and which ones suffered the greatest shortage of doctors?

*The context of the research obliges us to cast the definition in terms of the numerical relationship between doctors and patients, although the point was made in Chapter 1 that this is merely one of several possible definitions, and may not be the most realistic.

Methods of Measuring Inequalities in the Distribution of G.P.s.

Before starting the analysis some attention must be given to the question of methods. The two alternative ways of defining inequalities of distribution may yield conflicting conclusions with respect to any area or group of areas, for places which have quite large concentrations of doctors in designated areas are not always those with the greatest shortage.* The reasons for this paradox will emerge later, but its truth can be illustrated through the case of the North Riding of Yorkshire, which, in spite of having an average list size of only 2,443 in 1969 (and therefore no overall shortage of doctors), nevertheless had half of all the principals in the county working in designated areas. Conversely, the Southend Executive Council had a short-fall of 16.6 doctors per million population in 1969, even though none of the doctors contracted with the Council were in designated areas. There is thus no single answer to the question of where the under-doctored areas are located, and in this chapter four different approaches will be used, based upon the concepts of extent and depth on the one hand, and absolute numbers against rates on the other:

	<u>Absolute Numbers</u>	<u>Rates</u>
Extent of problem	1	2
Depth of problem	3	4

The concepts of extent and depth have already been discussed at considerable length. In applying them to the geographical location of under-doctored areas we may either count the number of doctors (or patients) in designated areas in each standard region, geographical county, executive council, or whatever area unit is chosen (which is a measure of extent); or we may calculate the short-fall of doctors in the different places (which is a measure of depth). Both methods are valid indicators of a shortage of doctors, but each reveals a different aspect of the problem.

The need to distinguish between absolute numbers and rates is simply to overcome the problem that established and recognised area units (such as standard regions, executive councils etc.) vary enormously in

*Throughout this chapter the phrase "shortage (or short-fall) of doctors" is used to denote the number of extra doctors required in any unit to bring the average list size down to 2,500. The number may be expressed raw, or as a rate per million patients in the unit. Conversely, the "surplus" of doctors in an area is defined as the excess above the number required to achieve an average list of 2,500. The surplus may also be expressed raw or as a rate per million patients.

size, and that direct comparisons cannot therefore be made between them in terms of, say, the number of doctors practising in designated areas. In 1969, for instance, Lancashire had 909 doctors in designated areas and Cambridgeshire had only 11. These absolute numbers may be relevant for analyses at the national level, for they show that, however large a proportion this might represent of all doctors in Cambridgeshire, the contribution of the county to the national situation was negligible. If, however, we wished to know whether the spread of the designated areas was relatively more extensive in the one county than in the other, their differences in size must be controlled by expressing the number of doctors in designated areas as a proportion of *all* doctors in each county. Similarly, the shortfall (or surplus) of doctors in each area unit might be expressed as a raw number or as a rate per million patients in the units.

The first and most simple method of measuring inequalities in the distribution of G.P.s. is to count the number of doctors in designated areas, and to group the figures by standard regions, geographical counties, executive councils, and, in some cases, medical practice areas (cell 1 in the figure). The method shows, with increasing precision as the units get smaller, exactly where these doctors are practising, and is important in relating regional and area analyses to the total national situation. The second method of measuring inequalities in the distribution of family doctors is to express the number of doctors in designated areas as a percentage of all doctors in the unit (cell 2 in the figure). The reasons for doing this have already been discussed. These first two methods, based upon a simple count of the number of doctors in designated areas (whether or not they are receiving the allowance) in whatever geographical units are chosen, describe the extent of the problem throughout the country. From the national perspective they yield critically important indicators of the location of under-doctored areas. But although they faithfully reflect the dimension of extent or spread, they give no clear indication of the depth of the problem in any individual locality, because, as we have already seen, units which contain even quite large proportions of doctors in designated areas do not necessarily have a greater short-fall of doctors than other places with lower proportions. The reason for this apparent illogicality is that whereas the administrative distinction between a designated and a non-designated area is clear and usually unambiguous, the average list size within a designated area may range anywhere from just over 2,500 to 4,000 and beyond. It is thus possible for a unit composed of several

medical practice areas (such as a geographical county) to have quite a large proportion of doctors *in* areas which are "only just" designated (that *is*, with average list sizes only a little above 2,500) and which consequently require relatively few extra doctors to become de-designated; and for another unit to have a much smaller proportion of doctors *in* "heavily" designated areas which would need many more additional doctors to become de-designated. In short, even within the designated areas, which are administratively indivisible units, there *is* a very wide range *in* the shortage of G.Ps.

The third method of measuring inequalities *in* the distribution of G.Ps. overcomes *this* difficulty by stating the number of extra doctors needed *in* a unit to reduce its average list size to 2,500 (cell 3 *in* the figure). This is obviously a very different *kind* of measurement from the first two, and the results which *it* produces are consequently different. It is a good measurement for policy purposes because *it* indicates how many doctors must be attracted to particular areas of the country *in* order to eliminate the designated areas *in* them, and from this point of view *it* is more valuable than a simple count of the number of doctors *in* designated areas.

Two important considerations stem from this approach. Firstly, by calculating the shortfall of doctors *it* is possible to distinguish units requiring extra doctors *in* order to eliminate the designated areas *in* them from those which could achieve the same result merely by redistributing the existing doctors within the unit. Whenever there *is* a surplus *in* any unit it would be possible *in* principle to eliminate all the designated areas *in* that unit merely by rearranging the existing doctors; and *this* can always be done regardless of the actual proportion of doctors *in* designated areas. The extreme example is the case of England as one single unit. In 1969 the average list size for the whole country was 2,495 and hence there was a very small surplus of G.Ps. (35). It would therefore have been possible *in* principle to eliminate all designated areas without the addition of one single doctor! Such a redistribution would be quite impossible *in* practice at this level, but the smaller the unit the greater may be the likelihood of achieving a redistribution of existing doctors.

The second consideration, as we have seen, *is* that even among units which do actually need extra doctors, some need a good deal more than others. This can be put the other way round by saying that for the addition of a given number of doctors, many more people might be brought within list sizes of under 2,500 in one unit than *in* another, and *it*

raises again the question of whether a redistributive policy (assuming it were effective) should aim primarily at reducing the burden in the smaller number of heavily under-doctored areas, or at securing the greatest possible number of patients on lists below 2,500. Examples of how this choice works in practice will be discussed later in the chapter, but immediately the problem arises of comparing the relative depth of the problem between units. The shortfall of 107 doctors in Lancashire cannot be compared directly with the three in Huntingdonshire (1969 figures) because the sizes of the two counties are so very different.

As before, the solution is to standardise, this time for population size, by expressing the shortfall of doctors as a rate per million patients. This constitutes the fourth method of measuring inequalities in the distribution of G.Ps. (cell 4 in figure). Units which have the highest rates are those in which the smallest number of patients would be brought within an average list size of 2,500 or less by the addition of a given number of doctors. In the example just quoted, Lancashire had a shortage of 20 doctors per million patients in 1969 while the shortage in Huntingdonshire was 11 per million.

The Choice of Area Units

Already the reply to the question "where are the under-doctored areas?" is more complex than might at first have appeared. The analysis in this chapter will use four differing ways of answering the question, each presenting a different aspect of the pattern of under-doctored areas. One further complication must first be considered - the choice of appropriate geographical units. The reply to the question "where are the under-doctored areas?" might make reference to standard regions, geographical counties, executive councils, or even medical practice areas. There are other possibilities, but the diversity is limited for practical purposes by the form in which vital information is made available.

There is a clear advantage in first presenting the material on a broad regional scale and then investigating more detailed sub-regional patterns, and this method of attack is adopted here; but it must be understood that the four measures used are not all cumulative between each stage. A simple count of the number of doctors in designated areas (method one) is cumulative. Thus the number of designated doctors in the Northern region is the cumulative total of all such doctors in the five counties of the region, and the county totals are in turn the sum of all the doctors within each executive council. Figures of the shortfall of doctors in each unit (method three) are not cumulative, however, because the larger units often conceal wide and significant differences between their

constituent parts. In the Northern region, for example, the average list size for the region as a whole in 1969 was 2,529 and the absolute shortfall of doctors was 15. One or two of the counties in the region, however, had quite large shortfalls, and the total number of extra doctors required in the region in order to bring the average list size for each county down to 2,500 was 55 - assuming, of course, that there was no movement of doctors from one county of the region to another. When the analysis is further broken down into executive councils the total shortfall was even higher (73), and although the figures for 1969 are not available it is probable that the summation by medical practice areas would have revealed an even higher total.

As this example demonstrates, the smaller the unit chosen, the greater appears to be the national shortfall of doctors. When the largest possible unit is taken - that is, England as a whole - the shortfall in 1969 was zero, because the national average list in that year was 2,495. By standard regions the shortfall was 356; by geographical counties it was 544; and by executive council areas it totalled 660. The elimination of designated areas at a time when the national average list size is only a little below 2,500 thus depends to some extent upon the maximum area within which doctors are prepared to move and settle. If most doctors were willing to settle in any part of England then the problem would be simplified, for at the national level there are (just) enough doctors to eliminate all designated areas. Most doctors are evidently not as mobile as this, but it may be the case that, with an appropriate structure of incentives, they are prepared to consider most places within any region. If such potential could be realised then it will be seen that some regions could eliminate their designated areas by an internal redistribution, without recourse to the influx of extra manpower. If, however, the county is the largest target area for doctors choosing a practice location then the relationship between redistribution and new resources shifts again. The ultimate question raised by this line of thought is: what geographical areas must achieve list sizes below 2,500 in order to be considered adequately stocked? Current policy identifies the medical practice area as the critical unit, but the boundaries of these areas are arbitrarily determined (they are not deliberately planned, for example, to delineate the optimum range of G.Ps.), and it may transpire that they are entirely inappropriate units by which to judge the adequacy of staffing. In short, it is not merely for convenience in presenting data that the analysis will range over different types of geographical units. The different patterns revealed at each successive stage will be of central importance in drawing implications from the survey data about future policy.

The figures in this chapter are drawn from three main sources, each of which is correct to a different date. Figures of the numbers of doctors in each type of medical practice area, by executive councils, are supplied by the Department of Health and Social Security. They are correct at 1st October 1969, and can be used in conjunction with population data to produce the four measures of under-doctoring for executive councils, geographical counties, and standard regions. Secondly, a separate list has been made available by the Medical Practices Committee of the classification of each practice area in the country. This list is correct at 1st January 1970, but it contains no information at all about the number of doctors or patients in each area. The most recent available analysis of this information by medical practice areas was made by the M.P.C. in March 1967, and is the third source of information relating to individual practice areas. It is probable that these figures correspond poorly with the actual situation in 1969, partly because some of the figures were out-of-date even in 1967, and partly because the situation is known to have changed considerably in the intervening years; but they are the best that are available. They will be used sparingly, and with the reservation that they may not provide a very good indication of the current situation.

The Analysis by Standard Regions

Table 3.1 groups the information by the eight standard regions of England.* The first column shows the total number of principals in each region at 1st October 1969, and the second column contains the number of principals within each region who were practising in designated areas at that time (whether or not they were receiving the allowance). Almost a quarter of all the G.P.s. in designated areas were in the large South Eastern region (24 per cent), a fifth were in the West Midlands (20 per cent), and 17 per cent were in the North West. By contrast, the South West contained only 2 per cent of these doctors and East Anglia had fewer than 1 per cent.

When the doctors in designated areas are expressed as a percentage of all principals in the regions the perspective changes (column 3). The South West and East Anglia still had very low proportions (7 per cent and 5 per cent respectively), but the West Midlands stood out clearly as the region with the highest proportion of doctors in designated areas (65 per

*For the purposes of this section the whole of Derbyshire had been included in the East Midland region, and Poole (Dcrset) has been included in the South Western region. Otherwise the regional boundaries used in this analysis correspond exactly with the official definitions (See: Abstract of Regional Statistics, No. 6, Appendix I, H.H.S.O. 1970).

cent), followed by the East Midlands (57 per cent), the North (53 per cent), Yorkshire/Humberside (48 per cent) and the North West (42 per cent). The South East, in spite of having the greatest absolute number of doctors in designated areas, had a proportion well below the national average - only one doctor in five (21 per cent) in the South East was practising in a designated area in 1969. The overall position is seen at a glance from Map 3.1. Immediately the North/South split is apparent. Relative to the number of principals in each region the South of England had many fewer designated doctors than the North, which in turn was slightly better off than the Midlands. The widespread prevalence of designated areas in the West Midlands is particularly noticeable. In all, more than half (52 per cent) of all doctors to the North of a line from the Wash to the Severn were in designated areas in 1969 compared with only 18 per cent to the South, and it can be seen from previous reports of the Department that the gap has been steadily widening over the past few years.

The fifth column of Table 3.1 gives the average number of patients per principal in each region, and the last two columns show the surplus(+) or shortfall (-) of doctors in each region relative to a regional average list size of 2,500 (that is, assuming there was no inter-regional movement of G.Ps.). The absolute surplus or shortfall of doctors for each region is shown in column 6, and column 7 expresses the figures as a rate per million patients in the region. The three Southern regions each had a surplus of practitioners in 1969, which means that all the designated areas within them could have been eliminated by an optimum internal redistribution. The other five regions each had average list sizes above 2,500 in 1969, and between them they would have needed an extra 356 doctors to reduce the regional averages to that figure. By definition, none of these extra doctors could have been found from within the regions, although it is also seen that the requisite number of doctors could have been drawn from among the three Southern regions without raising list sizes there above the threshold of designation. The West Midlands had the greatest absolute shortfall in 1969 (-113 doctors), followed by the North West (-108), the East Midlands (-74), Yorkshire/Humberside (-46), and the North (-15).

When the surpluses and shortfalls are expressed as rates per million patients the two Midland regions stood out dramatically with very high shortfalls indeed. The visual impact of Map 3.2 is strong, confirming that at the regional level the Midlands suffered the most intense deprivations of manpower. Not only were designated areas very prevalent, but list sizes were also very high in comparison with the rest of the country.

The North West had the next highest standardised shortage of doctors (-15.9 per million patients), and then came Yorkshire/Humberside (-9.4) and the North (-4.5). Of the three Southern regions, the South East had a more modest proportional surplus (+9.0) than either East Anglia (+30.2) or the South West (+47.0). The overall national picture (Map 3.2) is consequently one of an increasing shortage of G.Ps. as one moves from the Scottish border to the Highlands, with a relative abundance to the South of the Wash-Severn line. At this regional level, therefore, it can be seen that the depth of the problem of under-doctored areas varies between different parts of the country even when the extent of it appears to be similar. It is seen from Table 3.1, for instance, that 57 per cent of principals in the East Midlands were in designated areas in 1969 compared with 50 per cent in the North and Yorkshire/Humberside combined; yet whereas 74 extra doctors in the former region would have brought some three and a half million patients within a regional average list of 2,500, 61 extra G.Ps. in the latter regions would have done the same for more than eight million patients. It is a question of policy whether, given the option, a hundred new doctors would have been preferred in the East Midlands (which would have eased the intensity of the problem over a smallish area) or in the North and Yorkshire/Humberside (which would have affected patients over a much wider area).

The Analysis by Geographical Counties

We now move from the broad overview of the regional analysis to the finer and more detailed patterns revealed by individual counties. The effect is analogous to that in microscopy, when the focus control is turned further round and new shades and contours spring into view where formerly there had been only an area of apparent uniformity. Table 3.2 sets out exactly the same information as Table 3.1, but this time broken down by geographical counties to reveal the sub-regional patterns.*

The figures help to clarify the components of the gross regional patterns. The South Eastern region was shown to have the largest absolute number of doctors in designated areas in 1969, but several counties in the region had very few. There were no designated doctors at all in Sussex and Inner London, and Oxfordshire (16) and Hiddlesex (38) each made

*All county boroughs have been included with the counties in whose boundaries they lie; the Isle of Wight had been included with Hampshire and the Isles of Scilly with Cornwall; and, because of its size, the geographical county of Yorkshire has been treated as three separate Ridings. In London the boundaries of the metropolitan executive councils have been followed to yield the five "counties" of Inner London North East London, Middlesex, S.E. London and Kent, and S.W. London and Surrey.

negligible contributions to the regional picture. The other counties of the region, by contrast, each had quite large numbers of designated doctors, particularly those in the Eastern part of the region: Essex (174), North East London (254) and South East London and Kent (284) between them contained almost half (47 per cent) of all designated doctors in the region. Of the five counties in the West Midlands, Herefordshire and Shropshire between them contained only 19 doctors in designated areas in 1969, and Worcestershire had 117. About nine out of every ten designated doctors in the region were thus practising in the two counties making up the bulk of the Birmingham conurbation - Warwickshire (621) and Staffordshire (531). In the North West, Lancashire had 909 doctors in designated areas and Cheshire had 194. Of the East Midland counties, Derbyshire (207) and Leicestershire (204) contained the largest numbers of designated G.P.s. but the remaining three counties in the region also had significant numbers - Nottinghamshire (177), Lincolnshire (147) and Northamptonshire (103). The West Riding of Yorkshire accounted for over three-quarters (78 per cent) of all the doctors in designated areas in the Yorkshire/Humberside region; and in the Northern region Durham (422), Northumberland (110) and the North Riding (138) were almost the only scorers. Cumberland and Westmorland between them contained only 31 of these doctors.

Within regions there were thus considerable local concentrations of designated areas, and every region except the East Midlands and Yorkshire/Humberside had at least one county with no designated areas at all. Looking at the country as a whole six counties or clusters of counties seem to have had particularly heavy concentrations of designated areas, together accounting for three-quarters (76 per cent) of all principals in the designated areas of England in 1969. The first cluster centred on the Birmingham conurbation, where the counties of Staffordshire and Warwickshire between them contained almost a fifth (18 per cent) of all designated doctors in England. To the North and East, the counties of Derbyshire, Leicestershire and Nottinghamshire had a combined total of 588 principals in designated areas, making up a second distinct cluster. The third group of counties is located at the Northern and Eastern boundaries of London, where the home counties of Essex, Bedfordshire, Herefordshire, North East London and South East London accounted for a further 16 per cent of all G.P.s. in designated areas in England. Lancashire and the West Riding of Yorkshire each stand alone, by 'virtue mainly of their size, as two further areas with obvious concentrations of designated areas; and a final cluster is made up of Durham and the urban areas of

Northumberland, which together contained about 8 per cent of all designated principals in 1969.

With this distribution in mind the inter-county contrasts can now be made. Map 3.3 shows the percentage of doctors in designated areas in each geographical county, and it is based on column 3 of Table 3.2. In general, the counties with the highest percentages tended to be among those making up the six sub-regional clusters just described, and conversely most counties with very few principals in designated areas also had very low percentages. The reason is that as the units of analysis get smaller so there is a tendency towards a greater homogeneity of population size. Durham stood out as the most heavily designated county in England in 1969, with 82 per cent of its principals practising in these areas. The two heavily designated counties around the Birmingham conurbation also had very high percentages (75 per cent in Warwickshire and 80 per cent in Staffordshire), and in the East Midland cluster Leicestershire (68 per cent) and Derbyshire (60 per cent) were well above the overall national figure. In the home counties, Bedfordshire (79 per cent) had an exceptionally high proportion of principals in designated areas, and although none of the other home counties approached this figure, the percentage was nevertheless high in North East London (54 per cent) and Hertfordshire (49 per cent). Other individual counties with fairly high percentages included Northamptonshire (58 per cent), Worcestershire (45 per cent) and the East and North Ridings (52 per cent and 49 per cent respectively). Lancashire's enormous size reduces the significance of the fact that it had more doctors in designated areas than any other single county, for although the percentage was quite high (45 per cent) it was by no means among the worst counties. Similarly in the West Riding, which had the second largest number of designated doctors, the percentage was only 48. At the other end of the scale, 13 counties had fewer than one in ten of their doctors in designated areas, and of these only Westmorland and Herefordshire lay to the North of a line from the Wash to the Severn. The remainder were located in the South West, East Anglia, and in the Southern home counties.

In all, 25 of the 42 counties of England had average list sizes below 2,500 in 1969, which means that all the designated areas within them could in principle have been eliminated by an internal redistribution of manpower. If the surplus of G.P.s. in each county had in fact been perfectly redistributed, then the overall number of designated principals in England would have fallen by as much as a fifth, for in spite of having list sizes below 2,500 some of these 25 counties contained quite large numbers of doctors in designated areas. Cheshire, for example,

had 194 such doctors, Lincolnshire 147, South West London 146, Hampshire 139, and the North Riding 138. The 17 counties with average list sizes above 2,500 would have needed an extra 544 doctors between them to reduce the county averages to that figure. By definition, none of these extra doctors could have been found from within the 17 counties themselves, although they could theoretically have been drawn from the other counties without raising the average list in any county above 2,500. Moreover, Seven of these 17 counties were in standard regions with an overall surplus of doctors, which means that an internal redistribution **within the regions would have sufficed to redesignate those counties.**

The greatest absolute shortfall of doctors was in Lancashire (107) followed by Staffordshire (74), the West Riding (58), Durham (55) and Warwickshire (51). These five counties, which are all situated in the "black" clusters, accounted for almost two-thirds (63 per cent) of all the extra doctors needed at the county level, confirming that they were indeed among the most under-doctored places in England. It is noticeable that although many of the counties around London contained quite high numbers and percentages of doctors in designated areas, their shortfalls of doctors were generally quite modest. This indicates that the moderately high number of large practices in the South Eastern region as a whole and in some of its constituent counties was offset by other much smaller practices. Thus, Bedfordshire, Hertfordshire, North East London, Buckinghamshire, Essex and South East London together would have needed only about the same number of extra doctors in 1969 as Lancashire alone, and they could all have been supplied from other parts of the region.

When the shortfall of doctors in the counties is expressed as a rate per million patients, a slightly different picture emerges. Staffordshire and Durham continued to have high rates (of 40.0 and 38.4 per million patients respectively), and Warwickshire was also quite high (23.1); but the smaller county of Bedfordshire had moved to the top rank (43.8), whilst the large counties of Lancashire and the West Riding had lower rates than most counties. Once again we can see the dilemma (this time at the county level) of highlighting extent or depth as the **more serious type of inequality.** As an example, an extra 21 doctors in Bedfordshire in 1969 would have brought almost half a million patients within a county average list size of 2,500, whereas five times that number of doctors in Lancashire would have similarly affected eleven times the number of patients. In general, however, there is a fairly high degree of overlap between counties with large concentrations of designated areas and those with high average list sizes, as a visual comparison of

Maps 3.3 and 3.4 clearly shows. In both senses of the term, counties with the greatest manpower problems were concentrated mainly along a line drawn from Kent to Lancashire, with an intensification in the Highland counties and away from the line, in the North East. Counties to the West of a line from about Eastbourne to Chester had problems neither of depth nor of extensiveness (with the exception of Worcestershire), and the same can be said of East Anglia and the Northernmost counties of the country (with the exception of Durham). Counties such as Lincolnshire and the North and East Ridings, which combined fairly high percentages of principals in designated areas with below-average list sizes are uncommon, although they well illustrate the important fact that these two different aspects of under-doctoring do not necessarily coincide.

The Analysis by Executive Councils and Medical Practice Areas

The County figures modify the gross regional patterns in certain important respects, and help to clarify the location of under-doctored areas. Continuing with the earlier analogy, we can now focus the microscope even more finely by examining the situation within the counties themselves, namely in executive council and medical practice areas. Executive council boundaries are almost always co-terminous with those of the county boroughs and county councils (although not every C.B. has a corresponding executive council) and hence they provide a very rough division between large urban areas and the rest of the country. Table 3.3 presents the data for each executive council, this being the smallest unit for which national figures are regularly available. It is clear, however, that even within executive councils the availability of doctors may vary considerably between medical practice areas, and it is for this reason that the Medical Practices Committee's figures (1967) are used in the analysis.* A good illustration is afforded by the situation in Manchester, where 45 per cent of principals were in designated areas in 1969, yet only three extra doctors were needed to reduce the average list size for the city as a whole to 2,500. These figures indicate that the doctors were unevenly distributed throughout the city, and that the effect on the city's average list size of the large proportion practising in designated areas was offset by others with relatively small lists. It was therefore possible for Manchester to maintain an overall average list size of 2,527, even though 110 of the 247 principals in the city were in designated areas. In such cases it is

*In cases where executive councils are also single medical Practice areas (as is the case in many large cities) there are no figures available to show variations within the councils' boundaries.

obviously helpful to have the figures broken down into medical practice areas to show which parts of an executive Council are experiencing the worst deprivations.

The regional and county data highlighted six clusterings of counties with large numbers and percentages of doctors in designated areas, and with substantial shortfalls of doctors. The analysis for executive councils and medical practice areas will be limited to these clusters, for it is in them that the national problem is most acutely represented.

Cluster 1 - The Birmingham Conurbation (Warwickshire and Staffordshire)

These two geographical counties together comprise ten executive councils (the two administrative councils and eight county boroughs) having a total of 1,152 doctors in designated areas in 1969 (which equals 77 per cent of all the principals in the two counties) and a shortfall of 125 G.Ps. at the county level. Over three quarters of the 1,152 designated doctors in the cluster were in fact practising in the eight county boroughs, and only 23 per cent were in the two administrative counties. The problem was thus concentrated mainly in the dense urban areas, with Birmingham (357 doctors in designated areas), Coventry (133) Stoke (107) and Wolverhampton (97) prominent among them. These four cities together contained more than half (54 per cent) of all principals in designated areas in the entire West Midland region. Walsall (64) and West Bromwich (61) came next, and the two smaller county boroughs of Burton and Warley had much lower numbers (24 and 21 respectively). Of the two administrative counties Warwickshire had 131 doctors in designated areas and Staffordshire had 139. Most of the executive councils were wholly designated. With the reservation in mind about the 1967 figures, it is noted that in Birmingham the greatest concentration of doctors in designated areas appeared to be in the Bootle, Longbridge, Oscott, Washwood Heath, Sparkbrook and Deritend areas; in Warwickshire the designated doctors were particularly bunched in Solihull, Rugby, Nuneaton and Sutton Coldfield; and in Staffordshire the greatest concentrations appeared to be in Newcastle and Cannock.

The E.C. in the cluster with the largest absolute shortfall of doctors in 1969 was Staffordshire (26), Birmingham was 22 doctors short, and most of the other county boroughs required between 10 and 15 extra doctors. Warwickshire needed an extra 18 G.Ps. Within Birmingham itself the practice areas with the largest shortages in 1967 were Oscott, Brandwood, Rotten Park, Doddeston, Erdington, and Deritend: in

Warwickshire they were Sutton Coldfield, Nuneaton, Kenilworth and Kingsbury; and in Staffordshire, Cannock, Tamworth and the Lichfield rural district. When standardised for population size, Valsall had by far the highest shortage in 1969 (76 doctors per million patients), and Staffordshire, Wolverhampton and West Bromwich were also high. In many of the executive council areas, however, the rate was much lower. In Birmingham, for instance, it was only 19, and Warwickshire, Coventry, Burton and Warley all had rates below thirty.

Cluster 2 - The East Midlands (Derbyshire, Leicestershire & Nottinghamshire)

This second cluster contains five executive councils (one for each administrative county and one each for Derby and Leicester*), having a total of 588 principals in designated areas in 1969 (which equals 59 per cent of all the principals in the three counties) and a shortfall of 69 G.P.s. at the county level. Unlike the first cluster, where more than three quarters of all the designated doctors were practising in the county boroughs, only a third (35 per cent) of the designated doctors in this case were in the two county boroughs (although the failure to isolate Nottingham city as a separate executive council ensures that this figure is artificially low). We estimate that if Nottingham city were taken as a separate executive council then the proportion of doctors in designated areas practising in the county boroughs would increase to 58 per cent - still less than in Warwickshire and Staffordshire. The E.C.s. with the greatest absolute numbers of designated doctors were Nottinghamshire (177 - of which about 135 were in the city of Nottingham), Leicester (120) and Derbyshire (119). These three executive councils together contained 55 per cent of all designated principals in the entire East Midland region. Looking in greater detail at the medical practice areas in the three administrative counties, the designated doctors in Derbyshire seemed to be particularly concentrated in Chesterfield, Alfreton and Long Eaton in 1967; in Leicestershire they were prominent in Loughborough and North West Leicester; and in Nottinghamshire in the city of Nottingham, Sutton-in-Ashfield, Worksop, Arnold and Kirkby-in-Ashfield.

The E.C. in the cluster with the largest absolute shortfall of doctors in 1969 was Nottinghamshire (33), followed by Derbyshire (13) and Leicester (10). Within Nottinghamshire the practice areas needing the greatest number of extra doctors in 1967 were Nottingham South,

*In Nottinghamshire the county and the City of Nottingham are covered by one single executive council.

Nottingham North East, Worksop and Warsop; and in Derbyshire, Chesterfield Borough and Rural District, Long Eaton and Glossop. When standardised for population size the county boroughs immediately stand out with high rates: Derby (29 per million patients), Leicester (31) and Nottinghamshire (34, due mainly to the effect of the city of Nottingham). Even these rates, however, are not as high as in such cities in the Warwickshire/Staffordshire cluster as Walsall, Wolverhampton and West Bromwich, and this is consistent with the general conclusion that manpower problems are more acute in the West than in the East Midlands.

Cluster 3 - The South East (Essex, Bedfordshire, Hertfordshire, North East and South East London)

These counties together contained a total of 1,025 designated doctors in 1969, or almost half (45 per cent) of all principals. The shortfall at the county level was 100. Since there is only one county borough among these counties with a separate executive council (Southend), the breakdown by executive councils adds virtually nothing to the county analysis. It is necessary therefore to pass immediately to the 1967 figures for the medical practice areas, which show that a mere handful of areas accounted for over a third of all the designated doctors in the cluster. They were: Ilford (64), Hornchurch (47), Luton (57), Romford (43), Walthamstow (42), East Ham (38), Dagenham and Thurrock (37 each), Watford and Bexley (33 each) and Basildon (31). Southend contained no designated areas in 1967. These figures must be treated with extreme caution, for it is known that the situation (especially in South East London) has changed considerably since they were compiled. Nevertheless they indicate one belt of designated areas stretching out from London through Essex, another around the Luton-Watford area, and a third (not covered in the figures mentioned above) in the Medway towns. Most of Kent was free from designated areas apart from the Medway towns, but in Hertfordshire the designated doctors appeared to be distributed throughout most of the county, with a big bunching in Watford.

The shortfalls of doctors in 1967 followed a similar pattern. Luton and Hornchurch would each have needed seven extra doctors to become de-designated; Rochester, Dagenham and East Ham would each have needed five; and in Bexley and Chatham the figure was four. When the shortages are expressed as a rate per million patients some extremely high proportions result, though many of them in areas with very low absolute numbers (i.e. areas with small populations). Rochester (92 doctors per million patients), Chatham (85) and Dunstable (80) had the highest rates, and Basildon (70), Hertford (72), Elstree (74) and Waltham Cross (79)

also had problems in depth.

Cluster 4 - Lancashire

The fourth cluster consists of the administrative county and 17 county boroughs, each representing a separate executive council. In 1969 Lancashire had 909 doctors in designated areas (45 per cent of all principals) and a county shortfall of 107 G.Ps. Just over half (52 per cent) of all the designated doctors were practising in the 17 boroughs, and since these boroughs also contained 59 per cent of all principals in Lancashire there was no tendency for the designated areas to be unduly concentrated within the large towns. Not surprisingly, the administrative county contained the largest absolute number of G.Ps. in designated areas in 1969 (437) followed by Manchester (110) and nine towns or cities with fewer than a hundred such doctors. It is interesting that in 1969 seven of the Lancashire boroughs contained no designated areas at all whilst neighbouring towns, apparently of similar size and composition, had quite large concentrations. In Manchester, for example, 45 per cent of principals were in designated areas and in the nearby towns of Bolton, Bury, Oldham and Rochdale the percentage was virtually 100. Yet in Salford, which literally begins in the centre of Manchester, there were no designated areas at all, and the second major Lancashire city (Liverpool) was also free of such areas.

This odd situation can be explained in part by the distinction between extent and depth, for it is clear that although the designated areas were fairly extensively spread throughout the county, many were "only just" designated and would have required relatively few additional doctors to become de-designated. Thus although the designated/non-designated split reflects a very clear and sharp administrative division, it tends to exaggerate the fairly small differences in average list size which occur between different areas. The tendency is increased when the practice areas involved differ substantially in size, for we have already seen that larger areas often conceal local pockets of deprivation. This can be seen in the case of Manchester and Liverpool, for although the two cities had very different proportions of doctors in designated areas (45 per cent and zero respectively), they had identical average list sizes in 1969 (2,527 and 2,529 respectively) and an equal shortfall of doctors (3). The total number of G.Ps. in both cities relative to population size was thus identical, but the practice areas in Manchester happen to be drawn in such a way that local pockets of need showed up.*

"The "black" areas of Manchester in 1967 were Northenden, Ancoats, Miles Platting, Collyhurst, and Harpurhey. In the administrative county they were Ashton, Widnes, Leigh, Middleton, Huyton and Accrington.

In Liverpool there was presumably a much smaller variation between the different areas of the city, but it would in principle have been possible to redraw the area boundaries in a way that included a large proportion of doctors in areas with high average list sizes. These deprived areas would naturally have been offset by much lower list sizes in the remaining areas. This explanation, however, does not entirely account for the marked unevenness in the distribution of G.Ps. throughout Lancashire as a whole, for some of the boroughs had exceptionally large average list sizes and very high rates of shortfall. Most noticeable among these were Blackburn, Bolton, Oldham, Rochdale and St. Helens.

The shortfall of doctors at the executive council level was 129, of which 77 were in the administrative county. The practice areas with the greatest absolute shortfalls in 1967 were Ashton, Widnes, Worsley, Chadderton, Leigh and Darwen. None of the boroughs had high shortfalls in comparison (Blackburn, Bolton and St. Helens were the highest with eight each), and in five of the boroughs there was a surplus. When the executive councils are standardised for population size, St. Helens, Rochdale and Blackburn each had rates above 50, and Bolton, Bury and Oldham were also quite high. Among the practice areas in the administrative county some extremely high rates were recorded in 1967, although the fact that they were generally in areas with an absolute shortage of only one or two doctors sets them in a proper perspective. It is interesting to note, however, that the shortage of doctors per million patients was 107 in Droylsden, 112 in Darwen, 138 in Chadderton, and 153 in Horwich.

Cluster 5 - The West Riding of Yorkshire

In this 'county' 429 out of the 719 doctors in designated areas (60 per cent) were practising in the eleven county boroughs in 1969. Since these boroughs also contained 56 per cent of all the principals in the West Riding there was (as in Lancashire) no tendency for the designated areas to be unduly concentrated within the large urban areas. The administrative county contained the largest absolute number of G.Ps. in designated areas (290), followed by Sheffield (102), Bradford (92), Leeds (75) and five towns with fewer than forty such doctors. In 1969 three of the boroughs in the Riding had no designated areas at all, although in the case of Dewsbury and Huddersfield, which are also single medical practice areas, the average list sizes were 2,621 and 2,565 respectively. The 1967 data show that the practice areas within the administrative county with the greatest numbers of doctors in designated areas were Hemsworth, Batley, Morley, Castleford and the Rotherham rural district.

The shortfall of doctors at the executive council level was 62, of which 29 were in the administrative county. Sheffield (11 short) and Bradford (8) were the only boroughs with fairly large deficits, and five towns lacked no more than one doctor. Among these, Leeds, in spite of having a third of its doctors in designated areas in 1969, nevertheless maintained an average list size of less than 2,500. The practice areas in the county with the greatest shortfalls in 1967 were Castleford, Bentley, Batley, Conisborough and Dearne. When the E.Cs. are standardised for population size Barnesley had the highest rate (a deficit of 39 doctors per million population), then Doncaster (38) and the administrative county (37); but in all other boroughs the rates were under 30. Among the individual practice areas some extremely high rates were recorded in 1967: the standardised rate in Stockbridge was 199, in Conisborough 153, in Rossington 138, and in Dearne 124. On this criterion these towns have the distinction of being the most heavily under-doctored practice areas in the country, but the dangers of applying the criterion too literally have already been stressed.

Cluster 6 - The North East (Durham and Northumberland)

These two counties together contain nine executive councils (the two administrative counties and seven county boroughs), having a total of 532 G.Ps. in designated areas in 1969 (which equals 62 per cent of all the principals), and a shortfall of 55 doctors at the county level. The breakdown of these figures by executive councils shows that just over half (52 per cent) of 532 designated doctors were practising in the seven boroughs, and since these towns contained only 41 per cent of all principals in the cluster there was a slight tendency for the designated areas to be over-represented in the large urban centres of the North East. The administrative county of Durham contained 201 designated principals and Northumberland had 52. Of the boroughs, Sunderland, with 76 doctors in designated areas in 1969, had the greatest number, followed by Gateshead (42), South Shields (39), Newcastle (35), and Hartlepool (34). Focussing still further on the medical practice areas in the two administrative councils, the designated doctors in Durham seemed to be particularly bunched in Stockton and Easington in 1967, and in Northumberland, in Wallsend, Whitley Bay and Blyth.

The greatest absolute shortfalls of doctors were in Sunderland and Durham county, which between them would have needed an extra 39 doctors in 1969 to reduce their average list sizes to 2,500. By contrast, the shortfall was zero in Newcastle, Gateshead and Northumberland county, and quite low in the remaining E.Cs. Within Durham county itself, the

practice areas with the largest shortfalls in 1967 were Easington, Consett, Stanley and Billingham. When standardised for population size some of the executive councils in Durham had among the highest rates in the country, although in the administrative county itself the rate was moderately low - only 38 doctors per million patients. In Darlington, however, the rate was 66, in Hartlepool it was 51, and in Sunderland it was 55.

The Concentration of Designated Areas in Urban Areas

By showing how the designated doctors were distributed between county boroughs and administrative counties, Table 3.3 provided a rough index of the extent to which the designated areas were concentrated in the large towns. Table 3.4 summarises this situation by showing, for each geographical county, the proportion of all principals and designated principals practising in county boroughs in 1969.*

More than half (58 per cent) of all designated doctors in England were working in county boroughs (as defined) in 1969, but there were wide variations between the counties. In 19 of the 42 counties the proportion was zero, either because the counties did not contain separate boroughs, or because the boroughs did not include any designated areas. At the other extreme, the designated doctors in Cumberland, Norfolk, the East Riding and the "counties" in the G.L.C. area were all practising exclusively in the boroughs. Between these extremes four counties had fewer than half of their designated doctors in boroughs, seven had between 50 per cent and 60 per cent, and the remaining five counties had between 60 per cent and 99 per cent.

It seems, then, that designated G.Ps. were divided fairly equally between the large urban sectors, represented by county boroughs, and the small-town and rural areas contained within the administrative counties. But before we can finally draw such a conclusion we must consider the distribution of all principals, since the real question is whether the boroughs contained a higher proportion of designated doctors than of all G.Ps. The answer, contained in Table 3.4, is that whereas the boroughs had 58 per cent of the designated doctors in 1969, they had only 52 per cent of all the G.Ps., indicating a slight tendency for the designated doctors to be over-concentrated in them. This difference is by no means large enough to conclude that the problem of under-doctored areas is

*This does not apply in the few cases where a county borough does not have a separate corresponding executive council area. The five "counties" in the G.L.C. area have each been treated as though they were single county boroughs. To do otherwise would have grossly distorted the proportion of G.Ps. in large urban areas.

overwhelmingly one of the large towns and cities. However, the Greater London area has an important distorting effect, for if the figures are re-worked to exclude the five London counties we find the boroughs containing 52 per cent of the designated doctors but only 37 per cent of all principals.

Outside the capital, therefore, the under-doctored areas were more heavily concentrated in the large towns than would be expected on a purely random basis; and the Annual Reports of the Ministry of Health, which until 1962 contained the distribution of list sizes for counties and county boroughs, suggest that this has been the case since at least 1954. We can, moreover, see in Table 3.4 those counties for which this was particularly true. Cumberland, Lincolnshire, Norfolk, Worcestershire and the East Riding had more than twice the expected proportion of designated doctors in the boroughs, and the proportion was at least one-and-a-half times greater in Derbyshire, Hampshire, Leicestershire, Northamptonshire, and the North Riding. By contrast, the counties of Devonshire, Essex, Inner London, Somerset, Suffolk and Sussex had no designated doctors at all in county boroughs, even though in most of these counties at least a quarter of all the doctors were practising there. In sum, then, the extent to which the under-doctored areas are concentrated in a predominantly urban environment depends not only upon the way in which an area is defined, but also upon the part of the country in question. Over the country as a whole there is a very slight tendency for the designated doctors to be over-represented in the county boroughs, but outside London the tendency becomes a very marked one indeed.

The Persistence of Under-doctored Areas

There is a moderately large annual shift in the classification of practice areas, and evidence was presented in Chapter 2 of the extent of these changes since the introduction of the designated areas allowance in 1965. A longer term question is whether areas which were under-manned in 1969 have always been short of doctors, or whether their problems have only developed since the general decline in the supply of G.Ps. towards the end of the 1950s. The answer is of considerable importance for future policy: if it is shown that these areas have persistently experienced difficulties and shortages then the problem is clearly more than a transitory phenomenon or a passing combination of circumstances, and may consequently require more than a small monetary payment to resolve.

On a long-term perspective, we can first see how the situation in 1969 compared with the pre-N.H.S. distribution of G.Ps. Reference was

made in Chapter 1 to the P.E.P. Broadsheet, published in 1944, which included an undated map of the pre-war distribution of family doctors. From various clues in the Broadsheet we would put its date at about 1938. It is reproduced as Map 3.5 showing doctor/patient ratios for each geographical county.*

The overall visual impression in comparing the pre-war and the 1969 maps is that the basic patterns have remained virtually unaltered over the past 30 years. In 1938, just as in 1969, there was a marked lack of doctors in the Midlands, Lancashire and Durham, with a relative abundance elsewhere, particularly in the South West. But in some detailed respects the emphasis has changed somewhat over this period. In 1938, for example, Warwickshire seemed to have a lower average list size than the other counties in the East and West Midlands, although it is difficult from the original map to make an accurate allowance for Birmingham, which even then had a very high patient/doctor ratio. The Northern home counties also seemed to be rather better off pre-war than they are today, for there is no sign in the 1938 map of the serious shortage of doctors which now besets Bedfordshire and Hertfordshire and to a lesser extent Buckinghamshire and Essex. Then, as now, South East London and Kent had a slightly greater shortfall than most of the Southern counties; and it is clear that Sussex, like Westmorland, has never had any difficulty in attracting and retaining an adequate supply of family doctors. In general, we conclude that the geographical patterning of under-doctored areas has not changed very much over the past 30 years, and that most of the counties currently facing serious manpower shortages have had similar problems for at least that length of time, and probably longer. To this extent, the National Health Service has not brought about any dramatic shift in the location of family doctors, and the apparent chronicity of the problem further suggests that easy or quick solutions are unlikely to be found.

Next, we can follow the trends in individual executive councils since the inception of the H.H.S. The annual reports of the Ministry of Health between 1954 and 1962 contained figures for each executive council of the proportion of patients on lists of different sizes, and it is

*The map has been adapted from the original by merging the county boroughs into the geographical counties. No direct comparisons can be made with the 1969 maps because none of the latter is based specifically on doctor/patient ratios. For example, the cross-hatched shading on the 1938 map does not correspond with the same shading on any of the 1969 maps. Nevertheless, the pre-war map is reasonably close to Map 3.4, and if we make the assumption that the darker the shading the greater the shortage of doctors, then the two maps can usefully be contrasted.

possible from these reports to identify councils with the largest proportions of patients on lists of, say, more than 3,000. In 1963 there was a change in the method of presentation of the figures, and from then onwards the average list size for each executive council has been known. It has therefore been possible during this period to identify E.Cs. with average list sizes above the figure for the country as a whole.

The councils fall into three categories: those which have persistently satisfied the criteria of being short of doctors since 1954, those which have never been so classified, and those which have sometimes been short. In the first category are the administrative counties of Bedfordshire, Derbyshire, Durham, Essex, Lancashire, Lincolnshire, Staffordshire, Nottinghamshire and Warwickshire; and the county boroughs of Barnsley, Coventry, Dudley, St. Helens, Sunderland, West Bromwich and Wolverhampton. Almost all of these executive councils had high proportions of doctors in designated areas and large shortfalls of practitioners in 1969, and most of them were in one of the six clusters of heavily under-doctored counties. In particular, the appearance in the list of six executive councils in or around the Birmingham conurbation strongly suggests a history of under-doctoring in the area, although it is interesting to note that Birmingham itself has not appeared consistently among the list of councils with the largest list sizes.

Among the second category of councils (those which have never satisfied the criteria of being under-doctored) are the administrative counties of Cambridgeshire, Cornwall, Cumberland, Devon, Dorset, Gloucestershire, Hampshire, Herefordshire, Norfolk, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, Westmorland and the North Riding of Yorkshire. All of these counties had a surplus of family doctors in 1969, and most of them had no designated areas, and again this suggests that councils with few problems in 1969 have probably always been able to attract sufficient doctors to keep the average list sizes below the figure for the country as a whole.

The third category of councils (those which have sometimes been short of doctors during the period under review) is in many ways the most interesting of the three, for it shows how individual counties have fared in relation to national trends. In some of them the shortage is of quite recent origin and probably attributable more to the movement of population than of doctors. Berkshire, for example, did not appear in the list until 1964, and Hertfordshire, Leicestershire, Cheshire and

Wiltshire were all absent until 1958. Other counties have a less consistent history, being in the list some years and out of it in others. They include Huntingdonshire, S.W. London, Northamptonshire, "liddlesex and Worcestershire. Of the county boroughs, Gateshead, Great Yarmouth, Norwich, South,unpton, Wigan, York and Birkenhead all had fairly large lists until about 1963 and then appeared to reduce them, whilst Burton, Dewsbury, Hartlepool, Tynemouth, Stoke, Walsall, Worcester, Blackburn, Oldham and Hull have only appeared in the list since that date.

It must be emphasised that this analysis gives no more than a very rough picture of the trend during the past fifteen years in the pattern of under-doctored areas. No figures are available of the number of doctors in designated areas or of the shortfall of doctors for each executive council in previous years, and these should really be used for a complete picture. Nevertheless, the analysis based on average list sizes has clearly shown a tendency for executive councils to be consistent in their status, especially those with very large and very small average lists. The serious shortage of doctors in certain parts of the country does not appear to be a transitory phenomenon, for many of these areas have been relatively under-staffed even during periods when the overall number of doctors in the country was increasing.

Finally, what has been happening regionally since the introduction of the designated areas allowance in 1966? It was Seen in Chapter 1 that over the last four years the average list size in the designated areas has decreased, and that in the last year the number and percentage of principals in designated areas fell. Has this improvement been felt equally in all parts of the country, or have some regions benefitted at the expense of others? Table 3.5 shows the percentage of principals in designated areas for each standard region at 1st October 1967, 1968 and 1969, and also the percentage change between 1967-69 and 1968-69.* Over the country as a whole the number of principals in designated areas increased by 21 per cent between 1967 and 1969, and decreased by 2 per cent between 1968 and 1969, but this movement was far from uniform across the regions. East Anglia and the South East experienced a slight percentage decrease over the two year period, and a much larger one in the single year 1968-69, and the Northern and East Midland regions also showed a small percentage decrease in that year. The remaining regions each had increases during both periods under review, and it is

*The table covers England only, and for this reason the total figures differ slightly from those in Table 1.2, which also includes Wales.

consequently difficult to escape the conclusion that the apparent arrest in the spread of designated areas has been confined mainly to the South Eastern corner of England, with little or no change in the other parts of the country.

Summary

In plotting the geographical location of under-doctored areas four different methods are used. A distinction is first made between measures of extent and depth, which were discussed at length in Chapter 2. The former includes the number and percentage of principals in each area unit who are practising in designated areas, and the latter is based upon the number of extra doctors needed in order to bring the average list size down to 2,500. These two facets of the problem of under-doctored areas may yield very different results in the same unit. For each method a further distinction is made between raw scores and rates to get around the problem that area units are of unequal size. Thus, the number of designated doctors in a unit is expressed as a percentage of all doctors, and the shortfall of principals is also given as a ratio per million patients.

The selection of area units is also important, and this chapter analyses the available data in terms of standard regions, geographical counties, executive councils and medical practice areas. These units are chosen partly because of their official status, partly because of the convenience in presenting data on a broad level first and then on a smaller and more detailed scale, and partly because of the methodological advantages of showing the relationship between new resources and redistribution at each level of the analysis.

Looking first at the standard regions, the South East had the greatest number of designated doctors in 1969 (1,518), followed by the West Midlands (1,288), the North West (1,103) and Yorkshire/Humberside (917). East Anglia (35) and the South West (116) had the fewest. When the designated doctors are expressed as a percentage of all principals in the region, the West and East Midlands stood out with the highest percentages (65 per cent and 57 per cent respectively), followed by the North (53 per cent), Yorkshire/Humberside (48 per cent) and the North West (42 per cent). More than half (52 per cent) of all principals to the North of a line from the Wash to the Severn were in designated areas in 1969 compared with only 18 per cent to the South. The three Southern regions, having average list sizes below 2,500, also enjoyed a 'surplus' of doctors and the designated areas in these regions could theoretically have been eliminated purely through an internal

redistribution of G.P.s. Of the other five regions, the West Midlands needed an extra 113 doctors, the North West 108, the East Midlands 74, Yorkshire/Humberside 46, and the North 15. When the shortfall of doctors is expressed as a rate per million patients, the two Midland regions again stood out with the highest rates, and the overall picture is one of an increasing shortage of G.P.s. as one moves from the Scottish border to the Wash-Severn line with a relative abundance to the South of it.

The next level of analysis, by geographical counties, shows with greater precision where the designated doctors were located. About three-quarters of them were concentrated in six arbitrarily defined clusters: Staffordshire and Warwickshire together contained 18 per cent of all the designated doctors in England in 1969; the East Midland counties of Derbyshire, Leicestershire and Nottinghamshire contained 9 per cent; Essex, Bedfordshire, Hertfordshire and North East and South East London had a further 16 per cent; Lancashire and the West Riding contained 14 per cent and 11 per cent of the designated doctors respectively; and a further 8 per cent were in Durham and Northumberland. In most of these counties the designated doctors also represented a high proportion of all principals. The percentages were highest in Durham (where 82 per cent of all the G.P.s. were in designated areas in 1969), Staffordshire (80 per cent), Bedfordshire (79 per cent) and Warwickshire (75 per cent). Thirteen counties had fewer than 10 per cent of their doctors in designated areas, and of these only Westmorland and Herefordshire lay to the North of the Wash-Severn line. In all, 25 of the 42 counties had average list sizes below 2,500, which means that all the designated areas in them could in principle have been eliminated by an internal redistribution of doctors. Had this been done, the total number of designated principals in England would have been cut by as much as a fifth. Of the counties with a shortage of G.P.s., Lancashire led the list (with a shortfall of 107 in 1969), followed by Staffordshire (74), the West Riding (58), Durham (55), and Warwickshire (51). These five counties together accounted for almost two-thirds of all the extra doctors needed at the county level. When the shortfall is expressed as a rate per million patients Staffordshire and Durham continued to have high rates, as did Warwickshire; but the smaller county of Bedfordshire moved to the top rank and the larger counties of Lancashire and the West Riding had lower rates than most counties. In sum, the counties with the most pressing manpower problems tended to be concentrated around a line drawn from Kent to Lancashire, with an intensification of the situation in the Midland counties and, away from the line, in the North

East. Counties to the West of a line from about Eastbourne to Chester had problems neither of depth nor extensiveness, and the same was also true of East Anglia and most of the Northern counties except Durham.

At the next level of analysis, by executive councils and medical practice areas, the figures are less reliable partly because the area units are much smaller, and partly because the data for practice areas are older (1967). But some broad patterns can be observed. In the Warwickshire/Staffordshire cluster most of the designated doctors were concentrated in the county boroughs in 1969, especially in Birmingham, Coventry, Stoke and Wolverhampton. The shortfall of doctors per million patients was quite low in Birmingham, but high in Wolverhampton, Walsall and West Bromwich. In the East Midland cluster the greatest absolute numbers of designated doctors were in the three administrative counties (Leicestershire, Nottinghamshire and Derbyshire) and so too were the largest absolute shortfalls. However, the two county boroughs in this cluster (Leicester and Derby) were both wholly designated, and the standardised shortfalls there were considerably higher than in the surrounding counties. In the South Eastern cluster the data indicate one belt of designated areas stretching from London into the Southern part of Essex, another in the Luton/Watford area, and a third around the Medway towns of Kent. In Lancashire the administrative county contained the largest absolute numbers of designated doctors (expectedly, because of its size), followed by Manchester and nine other boroughs. Liverpool had no designated areas at all in 1969, nor did six other boroughs in Lancashire. Most prominent among the boroughs with serious manpower difficulties were Blackburn, Bolton, Oldham, Rochdale and St. Helens. In the West Riding the administrative county contained the largest absolute number of designated G.Ps. followed by Sheffield, Bradford and Leeds. Five boroughs were wholly designated, and three had no such areas at all. Apart from the administrative county, Sheffield and Bradford were the only E.Cs. with a moderate shortage of doctors, and five towns (including Leeds) lacked no more than one: but when standardised for population size Barnsley and Doncaster recorded the highest rates, along with the administrative county. In the sixth cluster (Durham and Northumberland) there was a slight tendency for the designated areas to be over-concentrated in the large urban centres, particularly in Sunderland, and all the boroughs except Newcastle were wholly designated in 1969. The greatest absolute shortfalls were in Sunderland and Durham county. When standardised for population size some of the Durham boroughs had among the highest rates in the country, notably Darlington, Hartlepool and Sunderland.

In England as a whole more than half (58 per cent) of all designated doctors in 1969 were working in county boroughs (as defined), although there were wide variations between individual counties. However, the boroughs also contained 52 per cent of all principals in the country, so that the designated areas were only slightly over-represented in them. London had an enormous effect on these overall figures, and outside the capital the under-doctored areas were concentrated in the large towns much more than would be expected on a purely random basis. This tendency was particularly marked in geographical counties with one single borough, especially where the borough was a single medical practice area.

Finally, the areas which were under-doctored in 1969 tend to have a tradition of large list sizes and of difficulties in attracting enough practitioners. The geographical patterning of areas which are short of family doctors does not seem to have changed much between 1938 and 1969. Then, as now, there was a marked lack of doctors in the Midlands, Lancashire and Durham, with a relative abundance elsewhere, particularly in the South West. The counties in which the greatest deterioration seems to have taken place are those around London, particularly Bedfordshire and Hertfordshire, and to a lesser extent Buckinghamshire and Essex also, probably due mainly to the rapid population growth in these counties in recent years. Similarly, within the lifetime of the N.H.S. there has been little change in the manpower situation in the executive councils. Several E.Cs., particularly those located in one of the six clusters of under-doctored areas, have persistently satisfied the criteria of being short of doctors from 1954 onwards. They include the counties of Bedfordshire, Derbyshire, Durham, Essex, Lancashire, Lincolnshire, Staffordshire, Nottinghamshire and Warwickshire, and the boroughs of Barnsley, Coventry, Dudley, St. Helens, Sunderland, West Bromwich, and Wolverhampton. Among the E.Cs. which have never appeared in the annual list of areas which are particularly short of G.Ps. are Cambridgeshire, Cornwall, Cumberland, Devon, Dorset, Gloucestershire, Hampshire, Herefordshire, Norfolk, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, Westmorland and the North Riding. Of the remaining E.Cs., some have been periodically in and out of the annual list of highly under-doctored areas, whilst others have appeared quite recently for the first time and have since stayed. These latter include Berkshire, Burton, Dewsbury, Hartlepool, Tynemouth, Stoke, Walsall, Worcester, Blackburn, Oldham and Hull. Finally, there is some evidence that recent successes in containing the spread of designated areas have occurred almost entirely in the South Eastern part of England, with little or no change

in the rest of the country. In sum, we conclude from these analyses that the broad patterns of need have changed little over the last 20 or 30 years. Areas which are currently facing the most serious shortages seem to have a fairly long history of manpower difficulties, whilst those which are today relatively well supplied with family doctors seem to have had no difficulty in past years in attracting an adequate number of doctors. This conclusion suggests that there can be no easy solution to the problem of the unequal distribution of general practitioners' but we must now begin to consider mobility patterns and motivations in more detail.

TABLE 3.1: THE GEOGRAPHICAL DISTRIBUTION OF PRINCIPALS IN DESIGNATED AREAS AND THE SHORTFALL OF PRINCIPALS, BY STANDARD REGIONS, AT 1st OCTOBER 1969

(England)

Source: Unpublished data, Department of Health and Social Security

Standard Region	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Total No. of Principals	Principals in Designated Areas		Total No. of Patients	Average No. of Patients per Principal	Surplus (+) or Shortfall (-) of Doctors of Doctors Rate per Im. Patients	
		No.	%			No.	
North	1,311	701	53	3,315,504	2,529	-15	-4.5
Yorkshire Humberside	1,914	917	48	4,899,630	2,560	-46	-9.4
East Midlands	1,319	757	57	3,481,496	2,639	-74	-21.3
East Anglia	697	35	5	1,621,063	2,326	+49	+30.2
South East	7,362	1,518	21	18,000,936	2,445	+162	+9.0
South West	1,712	116	7	3,830,544	2,237	+180	+47.0
West Midlands	1,970	1,288	65	5,207,581	2,643	-113	-21.7
North West	2,616	1,103	42	6,809,141	2,503	-108	-15.9
Total, England	18,901	6,435	34	47,165,895	2,495	+35	+0.7

TABLE 3.2: THE GEOGRAPHICAL DISTRIBUTION OF PRINCIPALS IN DESIGNATED AREAS
AND THE SHORTFALL OF PRINCIPALS, BY GEOGRAPHICAL COUNTIES, AT 1st OCTOBER 1969
(England)

Source: Unpublished data, Department of Health and Social Security

Geographical County	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Total No. of Principals	Principals in Designated Areas		Total No. of Patients	Average No. of Patients Per Principal	Surplus (+) or Shortfall (-) of Doctors	Rate per 10. Patients
		No.	%			No.	
Bedfordshire	171	135	79	479,900	2,806	-21	-43.8
Berkshire	265	70	26	659,536	2,489	+1	+1.5
Buckinghamshire	220	84	38	572,782	2,604	-9	-15.7
Cambridgeshire	130	11	12	299,145	2,301	+10	+33.4
Cheshire	612	194	32	1,531,846	2,503	-	-
Cornwall	181	-	-	374,174	2,067	+31	+82.8
Cumberland	130	31	24	300,395	2,311	+10	+33.4
Derbyshire	344	207	60	909,020	2,643	-20	-22.0
Devon	418	-	-	885,666	2,119	+54	+72.3
Dorset	159	-	-	347,037	2,183	+20	+57.6
Durham	517	422	82	1,429,510	2,765	-55	-38.4
Essex	493	174	35	1,294,707	2,626	-25	-19.3
Gloucestershire	469	56	12	1,091,890	2,328	+32	+29.3
Hampshire	701	139	20	1,657,272	2,364	+38	+22.9
Herefordshire	62	-	-	131,399	2,119	+9	+68.5
Hertfordshire	360	178	49	968,896	2,691	-28	-28.8
Huntingdonshire	70	-	-	182,869	2,612	-3	-16.4
Lancashire	2,004	909	45	5,277,295	2,633	-107	-20.2
Leicestershire	302	204	68	794,324	2,630	-16	-20.1
Lincolnshire	330	147	45	802,853	2,433	+9	+11.2
London, Inner	1,446	-	-	3,331,621	2,304	+113	+33.9
London, N.E.	472	254	54	1,202,337	2,547	-9	-7.4
London, S.E.	764	284	37	1,952,172	2,555	-17	-8.7
London, S.W.	852	146	17	2,037,067	2,391	+37	+18.2
Middlesex	904	38	4	2,247,898	2,487	+5	+2.2
Norfolk	264	24	9	595,280	2,255	+26	+43.7
Northamptonshire	179	103	58	467,767	2,613	-8	-17.1
Northumberland	343	110	32	823,555	2,401	+14	+17.0
Nottinghamshire	358	177	49	977,055	2,729	-33	-33.7
Oxfordshire	154	16	10	360,954	2,344	+10	+27.7
Shropshire	149	19	13	341,135	2,289	+13	+38.1
Somerset	300	14	5	669,785	2,233	+32	+47.8
Staffordshire	666	531	80	1,849,520	2,777	-74	-40.0
Suffolk	233	-	-	543,769	2,334	+15	+27.6
Sussex	560	-	-	1,235,794	2,207	+66	+53.4
Warwickshire	832	621	75	2,206,956	2,653	-51	-23.1
Westmorland	38	-	-	70,656	1,859	+10	+141.5
Wiltshire	185	46	25	461,992	2,497	-	-
Worcestershire	261	117	45	678,571	2,600	-10	-14.7
Yorkshire, East Riding	223	117	52	542,960	2,435	+6	+11.1
Yorkshire, North Riding	283	138	49	691,388	2,443	+6	+8.7
Yorkshire, West Riding	1,497	719	48	3,887,147	2,597	-58	-14.9
Total, England	18,901	6,435	34	47,165,895	2,495	+33	+0.7

TABLE 3.3: THE GEOGRAPHICAL DISTRIBUTION OF PRINCIPALS IN DESIGNATED AREAS AND THE SHORTFALL OF PRINCIPALS, BY EXECUTIVE COUNCILS, AT 1st OCTOBER 1969 (England)

Source: Unpublished data, Department of Health and Social Security

Executive Council	(1) Total No. of Principals	(2) Principals In Designated Areas		(4) Surplus(+) or Shortfall (-) of Doctors	(5) Rate per 1000 Patients
		No.	%		
Bedfordshire	171	135	79	-21	-43.8
Berkshire	198	61	31	-1	-2.0
Reading	67	9	13	+2	+12.4
Buckinghamshire	220	84	38	-9	-15.7
Cambridgeshire	130	11	12	+10	+33.4
Cheshire	405	133	33	-5	-4.8
Blackburn	63	-	-	+3	+19.9
Chester	37	-	-	-1	-10.6
Stockport	61	61	100	-2	-12.7
Walsley	46	-	-	+3	+28.1
Cornwall	179	-	-	+30	+80.6
Cumberland	99	-	-	+12	+54.9
Carlisle	31	31	100	-2	-9.1
Derbyshire	255	119	47	-13	-19.4
Derby	89	88	99	-7	-29.2
Devon	311	-	-	+55	+85.8
Plymouth	107	-	-	+9	+36.8
Dorset	159	-	-	+20	+57.6
Durham	296	201	68	-27	-33.4
Darlington	30	30	100	-6	-66.4
Gateshead	42	42	100	-	-
Hartlepool	34	34	100	-5	-50.7
South Shields	39	39	100	-4	-37.2
Sunderland	76	76	100	-12	-54.5
Essex	424	174	41	-22	-19.7
Southend	69	-	-	-3	-16.6
Gloucestershire	280	24	9	+24	+37.5
Gloucester	189	32	17	+8	+17.7
Hampshire	393	49	12	+15	+15.9
Bournemouth	76	-	-	+13	+82.2
Portsmouth	92	-	-	+9	+43.5
Southampton	92	90	98	-5	-20.7
Herefordshire	62	-	-	+9	+68.5
Hertfordshire	360	178	49	-28	-28.8
Huntingdonshire	70	-	-	-3	-16.4
Isle of Wight	48	-	-	+6	+57.3
Isles of Scilly	2	-	-	+1	+504.8
Lancashire	829	437	53	-77	-33.9
Barrow-In-Furness	28	-	-	+1	+14.7
Blackburn	38	38	100	-8	-70.1
Blackpool	68	-	-	+4	+24.9
Bolton	62	62	100	-8	-45.6
Booth	33	33	100	-2	-23.0
Burnley	38	-	-	+3	+34.0
Bury	26	26	100	-3	-41.9
Liverpool	279	1	-	-3	-4.2
Manchester	247	110	45	-3	-4.8
Oldham	47	46	98	-6	-45.4

continued overleaf

Table 3.3 (continued)

Executive Council	(1)	(2)	(3)	(4)	(5)
Preston	53	51	96	-2	-14.5
Rochdale	32	32	100	-5	-54.7
St. Helens	41	41	100	-8	-64.7
Salford	73	-	-	+7	+43.9
Southport	40	-	-	+4	+44.1
Warrington	38	-	-	-1	-10.2
Wigan	32	32	100	-3	-34.7
Leicestershire	182	84	46	-6	-12.7
Leicester	120	120	100	-10	-30.8
Lincolnshire (com)	257	75	29	+12	+19.6
Grimsby	39	39	100	-3	-28.3
Uncoln	34	33	97	-	-
London. Inner	1,446	-	-	+113	+33.9
London. N.E.	472	254	54	-9	-7.4
London. S.E.	764	284	37	-17	-8.7
London. S.W.	852	146	17	+37	+18.2
Middlesex	904	38	4	+5	+2.2
Norfolk	184	-	-	+23	+57.2
Great Yarmouth	24	24	100	-1	-15.9
Norwich	56	-	-	+4	+30.7
Northamptonshire	122	46	38	-7	-21.6
Northampton	57	57	100	-1	-6.9
Northumberland	209	52	25	+14	+28.7
Newcastle	111	35	32	+2	+7.3
Tynemouth	23	23	100	-2	-32.0
Northumberland	358	177	49	-33	-33.7
Oxfordshire	154	16	10	+10	+27.7
Shropshire	149	19	13	+13	+38.1
Somerset	260	14	5	+29	+50.3
Bath	40	-	-	+3	+32.1
Staffordshire	237	139	59	-26	-39.6
Burton-on-Trent	25	25	100	-2	-29.9
Stoke-on-Trent	107	107	100	-10	-34.1
Walsall	64	64	100	-15	-75.9
Warley	75	38	51	-	-
West Bromwich	61	61	100	-7	-41.0
Wolverhampton	97	97	100	-15	-53.7
Suffolk (com)	178	-	-	+17	+42.3
Ipswich	55	-	-	-2	-14.0
Sussex (com)	411	-	-	+49	+54.2
Brighton	86	-	-	+10	+52.9
Eastbourne	32	-	-	+5	+74.5
Hastings	31	-	-	+1	+13.4
Warwickshire	252	131	52	-18	-26.6
Birmingham	447	357	80	-22	-18.7
Coventry	133	133	100	-10	-27.8
Westmorland	38	-	-	+10	+141.5
Wiltshire	185	46	25	-	-
Worcestershire	168	24	14	+4	+9.7
Oudley	60	60	100	-12	-67.1
Worcester	33	33	100	-3	-33.7
Yorkshire East Riding	106	-	-	+16	+71.5
Hull	117	117	100	-11	-34.4
Yorkshire. North	134	6	4	+21	+74.4
Riding					
Teesside	149	132	89	-15	-36.6
Yorkshire. West Riding	662	290	44	-29	-16.7
Barnsley	27	27	100	-3	-39.4
Bradford	120	92	77	-8	-24.9

continued overleaf

Table 3.3 (continued)

Executive Council	(1)	(2)	(3)	(4)	(5)
Dewbury	22	-	-	-1	-17.3
Doncaster	38	38	100	-4	-37.6
Hallam	35	35	100	-2	-21.6
Huddersfield	51	-	-	-1	-7.6
Leeds	210	75	36	+1	+1.9
Rotherham	33	33	100	-2	-22.8
Sheffield	210	102	49	-11	-19.8
Wakefield	27	27	100	-1	-14.1
York	62	-	-	+5	+35.2
Total, England	18,901	6,435	34	+20	+ 0,6

TABLE 3.4: THE DISTRIBUTION OF PRINCIPALS BETWEEN ADMINISTRATIVE COUNTIES
AND COUNTY BOROUGHS AT 1st OCTOBER 1969
(England)

Source: Unpublished data, Department of Health and Social Security

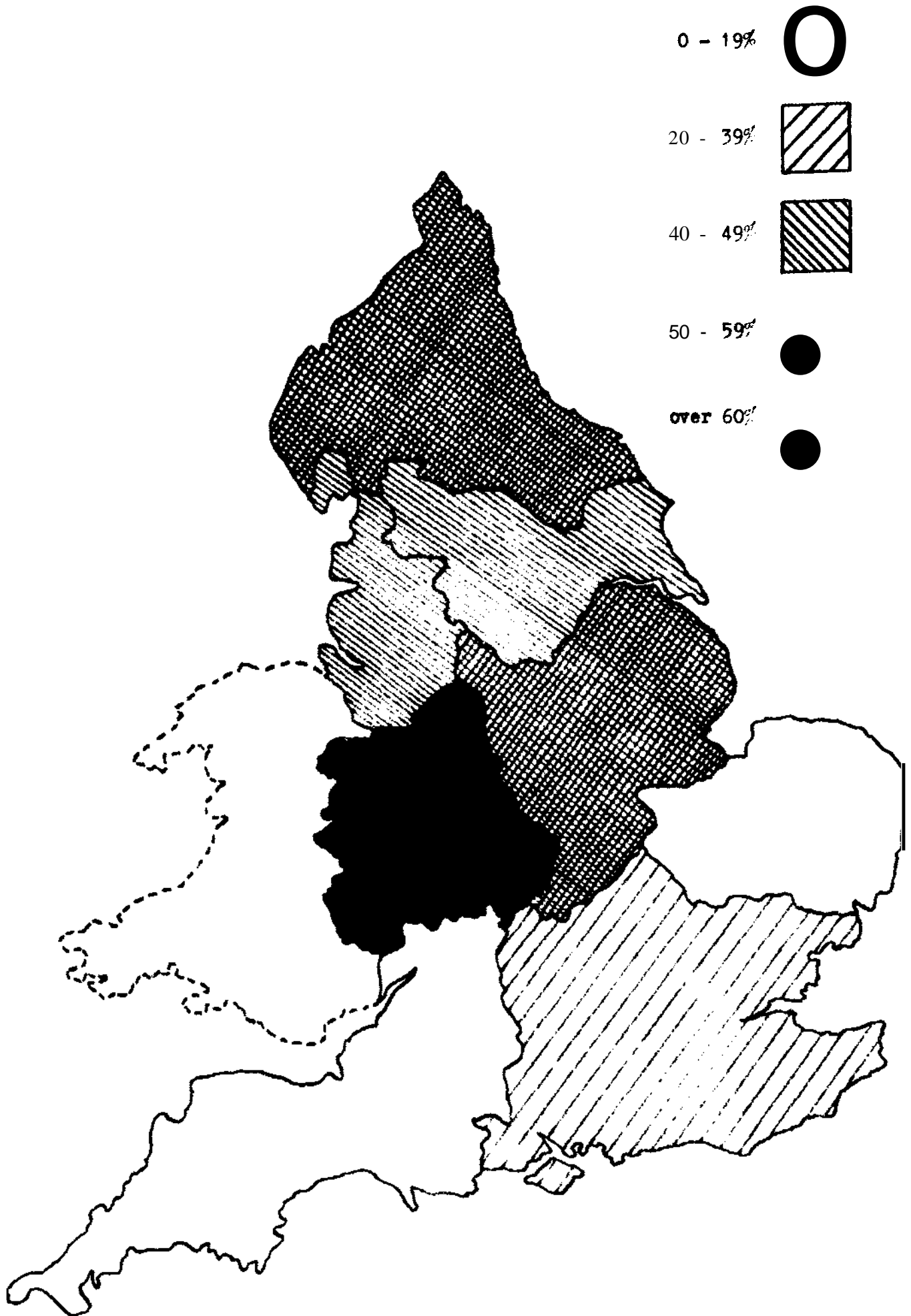
Geographical County	(1)	(2)	(3)	(4)
	Principals In County Boroughs No.	% of all Principals	Principals In Designated Areas In County Boroughs No.	% of all Principals In Designated Areas
Bedfordshire	-	-	-	-
Berkshire	61	25	9	13
Buckinghamshire	-	-	-	-
Cambridgeshire	-	-	-	-
Cheshire	201	34	61	31
Cornwall	-	-	-	-
Cumberland	31	24	31	100
Derbyshire	89	26	88	44
Devonshire	101	26	-	-
Dorset	-	-	-	-
Durham	221	43	221	52
Essex	69	14	-	-
Gloucestershire	189	40	32	51
Hampshire	260	31	90	65
Herefordshire	-	-	-	-
Hertfordshire	-	-	-	-
Huntingdonshire	-	-	-	-
Lancashire	1,115	59	412	52
Leicestershire	120	40	120	59
Lincolnshire	13	22	12	49
London, Inner	1,446	100	-	-
London, North East	472	100	254	100
London, South East	164	100	284	100
London, South West	852	100	146	100
Middlesex	904	100	38	100
Norfolk	80	30	24	100
Northamptonshire	51	32	51	55
Northumberland	134	39	58	53
Nottinghamshire	-	-	-	-
Oxfordshire	-	-	-	-
Shropshire	-	-	-	-
Somerset	40	13	-	-
Staffordshire	429	64	392	14
Suffolk	55	24	-	-
Sussex	149	21	-	-
Warwickshire	580	10	490	19
Westmorland	-	-	-	-
Wiltshire	-	-	-	-
Worcestershire	93	36	93	19
Yorkshire, East Riding	111	52	111	100
Yorkshire, North Riding	149	53	132	96
Yorkshire, West Riding	835	56	429	60
Total, England	9,164	52	3,110	58

TABLE 3.5: THE GEOGRAPHICAL DISTRIBUTION OF PRINCIPALS IN DESIGNATED AREAS,
BY STANDARD REGIONS. IT 1st OCTOBER 1967-69
 (England)

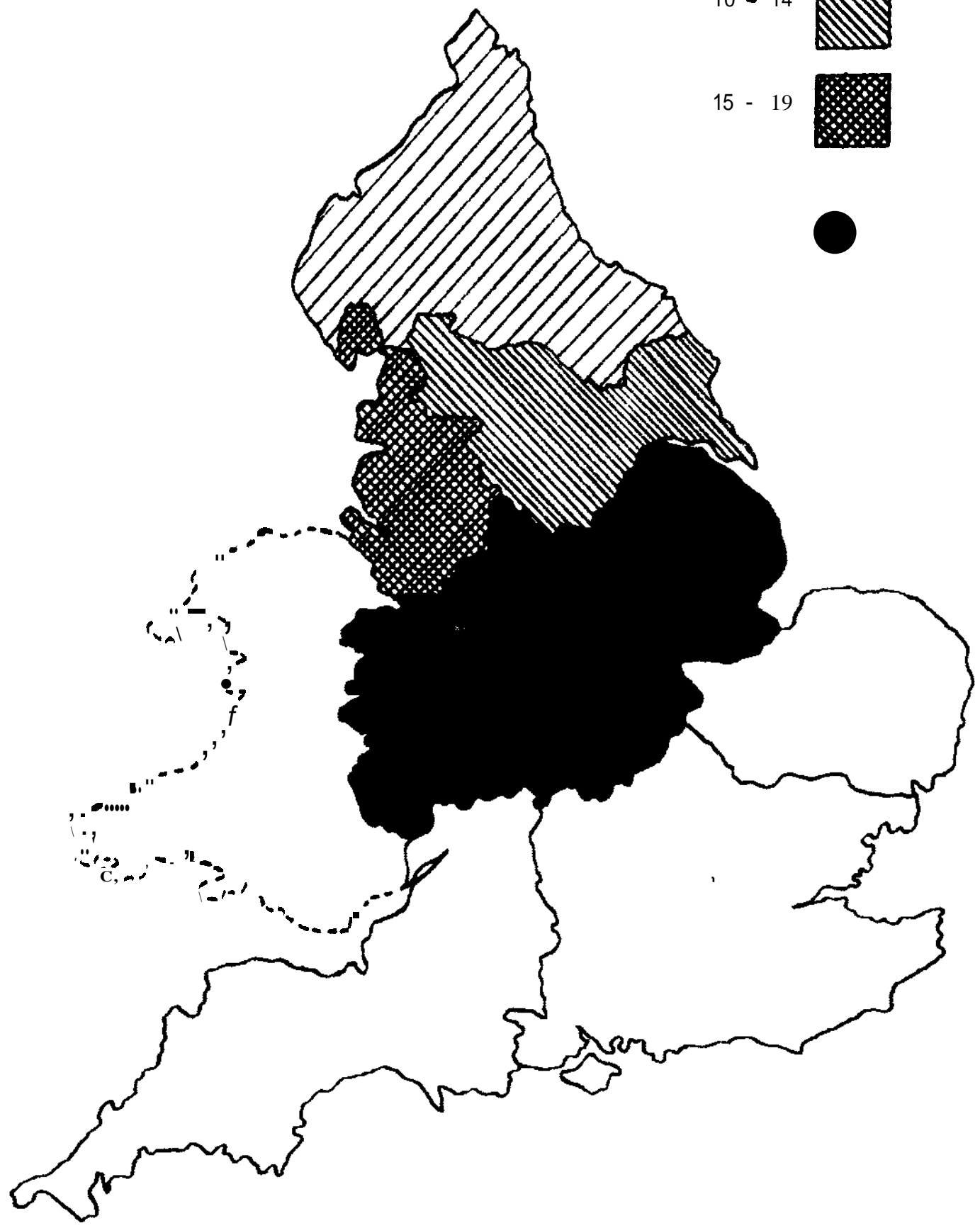
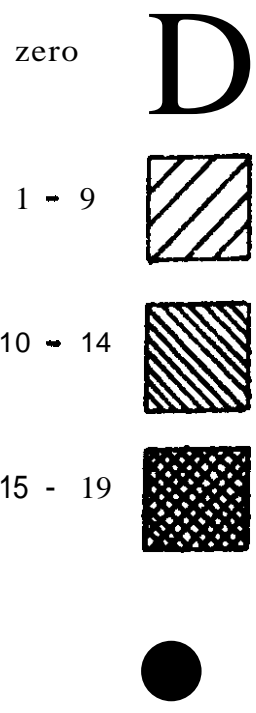
Source: Unpublished data, Department of Health and Social Security

Standard Region	Principals In Designated Areas						Percentage Change	
	1967		1968		1969		1967 - 69	1968 - 69
	No.	£	No.	£	No.	£		
North	547	42	732	55	701	53	+28	-4
Yorkshire Humberside	727	39	860	46	917	48	+26	+7
East Midlands	561	43	772	59	757	57	+35	-2
East of England	36	5	53	8	35	5	-3	-34
South East	1,533	21	1,741	24	1,518	21	-1	-13
South West	40	2	112	7	116	7	+190	+4
West Midlands	1,075	56	1,263	65	1,288	65	+20	+2
North West	821	31	1,027	39	1,103	42	+34	+7
Total, England	5,340	29	6,560	35	6,435	34	+21	-2

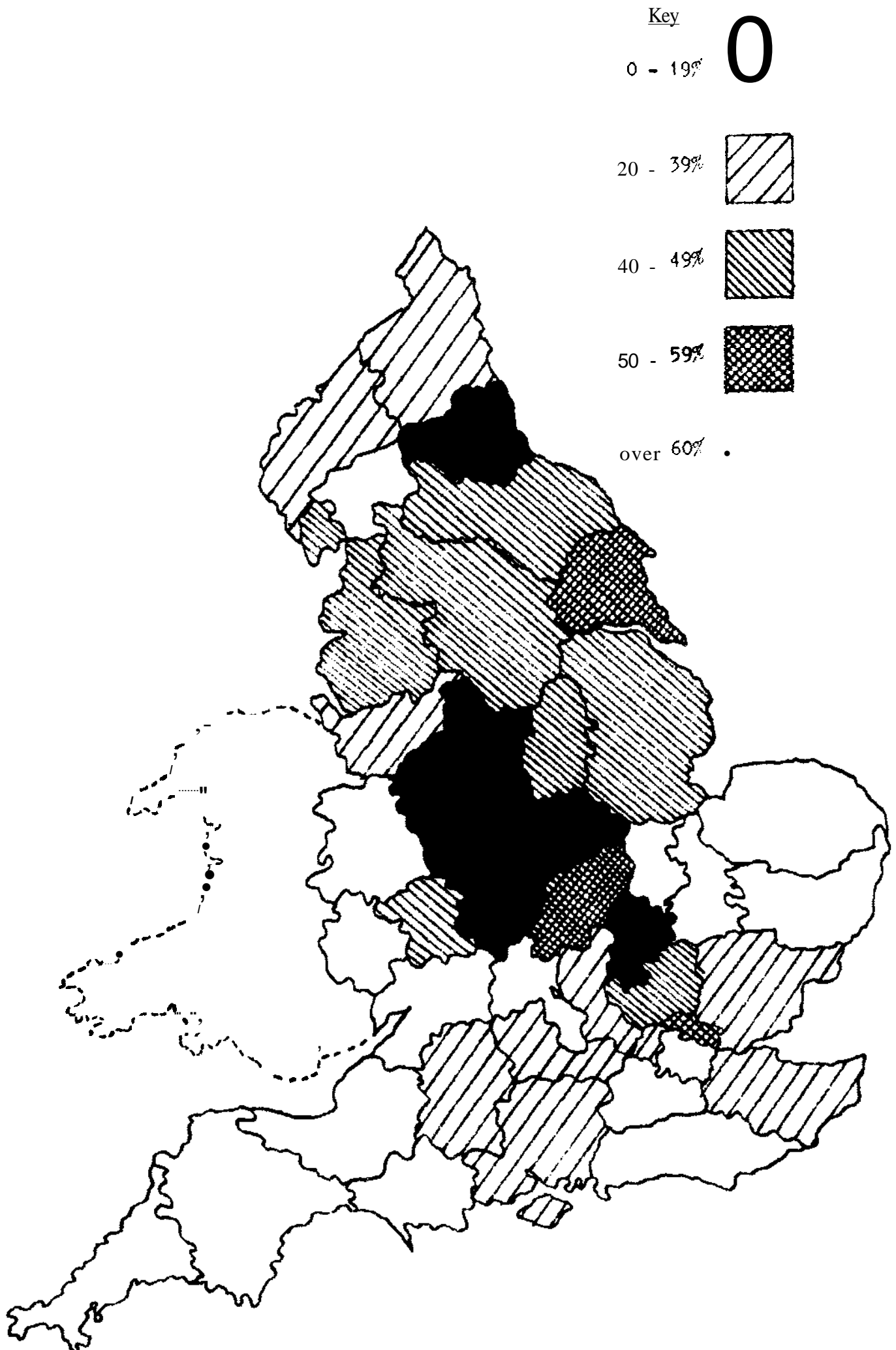
Map 2.1 Percentage of principals in designated areas, by standard regions at 1st October 1969.



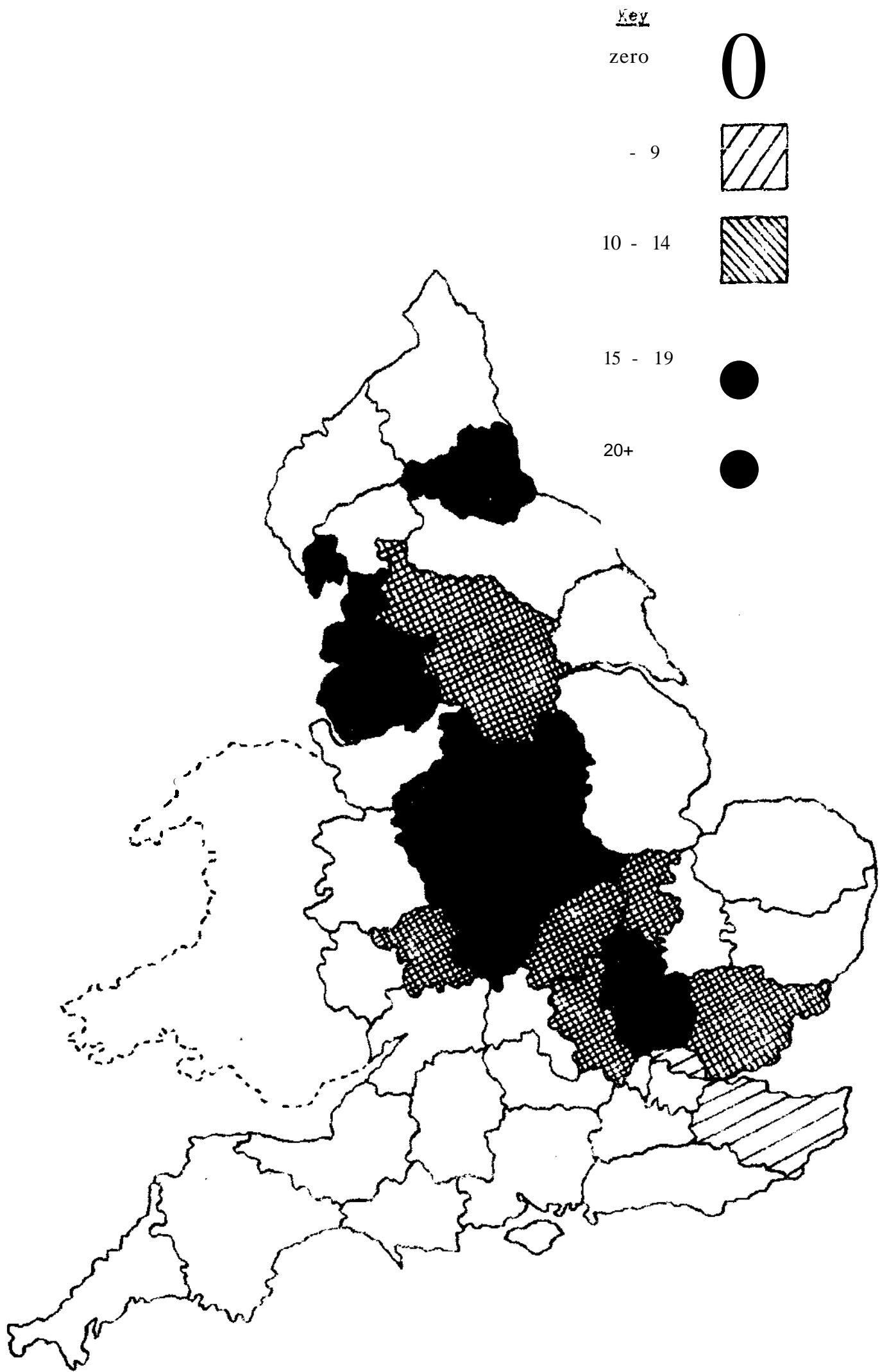
Map 3.2. Shortfall of principal. per million patients. by etandard regions, at 1st. October 1969.



Map 3.3. Percentage of principals in designated areas, by geographical counties, at 1st, October 1969.



Map 3.4. Shortfall of principals per million patients, by geographical counties, at ⁰ 1st October 1969.



Map 3.5. Average list, i.e., by geographical counties, in pre-war mE (probably 1938).

Adapted from the P.E.P. Broadsheet Philipp pg. June 1944.



CHAPTER 4

A SURVEY OF GENERAL PRACTITIONERS

'I don't like people who do surveys.'

- G.P. in Worcestershire

In the first three chapters we have been able to use existing data to sketch in some of the historical dimensions to the problem of under-doctored areas and to describe in detail some current trends in the distribution of family doctors. Our aim has been to define the nature of the problem underlying the research with greater precision, and to clarify some of the conceptual and methodological issues involved in policy decisions. But such clarification is merely the first step in the research task, and so far we have been able to say very little about why the inequalities in distribution arise in the first place, or how they are maintained. Nor are we yet in a position to predict which forms of action are most likely to be effective in the future. We now need to study the processes which affect the location of family doctors, and to uncover the real and perceived differences between conditions in designated and non-designated areas. How often do G.Ps. change practices, who moves, and what is the relationship of mobility potential to career and family development? Which areas gain and lose in the net balance of internal migration? What relationship does the choice of a practice area have with a doctor's family home area, the situation of his medical school and the family ties of his wife? What features characterise the doctor in a designated area and how does he differ from the doctor in an open or restricted area? What perception do G.Ps. in different areas have of the professional, social and cultural value of their neighbourhoods? These questions cannot be answered from available data; the answers can only come from the doctors themselves, and to get them means a special survey.

General practice is probably one of the most intensively surveyed professions in recent years, and yet another survey was planned with considerable apprehension. But it was necessary because the requisite information had not been collected previously. Most surveys of G.Ps. have been local rather than national (therefore of limited value to this project) and none of the nation-wide surveys have elicited mobility and settlement patterns in the detail required by this project. Post-

war surveys of general practice include the classical studies in the 1950s by Collings,¹ Taylor,² and Hadfield;³ Hill's nation-wide survey in 1945;⁴ Benjamin and Ash on prescribing habits;⁵ the Pilkington survey on remuneration;⁶ Cartwright's surveys in 1963⁷ and 1964;⁸ Bevan and Draper's large nation-wide survey of appointments systems;⁹ Last's extensive postal survey among a 10 per cent sample of G.P.s. and consultants in 1966;¹⁰ and most recently Mechanic's study of correlates of frustration among British G.P.s.¹¹ All of these studies were nationally based (though some with very small samples), but few included questions pertinent to the current investigation. Cartwright's data (1964) can be analysed by type of practice area, but her schedule contained no questions relating specifically to the choice of practice area. Last's surveys^{10,12} of regional patterns of settlement of doctors in relation to their home areas and medical school are more closely related to the objectives of our project than any other British study, but relatively few questions were asked and the results are consequently scanty. Of the local investigations, the most important is that currently being undertaken by Brown and Walker¹³ in three areas based on Hull, Cardiff and Southampton, and material from this research is quoted at appropriate points in subsequent chapters. An extensive literature exists of mobility and migration patterns in general populations (see for example Beshers¹⁴ and Donnison¹⁵) and also among medical practitioners in other countries (e.g. Brown and Belcher,¹⁶ Benham et al¹⁷), but it was clear from an early stage in the research that the data required could only be obtained through a specially designed survey.

This chapter briefly describes the survey which was conducted among a sample of about 10 per cent of all principals in England. Wales was excluded because of its small number of designated areas (only five in 1968, when the research was being planned), and because of the low pay-off which would consequently result from the extra cost and complexity of extending the research there. Scotland had only 18 designated districts in mid-1968, and has the added difficulty of an entirely separate system of administration, finance and record-keeping. The purpose of this chapter is to equip the reader with sufficient knowledge about the survey procedures to understand and evaluate the results presented in subsequent chapters. A full account of the methods employed in the survey is contained in Appendixes A-C.

The Sample

Various factors influenced the definition of the population and

the size of the sample, including the desirability of a wide distribution across the country, the need for an adequate number of doctors in each region and type of area, the availability of a national sampling frame (the Doctor Index), and the possibility (not finally confirmed at the time of drawing the sample) that the survey *might* be conducted through the post. In the event, the population consisted of principals contracted with executive councils in England and providing unrestricted general medical services. The sample, drawn from the Doctor Index held by the Department of Health and Social Security, was originally correct at 1st October 1967, but later, when the revised Index became available in April 1969, it was updated to 1st October 1968. Since the survey itself was conducted between November 1969 and February 1970 there was a slight but inevitable incompleteness in the sample which was reflected in the number of deaths and retirements detected after the survey began.

The population was stratified by standard region and type of practice area (designated or non-designated). The sampling goal was to achieve a target of 2,000 doctors by using a one-in-eight sampling fraction among designated doctors in each region, and a one-in-ten fraction among non-designated doctors. In the event, however, these fractions had to be increased to include all designated doctors in East Anglia and the South West (since there weren't many of them) and to provide a minimum of 100 non-designated doctors in each region.* At this stage the sample amounted to 2,360 doctors, and it was reduced to 2,266 after up-dating to 1st October 1968. The pilot survey consumed a further hundred doctors, and subsequent reductions due to death, retirement, etc. resulted in a final sample size of 2,031, of which 816 were in designated areas and 1215 in non-designated areas. A comparison of some characteristics of doctors in the sample with those of all principals in England and Wales in 1968 (Appendix Table) shows that the sample was adequately representative of the population with respect to the characteristics under consideration.

The Pilot Survey

A small pilot survey was carried out in the summer of 1969 to test the adequacy of the questionnaire and to assess the feasibility of alternative methods of data collection. At the outset of the project two alternative methods of data collection seemed possible for the main survey:

*Strictly speaking, therefore, the sampling fractions were not quite uniform in each region of each sample, and the fraction was 100% among designated doctors in East Anglia and the South West. However, in view of the small numbers involved the analyses assume a uniform regional sampling fraction, and very little precision is lost as a result.

an interview survey conducted by the Regional Medical Officers, or a postal survey. Both methods were used in the pilot survey. One batch of 53 doctors received a postal questionnaire directly from the University, and a second batch of 47 names was forwarded for interview to the Divisional Medical Offices in the Western, Southern and Eastern Divisions. The aim was to compare the two batches for differences in response rates and the content of responses, and so to discover the more effective of the two methods. In fact very few of the R.M.Os. personally interviewed the doctors whose names they had; most of them merely sent the questionnaires for the G.Ps. to fill in themselves. Contrary to the intention of the pilot survey both sub-samples were thus effectively subjected to a postal questionnaire, although the nature of the contact and the probable motivation of the doctors to respond differed in each case by virtue of the different sponsorship which the survey was seen to have.

The first sub-sample (where the questionnaires were sent directly from the University) achieved a response rate of 60 per cent without any follow-ups, and it was estimated on this basis that two follow-ups would have yielded a final response of 80 per cent. In the second sub-sample the overall response rate was 84 per cent, and because of the large variations in response between the three Divisions it was felt that the diligence of individual R.M.Os. in following up non-respondents was probably a critical factor. In both sub-samples the response rate was similar for doctors in designated and non-designated areas, although in both cases doctors with higher qualifications and large lists were more likely to reply. The replies of both batches of doctors were strikingly similar, and in every case where answers differed significantly the cause could reasonably be attributed to the different sampling procedures by which the two batches were derived. It was concluded from the pilot survey that a postal questionnaire would be the appropriate research tool in the main phase and, since the involvement of the Regional Medical Officers appeared to increase the motivation to respond, it was decided that the survey should be seen to be sponsored by the Divisional Offices •

The Main Survey

Lists were prepared of the names and addresses of all doctors in the sample (excluding those who had been chosen in the pilot survey) and then sent to the Divisional Medical Offices for updating. A total of 2,166 G.Ps. was included at this stage, but a further 135 were subsequently eliminated (for reasons of death, retirement, resignation, etc.) leaving a final sample size of 2 031. The first mailing, from the University, in November 1969, consisted of a questionnaire (with a prominent

identification number), a covering letter printed on the appropriate Divisional notepaper and personally signed by the doctor's R.M.O., and a stamped reply envelope addressed directly to the University.*

Doctors who had not replied within about two weeks of the first mailing received a follow-up letter on University notepaper and signed by the Senior Research Associate working on the study, stressing the importance of achieving a high response rate. A second follow-up, consisting of another identical questionnaire and reply envelope and a further letter from the Senior Research Associate was sent in February 1970, following a trial run in one Division which amply showed the benefits which a third mailing would bring. The reply lists were closed in March 1970 when analysis of the data began, although the odd reply continued to come in right through to November.

Of the 2,031 eligible respondents almost two-thirds (64 per cent) replied to the first mailing, which is to say that they had returned their completed questionnaires within about two weeks of the mailing. The second mailing yielded a further 15 per cent of the total sample or just over two-fifths (43 per cent) of what was left; and the third mailing yielded another 6 per cent of the total, equivalent to 26 per cent of what remained at that time. In total, therefore, 1,721 completed and usable replies were received, giving an overall response rate of 84.7 per cent. In designated areas the rate was 84.2 per cent, and in non-designated areas it was 85.1 per cent. There were no great variations in response between different executive councils, although a handful of large E.Cs. had rates below 80 per cent, including Inner London, Liverpool, Walsall, Warwickshire and Birmingham. In general, response rates were higher in rural than in urban areas, and lowest in the large cities and conurbations of the country - London, Birmingham, Manchester and Liverpool. Proximity to London did not appear to be a factor in response, although the rate for Inner London itself was low. Appendix contains full details of the response rates.

The sample print-out contained sufficient information about the doctors to enable quite detailed comparisons to be made between respondents and non-respondents. Five points of comparison were used - classification of practice area, sex, age, list size, and number of principals in the practice. No statistically significant differences

*By having the returns sent directly to the University the doctors could be assured that their completed questionnaires would not be seen by anybody at the Divisional Offices.

were observed on any of these attributes between the actual frequencies and the expected frequencies *if* each attribute had no effect upon the probability of response, and we can therefore say with some confidence that doctors who returned their completed questionnaires were a satisfactory cross-section of all the G.Ps. *in* the sample. There were, however, some discrepancies at the extremes of some attributes, especially where the frequencies were low. Female doctors in designated areas were under-represented, and so too were elderly doctors and those with small list sizes in both designated and non-designated areas.

The coding of the questionnaires ran concurrently with the survey, and was carried out by a specially trained team. Data were stored on 80-column cards and magnetic tape, and analysed on the University's ICL 4130 computer. Details of the coding and analysis are contained *in* Appendix

The Follow-Up Survey

A postal survey has certain strengths and weaknesses in comparison with other types of surveys. If the problem of low response can be overcome (which is the chief disadvantage of the method) a postal survey is usually much cheaper than any other form of data collection, but *it* has the added drawback of being *limited* mainly to simple and factual questions. A mail questionnaire is not good at tapping opinions or attitudes and it is generally agreed that complex questions requiring long written answers are best omitted. Much of the information we needed was of a type that could properly be collected through a mail questionnaire, but *it* also seemed useful to supplement these 'hard' statistical data with more subjective responses for use as illustrative material. To this end a small follow-up survey was mounted in September 1970 in which four research workers from the University conducted tape-recorded semi-structured interviews with a total of 30 doctors and, where possible, with their wives also. The doctors selected for these follow-up interviews were concentrated in areas of the country with very different manpower situations - in Leicestershire, Warwickshire, the West Riding, Wiltshire, Devon, Cornwall and Sussex. The set consisted of doctors who had made 'functional' moves from non-designated to designated areas, and, correspondingly, those who had at some time in the past made 'dysfunctional' moves from a designated to a non-designated area. It is not suggested that the stories recounted in these discussions are representative of the general experience of G.Ps. since the numbers involved are very small and were not randomly selected; but they provide instructive case histories to illustrate and complement the main survey analyses. The material drawn from these follow-up

interviews is presented in Chapter 12.

The Presentation of Survey Data

Much of the remainder of this report is taken up with presenting and discussing the main results from the survey, and some brief comments about the method of data presentation will help the reader to find his way through the sometimes complex tables in the report. Firstly, it will be appreciated that the research design in fact yielded two samples (one of doctors in designated areas and the other of doctors in non-designated areas) each having a different sampling fraction. It was necessary to use this design to get an adequate number of designated doctors in the survey, but it means that the results obtained from the two samples cannot strictly be aggregated to give representative results for the country as a whole. In most of the tables, therefore, the results are presented separately for the designated and non-designated samples.* This procedure enables us to compare the relative frequency of characteristics of doctors in both samples, and is perfectly compatible with the design of the sampling scheme. Where estimates are required for the total population of doctors in an area (irrespective of whether they are designated or non-designated, as in the analysis in Chapter 6) they are obtained by weighting the designated and non-designated samples to take account of the differential sampling fractions. If, on the other hand, the percentage of doctors possessing an attribute is virtually identical in both samples then no harm is done by producing an unweighted aggregate of the two sets of data.

Secondly, in most cases the figures included in the tables are the raw sample frequencies - that is, they are not adjusted to allow for non-response nor are they inflated to give total population estimates. The decision not to adjust the raw sample frequencies for non-response was based on the fact that, as far as we could tell, the respondents were a representative sample of all the doctors approached, and consequently the failure to achieve a 100 per cent response rate merely affected the ultimate size of the sample, and not its randomness with respect to the full population of G.Ps. (see Appendix , Table). We have seldom inflated the sample figures to give estimates of population totals because in most tables our primary aim is to compare the proportions of doctors in various categories possessing a characteristic of interest; but sample frequencies can quite easily be inflated if the reader wishes to do so. For example, if 200 doctors in the designated sample had a certain attribute, then there is a 95 per cent chance that between 1,700 and 2,120 doctors in designated areas throughout the country also had that particular attribute in 1968. For a designated sample frequency of 400

*The non-designated sample includes all doctors in open, intermediate and restricted areas, although in many tables the results are broken down for each separate type of area.

the population range lies between 3,590 and 4,050, and for a frequency of 600 the range is 5,570-5,880. Population ranges at 95 per cent confidence for sample frequencies in the non-designated sample are: for 300, 3,210-3,860; for 600, 6,720-7,420; and for 900, 10,360-10,840.*

Thirdly, significance tests are rarely given in the text or by the tables. The main reason for this is that significance tests in common use relate to an individual characteristic of a table or a result, whereas the arguments put forward in a research report of this kind tend to be based on a complex of results. In such cases it is more important to observe a set of results which are mutually consistent with the argument than to dwell on the significance of individual results to the exclusion of others in the complex. It is possible to apply more sophisticated multi-variate techniques to test the significance of complex hypotheses, and it is our hope at a later stage to pursue further analyses which may deepen our understanding of the situation portrayed by the data. As a first step, *it* seems more appropriate to present results based on survey data which are reasonably clear and beyond dispute, since *it* is on these that policy-makers can most readily base their actions.

*The standard error of the percentage, with finite population correction, is calculated as

$$\sqrt{\frac{pq}{n} \left[\frac{N-n}{N} \right]}$$

where N and n are respectively the population and sample sizes; p is the percentage of the sample possessing the characteristic in question; and q = 100 - p.

References

1. J.S. Collings "General Practice in England Today" Lancet (1950) i, 555.
2. s. Taylor Good General Practice Oxford University Press, 1954.
3. S.J. Hadfield "A Field Survey of General Practice" British Medical Journal, (1963), 2, 683.
4. A. Bradford Hill "The Doctor's Day and Pay" Journal of Royal Statistical Society, (1953), Series A, 114, 1.
5. B. Benjamin and R. Ash "Prescribing Information and Management of the N.H.S. Pharmaceutical Services" Journal of the Royal Statistical Society, (1964), Series A, 127, 165.
6. Report of the Royal Commission on Doctors' and Dentists' Remuneration (Pilkington Report), Cmd. 939, H.M.S.O., 1960.
7. A. Cartwright and R. Marshall "General Practice in 1963" Medical Care, (1965).3.69.
8. A. Cartwright Patients and Their Doctors Routledge and Kegan Paul, 1967.
9. J.M. Bevan and G.J. Draper Appointment Systems in General Practice Nuffield Provincial Hospitals Trust, O.V.P., 1967.
10. J.M. Last "The Regional Distribution of General Practitioners and Consultants in the National Health Service" British Medical Journal, (1967),2,796.
11. D. Mechanic "Correlates of Frustration Among British General Practitioners" Journal of Health and Social Behaviour, (1970), 11, 87.
12. J.M. Last and E. Broadie "Further Careers of Young British Doctors" British Medical Journal (1970), 4, 735.
13. R.G.S. Brown and C. Walker "The Distribution of Medical Manpower" Chapter 1 in Problems and Progress in Medical Care (ed. G. McLachlan) Fifth series. Nuffield Provincial Hospitals Trust, O.U.P., 1971.
14. J.M. Beshers Population Processes in Social Systems The Free Press, 1967.
15. D.V. Donnison "The Movement of Households in England" Journal of the Royal Statistical Society
16. L.A. Brown and J.C. Belcher "Residential Mobility of Physicians in Georgia" Rural Sociology. (1966), 31, 439.
17. L. Benham, A. Maurizi and M.W. Reder "Migration, Location and Remuneration of Medical Personnel" The Review of Economics and Statistics, (1968),50,332.

CHAPTER 5

THE MOBILITY OF GENERAL PRACTITIONERS

"I think you should certainly put down roots. You get to know patients when you stay in one place, and when you get to know them you want to carry on looking after them. That's why we're doctors, isn't it?"

- G.P. in Leicester

In Chapter 2 we described the various processes affecting the distribution of family doctors. The number of G.Ps. in any area is the net result of gains and losses from and to other stocks of medical manpower, and desired changes in the number can in principle be effected by stimulating the gains or restricting the losses or both. In practice some movements are more easily influenced than others, and some have a greater capacity for short-term improvements than others. In this chapter we are concerned with the movement of G.Ps. after starting in general practice, and we begin the analysis of the survey data by considering the mobility patterns of the doctors in the survey.* The success that can reasonably be expected from any attempts to persuade established G.Ps. to move to other areas will depend to a large extent upon the mobility potential of the profession as a whole. How often do doctors move once they have started their careers in general practice, and when are doctors most likely to move? If it should be shown that only a small proportion of doctors normally change practices during the course of their careers, or that those who do move are mainly elderly doctors wanting to change to a smaller practice for their last few years, then the policy implications would be different (and more serious) than a situation in which most doctors moved at least once in their lives, and at a fairly young age. In the first case the task of an incentive scheme would be to stimulate mobility among doctors who would otherwise not normally consider moving, and in the latter case the problem would be one of ensuring that doctors who are prepared to move were given sufficient encouragement to go to the 'right' areas.

The analysis in this chapter is complicated by the ambiguity of the concept of 'mobility', and by the need to control for the effects of time on the assessment of gross mobility patterns. On the question

*These include internal mobility by G.Ps. within the country and also immigration into England from outside; but the research design obviously excludes migration out of the country. The implications of this unavoidable exclusion are discussed in chapter 6.

of definition, the concept of 'mobility' *is* used throughout the report in two distinct ways. On the one hand the concept *is* used in the professional sense of moving from one practice to another.* General practitioners do not inevitably need to change practices in order to achieve career advancement: many are promoted from assistant to partner within the same practice and some may move immediately into general practice as partners. But for many doctors at least one move between practices has been a necessary condition of advancement, particularly in the early years of the N.H.S. when the number of assistants seeking partnerships far exceeded the number of vacant posts. Yet even if a substantial proportion of family doctors do in fact change practices during the course of their careers this would still not necessarily constitute a potential source of geographical redistribution, for most moves may be local, within the boundaries of the same executive council or even medical practice area. The second usage of the concept of mobility is therefore in the geographical sense of movement from one administrative unit to another. The unit may be a standard region, county, executive council, medical practice area, or whatever is chosen as appropriate. (In practice the small sample frequencies and the constant revision of practice area boundaries compel us to limit the analysis to transfers between regions and geographical counties.) By definition, geographical mobility always implies professional mobility, but the reverse does not hold good provided a change of county is taken to be the minimum movement for the purpose of assessing geographical mobility.

The second general difficulty underlying the analysis *is* that of allowing for the effects of time. Since the survey was conducted among samples of all general practitioners in England it inevitably included doctors scattered across the whole of the age range. Results based on total data for the two samples are consequently a sort of average of all the trends over the past 40 years or more, and may conceal important differences between generations. Mobility may have become much more or much less common since the inception of the N.H.S., in which case the more recent trends will be of the greatest interest. The difficulty *is* that such trends, if they exist, will not show up in the total sample data. Ideally the problem can only be overcome by studying successive cohorts of doctors over a long period of time, for

*A full definition of professional mobility would also take account of movement between general practice and other branches of the profession, but that lies beyond the scope of the present study.

it is only by using this kind of research design that the full effects of secular changes can be seen; but it is costly and time-consuming. At second-best, one can take a cross-sectional survey and examine inter-generation variations within it, as we have done here, although the method has disadvantages. In particular, for each successive generation represented in a cross-sectional sample the upper age limit decreases, and the completed career patterns of different generations cannot strictly be compared. This problem is discussed in greater detail when the relevant data are presented.

Professional Mobility

The doctors participating in the survey were asked to list all the positions they had ever held in general practice, except as locums. A change of position was defined as a transition from one practice to a different one, and specifically excluded promotions within the same practice. Table 5.1, containing the first results of this question, shows that just over 40 per cent of respondents in each area were still working in the same practice in which they had started, and about a third had worked in two practices (that is, they had "moved once). The remainder, about a quarter of all the doctors, had held three or more different positions, which means that they had moved from one practice to another on at least two occasions. It seems on past experience that more than half of all family doctors can expect to change practices at least once during the course of their careers, but that most of those who do so will move on one occasion only. There were no great differences in this respect between doctors in each type of practice area, although those in restricted areas were slightly more likely than the rest to have made more than one move. A small list size, probably in a pleasant residential area, may be the reward of G.Ps. who are prepared to make several moves to achieve it. It was not uncommon in pre-N.H.S. days for doctors to "serve their time" in industrial working-class areas before selling up and moving to a sea-side or country practice, and several doctors in the survey saw no reason why it should not remain a normal thing to do.

Of greater interest than these small variations is the question of whether there have been any significant changes in professional mobility over the last few decades. Are doctors entering general practice these days likely to move more or less frequently than their older colleagues? The answer is complicated by the fact that there is in any case an obvious relationship between age and mobility simply because it generally takes a certain amount of time to make several

moves: doctors who have worked in three or four different practices are not likely to be much under 35 years of age. Quite apart from any changes over time, therefore, we would expect the younger doctors in the survey to have moved less than the older ones, even though their mobility potential may be higher. The important question is whether, before settling down in their main life-time practice, younger doctors are nowadays more likely to move than their older colleagues did before they settled down. When put in this way the limitations of our research design are harshly revealed, because many of the younger doctors in the survey had not yet settled and we cannot tell how often they will move before doing so. If however it is assumed for the moment that most doctors have settled by the time they reach 40 it is at least possible to compare mobility patterns up to that age for different periods up to the late 1950s. In particular, since virtually all of the doctors who are currently less than 50 will have spent all their time as G.Ps. within the National Health Service, some simple pre-/post-1948 comparisons can be made.

The figures are set out in Table 5.2. The first point to note is that the youngest set of doctors (under 30) in both samples had, as expected, made significantly fewer moves than their older colleagues. Doctors in the next two age groups occupied intermediate positions, but among those over the age of 40 there were no major differences in professional mobility in either sample. There is certainly no firm evidence that doctors starting in general practice in pre-N.H.S. times have been consistently more or less mobile than those who have practised exclusively within the Service. Nevertheless there are some hints in the figures that younger G.Ps. may change practices more often than doctors have done in the past. We see, for instance, that those in the age group 40-44 had already achieved as many moves, on average, as doctors in any of the higher groups, and it is therefore probable that their eventual life-time mobility will also be greater. The fact that even those in the age group 65-69 in the non-designated sample **had also made more moves than any of their older colleagues reinforces** that conclusion. It is impossible to estimate the eventual mobility potential of the youngest doctors with any degree of certainty because new factors (such as the introduction of the designated areas allowance in 1966) distort the extrapolation of past trends, but at least their record so far is consistent with the hypothesis of greater professional mobility potential among young doctors entering general practice since the early 1960s.

A second interesting point in the table is that doctors in the 55-59 age group in both samples were rather less likely to have moved at all than most other G.P.s. over 40. Is this just a chance result or does it hold some significance? We think that it does. Most of the doctors in this age group were completing their undergraduate courses between about 1938 and 1942, and would probably have had their normal post-graduate careers interrupted or in some way affected by the war. In consequence their average age of starting in general practice was some four or five years higher than usual, and since mobility is mainly a feature of youth, it is no surprise that these doctors had been rather less mobile than either the preceding or the subsequent generations of students. Other evidence of the unsettling effects of the war was found by Brown and Walker in their study of general practitioners in East Yorkshire, South Hampshire and Glamorgan.¹ Only 58 per cent of these doctors who graduated between 1940 and 1954 had settled in the area of their first choice compared with 68 per cent of pre-1940 and post-1955 graduates. The evidence is therefore consistent: doctors whose training was affected by the war were older than average on starting general practice, therefore less likely to move, and consequently less likely to have finished up in the area of first preference.

Geographical Mobility

We shall return to the professionally mobile doctors later in the chapter when we examine some of the correlates of mobility, but we must next consider the evidence about the second type of mobility, across administrative boundaries. Given that some 60 per cent of general practitioners had moved from one practice to another during the course of their careers, were they also mobile geographically, in the sense in which the term has been defined? Table 5.3, which sets out the evidence on inter-regional mobility,* shows that fewer doctors had moved from one region to another than had changed practices. About two-thirds of respondents in each sample had spent their entire careers in general practice up to the time of the survey in the same region, and most of those who had crossed regional boundaries had done so only once. Fewer than one doctor in ten had been a G.P. in more than two different regions. The differences between the age groups are much as we would expect: doctors under 40 had made fewer inter-regional moves, on average, than their older colleagues, although we would expect their eventual life-time

*All areas outside England were treated as one single standard region for the purposes of this analysis.

movements to be no less (and possibly greater). The differences among doctors over the age of 40 are small, although once again those in the 55-59 age group have been slightly less inclined to move from one region to another than those in the preceding or subsequent age groups. The overall variations between the designated and the non-designated samples are negligible.

The movement of doctors in the sample between geographical counties is shown in Table 5.4.* The main findings are similar to the patterns of regional movement: an increasing number of inter-county moves, on average, in successive age groups up to the age of about 40; broadly similar patterns beyond that age with the exception of doctors in the 55-59 group; and a small proportion of moves between three or more different counties. The variations between the two samples are also slight. As we might expect, however, the actual number of doctors moving across county boundaries was somewhat greater than the number moving from one region to another: about 40 per cent of G.P.s. in each sample had crossed county boundaries compared with about 33 per cent who had crossed regional boundaries. Taking regional and county mobility together it is seen that, although most of the doctors had spent their entire careers in general practice up to the time of the survey in the same standard region, most of those who had moved geographically had done so from one region to another: four-fifths of those crossing county boundaries had also changed regions in the process. Data presented in the next chapter will describe the regions and counties most frequently involved in these transactions.

We can now combine and summarise the information on professional and geographical mobility by identifying four types of mobility (Table 5.5):

1. Doctors who had spent their careers to date in the same practice (no mobility).
2. Doctors who had changed practices within the same county (mobility within county).
3. Doctors who had moved between counties within the same region (mobility within region).
4. Doctors who had moved from one region to another (mobility between regions).

*For the purposes of this analysis the East and West Ridings of Yorkshire were treated as one single county, and the whole of Derbyshire and Lincolnshire were included in the East Midland region.

These four types are used in most of the remaining tables in the chapter. Table 5.5 shows the distribution of respondents between each type, with doctors above and below the age of 40 separated out. The older and younger doctors within each sample obviously have different mobility histories, but within each of the two age categories the variations between the designated and non-designated samples are slight. Of the younger respondents (those under 40) almost half had remained in the same practice to date and about a quarter had crossed regional boundaries. Among the older G.Ps. these proportions were, respectively, about two-fifths and one-third. Relatively few doctors (about 15 per cent) had changed practices within the same county, and even fewer (about 8 per cent) had changed counties within the same regions. These latter proportions were more or less constant, irrespective of age or type of area. Even allowing for the limitations of a cross-sectional survey it seems that these figures are tolerably good indicators of the amount of movement that can be expected from existing G.Ps. over the course of a full career. The detailed age analyses in Tables 5.2 - 5.4 suggest that there have been no major changes in the amount of career movement achieved by general practitioners over the past four decades or so, although the situation may well be changing. Quite apart from general and uncontrolled developments in the structure and administration of general practice, there is evidence in the survey that younger doctors may now have a greater mobility potential than their counterparts in previous years. Already doctors in their early forties had, on average, changed practices a little more frequently than G.Ps. in any of the older age groups, and it is therefore likely that their eventual lifetime movement will also be greater. We can be less confident about the potential of the youngest doctors in the sample because they had completed an insufficiently large part of their careers on which to base reliable predictions, but at least their performance so far is consistent with the hypothesis of greater freedom of movement. The existence of possible counter-productive factors is considered in the next section.

Correlates of Mobility

What is the relationship between mobility and career patterns? The data in the previous section strongly suggest that both professional and geographical mobility are activities of youth. Doctors are most likely to change practices in the early years of their careers, possibly before they acquire family commitments, and while they are seeking to establish themselves. Once settled as partners it is expected that subsequent movement will be small, with such exceptions as married women

moving when their husbands change jobs and older practitioners moving to smaller practices towards the end of their careers. This is all very obvious, but the data permit us to examine more specific questions. Is mobility (or immobility) a function simply of age, or do other events which normally occur in the early years of a doctor's career also influence his decisions in this respect? Does it make any difference whether or not he does a lot of hospital work before starting in general practice, or whether he gets married before or after taking up his first appointment? And can we be more specific about the age range during which practitioners are at greatest risk of moving? These questions arise from considering mobility within the context of a doctor's life-pattern rather than as a simple function of age.

Age: Considering first the age span during which G.Ps. most commonly move we immediately come up against the problem of using a cross-sectional study to perform cohort analyses. The difficulty is that whilst we know the ages of the doctors when they took up their present appointments, we cannot be sure that these will be their terminal appointments. Indeed, many of the younger doctors undoubtedly will move during the next few years, and some will move several times. There are consequently obvious limitations in simply equating the age of the doctors on starting their current positions with the age at which mobility generally ceases. There is no perfect solution to this dilemma without resort to a much larger and more complicated study, but we can arrive at a sufficiently good estimate by assuming that the older a doctor gets the less likely he is to move again. The question then is Whether the proportion of movers who had started their present post by any given age is the same among younger doctors as among their older colleagues.

The figures set out in Table 5.6 are restricted to doctors who had changed practices at least once UP to the time of the survey. They show the present ages of these doctors, and their ages when they took up their current appointments. There is a clear trend in the table of older doctors having started their current positions at a later age than younger respondents. If, for example, those in the highest age group (60+) make no further moves before they retire, then it is seen that more than a quarter will have changed practices after the age of 40, and at least one in ten will have moved after 50. In the next lowest age group (50-59) the proportion moving after the age of 40 falls to about one-fifth, and the effect of the war is seen again in the relatively low proportion of these doctors who had started in their

current posts by the age of 30.

The intriguing question is whether the completed career histories of the younger doctors in the sample will show a similar distribution to that of the over 60s. There is clear evidence of mobility potential among these older doctors stretching well into the middle and later stages of their careers; can we expect a similar tendency to move among doctors currently under 40? The data in Table 5.6 offer no clues: they are consistent with the notion that such a tendency might exist, but it could equally well transpire that these younger G.Ps. might suddenly put down roots and remain in one place for the remainder of their careers. Certain background factors may be considered in forming an opinion. The difficulties of achieving partnership status in the 1950s and the consequent tendency for doctors at that time to spend quite long periods as assistants before moving to partnerships, (which may explain the relatively late age of settling of some of the older doctors in the sample), are less likely to affect younger G.Ps. It is much easier for a younger man to become a partner and achieve quick parity in 1970 than it was ten or fifteen years earlier, and hence the opportunities to settle at an earlier age are greater. Reinforcing this conclusion is the additional fact that early marriage tends to act as a brake on mobility potential (see next section), and that as the age of marriage falls, so an increasing number of doctors can be expected to settle by about their mid-30s. Against this interpretation of events is the earlier conclusion that younger doctors are likely to make as many moves during the course of their career as their older colleagues have done, and may even make more. It was noted, for example, that doctors in the 40-44 age group in both samples had already made more moves, on average, than those in any of the higher groups, and are therefore almost certain to have worked in a greater number of different practices by the time they eventually retire. Unless G.Ps. who are currently in their 30s deviate radically from the mobility patterns of their immediate seniors it seems that the current tendency is for doctors entering general practice to make a number of quick moves before settling at a comparatively early age. It is likely, however, that a significant proportion will continue to change practices until late in their careers, even if not to the same extent as older G.Ps. currently in practice.

Marriage and Family Responsibilities: In spite of the rather unexpected finding in the previous section that a substantial number of doctors in the sample had changed from one practice to another beyond their mid-40s it remains the case that mobility is primarily an activity of youth. At least half of the younger doctors who move now can expect to settle before

they are 34, and most will probably have made their final move by the age of 40. But is mobility simply a function of age or do other events in the early years of a doctor's career also have some bearing on his decisions about moving and settling?

One such event is marriage, and here the evidence clearly indicates that early marriage discourages movement. The relevant figures are set out in Table 5.7. Ignoring for the moment the age differences involved, it is seen that doctors who had married after starting in general practice were more mobile in every sense than those marrying before starting their careers as G.P.s. - they were more likely to have changed practices, more likely to have done so several times (although this is not included in the table), and more likely to have crossed regional boundaries. The differences are not of a very large order, but they are significant, and are consistent in both samples. Even when the effect of age is controlled the significance of the timing of the marriage remains.* Among the doctors over 40 the difference remains in both samples between the achieved mobility of those marrying before and those marrying after starting in general practice. Among the younger doctors (those under 40) the trends are naturally less clear, especially in the designated areas, although we would expect the greatest future mobility among these doctors to be shown by those marrying later rather than earlier. We conclude that early marriage has tended to reduce the likelihood of doctors moving in the past, and may still do so today.

One of the main reasons for this appears not to be the marriage itself, but the consequent assumption of family responsibilities. The younger a doctor marries the earlier in his career he is likely to assume the responsibilities of parenthood; hence the timing of the marriage tends to be an indirect rather than a direct factor in mobility. It is invariably easier for single people and childless couples to move house than for families, and unless the children are at a boarding school the upheavals increase as the children get older. There is clear evidence from the survey that the decision to settle is closely related to the cycle of family development, and particularly to the educational needs of the children. Just over two-fifths of the married doctors had started in their current positions before they had

*The control is introduced in Table 5.7 by dividing the doctors into those under 40 and those 40 and over at the time of the survey, a procedure which maintains sufficient numbers in most cells for valid comparisons to be made between them, and also broadly separates out those who were less likely to have exhausted their mobility potential.

any children, and over 90 per cent of them had started by the time their eldest children had reached secondary school age (Table 5.8). In contrast, only 5 per cent of the married respondents had no children at the time of the survey and less than a quarter had all their children of pre-secondary school age. Put the other way round, fewer than one doctor in ten had so far moved after his eldest child had reached secondary school age. Naturally, doctors who moved several times tended to settle at a later stage in their family development than those moving only once, but even among those with more than two moves the proportions who were still mobile after their children had reached secondary school age were only 16 per cent and 11 per cent respectively in the designated and non-designated samples.

It is not possible from this survey to sort out the independent significance of various events occurring in the first few years of a doctor's career in general practice, but it is clear from the evidence so far that marriage and family responsibilities may affect a doctor's mobility potential. Early marriage diminishes the likelihood of a doctor moving by hastening the assumption of family responsibilities. In almost all cases the doctors in the survey seemed to have settled down by the time their eldest children had reached secondary school age, regardless of their own age. Thus in general, doctors who had changed practices after the age of 40 were those who either married later or were later in starting their families.

Post-Graduate Training: The general tendency for G.Ps. to switch practices in the early part of their careers before they assume extensive family commitments means that events which postpone the age of starting in general practice may also reduce mobility potential. We have seen, for example hO; this affected doctors qualifying between about 1938 and 1942, although war is epiphenomenal. Many doctors, however, pursue post-graduate courses and take higher degrees before starting out as G.Ps., and the analysis so far leads us to expect that, other things being equal, those who do so would be less likely to move than those who don't. The evidence clearly shows this to be the case in both samples (Table 5.9), even when a simple control is made for age. Among the over 40s in the designated sample, 46 per cent of those gaining their secondary qualifications* before entering practice had stayed in the same practice up to the time of the survey compared with only 29 per cent of those who obtained qualifications after starting in general practice.

*!Secondary qualifications, are defined by the question: "What other (i.e. non-primary) qualifications do you have? Please include all higher degrees, diplomas, memberships, etc."

In the non-designated sample the corresponding percentages were 49 and 37. Doctors with no additional qualifications fell mid-way between these extremes in both samples. Respondents who had obtained their further qualifications before starting general practice may have been different from the others in ways which affected their mobility potential, but the data are at least consistent with the basis hypothesis about the relationship between mobility and the career cycle.

Sex: There remain two further individual characteristics which may be significant in decisions about moving - sex and birthplace. Female doctors constituted less than 10 per cent of the total sample (reflecting their relative prevalence among G.Ps. as a whole), and they could therefore have accounted for only a small proportion of the total amount of movement, even if they had all been highly mobile. It is nonetheless important to check whether the female respondents had moved more often than their male colleagues. Since most women G.Ps. are married their likelihood of moving is influenced mainly by their husbands' occupations, and may equally well be greater or less than that of male G.Ps. In fact the evidence shows no significant difference between the mobility types of male and female respondents (Table 5.10). The men had made slightly more moves, especially between regions, but the difference is of a very small order and has no bearing upon the analysis.

Birthplace: The influence of certain biographical factors on the choice of a practice location is examined in detail in Chapter 7, including the significance of birthplace, home area and medical school; but it is relevant at this point to consider the experiences of those doctors in the survey who were born outside England, and who had consequently already made one major move (though not necessarily as a general practitioner). It is difficult to predict whether these people are more or less likely to change practices and move around the country than English-born doctors. On the one hand it is arguable that having made one significant move they would be more likely to make subsequent ones; and this is reinforced by the fact that, having few or even no family connections in this country, they are unlikely to have developed links or attachments to specific localities. On the other hand many of the non-British doctors had experienced considerable difficulty in obtaining the kind of practice they wanted, and several had been unable to move even when they wished to.

The non-English born practitioners constituted 41 per cent of the designated sample and 34 per cent of the non-designated sample. The difference is significant, but most of these doctors had been born in

Scotland and Ireland, and it is shown in Chapter 9 that even among the Commonwealth-born practitioners many were United Kingdom citizens. The evidence about their mobility potential is equivocal. Table 5.11 shows that the non-English born doctors as a whole had moved more frequently, and probably over a greater distance, than those born in England. In the designated sample 35 per cent of them had remained in the same practice up to the time of the survey and 42 per cent had crossed regional boundaries, compared with 45 per cent and 30 per cent respectively among their English-born counterparts. Similar percentages are found in the non-designated sample. These results tend to support the argument that having made at least one international move people are less likely to settle easily in one place, but many other factors may be affecting the results. Moreover, if we look at the mobility patterns of doctors born in each individual country, we find much inconsistency, although the frequencies are admittedly low. We conclude that doctors born in countries outside England are likely to respond at least as favourably as English-born practitioners to mobility incentives, although the reasons are unclear.

Summary

One of several ways through which a more equal distribution of family doctors might be achieved is the movement of manpower from areas with a relative abundance to those which are less well supplied. The debate leading up to the introduction of the designated areas allowance in 1966 failed to clarify whether the payment was intended to stimulate this kind of redistribution or whether it was seen mainly as an incentive for new entrants to general practice to move into under-doctored areas; but it is clear from Chapter 3 that inequalities of distribution could be improved simply by rearranging the location of doctors within fairly small geographical areas. The likelihood of this happening will in turn depend upon the mobility potential of G.Ps.

Mobility is defined in two ways. Professional mobility is taken to be a change from one practice to a different one, and geographical mobility is defined as movement across regional and county boundaries. Taking professional mobility first, just over 40 per cent of the doctors in each sample had spent their whole careers up to the time of the survey in the same practice, some 33 per cent had worked in two different practices, and the remaining 25 per cent had moved between three or more practices. When these moves are expressed in terms of geographical mobility, the data show that almost 60 per cent of the doctors had stayed in the same geographical county for the whole of

their careers to date, (including those who remained in the same practice), almost 10 per cent had moved between counties within the same region, and the remaining 30 per cent or so had moved across standard region boundaries. Most of those who had crossed regional boundaries had done so only once. There were no differences in the total amount of movement between doctors in the designated and non-designated samples, and there is no evidence that doctors starting in general practice in pre-N.H.S. times have been consistently more or less mobile than those who have practised exclusively within the Service. There are, nevertheless, some hints that younger G.Ps. (those under about 45) may move more times during the course of their careers, on average, than older doctors currently in practice; and there is also clear evidence that the war has had an unsettling effect, in various ways, on those who qualified in the 1938-1942 era.

The significance attached to these results depends upon the assumptions held about the mobility of general practitioners. The common assumption seems to be that G.Ps. tend to change practices infrequently and generally remain within a small geographical area. If this is so, then one of the functions of any incentive must be to stimulate doctors to move in the first place. The survey data, on the other hand, indicate that at least one change of practice is the norm for the majority of doctors, and that a substantial minority of them also move across county and even regional boundaries. It follows therefore that the chief problem may be less one of getting doctors to move in the first place than of directing their natural mobility potential into the 'right' areas and, having got them there, of encouraging them to stay. This redefinition of the central problem is necessarily tentative at this stage of the analysis, for it is not yet known how the different regions and counties of the country have been affected by the net balance of movement. It may be the case, for example, that most of the moves have been self-cancelling ones between, say, the South Eastern and South Western regions, or between the East and the West Midlands, in which case the overall balance within the country would remain unchanged. The next chapter is devoted to this particular question. We merely conclude at this stage that a considerable and possibly growing natural potential for internal migration appears to exist among G.Ps., with a consequent need to redefine the central components of the problem.

The results of the survey also illustrate some of the factors associated with movement. As in all studies of migration, age was found to be a very important factor. Most doctors had moved while they were

young, and the likelihood of moving decreased with age. Of the current generation of younger doctors, at least half will have made their final move by the time they reach the age of 34 and at least two-thirds can expect to have settled by the time they are 40. But other events are also important in decisions about moving, and they are to some extent independent of age. In particular, marriage and the consequent development of family responsibilities acts as an important constraint on mobility potential. Doctors who married before starting in general practice were less likely to have moved at all than those who married later, and very few doctors had moved after their eldest children had reached secondary school age. As the age of marriage falls (albeit at a slower rate among the medical profession than in the total population) and as doctors consequently assume parental responsibilities at an earlier stage in their careers, so we can expect the age of settling to decrease.* Other developments in the structure and administration of general practice, such as the growing ease with which doctors can move from assistant to partner within the same practice and the growth of salaried partnerships are likely to reinforce the trend. Against this, however, the increasing emphasis on post-graduate training as a necessary pre-requisite of entry to general practice suggests that in future the average age of entry into general practice may rise, and this in turn will be reflected in a later average age of settling. There is also the earlier finding that the likelihood of doctors moving sometime during their careers may be increasing, which also points to the probability of doctors in the future usually being somewhat older by the time they settle than at present. The signs, in short, are conflicting, as they are in most situations of social change. It is probable that we are currently entering a period when new influences will bring about new patterns of movement. It seems fairly certain that the tendency observed in the survey for doctors to change practices at least once during their early careers will be maintained, but it would be desirable to establish some method of monitoring the pattern of future mobility. We return to this theme in the concluding chapter.

*Of final-year medical students in 1966, 22 per cent were married and a further 14 per cent were either engaged or intending to be married within a year.² It is estimated that by 1971 the proportion of final-year students who were married had risen to 25 per cent.

References

1. R.G.S. Brown and C. Walker "Motivation and Career-Satisfaction in General Practice" Unpublished paper, University of Hull, 1971.
2. Report of the Royal Commission on Medical Education (Todd Report) Cmnd. 3569, H.M.S.O., 1968. (Appendix 19, page 331)

TABLE 5.1

NUMBER OF POSITIONS IN GENERAL PRACTICE BY TYPE OF PRACTICE AREA

Number of Positions in General Practice	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
1	283 (41.2)	275 (44.4)	112 (43.6)	65 (41.4)
2	245 (35.7)	193 (31.1)	90 (35.0)	43 (27.4)
3	105 (15.3)	90 (14.5)	38 (14.8)	40 (25.5)
4	35 (5.1)	42 (6.8)	9 (3.5)	7 (4.5)
5	15 (2.2)	12 (1.9)	6 (2.3)	1 (0.6)
6	2 (0.3)	4 (0.6)	1 (0.4)	-
7	-	1 (0.2)	-	-
Not Known	2 (0.3)	3 (0.5)	1 (0.4)	1 (0.6)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
Mean Number of Positions	1.9	1.9	1.9	1.9

Percentages calculated down the columns, and included in brackets

NOTE: The age distributions of doctors in each type of area did not differ significantly (table 6.1, page), hence there is no harm in comparing the non-standardised results for each area.

TABLE 5.2

NUMBER OF POSITIONS IN GENERAL PRACTICE BY PRESENT AGE

Present Age	Number of Positions in General Practise				Total.	j-lea Number of Positions
	1	2	3+	not known		
DESIGNATED SAMPLE						
Less than 301	6 (85.7)	-	1 (14.3)	-	7 (100)	1,3
30-34	29 (54.7)	18 (34.0)	6 (11.3)	-	53 (100)	1,6
35-39	52 (45.2)	39 (33.9)	24 (20.9)	-	115 (100)	1,8
40-44	47 (33.3)	56 (39.7)	38 (27.0)	-	141 (100)	2.1
45-49	45 (39.1)	37 (32.2)	33 (28.7)	-	115 (100)	2,0
50-54	42 (39.3)	46 (43.0)	17 (15.9)	2 (1.9)	107 (100)	1.8
55-59	30 (44.1)	24 (35.3)	14 (20.6)	-	68 (100)	1.9
60 & above'	32 (39.5)	25 (30.9)	24 (29.61)	-	81 (100)	2,1
TOTAL	283 (41.2)	245 (35.7)	157 (22.9)	2 (0.3)	687 (100)	1.9
NON-DESIGNATED SAMPLE						
Less than 301	9 (81.8)	2 (18.2)	-	-	11 (100)	1,2
30-34	39 (49.4)	32 (40.5)	8 (10.1)	-	79 (100)	1.6
35-39	48 (42.9)	35 (31.3)	29 (25.9)	-	112 (100)	2.0
40-44	77 (38.1)	60 (29.7)	65 (32.2)	-	202 (100)	2.1
45-49	78 (42.4)	61 (33.2)	45 (24.5)	-	184 (100)	1,9
50-54	60 (40.5)	54 (36.5)	33 (22.3)	1 (0.7)	148 (100)	1,9
55-59	67 (46.2)	43 (29.7)	35 (24.1)	-	145 (100)	1,9
60 & above	74 (48.4)	39 (25.5)	36 (23.5)	4 (2.6)	153 (100)	1,9
TOTAL	452 (43.7)	326 (31.5)	1251 (24.3)	5 (0.5)	1034 (100)	1.9

Percentages calculated across rows, and included in brackets.

TABLE 5.3

NUMBER OF DIFFERENT STANDARD REGIONS, BY PRESENT AGE

Present age	Number of different standard regions				Total	Mean number of regions
	1	2	3+	Not known		
DESIGNATED SAMPLE						
Less than 30	6 (85.7)	1 (14.3)	-	-	7 (100)	1.1
30 - 34	42 (79.2)	9 (17.0)	2 (3.8)	-	53 (100)	1.2
35 - 39	79 (68.7)	30 (26.1)	6 (5.2)	-	115 (100)	1.4
40 - 44	85 (60.3)	45 (31.9)	10 (7.1)	1 (0.7)	141 (100)	1.5
45 - 49	66 (57.4)	37 (32.2)	12 (10.4)	-	115 (100)	1.5
50 - 54	71 (66.4)	29 (27.1)	5 (4.7)	2 (1.9)	107 (100)	1.4
55 - 59	47 (69.1)	17 (25.0)	4 (5.9)	-	68 (100)	1.4
60 & above	48 (59.3)	24 (29.6)	8 (9.9)	1 (1.2)	81 (100)	1.5
TOTAL	444 (64.6)	192 (27.9)	47 (6.8)	4 (0.6)	687 (100)	1.4
NON-DESIGNATED SAMPLE						
Less than 30	10 (90.9)	1 (9.1)	-	-	11 (100)	1.1
30 - 34	61 (77.2)	16 (20.3)	2 (2.5)	-	79 (100)	1.3
35 - 39	82 (73.2)	24 (21.4)	5 (4.5)	1 (0.9)	112 (100)	1.3
40 - 44	130 (64.4)	48 (23.8)	22 (10.9)	2 (1.0)	202 (100)	1.5
45 - 49	112 (60.9)	57 (31.0)	15 (8.2)	-	184 (100)	1.5
50 - 54	93 (62.8)	44 (29.7)	9 (6.1)	2 (1.4)	148 (100)	1.4
55 - 59	104 (71.7)	31 (21.4)	10 (6.9)	-	145 (100)	1.4
60 & above	105 (68.6)	33 (21.6)	10 (6.5)	5 (3.3)	153 (100)	1.4
TOTAL	697 (67.4)	254 (24.6)	73 (7.1)	110 (1.0)	1034 (100)	1.4

Percentages calculated across rows, and included in brackets.

TABLE 5.4

NUMBER OF DIFFERENT COUNTIES, BY PRESENT AGE

Present age	Number of different counties				Total	Mean number of counties
	1	2	3+	Not known		
DESIGNATED SAMPLE						
Less than 30	6 (85.7)	1 (14.3)	-	-	7 (100)	1.1
30 - 34	37 (69.8)	14 (26.4)	2 (3.8)	-	53 (100)	1.3
35 - 39	70 (60.9)	36 (31.3)	9 (7.8)	1	115 (100)	1.5
40-44	68 (48.2)	54 (38.3)	18 (12.8)	1 (0.7)	141 (100)	1.6
45 - 49	59 (51.3)	38 (33.0)	18 (15.7)	-	115 (100)	1.6
50 - 54	64 (59.3)	29 (27.1)	12 (11.2)	2 (1.9)	117 (100)	1.5
55 - 59	42 (61.8)	26 (38.2)	-	-	68 (100)	1.4
60 & above	45 (55.6)	25 (30.9)	10 (12.3)	1 (1.2)	81 (100)	1.6
TOTAL	391 (56.9)	217 (31.6)	75 (10.9)	4 (0.6)	1687 (100)	1.5
NON-DESIGNATED SAMPLE						
Less than 30	9 (81.8)	2 (18.2)	-	-	11 (100)	1.2
30 - 34	49 (62.0)	27 (34.2)	3 (3.8)	-	79 (100)	1.4
35 - 39	69 (61.6)	29 (25.9)	13 (11.6)	1 (0.9)	112 (100)	1.5
40 - 44	105 (52.0)	63 (31.2)	32 (15.8)	2 (1.0)	202 (100)	1.6
45 - 49	102 (55.4)	57 (31.0)	25 (13.6)	-	184 (100)	1.6
50 - 54	80 (54.1)	51 (34.5)	15 (10.1)	2 (1.4)	148 (100)	1.6
55 - 59	96 (66.2)	34 (23.4)	15 (10.3)	1	145 (100)	1.4
60 & above	96 (62.8)	33 (21.6)	19 (12.4)	5 (3.3)	153 (100)	1.5
TOTAL	606 (58.6)	296 (28.6)	122 (11.8)	10 (1.0)	1034 (100)	1.5

Percentages calculated across rows, and included in brackets.

TABLE 5.5

MOBILITY TYPE BY PRESENT AGE

Mobility type	Sample and present age			
	Designated		Non-designated	
	Under 40	40 & above	Under 40	40 & above
No mobility	87 (49.7)	196 (38.3)	96 (47.5)	356 (42.8)
Mobility within county	26 (14.9)	82 (16.0)	31 (15.3)	122 (14.7)
Mobility within region	14 (8.0)	39 (7.6)	26 (12.9)	66 (7.9)
Mobility between regions	48 (27.4)	191 (37.3)	48 (23.8)	279 (33.5)
Not known	-	4 (0.8)	1 (0.5)	9 (1.1)
TOTAL	1175 (100)	512 (100)	202 (100)	832 (100)

Percentages calculated down columns, and included in brackets.

TABLE 5.6

PRESENT AGE AND AGE AT STARTING CURRENT POSITION OF ALL DOCTORS WHO HAVE CHANGED PRACTICES AT LEAST ONCE

Present age	Age at starting current position						Total
	Less than 30	30-34	35-39	40-49	50 and above	Not known	
DESIGNATED SAMPLE							
Less than 35	14(56.0)	11(44.0)	-	-	-	-	25(100)
35 - 39	24(38.1)	35(55.6)	4(6.3)	-	-	-	63(100)
40 - 49	57(34.8)	58(35.4)	133(20.1)	16(9.8)	-	-	164(100)
50 - 59	12(11.9)	44(43.6)	126(25.7)	15(14.9)	4(4.0)	-	101 (100)
60 & above	17(35.0)	13(26.5)	5(10.2)	7(14.3)	6(12.2)	1(2.0)	49(100)
TOTAL	124(30.3)	161(40.0)	68(16.9)	38(9.5)	10(2.5)	1(0.2)	402(100)
NON-DESIGNATED SAMPLE							
Less than 35	33(73.6)	9(21.4)	-	-	-	-	42(100)
35 - 39	12(18.8)	43(67.2)	9(14.1)	-	-	-	64(100)
40 - 49	51(22.1)	99(42.9)	55(23.8)	26(11.3)	-	-	231 (100)
50 - 59	23(13.9)	59(35.3)	43(26.1)	27(16.4)	11(6.7)	2(1.2)	165(100)
60 & above	16(21.3)	18(24.0)	13(17.3)	15(20.0)	11(14.7)	2(2.7)	75(100)
TOTAL	135(23.4)	228(39.5)	120(20.8)	68(11.8)	22(3.8)	4(0.7)	577(100)

Percentages calculated across rows, and included in brackets.

TABLE 5.7

HOBILITY TYPE BY TIME OF MARRIAGE AND PRESENT AGE

Time of marriage and present age	Mobility Type					Total
	No Mobility	Mobility within county	Mobility within region	Mobility between regions	Not known	
DESIGNATED SAMPLE						
Marriage before entering general practice:						
under 40	70(48.6)	22(15.3)	12(8.3)	40(27.8)		144(100)
40 & above	125(40.8)	42(13.7)	26(8.3)	112(36.6)	1(0.3)	306(100)
Marriage after entering general practice:						
under 40	12(48.0)	3(12.0)	2(8.0)	8(32.0)		25(100)
40 & above	57(32.8)	35(20.1)	12(6.9)	69(39.7)	1(0.6)	174(100)
Never married	13(50.0)	4(15.4)	1(3.8)	8(30.8)		26(100)
Marital status not known	6(50.0)	2(16.7)		2(16.7)	2(16.7)	12(100)
TOTAL	283(41.2)	108(15.7)	53(7.7)	239(34.8)	4(0.6)	687(100)
NON-DESIGNATED SAMPLE						
Marriage before entering general practice:						
under 40	78(45.9)	27(15.9)	24(14.1)	41(24.1)	-	170(100)
40 & above	235(46.4)	84(16.6)	34(6.7)	151(29.8)	2(0.4)	506(100)
Marriage after entering general practice:						
under 40	11(37.9)	10(4.5)	2(6.9)	5(17.2)	1(3.4)	29(100)
40 & above	92(36.2)	31(12.2)	26(10.2)	104(40.9)	1(0.4)	254(100)
Never married	25(51.0)	1(2.0)	4(8.2)	18(36.7)	1(2.0)	49(100)
Marital status not known	11(42.3)		2(7.7)	8(30.8)	5(19.2)	26(100)
TOTAL	452(43.7)	153(14.8)	92(8.9)	327(31.6)	10(1.0)	1034(100)

Percentages calculated across rows, and included in brackets.

TABLE 5.8

MOBILITY TYPE BY AGE OF CHILDREN AT STARTING CURRENT POSITION
(Married respondents only)

Mobility type	Age of children at starting current position			Total
	No children	Eldest child under 11	Eldest child over 11	
DESIGNATED SAMPLE				
No mobility	150(56.4)	110(41.4)	6(2.3)	266(100)
Mobility within county	47(46.5)	48(47.5)	6(5.9)	101 (100)
Mobility within region	19(36.5)	29(55.8)	4(7.7)	52(100)
Mobility between regions	76(33.0)	132(57.4)	22(9.6)	230(100)
Not known	-	-	-	-
TOTAL	292(45.0)	319(49.2)	38(5.8)	649(100)
NON-DESIGNATED SAMPLE				
No mobility	231(55.7)	171(41.2)	13(3.1)	415(100)
Mobility within county	55(36.7)	81(54.0)	14(9.3)	150(100)
Mobility within region	29(33.7)	55(64.0)	2(2.3)	86(100)
Mobility between regions	94(31.0)	175(57.8)	1.34(11.2)	30.3(100)
Not known	3(60.0)	2(40.0)	-	5(100)
TOTAL	412(42.9)	484(50.5)	163(6.6)	959(100)

Percentages calculated across rows, and included *in* brackets.

TABLE 5.9

MOBILITY TYPE BY TIME OF GAINING SECONDARY QUALIFICATIONS AND PRESENT AGE

Time of gaining secondary qualifications and present age	Mobility Type					Total
	No Mobility	Nobility within county	Mobility within re"ion	Mobility between re"ions	Not known	
DESIGNATED SAMPLE						
Qualifications gained before entering general practice:						
under 40	30(54.5)	5(9.1)	4(7.3)	16(29.1)	-	55(100)
40 & above	60(46.2)	20(15.4)	9(6.9)	41(31.5)	-	130(100)
Qualifications gained after entering general practice:						
under 40	11(39.3)	6(21.4)	1(3.6)	10(35.7)	-	28(100)
40 & above	16(28.6)	9(16.1)	8(14.3)	22(39.3)	1(1.8)	56(100)
No secondary qualifications	160(39.6)	67(16.6)	31(7.7)	144(35.6)	2(0.5)	404(100)
Not known	6(42.9)	1(7.1)	-	6(42.9)	1(7.1)	14(100)
TOTAL	283(41.2)	108(15.7)	53(7.7)	239(34.8)	4(0.6)	687(100)
NON-DESIGNATED SAMPLE						
Qualifications gained before entering general practice:						
under 40	47(52.2)	9(10.0)	16(17.8)	18(20.0)	-	90(100)
40 & above	111(49.8)	28(12.6)	20(9.0)	63(28.3)	1(0.4)	223(100)
Qualifications gained after entering general practice:						
Under 40	16(51.6)	4(12.9)	2(6.5)	9(29.0)	-	31(100)
40 & above	46(36.8)	17(13.6)	9(7.2)	51(40.8)	2(1.6)	125(100)
No secondary qualifications	221(40.8)	91(16.8)	44(8.1)	182(33.6)	4(0.7)	542(100)
Not known	11(47.8)	4(17.4)	1(4.3)	4(17.4)	3(13.0)	23(100)
TOTAL	452(43.7)	153(14.8)	92(8.9)	1327(31.6)	10(1.0)	1034(100)

Percentages calculated across rows, and included in brackets.

TABLE 5.10

MOBILITY TYPE BY SEX

Sex	Mobility Type					Total
	No mobility	Mobility within COWtv	Mobility within region	Mobility between regions	Not known	
DESIGNATED SAMPLE						
Male	268(41.2)	99(15.2)	50(7.7)	230(35.3)	4(0.6)	651 (100)
Female	15(41.7)	9(25.0)	3(8.3)	9(25.0)	-	36(100)
TOTAL	283(41.2)	1108(15.7)	53(7.7)	239(34.8)	4(0.6)	687(100)
NON-DESIGNATED SAMPLE						
Male	406(43.3)	136(14.5)	8(9.4)	297(31.7)	10(1.1)	937(100)
Female	46(47.7)	17(17.5)	4(4.1)	30(30.9)	-	97(100)
TOTAL	452(43.7)	153(14.8)	92(8.9)	327(31.6)	110(1.0)	1034(100)

Percentages calculated across rows and included in brackets.

TABLE 5.11

MOBILITY TYPE BY COUNTRY OF BIRTH, NON-ENGLISH BORN DOCS ONLY

Country of Birth	Mobility type					Total
	No Mobility	Mobility within country	Mobility within region	Mobility between regions	-N-o-t-I known	
DESIGNATED SAMPLE						
Scotland	30(31.3)	10(10.4)	7(7.3)	49(51.0)		96(100)
Wales	9(40.9)	3(13.7)	3(13.7)	6(27.3)	1(4.5)	22(100)
Northern Ireland/ Irish Republic	31(35.2)	116(18.2)	4(4.5)	37(42.0)		85(100)
Commonwealth	9(29.0)	6(19.4)	5(16.1)	10(32.3)	1(3.2)	31(100)
Other	21(44.7)	6(12.8)	3(6.4)	17(36.2)		47(100)
SUB-TOTAL	100(35.2)	41(14.4)	22(7.7)	119(41.9)	2(0.7)	284(100)
England	183(45.4)	67(16.6)	31(7.7)	1120(29.8)	2(0.5)	403(100)
GRAND TOTAL	283(41.2)	1108(15.7)	53(7.7)	239(34.8)	5(0.6)	1681(100)
NON-DESIGNATED SAMPLE						
Scotland	38(39.2)	10(10.3)	5(5.2)	44(45.4)		97(100)
Wales	17(43.6)	2(5.1)	1(2.6)	18(46.2)	1(2.6)	39(100)
Northern Ireland/ Irish Republic	31(32.3)	15(15.6)	11(11.5)	39(40.6)		96(100)
Commonwealth	19(42.2)	9(20.0)	4(8.9)	13(28.9)		45(100)
Other	32(42.1)	20(26.3)	2(2.6)	21(27.6)	1(1.3)	76(100)
SUB-TOTAL	137(38.8)	56(15.9)	23(6.5)	135(38.2)	2(0.6)	353(100)
England	315(46.3)	97(14.2)	69(10.1)	1192(28.2)	8(1.2)	681(100)
GRAND TOTAL	452(43.7)	1153(14.8)	92(8.9)	327(31.6)	10(1.0)	1034(100)

Percentages calculated across rows, and included in brackets.

CHAPTER 6

AN AREA ANALYSIS OF MOBILITY PATTERNS

"My wife and I would both like to move to the South of England".

- G.P. in Lancashire

The data presented in the previous chapter attempted to show how often doctors move after they have started in general practice and what factors are associated with mobility potential. The majority of respondents had changed practices at least once up to the time of the survey, and at least four out of every ten had moved from one county to another. But because the broad geographical patterning in the distribution of G.P.s. has remained fairly stable for at least the lifetime of the National Health Service it is likely that the large number of moves made during the last two or three decades have not yielded any substantial net benefits to areas with chronic and persistent manpower problems. In spite of the potential capacity among G.P.s. for removing or at least alleviating gross inequalities between different regions and areas, such improvements have not in fact occurred. In 1969, as in 1938, the East and West Midlands, the North West and parts of the North East experienced large average list sizes, whilst the Southern parts of the country continued to enjoy a relative abundance of family doctors. Possible reasons for this preservation of the status quo include the reciprocity of most moves, the tendency for doctors to remain for short periods of time in the under-staffed areas before moving on, and the failure of these areas to attract a sufficient number of doctors in the first place to meet local needs. To unravel these various strands we must now plunge deeper into the data and see how the different areas of the country have fared as a result of the mobility patterns disclosed in the previous chapter.

In order to simplify what might easily become an impossibly complicated analysis the chapter will concentrate on migration between standard regions and between counties*. We recognise that to confine the analysis to these two levels is to remain two stages removed from the unit of ultimate significance (the medical practice area, since it

* The standard regions are here defined in the same way as in Chapter 3, with the exception that the whole of Lincolnshire is included in the East Midland region. This was necessitated by the difficulty of accurately identifying the first practice locations of some of the doctors in the sample.

is this which is either designated or non-designated), and that consequently certain assumptions must be made about inter-changes at the sub-county level. On the other hand, the results would not only become very complex if extended to executive councils and medical practice areas, they would also be of dubious value in many instances, for the raw frequencies become quite small. For these reasons it was decided to limit the main analysis to movements between regions and counties, although some comments are made at the end of the chapter about the probable shape of sub-county migration patterns.

The analysis around which the chapter is structured compares the first and current practice locations of the doctors in the sample. The qualifying phrase is important because the aim of the chapter is fairly limited and might easily be misunderstood. Our purpose is simply to reconstruct the mobility patterns of a sample of doctors still in practice, and then to use the results to see whether the manpower problems in an area are attributable to an unfavourable balance of movement. The data do not indicate changes in the stock of G.Ps. in an area during a specified period of time. Such data could only be derived from a cohort study, whereas the research design employed in this investigation is cross-sectional. With a cohort study we would be able to take a particular unit (for example Lancashire) and a particular starting date (say, 1920) and then trace the gross gains and losses to the unit over whatever period of time we might choose. The results could be presented in the form that between 1920 and 1970 Lancashire experienced a gross gain of, say, 600 practitioners (made up of such-and-such a proportion of newly qualified doctors, immigrants from abroad, and family doctors moving from other parts of the country), and suffered a gross loss of, say, 350 doctors (so many of whom died, retired, emigrated, or moved elsewhere). The individual doctors making up the results would change over the period under review as some came and some went, and there would be no single point in time when all the individuals in the analysis were practising together.

A cross-sectional design, by contrast, is limited to just such a single moment of time: it represents a closed system, with no openings through which individuals can come and go, and hence any reconstruction of earlier migration patterns can only take account of those people in the system at the one point in time. This limitation means that words such as "gains" and "losses" acquire a particular and more restricted meaning than they would have in a cohort study. When we say that a certain region has gained 150 G.Ps. we do not mean that a total of 150

doctors had moved into the region during a specified time period; we mean that 150 doctors in the sample were practising in that region at the time of the survey, having moved into *it* as general practitioners at various times in the past. Likewise the statement that a certain county has lost 50 G.Ps. means that 50 respondents in the survey had their first appointments in general practice in the county, but were currently practising elsewhere at the *time* of the survey. Many "real" losses, through death, retirement and emigration are by definition beyond the scope of the survey. Similarly the phrase "the number of doctors first practising in a region" does not refer to the total stock of G.Ps. in the region at some specific point in the past, but to the number of practitioners in the sample whose first appointments had been in that region (whether as an assistant or principal). In short, our concern is with the patterns of geographical *mobility* within a closed system, and with the extent to which these internal movements have affected the overall distribution of manpower.

Finally by way of introducing this chapter the problem of allowing for the effects of *time* must again be noted. The result of aggregating *all* the moves made by the respondents in the survey is a sort of average of the trends over the past thirty to forty years, and there can be no certainty that the results are a valid picture of the current trends of losses and gains. The problem *is*, however, by now a familiar one, and as in the previous chapter, *it* is possible to reconstruct the behaviour of successive generations of practitioners in the sample in a way that detects any gross dissimilarities in their migratory patterns. This is done at a later point in the chapter (page 153): for the present *it* is enough to note that the results confirm that the major migration routes described in the following sections have not changed much during the past thirty or forty years.

Migration Patterns: The Total Net Balance*

We start the analysis by considering the total net balance of movement at the regional level and then breaking the figures down into the constituent gross gains and losses to and from other sources. The first column in Table 6.1 shows the total number of principals practising in England in 1968 classified by *the* region of their first appointments in general practice.** The total at the foot of the

*The reader is reminded of the limitations of the analysis described in the previous section.

** The figures in this and subsequent tables in the chapter are 1968 population estimates for England, obtained by inflating the sample frequencies by the appropriate factor for the designated and non-designated samples in each standard region.

column (17,309) is somewhat less than the full number of principals in 1968 because a certain number had had their first appointments outside England. The doctors first practising in each region are expressed as a base of 100 (column 2) to facilitate the inter-regional comparisons of subsequent losses and gains. Column 11 in the table shows the same principals classified by their region of practice in October 1968, (effectively their current practice at the time of the survey). The total in this column (18,750) is the full number of principals in England at that date, and the difference between this and the column 1 total is made up by doctors who had entered the country from abroad (column 9). The final column (12) in the table expresses the number in column 11 as percentages of the numbers first practising in the regions.

When all the observed components of change have been added together, two regions (Yorkshire/Humberside and the South West) are seen to have suffered a net loss of doctors of 4 per cent and 9 per cent respectively (column 12). This means that the net result of balancing the outward movement of doctors first practising in the regions against the inflow of G.Ps. from other regions and countries has been a loss of almost 70 doctors in Yorkshire/Humberside and about 170 in the South West. Such losses, however, are only those caused by migration among doctors still practising in 1968, and they are not incompatible with the moderate overall gains which have occurred in both regions during the last quarter of a century. In Yorkshire/Humberside the rate of population growth since the war has been comparatively slow, and is expected to continue in this way at least until 1981, but nevertheless by then the population is expected to have grown by more than a quarter of a million (six per cent) on the 1969 figures.* If the region continues to lose doctors as it appears to have done in the past the situation there may worsen. The implications for the South West are less severe, because although the region has suffered an even greater net loss than Yorkshire/Humberside it nevertheless remains well supplied with G.Ps. There does not seem to be much immediate danger in this region, although it is expected in the future to be one of the faster growing regions in Southern England, increasing its population between 1969 and 1981 by almost ten per cent.

The West Midland region has broken even - that is, the gross gains to the region from various sources have been offset almost exactly by its

*See Appendix for a more detailed discussion of past and projected regional population trends.

losses. This region, however, is expected to be among the fastest growing regions over the next 15 years, increasing its population by more than 16 per cent by 1981, and it must either attract an increasing number of doctors or hold onto a greater proportion of those who first settle there if the supply is to keep pace with population growth. The Northern region has experienced a net gain of some 70 principals (6 per cent). The regional average list size has been hovering around 2,500 for several years, and its projected rate of population growth is the lowest in the country. This is therefore a region in which one might look for no more than a moderate rate of increase in the stock of G.P.s., and the future does not seem as unfavourable here as in the West Midlands or Yorkshire/Humberside.

East Anglia has shown a larger net percentage increase than the Northern region (11 per cent). At the moment the region is generally well supplied with doctors, but it is expected to experience a faster rate of population growth than any other region over the next 15 years, (about 25 per cent between 1969 and 1981), and it must continue to attract newly qualified and mobile doctors if the future supply of practitioners is to keep pace with population growth. The South East has shown a similar overall increase to East Anglia (12 per cent), but this region has virtually reached its maximum expansion capacity for several years, and is expected to have a lower rate of population growth over the next 15 years than any region except the North (5 per cent between 1969 and 1981).

The North West, with a net gain of almost 20 per cent, has been one of the most successful regions in this respect. Nevertheless it still has an average list size in excess of 2,500, and it must continue to attract doctors to keep pace with the moderately high projected growth in population size (10 per cent between 1969 and 1981). Finally, the East Midlands has shown a higher net percentage increase in the number of doctors than any other region, but in spite of this very favourable trend it has not been able to keep pace with the increase in population, and the regional average list size has been steadily rising over the last few years. The projected population growth through to 1981 is quite high (about 15 per cent), and it is likely that the regional shortfall of doctors will continue, although with much less serious consequences than if the region did not have the attractive capacity which it appears to display.

Before delving into the constituents of these net gains and losses it may be noted that they do not appear to relate directly to the regional manpower situation in 1968. We might expect at a simple level

that regions experiencing a net loss through migration (or a relatively small increase) would be those with the greatest relative shortfalls of doctors, but this is not the case. Indeed, the rank correlation (Spearman's Rho) between the net percentage balance of movement and the surplus/shortfall of doctors per million patients is negative at the regional level: - 0.36. If therefore we are looking for a relationship between regional losses and gains from mobility patterns and the relative availability of G.P.s. the search must switch to the gross components of the net balance in each region.

The Net Balance of Internal Migration

We start by considering regional fortunes from the net balance of internal migration; that is, excluding doctors who had moved into the country after a first appointment in general practice outside England. Column 7 in Table 6.1 shows the actual numbers of doctors lost or gained by each region as a result of such movement, and column 8 expresses these numbers as percentages of those first practising in each region. Since the movements contained in these figures are internal, the gains of some regions are the losses of others, and hence the total resolution is zero. Table 6.2 shows how the net balance has affected each region in relation to every other region.

The regions fall into four pairs. The first pair consists of the South East and East Anglia, which have both shown a net gain from internal movement (of 4 per cent and 5 per cent respectively), but which would still have had average list sizes below 2,500 in 1968 even if the balance had been zero. A certain part of the net gain to these regions has therefore been "unnecessary" in the sense that it has diverted manpower to them which might be more urgently needed elsewhere. The "unnecessary" migration routes which have taken doctors to the two regions are shown in Table 6.2. Reading across the rows we see that the major sources of "surplus" manpower into the South East were the South West, the North, Yorkshire/Humberside and the West Midlands (of which the latter three can ill afford to lose manpower to a better endowed region); and the largest net gains to East Anglia were from the North West and South West.

The second pair of regions (the East Midlands and the North West) have also shown a net gain from internal movements (of 16 per cent and 10 per cent respectively), but unlike East Anglia and the South East they had average list sizes in excess of 2,500 in 1968. They may be said to "really need" everyone of the extra doctors they have been able to attract, and their position in 1968 would have been even worse if

their net balance had been less favourable. However, Table 6.2 shows that much of the net increase in the East Midlands has been at the expense of the West Midlands, and in the North West at the expense of Yorkshire/Humberside and the West Midlands, and is therefore largely self-defeating since these two regions themselves suffered a shortfall of doctors in 1968.

The third pair of regions (the South West and the North) have both shown a net loss from internal movements (of 17 per cent and 5 per cent respectively), but nevertheless managed to maintain a regional average list size below 2,500 in 1968.* The case of the South West is particularly remarkable because the absolute and percentage loss was higher than in any other region, and yet the average list size remained the lowest of any region. Most of the doctors leaving the South West have gone to the South East and the West Midlands. The situation in the Northern region is rather different, for although the percentage loss was much lower than in the South West, the average list size in the region has recently been hovering just below the 2,500 mark, and is now rising. If the net loss to the region continues we can expect to see an increasing shortfall of doctors in it. Most of the doctors leaving the Northern region have gone to the South East and the North West.

The last two regions (Yorkshire/Humberside and the West Midlands) have also suffered a net loss through internal migration (of 11 per cent and 7 per cent respectively) and in addition they had quite large average list sizes and shortfalls of doctors in 1968. These two regions have consequently suffered the most as a result of internal migration, and if they continue to lose doctors then an increasing number of areas in them may become designated. The great majority of G.P.s. leaving Yorkshire/Humberside have gone across the Pennines to the North West and some have gone to the South East and West Midlands. In the West Midlands the percentage loss has been a little lower than in Yorkshire/Humberside, but again the regional position could have been much better if the outflow of doctors to the South had been checked. The greatest net losses from the region have been to the East Midlands, the South East and the North West.

These data begin to reveal the relationship between mobility patterns and manpower needs. It is true that there is very little association between the net balance of internal migration and the

*The list size for the Northern region had exceeded 2,500 by October 1969 (Table 3.1).

shortage or surplus of doctors *in* each region *in* 1968: indeed, as with the total balance of migration, the rank correlation is negative (-0.33). But by studying the interchange of doctors between specific regions we are able to see how the net gains and losses *in* each case give rise to the shortfalls or surpluses revealed *in* Table 3.1. For example, *it* was shown *in* that table that Yorkshire/Humberside was short of 46 C.Ps. *in* 1969; that *is*, the region needed that number of additional doctors to reduce its average list size to 2,500. From Table 6.2 we see that the region lost almost that number of C.Ps. as the net result of doctors *moving* between Yorkshire/Humberside and the South East.* Bearing in mind the fact that all of these practitioners were "surplus" to the requirements of the South East *it* follows that if the loss of doctors through this route alone had been stemmed, the manpower shortage *in* Yorkshire/Humberside (at least at the regional level) would have virtually disappeared by 1968. The exercise can be repeated for each of the other regions, although the conclusions are somewhat different in each case. We are still, however, some way removed from a complete understanding of the relationship between mobility and supply. We must first examine the sub-regional patterns (which we do later *in* the chapter), and we must also unravel the components of the net balance of internal inter-regional migration. That is our next task.

Outward Migration to Other Parts of England

Column 3 *in* Table 6.1 shows the number of principals *in* England *in* 1968 whose first appointments *in* general practice had been *in* each of the eight regions but who were currently practising *in* a different region at the *time* of the survey. These are the gross "losses" *in* the sense *in* which we have defined them (see page 140). Column 4 expresses them as percentages of the numbers of doctors first practising *in* each region; and Table 6.3 shows how the gross movement has affected each region in relation to every other region.

Different regions have experienced variable gross percentage losses as the result of internal migration. In four regions (Yorkshire/Humberside, the East and West Midlands, and the South West) at least 30 per cent of doctors first practising there had subsequently moved out, compared with fewer than 20 per cent in the South East and the

*The discrepancy between 1968 and 1969 figures is unavoidable. It was desirable *in* Chapter 3 to present the most recent statistics available, but the sample was updated only to 1968. There are some material differences between the two years, but they do not greatly affect the gist of the argument.

North West. This link between mobility and the supply of medical manpower is much stronger than those examined earlier, for apart from the South Western region (which has somehow managed to combine the largest gross loss with the lowest average list size) the regions with the highest gross percentage losses generally had the greatest shortfalls of doctors per million patients in 1968. Indeed, if we exclude the South West from the analysis, the rank correlation of the remaining seven regions on the two distributions is transformed from a negative to a positive figure.* It seems that the contemporary shortage of family doctors in some regions may be due as much to their failure to retain doctors who took up first appointments there as to their inability to attract newly qualified practitioners or established G.Ps. leaving other positions elsewhere and at risk of moving into them.

This possibility is reinforced by a closer examination of the data. At a simple level we see that family doctors would currently be much more evenly distributed throughout the country if each region had been able to retain the same proportion of doctors as the South East (85 per cent). If this had in fact happened there would have been fewer mobile doctors to move into the less well stocked regions, but the losses from the Midland and Northern regions to the South East, South West and East Anglia alone would have been enough to tip the scales (Table 6.3). If, in other words, the regions with a shortfall of doctors had each been able to retain enough practitioners leaving for the three Southern regions to ensure that their current average list sizes were 2,500, there could still have been a small surplus of doctors (about 35) in these three regions in 1969 (although the average list sizes in them would obviously have risen). This conclusion is very important. The key to the persistent manpower problems in parts of the Midlands and the North may lie as much in selectively controlling the outward flow of doctors as in encouraging more practitioners to move there. A successful long-term policy to dissuade young doctors starting out in the under-serviced regions from leaving for the attractions of the South would seem to stand a reasonable chance of easing the chronic shortage of family doctors in certain parts of the country.

The detailed inter-regional movements are seen by reading across the rows in Table 6.3, comparing the region of first practice with that of current residence. This comparison does not quite include all the

*The correlation (ρ) = +0.07 with all eight regions; = +0.41 with the South Western region omitted.

inter-regional movements which have taken place for it obviously excludes the few doctors moving from region A to B and then back to A, and it also excludes the intermediate moves of those crossing regional boundaries more than once. But the exclusions do not substantially affect the general trends, for by taking only first and current regions more than 90 per cent of all inter-regional moves are included.

The pattern of regional losses can be summarised by saying that doctors leaving each region have, numerically, gone mainly to the South East and to adjacent regions. In fact, however, it is only adjacent regions which are relatively over-represented among the host regions, for the large numbers of doctors moving to the South East merely reflect its comparative size. Almost two-fifths of all principals in England live in the South East, and no more than this proportion of doctors leaving most regions had gone there. The exceptions are East Anglia and the South West, two of the adjacent regions to the South East, from which at least half of the emigrant doctors had gone to the South Eastern region. The pull of neighbouring regions is also seen elsewhere in the country. Most doctors moving out of the Northern region finished up in Yorkshire/Humberside and the North West; those leaving Yorkshire went mainly to the North and the East Midlands; emigrants from the West Midlands were attracted to the East Midlands, the North West and the South West; and so on. The destinations of doctors who had moved away from the South East show a similar tendency for migrating doctors to transfer to nearby regions. Three adjacent regions (the East and West Midlands and the South West) accepted the highest absolute numbers of migrants, and relative to its size the East Anglian share was also large. In the North and in Yorkshire, by contrast, the numbers of refugees from the South East were low, and the North West also took a small proportion relative to its size.

Before finally leaving the question of losses from each region, mention must be made of migration not only out of a region, but out of the country altogether; for this is an element in the situation which is not only missing but elusive to quantify. The point was made earlier that since the analysis in this chapter is in effect limited to the reconstruction of migration patterns within a closed system, losses through emigration (and also retirement and death) are not strictly relevant to the argument. They would be indispensable elements in a cohort study, but we are dealing with cross-sectional data. Nevertheless, in view of the prominence given in recent years to the depletion of British doctors through emigration it is worth briefly reviewing the position. Various estimates have been made in recent years of the loss

to British medicine through emigration. The Minister of Health estimated in 1962 that between 6 and 7 per cent of British doctors who graduated during the 1950s were then resident abroad,¹ but a later study by Abel-Smith and Gales² indicated that nearly 17 per cent of doctors registered on the home list between 1950 and 1954 were resident outside the U.K. in July 1962, together with over 11 per cent of those registered between 1955 and 1959. Taking all doctors who received their medical education in the U.K. between 1925 and 1959, 16 per cent were resident elsewhere in 1962. The authors' conclusion that the rate of emigration has declined since the peak year of 1959 is further substantiated from a recent study by Last and Broadie,³ which indicated that about 12 per cent of British doctors graduating in the early 1960s were living abroad in 1969.

Although the facts derived from these studies are quite specific the results are of only limited relevance to this study, for the great majority of emigrants are hospital doctors, not general practitioners. Abel-Smith and Gales found that only 18 per cent of their sample of all emigrant doctors had held their last posts in Britain in general practice (the proportion of G.Ps. rises to 23 per cent among those doctors whose last appointments had been in the N.H.S.); and Last, in his earlier study, concluded that prospective general practitioners were the least likely of all medical students to emigrate on qualifying.⁴ On the one hand, therefore, it seems that the depletions to the total stock of G.Ps. through emigration may be nearer 4 or 5 per cent than the 15 per cent or thereabouts suggested by traditional emigration data. Against this, however, must be set the more limited migration of doctors from England to other parts of the United Kingdom, which, whilst not generally defined as emigration, is nevertheless relevant to a study of G.Ps. in England. The magnitude of this component is unknown, but is probably quite small; certainly it is likely to be smaller than the volume of movement in the opposite direction, since Scotland and Ireland have generally produced more medical graduates than they can employ in the home market. We conclude, therefore, that although the precise loss through emigration to the stock of family doctors in England is unknown, it is probably less significant than the losses to certain regions through internal migration within the country. The future would undoubtedly be brighter if more G.Ps. (and prospective G.Ps.) could be persuaded to remain in England, but even without them there is still a considerable potential for effective redistribution.

Inward Migration from Other Parts of England

Since we are dealing in this analysis with a closed system, the losses from one region are the gains to another. To complete the picture of internal migration we must therefore consider the gross regional gains resulting from the movement of doctors within the country. The figures are set out in columns 5 and 6 of Table 6.1, the percentages being based on the number of doctors first practising in each region. As with the gross losses, the gains vary considerably from region to region, but they differ somewhat from the expected pattern. Although the absolute number of doctors moving to the South East has been large, nevertheless this region, together with the South West, the North and Yorkshire/Humberside, has gained the lowest proportions of doctors (about a fifth in each case). Then come two regions with slightly larger proportional gains (the West Midlands and the North West), and the remaining two regions with appreciably higher percentage gross increases through internal migration - East Anglia (32 per cent) and the East Midlands (52 per cent).

We have already seen that a fairly close relationship exists between the gross regional losses and the current distribution of family doctors, and it was suggested that the failure to retain doctors at the start of their careers as G.Ps. in certain regions may be as significant a factor in current shortages as the inability to attract doctors who are moving from other regions. This conclusion is reinforced by the lack of a corresponding relationship between a region's attractiveness to mobile doctors and its present stock of practitioners. The East Midland region, for example, has attracted a very high proportion of doctors and yet still had a severe shortage in 1969, whereas in the South West, to which a much lower proportion of doctors has gone, the average list size has remained consistently low. Only East Anglia and Yorkshire/Humberside have corresponding ranks for doctor/patient ratios and the proportion of incoming practitioners. Naturally, a higher intake into the North and Yorkshire/Humberside would have helped to improve the situation in these two regions (since their proportional gains were low), but in general it seems that the need for certain regions to attract a greater number of established doctors has been less important than their needs to retain doctors taking up first appointments in them.

Turning now to the question of the sources from which different regions have drawn their gross gains, we find a very similar picture to that of the losses (Table 6.3, reading down the columns). Just as

most losses **from** each region have been to the South East and to adjacent regions, so most of the gains have also been made from the South East and from adjacent regions. The Northern region, for example, made most of its gains from the South East, Yorkshire/Humberside and the North West; most of the doctors moving into Yorkshire/Humberside in turn came **from** the North West, the South East and the East Midlands; and so on. The upshot of these reciprocal migration routes is that much of the total activity of internal mobility has been self-cancelling: doctors moving from A to B have, over a period of time, more or less been replaced by equal numbers of G.Ps. making the reverse trip. Thus the net balance of internal migration (that is, when all the reciprocal moves have been sorted out and excluded) has generally revealed much smaller gains or losses to each region than the total amount of migration might suggest.

Internal migration: summary and implications

We draw four conclusions **from** this analysis of internal migration. The first is that although the number of doctors moving between regions has been quite large, many of the moves have simply cancelled each other out. The net balance, whether positive or negative, thus represents a fairly small change to most regions. In six of the eight regions, for example, the percentage change through the net balance of internal migration has been less than or only a little above 10 per cent, and for the other two regions the change has been less than 20 per cent. Thus after excluding all reciprocal moves there do not remain many great differences between the distributions of doctors in their first and their current regions of practice. The second conclusion is that, even though the net changes to each region have been quite small, they are considerably larger than the net change either between North and South, or between the better-doctoring and the under-doctoring regions. After excluding all the reciprocal moves the status quo has more or less been preserved in the proportion of doctors in the North and in the South of the country, and in the regions with average list sizes above and below 2,500. Such movement of this kind that has occurred has been in favour of the North and of the worst regions: the five regions to the North of a line **from** the Wash to the Severn gained a net increase of 32 doctors (0.4 per cent), and the four regions with average list sizes in excess of 2,500 in 1968 gained a net increase of 88 doctors (1.2 per cent). This is at least a move in the right direction, but it is a very small one.

As a logical extension of this point, the third conclusion is that a greater net balance of movement has taken place within the 'good' and the 'bad' regions than between them. Against the 88 doctors representing the net movement from 'good' regions may be contrasted the net gain of 288 doctors by the East Midlands and the North West at the expense of Yorkshire/Humberside and the West Midlands, and the 295 doctors gained by the South East and East Anglia at the expense of the North and the South West. The fourth conclusion, and the most important, is that concealed within the small net changes between 'good' and 'bad' areas are larger gross movements of doctors which have carried within themselves the potential over a period of time for a more even distribution of G.Ps. The particular mobility routes which are important in this respect are those from the under-doctored regions to the South East, the South West and East Anglia. If these routes could have been closed, whilst keeping the reciprocal routes open, there could now be an almost equal distribution of doctors between the regions in relation to their size.

Inward migration from countries outside England

One further process completes the total picture of migration: the inflow of doctors to England from other countries. Although the description of these people as 'immigrant' may suggest that they are foreign-born this is in fact not the case. It was shown in the previous chapter that most doctors born outside England were born elsewhere in the United Kingdom, and a similar picture obtains for doctors originally practising outside England. Most had been in general practice in other parts of the U.K. before moving to this country: almost half had been in Scotland, a fifth in Wales, and a tenth in Northern Ireland. Only about 20 per cent of them had come from outside the U.K., and fewer than 1 per cent of all the respondents in the survey had been born and had started in general practice outside the United Kingdom.

It is estimated that some 1,300 G.Ps. practising in England at the time of the survey had started their careers in general practice outside the country.* This is by no means an insignificant number, for it roughly equals the total number of family doctors in the Northern or East Midland regions, and is considerably in excess of the

*The form of the question enables us to identify only those respondents who had previously been in general practice in another country. There is no way of isolating doctors who had come to England after pursuing other medical careers abroad, but the number is probably quite small.

total shortfall of doctors described in Chapter Three. Columns 9 and 10 in Table 6.1 show that, when expressed as a percentage of the number of doctors first practising in each region, these immigrants have been fairly evenly distributed throughout the country. The East Midlands and the North have attracted a higher than average proportion of them, and East Anglia has done rather less well by them than average, but there are no very large differences in this respect between the regions. The question then arises of whether, given the existing patterns of internal migration, the immigrant doctors could theoretically have been used to achieve a more even distribution of doctors if they had been optimally located. The answer is that they could not entirely have reduced the average list size to 2,500 in each region, but they could have gone a long way towards doing so. An examination of the figures in Tables 6.1 and 3.1 shows that East Anglia and the South West would still have had list sizes below 2,500 in 1969 even if they had received no immigrant doctors at all, and in the South East this figure could have been maintained with 170 fewer immigrant doctors than did in fact enter the region. Adding together the 'surplus' immigrant doctors from these three regions yields a total of 320, which compares with a total shortfall of 356 G.Ps. at the regional level in 1969 (see Chapter 3, page 67). Naturally this kind of numerical juggling depends upon an ideal distribution within each region which in reality could never be achieved (that is, where the average list size in each medical practice area is 2,500 when the regional average is also 2,500), but the analysis illustrates the potential contribution that could be made by these immigrant doctors towards the problem of regional inequalities. They are a particularly important group of G.Ps. because they are by definition mobile, even to the extent of moving from one country to another in mid-career, and it is possible that with sufficient incentives they may be more prepared to go anywhere than doctors with stronger local ties. This point is reinforced in the next chapter, where the relationship between medical school, home area and practice area is analysed.

The effects of time

Before considering how the individual counties have fared as a result of all the movement that has taken place we must return to the question of time trends, and justify the claim made in the introduction to this chapter that the major migration routes described above have not altered greatly during the time period represented in the survey. Ideally this can only be done by taking successive cohorts of doctors starting in general practice at five- or ten-yearly intervals and

tracing their subsequent movements through to the completion of their careers. An alternative method from a cross-sectional survey would be to trace the gross gains and losses through internal movement and immigration for each region of doctors in different age groups. It would have the technical disadvantage of dealing with increasingly incomplete careers in the younger age groups; and it would also have the severe practical limitation in this survey of inadequate sample size. All that can be done, therefore, is to compare the net changes between first and current regions of practice for doctors in different age groups, and, if these changes are shown to be consistent, to assume that the gross inter-regional movements have not changed significantly either. Independent evidence about secular trends in gross mobility patterns is virtually non-existent. Brown and Walker^S found that the stability of G.P.s. in East Yorkshire, Hampshire and Glamorgan increased during the decade 1955-65 after an unsettled period during the early years of the N.H.S. , but that since that time the turnover rate has once again been increasing in all three areas. Neither they nor any other known investigators, however, have examined regional gains and losses in a time perspective, and there is consequently no external yardstick against which to compare the validity of our admittedly sketchy analysis.

Table 6.4 shows the current ages of the doctors at the time of the survey and the standard regions in which they first practised as G.P.s. The figures in this and the following table are percentages based upon weighted aggregate frequencies of the designated and non-designated samples. They reveal no major or consistent differences between doctors of different ages in the regional locations of their first practices. In other words there have probably been few significant changes over the last thirty or forty years in the extent to which the different regions have attracted G.P.s. first starting up in general practice. This is a somewhat surprising finding and a significant one because it means that we might reasonably expect to see a similar distribution occurring naturally in the future unless some deliberate changes are introduced. The remaining question is whether the direction of moves between first and current appointments has remained the same. This would be inferred if regions which have experienced net overall increases have also expanded within each age group, and, correspondingly, if regions with net losses have also lost among doctors of different ages. The actual trends can be seen by comparing the corresponding cells in Tables 6.4 and 6.5, and within the limitations posed by the small frequencies they are consistent with the hypothesis of minimum changes over the working lifetimes of the doctors in the

sample. In the East Midland region, for example, it is seen that a higher proportion of doctors in each age group were currently working in the region than first practised there, and this even holds among the youngest group (under 40).* The North, the North West, the South East and East Anglia (the other regions with a surplus on the overall balance of movement) also reveal increases within almost every age group, whilst the two regions with net overall losses (the South West and Yorkshire/Humberside) experienced losses or a preservation of the status quo in almost each group.

It seems, then, that within the acknowledged limitations of the analysis, the net migration patterns between regions have probably changed little over the last forty years and it is likely that the gross patterns have Changed little as well. We can be less sure about this latter point, but at least there are no signs in the data that they have.

Migration Patterns Between Counties

The data on regional migration patterns in Table 6.1 are repeated for each individual county in Table 6.6. As in the former table, the figures are population estimates for 1968, derived by inflating the sample frequencies by the appropriate factor for the designated and non-designated samples in each county. The totals in columns 1, 9 and 11 are the same in the regional and county analyses (the very slight differences are merely the result of rounding off), but the gross gains and losses (columns 3 and 5) do not match partly because of the consequences of using regional inflation factors in one table and county factors in the other, and partly because gross gains and losses from a region will only equal the losses and gains from its constituent counties if *all* doctors moving into and out of the counties also moved into and out of the region. The latter discrepancy is similar to that described in Chapter Three, whereby the shortfall of doctors at the regional level is always lower than the total shortfall for the counties. Most individual counties are represented in the table; and the East and West Ridings of Yorkshire have necessarily been combined in a single county.

*The consistency of the trend is the important characteristic of these data, even though differences in individual cells might be accounted for by sampling errors.

In the Northern region the net balance of internal migration was seen to be **negative**, but the loss was outweighed by **immigrant** doctors and those from unknown regions to give an overall **gain** to the region of about 6 per cent (Table 6.1). All five counties in the region except Northumberland have also achieved overall gains, although only two (Cumberland and Westmorland) have had a positive balance from **internal migration**. Durham and the North Riding both show small net losses from **internal** movement, but these have been more than offset by an above-average influx of **immigrant** doctors. In Northumberland the overall deficit has resulted primarily from the county's inability to attract doctors moving from other places in England, for the losses from the county have been lower than average and proportionately not as **great** as from Durham or the North Riding. Most of the doctors moving into the Northern region from countries outside England have settled in Durham and the North Riding, although in Durham the **gains** have still not been sufficient to prevent a **very** high average **list** size in the county, caused primarily by the failure to achieve a positive balance through internal movement.

In the Yorkshire/Humberside region the necessary amalgamation for coding purposes of the East and West Ridings and the exclusion of the Lindsey **area** of Lincolnshire renders a **sub-regional** analysis impossible. It may be noted, however, that the net loss to the East and West Ridings through internal movement has been almost exactly offset by the inflow of doctors from abroad. As with most of the Northern counties, the loss of doctors **first** practising in these areas has been low in comparison with the rest of the country, but so too has the gain of G.P.s. from other regions. Moreover, although the percentage loss is fairly low, the number of doctors involved (almost 500) considerably outweighs the current shortage of doctors in the East and West Ridings at the executive council and medical practice **area** levels.

The East Midland region was seen to have had a high net gain through internal migration and an above-average attraction for immigrant doctors, resulting in a **higher** overall percentage increase (more than 25 per cent) than any other **region**. This pattern has generally been repeated in each of the constituent counties. Two counties (Leicestershire and Lincolnshire) have experienced a relatively large outflow of doctors, but in each county in the region the proportional gains have been well above the national average, particularly in Nottinghamshire and Leicestershire. The resulting balance of internal migration has been positive in each county except

Lincolnshire_, but the introduction of immigrant doctors to the region has ensured that all five counties have expanded as a result of the total movement of practitioners. Expansion rates have been particularly high in Nottinghamshire (about a half), Derbyshire (about a third) and Northamptonshire (about a quarter).

The paradox surrounding these East Midland counties is that although they have benefited considerably from the total movement of doctors, all except Lincolnshire nevertheless had high average list sizes in 1969 and a shortfall of doctors. If we assume that the capacity of these counties to attract and retain internally mobile and immigrant doctors could not be further expanded then future improvements must come either from an increase in the number of doctors first starting in general practice or from a decrease in the number who subsequently move to other pastures, particularly to the South East. On the first point, it will be shown in the next chapter that the East Midland counties have in the past attracted a relatively low proportion of newly qualified doctors, probably due to the absence hitherto of a medical teaching centre in the region. It seems likely that the establishment of the medical school at Nottingham will, in the long-term, substantially reduce recruiting problems in the region. On the question of losses from the region we merely note that if all the doctors moving from the East Midland counties to the three Southern regions had in fact stayed, then each county would currently enjoy an average list of less than 2,500.

East Anglia has few immediate problems either at regional or county level. The region had a low average list size in 1969 and yet has gained from both internal movement and immigration. Of the four counties comprising East Anglia, only Huntingdonshire had a list size above 2,500 in 1969. All four counties have gained doctors as a result of total movement, with Huntingdonshire paradoxically recording the highest gain of all. This results from exceptionally large proportional gains from internal migration and from doctors entering the county from outside England, but the very small numbers involved render the percentages rather meaningless. The general pattern among the counties of East Anglia is one of low losses, large gains, and an equal distribution of immigrant doctors between Cambridgeshire, Huntingdonshire and Norfolk.

The South East is a huge region, and we would expect to find much more heterogeneity among its constituent counties than in some of the smaller regions. As a region, the South East has a favourable supply of manpower, with an average list size below 2,500 in 1969 and with

only a quarter of its G.Ps. practising in designated areas. The stock of practitioners in the region has, moreover, increased by over 10 per cent on the overall balance of movement: much of it due to the influx of manpower from outside the country. Hithin the region, however, there are wide variations between counties, with the block of home counties to the North and East of London forming one of the major clusters of under-doctored areas in the country.

A dominant feature of the county migration patterns is the relatively high losses experienced by most of the counties. All but three counties in the region (Hampshire, the G.L.C. area and Surrey) have suffered relatively higher gross losses than average, and in some cases, notably Bedfordshire and Oxfordshire, the gross losses have been very high indeed. A visual comparison between the losses from the South Eastern counties and those from the Northern counties vividly illustrates the much greater difficulty of the Southern counties in retaining G.Ps. who first practise in them. But although the outflow of doctors from the counties has been large, the gross losses to the South Eastern region has been very low (Table 6.1), clearly indicating that a high proportion of moves are simply to other counties in the region. Further evidence of this is seen in the correspondingly high gross gains to the counties from internal mobility (most notably to Sussex, Oxfordshire and Kent) which are entirely at odds with the pattern of regional gains. The reciprocal nature of many moves within the region is consequently seen in the relatively small net gains or losses in several counties of the region: four of the counties, for example, have had a net balance (positive or negative) of less than 10 per cent. For the rest, the net result has been a transfer of doctors from Bedfordshire and Berkshire to Essex, Kent and Sussex. This is an important conclusion for it suggests that the manpower difficulties in some parts of the region - notably in Bedfordshire, Buckinghamshire, Hertfordshire and Essex - might be improved by putting the regional house in order in the sense of stemming the outflow of doctors from some parts of the region to others.

The immigrant doctors into the South East have, numerically, been attracted mainly to London, with Essex, Surrey, Hampshire and Oxfordshire also prominent among recipient counties. London's proportional share of these incoming doctors has been just above average, but on a percentage basis Oxfordshire and Essex move to the top of the league of host counties. When the factor of immigration is added to the net balance of internal movement it is seen that three counties (Bedfordshire, Berkshire and Buckinghamshire) have suffered

a reduction in their number of G.P.s., three (Hampshire, G.L.C. and Surrey) have increased by less than 10 per cent, and the remainder have increased by amounts of between a fifth and a third. The outstandingly large overall loss from Bedfordshire (of more than a third of the doctors first practising in the county) more than accounts for the current deficit of doctors there, but with the exception of that county there is no clear relationship between overall county losses and current manpower shortages.

In the South West, as in the East Midlands, the regional pattern is repeated quite uniformly in each of the constituent counties. Thus we find a fairly high outward movement of doctors from most of the counties which has not generally been offset by an influx from other counties. Only two of the six counties (Devonshire and Wiltshire) have consequently experienced a small net gain from internal movement, whilst in some cases - notably Dorset and Gloucestershire - the losses have been very high. The influx of immigrant doctors has been below average in each county save Devonshire and Wiltshire, and these are also the only two counties to have benefited from the total balance of movement. For the rest, the overall losses have been as high as for almost any county in England, although the significance of this is considerably tempered by the compensating fact, that, notwithstanding these trends, the counties in the South West currently enjoy some of the most favourable doctor/patient ratios in the country.

The West Midland region, by contrast, presents a much greater problem than the South West. There was a huge concentration of doctors in designated areas in the region in 1969 and a high shortfall per million patients, especially in the dense urban areas around the Birmingham conurbation. Herefordshire and Shropshire stood in marked contrast to this general regional picture, but they are both very small counties whose "excess" of doctors would make very little impact even if moved to Warwickshire, Staffordshire or Worcester'shire. The region as a whole has suffered a net loss through internal movement which has been exactly offset by the gain of immigrant doctors to produce a zero balance of total movement.

The figures for the individual counties show that three of them (Shropshire, Staffordshire and Warwickshire) have experienced high gross percentage losses and, relative to the other two counties, low percentage gains and an unfavourable net balance of internal migration. Staffordshire and Warwickshire have a particularly unfavourable balance between losses and gains which has not been entirely offset by

immigrant doctors coming into them. Both counties have thus lost out on the total movement of doctors, and their current problems can be attributed in large measure to the failure to retain G.Ps. who first start practising in them. Shropshire has managed to achieve a modest gain, but the county has no problems at all in the supply of doctors. In Worcestershire and Herefordshire the colossal excess of gains over losses (the largest in the country) has resulted in very large surpluses on the balance of internal migration, and on the total balance of movement. In Herefordshire the surplus, though small numerically, is merely an addition to a county already well supplied with G.Ps., but in Worcestershire there remained a shortage of doctors in 1969 in spite of a "doubling" of the numbers of practitioners through migration.* The major difficulty here has thus been the failure to attract enough new doctors to the county who are entering practice for the first time.

In the North West about two-fifths of all G.Ps. were practising in designated areas in 1969, and the regional shortage was about 100 doctors, mostly in Lancashire. The region's stock of practitioners expanded by about 20 per cent through the total movement of doctors, due to a very favourable net balance of internal migration coupled with an unusually large proportion of immigrant doctors into the region. The overall trends in the two counties comprising the region are identical, both Cheshire and Lancashire having gained an overall total of some 15 per cent of doctors. The processes which result in these totals have not, however, been quite the same in each case. Although both counties have lost the same gross proportion of doctors as the result of outward movement, the higher internal gains to Cheshire have been exactly matched by a correspondingly higher influx of immigrant doctors into Lancashire. In view of the lower than average rate of outward movement by doctors who first practised in Lancashire the shortage of doctors in the county in 1969 appears to have sprung from the failure to attract newly qualified doctors as well as those moving from other parts of the country.

Migration Between Counties: Summary and Implications

Two main conclusions emerge from this brief survey of migration routes between the counties of England. The first, and most important, is that even at the county level there has been sufficient potential in the observed patterns of movement to ensure a currently equal distribution of doctors. The argument that certain counties have been

*The reader is again reminded of the caution on page 140•

basically unable to attract enough doctors to meet their current needs cannot be sustained, for even allowing for the standard errors in the population estimates, the gross losses of doctors from each county have been considerably in excess of the current shortage of doctors as defined in Chapter Three (Table 3.2). The problem, in other words, is as much one of retaining doctors who once practise in certain areas as of enticing them there in the first place.

This bald assertion, though fundamentally Valid, must nevertheless be modified as a guide to pragmatic action. The equation between losses and deficits is the outcome of long-term trends, for although we have shown that in every case the outflow of doctors from each county has exceeded the current deficit, the total losses have nevertheless been the result of migratory patterns over a long period of time. Even if it was possible to selectively control the emigration of doctors from certain counties in the manner indicated in this chapter it would still require many years before significant improvements in doctor/patient ratios were visible (assuming also that the other factors remained constant). At best, therefore, the implications of the analysis are long-term, and any immediate improvements would need to be sought through alternative channels. Further, the problem of "retaining" doctors in the critical counties is primarily one of providing sufficient openings for younger doctors seeking promotion, for a very large proportion of the moves described in this chapter have been those of assistants or trainees transferring to partnerships.

The second conclusion modifies but does not contradict the first, and is that the counties appear to differ in the extent to which their inability to keep doctors has contributed to their overall shortage. Some counties which have experienced very low rates of outward movement still had quite high average list sizes in 1969, and although the shortage could theoretically have been eliminated by reducing the losses still further, this would probably have been extremely difficult if not impossible to achieve. In these counties the most hopeful future developments are likely to come from increasing the intake of doctors (whether newly qualified, immigrant or internally mobile) rather than controlling the outward flow of them. There seems, moreover, to be an interesting North/South split in this respect. The counties in the Northern regions have generally experienced a below-average loss of doctors moving to other areas, and it seems unlikely that the retention rate in these counties could be improved by any significant amount. Durham, Lancashire and the East

and West Ridings are examples of Northern counties which, despite a below-average rate of outward movement, still had high average list sizes. The most significant problem in these counties seems to lie in their low capacity for attracting doctors moving from other counties or immigrant doctors from outside England. In the South and the Midlands, on the other hand, the problem is more one of controlling losses than of stimulating gains, for although the under-doctored counties in these regions have generally experienced large percentage gains of mobile and immigrant doctors, they have also suffered high rates of outward movement of doctors who first practised in them.

Migration Patterns at Sub-county Level

The point was made in the introduction to this chapter that the analysis of migration patterns cannot formally go beyond the level of the geographical counties, but the question nevertheless arises of whether it is reasonable to assume that the conclusions reached above can also be applied to the executive councils and medical practice areas. For example, we have seen that the shortfall of 51 doctors in the geographical county of Warwickshire in 1969 is only a small fraction of the 454 doctors representing the gross loss to the county from the outward migration of doctors first settling there; and we have concluded that the current shortage of manpower in the county has resulted as much from the failure to retain doctors as to attract them in the first place. Can this also be assumed for each of the constituent executive councils and medical practice areas of the county? Can we assume that in Birmingham and Coventry, and in all the M.P.A.'s, the current shortfall of doctors is less than the total loss to them of doctors moving out?

The strict answer is that such an assumption cannot automatically be made, but that in most cases it is a reasonable one - at least as far as the executive councils are concerned. Returning to the example of Warwickshire it is seen that in 1969 Birmingham was short of 22 doctors and Coventry's shortage was 10 (Table 3.3). If the gross loss from these two cities had in fact been less than these figures then more than 90 per cent of the 454 doctors lost from the county as a whole must have come from the Warwickshire Executive Council - a most improbable occurrence! It is virtually inconceivable that the losses from each of the three E.Cs. in the county have not substantially outweighed their current shortfalls, and it is unlikely that the same has not also happened in most of the individual medical practice areas. It is true that the example of Warwickshire is extreme, for the ratio between losses and shortfall has been higher there than in almost any

other county; but a close examination of the data for each county strongly suggests that in most executive councils and probably in many medical practice areas the losses have been substantially in excess of present-day shortages.

A different type of sub-county migration concerns the extent to which doctors move within each county, raising the question of whether these migration patterns hold any potential for improving the distribution of practitioners. The redistribution of doctors within a county can only eliminate all the designated areas in it if the county average list size is below 2,500; if the list size exceeds 2,500 an internal redistribution might achieve a more even spread of G.Ps. but it could only de-designate a substantial number of areas at the expense of inflated list sizes in others. For this reason our interest in within-county movements is restricted to those counties with average lists below 2,500: for the rest, an influx of doctors from outside is the only way through which the situation could be improved. In 1969, sixteen counties had the potential to eliminate their designated areas through internal movement (Table 3.2), and if this had in fact been achieved the number of doctors in designated areas would have fallen by 1,122 (17 per cent). In eight of the sixteen counties the total number of doctors who had moved within the county exceeded the shortfall, and in the remaining eight the shortfall exceeded the numbers moving. If we bear in mind that even in the former counties there is no certainty that the movement patterns contained the potential for an effective redistribution from non-designated to designated areas we are left with the conclusion that intra-county migration, even if selectively controlled, could probably have contributed little towards the overall problem.

Summary

In spite of the large number of professional and geographical moves which have been made by G.Ps. the data presented in previous chapters clearly indicate that areas currently experiencing a relative shortage of family doctors have generally had a history of manpower problems at least throughout the lifetime of the National Health Service. There may be several different explanations to the persistence of under-doctored areas. Some places may fail to attract an adequate number of newly qualified practitioners entering general practice for the first time; others may lose a high proportion of these doctors through outward migration to other parts of the country; Some may fail to get a fair share of doctors moving from other areas or coming into the country from abroad; and others may lose a high proportion of doctors emigrating to other countries - although this latter factor is beyond

the scope of our study. In short, the manpower problems which face certain regions and areas of the country may have been caused and perpetuated by the combined effects of different patterns of movement among G.Ps. in the system.

We start this part of the summary with the evidence about practitioners taking up their first appointments in general practice. The failure to attract enough newly qualified practitioners is likely to have been a major factor in the current shortage of doctors in areas which have achieved an above-average gain from the total balance of movement but where the list size still remains above 2,500. On this definition, the regions which have failed to attract enough new doctors are the East Midlands and the North West, and the counties for which this has been an important factor in the current shortage of doctors are: Durham, Derbyshire, Leicestershire, Northamptonshire, Nottinghamshire, Huntingdonshire, Essex, Hertfordshire, S.E. London/~~Kent~~, Worcestershire and Lancashire. The reasons why some areas have been unable to attract enough new practitioners are explored in the next chapter.

Just as some regions and counties have suffered an inadequate supply of new doctors, so others can be said to have enjoyed an "excess". This would be the case where the current average list size is below 2,500 even though the gain from the total balance of movement has been below the average or even negative. On this definition the South Western region has attracted a surplus of new doctors, and so also have the following counties: Northumberland, Hampshire, Inner London, South West London/Surrey, Cornwall, Dorset, Gloucestershire, Somerset, Shropshire and Norfolk.

The second movement which increases the supply of doctors is that of practitioners moving into an area from other places in England. The failure to attract enough of these mobile doctors is likely to have been a major contributory factor in areas which would currently enjoy a list size of 2,500 or less if they had been able to attract an average proportion of such doctors. On this definition only the Northern region and Yorkshire/Humberside and its constituent counties can attribute their current shortages primarily to this factor, although several other under-doctored counties have not attracted as many doctors as the average. The situation in these counties would obviously have improved but would not have been entirely rectified even if they had been able to attract the average proportion of mobile doctors. Conversely, East Anglia may be said to have attracted a

surplus of mobile doctors (because the ~~region~~ would still have had an average list size of 2,500 in 1969 even if its proportional gains had been reduced to the national average), and the same has also occurred in Cumberland, Cornwall, Devon, Somerset and Wiltshire.

The third movement which increases the supply of doctors is that of practitioners moving into the area from positions in countries outside England. The failure to attract enough of these immigrant doctors is likely to be a major contributory factor in areas which would currently enjoy a list size of 2,500 or less if they had been able to attract an average proportion of such doctors. On this definition only Buckinghamshire can attribute its current shortage of doctors primarily to this factor, although the situation in many other counties would have improved considerably by increasing the proportion of immigrant doctors coming into them. No region has had a "surplus" of immigrant doctors in the sense in which the term has been defined.

The movements which decrease the supply of doctors are simpler to summarise because in this analysis they are necessarily confined to migration within the country. On the basis of the definitions used above, three regions (Yorkshire/Humber and the East and West Midlands) would have had list sizes below 2,500 in 1969 if they had been able to reduce their gross losses to the national average, and the same is also the case with the following counties: Bedfordshire, Buckinghamshire, Essex, Hertfordshire, Leicestershire, Staffordshire and Warwickshire. In the remaining regions and counties with high list sizes the losses had been below the national average in any case and could not easily have been reduced any further; but it is important to note that in every case the total gross losses of doctors to other well supplied areas have more than outweighed the current shortage of doctors. By the converse of this definition, no standard region has lost "too few" doctors, although four counties (Westmorland, Norfolk, Hampshire and Herefordshire) would still have had average list sizes below 2,500 in 1969 even if their proportion of losses, which in fact were low, had been as high as the national average.

The significance of these different movements is summarised in Table 6.7. The areas listed in the "inadequate" column are those which would have had average list sizes below 2,500 in 1969 if they had been able to achieve an average performance on each growth factor alone. Conversely, areas listed in the "super-adequate" column are those which would still have had average list sizes below that figure even if their performance on each factor alone had been no more than

average. By concentrating on areas which would be brought into line by an average achievement on each single factor we can highlight the major strengths and weaknesses of the various regions and counties. In practice, however, the situation in any region or county is most likely to change as the result of partial improvement on several or all of the factors. For example, the failure to retain an average proportion of doctors who first practised in Bedfordshire has alone accounted for the current shortage of doctors in the county. This finding indicates that in principle the best chances for a long-term improvement *in* Bedfordshire are likely to result from an attempt to stem the outward movement of doctors first practising there, but in reality an attack on this factor alone is unlikely to succeed. It would be more realistic to concentrate mainly on improving the retention rate, whilst at the same time trying to attract more newly qualified and mobile doctors into the county.

The scale of the survey is too small to permit a detailed study of sub-county migration patterns, but two principal conclusions seem justified. First, the evidence strongly supports the conclusion that in most executive councils and probably in many medical practice areas the losses of doctors moving out of the districts have been considerably greater than the current shortages of general practitioners. The finding that each region and county has in the past attracted enough G.Ps. to ensure current list sizes below 2,500 appears to hold good for the smaller units also, shifting the emphasis of the problem of designated areas from that of attracting enough doctors to that of retaining those who first practise in certain places. Secondly, there is not much evidence that an optimal internal redistribution of doctors within counties would yield many benefits. Only half of the counties which in 1969 could theoretically have eliminated their designated areas internally had in fact experienced a sufficient amount of intra-county mobility, and even in these counties there is no evidence of an adequate amount of gross mobility from non-designated to designated areas within them.

References

1. R. Stevens 'Medical Practice in Modern England Yale University Press, 1966. (page 254).
2. B. Abel-Smith and K. Gales British Doctors at Home and Abroad Codicote Press, 1964.
3. J.M. Last and E. Broadie "Further Careers of Young British Doctors" British Medical Journal (1970), 4, 735.
4. J.M. Last "The Regional Distribution of General Practitioners and Consultants in the National Health Service" British Medical Journal (1967), 2, 796.
5. R.G.S. Brown and C. Walker "Motivation and Career-Satisfaction in General Practice" Unpublished paper, University of Hull, 1971.

TABLE 6.1

LOSSES, GAINS AND NET BALANCE OF INTERNAL MIGRATION; IMMIGRATION; AND TOTAL BALANCE OF MOVEMENT, BY STANDARD REGIONS

(Population estimates for England, 1968)

Standard region	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Doctors first practising in region		Losses		Internal migration		Net balance		Immigrant doctors from abroad and unknown regions		Doctors currently practising in region (1968)	
	No.	(=100%)	No.	%	No.	%	No.	%	No.	%	No.	%
North	1,250	100	293	23.4	234	18.7	-59	-4.7	130	10.4	1,321	105.7
Yorkshire/ Humberside	1,757	100	537	30.5	343	19.5	-194	-11.1	127	7.2	1,690	96.3
East Midlands	1,187	100	421	35.4	613	51.6	+192	+16.2	122	10.3	1,501	126.4
East Anglia	624	100	170	27.2	201	32.2	+31	+5.0	35	5.6	690	110.6
South East	6,495	100	999	15.4	1,247	19.2	+248	+3.8	558	8.6	7,301	112.4
South West	1,371	100	727	38.8	416	22.2	-311	-16.6	139	7.4	1,699	90.9
West Midlands	1,940	100	632	32.6	502	25.9	-130	-6.7	132	6.8	1,342	100.1
North West	2,185	100	389	17.8	612	28.0	+223	+10.2	198	9.1	2,606	119.2
TOTAL - ENGLAND	17,309	100	4,168	24.1	4,168	24.1	0	0	1,441		18,750	108.3

NOTE: All percentages are based on the number of doctors first practising in each region.

TABLE 6.2

NET BALANCE OF INTERNAL MOVEMENT BETWEEN STANDARD REGIONS

(Population estimates for England, 1968)

	North	Yorkshire/ Humberside	E. Midlands	E. Anglia	S. East	S. West	W. Midlands	N. West	Total
North	-2	-2	-2	-2	-62	+23	-1	-13	-59
Yorkshire/ Humberside	+2	-9	+7	-41	-3	-22	-128	-194	
East Midlands	+2	+9	+1	+79	+11	+93	-3	+192	
East Anglia	+2	-7	-1	-9	+20	0	+26	+31	
South East	+62	+41	-79	+9	+211	+64	-60	+248	
South West	-23	+3	-11	-20	-211	-59	+10	-311	
West Midlands	+1	+22	-93	0	-64	+59	-55	-130	
North West	+13	+128	+3	-26	+60	-10	+55	+223	

NOTE: The table is read across the rows. Thus, the Northern region shows a net loss of 2 doctors to Yorkshire/Humberside, the East Midlands and East Anglia, a net loss of 62 to the South East, a net gain of 23 from the South West, and so on.

TABLE 6.3

STANDARD REGION OF FIRST AND CURRENT PRACTICES

(Population estimates for England 1968)

Standard region of first practice	Standard region of current practice (1968)								Total
	North	Yorkshire/ Humberside	E. Midland	E. Anglia	S. East	S. West	W. Midland	N. West	
North	957	54	20	2	114	20	19	64	1,250
Yorkshire/ Humberside	52	1,220	72	19	106	40	50	198	1,757
East Midlands	18	63	766	19	156	20	60	85	1,187
East Anglia	-	26	20	454	85	29	10	-	624
South East	52	65	235	76	5,496	217	184	170	6,495
South West	43	37	31	49	428	1,144	139	-	1,871
West Midlands	18	28	153	10	248	80	1,308	95	1,940
North West	51	70	82	26	110	10	40	1,796	2,185
Outside England	113	117	112	33	480	119	132	184	1,290
Not known	17	10	10	2	78	20	-	14	151
TOTAL	1,321	1,690	1,501	690	7,301	1,699	1,942	2,606	18,750

TABLE 6.4

PRESENT AGE, BY STANDARD REGION OF FIRST PRACTICE

(Percentages based upon weighted aggregates of designated and non-designated samples)

Standard region of first practice	Present Age				
	Less than 40	40-49	150-59	50 or more	All ages
North	7.5	7.8	8.5	7.2	7.8
Yorkshire/ Humberside	10.8	9.8	11.5	10.1	10.5
East Midlands	7.0	6.9	6.0	5.9	6.5
East Anglia	4.6	5.8	4.7	2.5	4.8
South East	31.8	29.9	28.5	34.6	30.6
South West	10.2	13.1	10.4	8.4	11.1
West Midlands	12.1	10.9	8.7	10.1	10.5
North West	10.2	8.7	12.3	11.8	10.5
Other	5.6	6.5	8.3	7.2	6.9
Not known	0.3	0.6	1.1	2.1	0.9
N (= 100%)	377	642	468	234	1,721

Percentages calculated down columns.

TABLE 6.5

PRESENT AGE, BY STANDARD REGION OF CURRENT PRACTICE

(Percentages based upon weighted aggregates of designated and non-designated samples)

Standard region of current practice	Present Age				
	Less than 40	40-49	50-59	60 or laore	All ages
North	8.6	8.4		6.8	8.5
Yorkshire/ Humberside	10.8	10.3	11.5		10.6
East Midlands	9.9	0.4	6.6		
East Anglia	5.6	6.5	7.0	4.6	6.2
South East	30.6	31.8	32.3	39.7	32.8
South West	9.4	11.5	10.6	10.1	10.6
West Midlands	13.2	12.0	8.9	9.7	11.1
North West	11.8	11.1	13.4	11.0	11.9
N (= 100%)	377	642	468		

Percentages calculated d0lffi columns.

TABLE 6.6

LOSSES, GAINS AND NET BALANCE OF INTERNAL MIGRATION; IMMIGRATION; AND THE TOTAL BALANCE OF MOVEMENT, BY GEOGRAPHICAL COUNTIES

(population estimates for England, 1968)

Geographical County	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Doctors first practising in county		Losses		Internal migration Gains		Net balance		Immigrant doctors from abroad, and unknown regions		Doctors currently practising in county (1968)	
	No.	(=100%)	No.	%	No.	%	No.	%	No.	%	No.	%
Cumberland	111	100	28	25.2	42	37.8	+14	+12.6	9	8.1	134	120.7
Durham	455	100	153	33.6	152	33.4	-1	-0.2	67	14.7	521	114.5
Northumberland	425	100	128	30.1	35	8.2	-93	-21.9	15	3.5	347	81.6
Westmorland	32	100	5	15.6	12	37.5	+7	+21.9	-	..	39	121.9
Yorkshire, N Riding	238	100	105	44.1	97	40.8	-8	-3.4	49	20.6	279	117.2
Yorkshire, E & W Ridings	1,698	100	478	28.2	349	20.6	-129	-7.6	118	6.9	1,687	99.4
Derbyshire	256	100	89	34.8	123	48.0	+34	+13.3	52	20.3	342	133.6
Leicestershire	249	100	120	48.2	151	60.6	+31	+12.4	13	5.2	293	117.7
Lincolnshire	293	100	140	47.8	136	46.4	-4	-1.4	37	12.6	326	111.3
Northamptonshire	141	100	43	30.5	76	53.9	+33	+23.4	-	-	174	123.4
Nottinghamshire	234	100	76	32.5	164	70.1	+88	+37.6	39	16.7	361	154.3
Cambridgeshire	102	100	10	9.8	25	24.5	+15	+14.7	12	11.8	129	126.5
Huntingdonshire	38	100	8	21.1	29	76.3	+21	+55.3	11	28.9	70	184.2
Norfolk	248	100	75	30.2	77	31.0	+2	+0.8	11	4.4	261	105.2
Suffolk	160	100	29	18.1	100	62.5	+71	+44.4	-	-	231	144.4
Bedfordshire	271	100	225	33.0	124	45.8	-101	-37.3	-	-	170	62.7
Berkshire	305	100	132	43.3	75	24.6	-57	-18.7	11	3.6	259	84.9

continued ...

TABLE 6.6 (Continued)

Geographical County	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Buckinghamshire	229	100	97	42.4	75	32.8	-22	-9.6	10	4.4	217	94.8
Essex	371	100	157	42.3	216	58.2	+59	+15.9	63	17.0	493	132.9
G.L.C.	2,655	100	675	25.4	576	21.7	-99	-3.7	267	10.1	2,823	106.3
Hampshire	672	100	217	32.3	196	29.2	-21	-3.1	34	5.1	685	101.9
Hertfordshire	298	100	133	44.6	166	55.7	+33	+11.1	27	9.1	358	120.1
Kent	598	100	219	36.6	373	62.4	+154	+25.8	17	2.8	769	128.6
Oxfordshire	116	100	72	62.1	76	65.5	+4	+3.4	31	26.7	151	130.2
Surrey	784	100	169	21.6	184	23.5	+15	+1.9	44	5.6	843	107.5
Sussex	424	100	194	45.8	305	71.9	+111	+26.2	16	3.8	551	130.0
Cornwall	194	100	92	47.4	80	41.2	-12	-6.2	-	-	182	93.8
Devon	382	100	141	36.9	142	37.2	+1	+0.3	34	8.9	417	109.2
Dorset	219	100	103	47.0	44	20.1	-59	-26.9	-	-	160	73.1
Gloucestershire	596	100	300	50.3	120	20.1	-180	-30.2	46	7.7	462	77.5
Somerset	314	100	183	58.3	146	46.5	-37	-11.8	16	5.1	293	93.3
Wiltshire	143	100	41	28.7	54	37.8	+13	+9.1	27	18.9	183	128.0
Herefordshire	37	100	8	21.6	35	94.6	+27	+73.0	-	-	64	173.0
Shropshire	133	100	74	55.6	84	63.2	+10	+7.5	-	-	143	107.5
Staffordshire	666	100	364	54.7	285	42.8	-79	-11.9	73	11.0	660	99.1
Warwickshire	849	100	454	53.5	356	41.9	-98	-11.5	63	7.4	814	95.91
West Yorkshire	123	100	31	25.2	146	118.7	+115	+93.5	17	13.8	255	207.3
Cheshire	518	100	136	26.3	190	36.7	+54	+10.4	26	5.0	598	115.4
Lancashire	1,737	100	455	26.2	543	31.3	+88	+5.1	180	10.4	2,005	115.4
TOTAL, ENGLAND	17,314	100	6,159	35.6	6,159	35.6	0	0	1,435	8.3	18,749	108.3

NOTE: All percentages are based upon the number of doctors first practising in each county

TABLE 6.7

ADEQUACY OF REGIONS AND COUNTIES ON GROWTH FACTORS

(See text for details)

Growth factor	Inadequate	Super-adequate
Capacity to attract new doctors	E:BT MIDLANDS, NORTH WEST, Durham, Derbyshire, Leicestershire, Northamptonshire, Huntingdonshire, Essex, Hertfordshire, S.8. London/Kent, Torcestershire, Lancashire, Nottinghamshire	SOUTH WEST, Nerthumberland, Hampshire, Inner London, South West London/surrel Cornwall, Dorsot, Gloucestershire, Somerset, Shropshire, Norfolk
Capacity to attract mobile doctors	NORTH, YORKSHIRE/HUMBERSIDE, West Riding of Yorkshiro	E:ST ENGLIA, Cumborland, Cormrall, Devonshire, Somorset, Wiltshirc
Capacity to attract immigrant doctors	Buckinghamshire	-1, Cambridgeshire, Devonshire
Capacity to retain doctors	YORKSHIRE/HUMBERSIDE, E:BT MIDLANDS, TEST MIDLANDS, Bedfordshiro, Buckinghamshire, Essex, Hertfordshire, Leicostershire, Staffordshire, Warwickshire	Westmorland, Norfolk, Hampshire, Herefordshire

Standard regions are in capital type.

CHAPTER 7

COMMUNITY TIES

"I should probably have settled in Edinburgh and gone into partnership with my uncle outside Edinburgh. but then I moved around and met my wife, and I finished up here. My father-in-law was in practice **here.**"

- G.P. in Sussex.

"I met a nice young lady here."

- G.P. in Leicestershire.

In the previous chapter we traced the complex migration routes which general practitioners have followed, and we showed how these patterns of movement are related to the current distribution of doctors throughout the country. It was seen that different regions and counties have suffered diverse fortunes as a result of the mobility of doctors, and that whilst the shortage in some areas can be attributed primarily to the failure to capture G.Ps. moving from one practice to another, in others the chief difficulty has been that of attracting a sufficient number of newly qualified doctors, and of keeping them once they have arrived. Results of this kind are important in reaching a clearer understanding of the nature of the problem of the designated areas and in ordering the priorities of action, but they offer few clues about the sort of action that might be effective. It is important to know, for example, that the shortage of doctors in the East Midland counties is closely tied up with the relatively low number of newly qualified G.Ps. who choose to practise there, but this fact alone casts little light upon the steps which might effectively be taken to remedy the deficit. Unless we have some understanding of why young doctors have seemingly been reluctant to minister to the needs of East Midlanders any course of action would necessarily be speculative.

This particular example highlights an important set of motivational factors, for it may be no coincidence that the East Midlands is also the only region without a medical school.* The absence of an undergraduate teaching centre may be important in the specific sense of failing to acquaint medical students with the region during their training, and also in the more general sense of

* The medical faculty at Nottingham University did not accept its first students until October, 1970.

illustrating the significance of existing links and ties with an area when decisions are made about moving and settling. During the course of their lives people tend to develop attachments to particular localities and communities which for many are never entirely broken, even among spiralisists and those whose jobs require them to make frequent moves¹. The ties of birthplace, family home and education may be as important to doctors as to any other occupational group, and in some cases may be more important. During his years at medical school, for example, the student will almost certainly develop some links with the local medical community and he will begin to assemble an image about the conditions of practice in the vicinity of the school which will either excite or depress him, and which may subsequently be of great significance to him in evaluating possible areas to work. He might be particularly attracted by the locality around his medical school, or he may be put off by it. At the same time the student doctor may also be under some constraint to return to the area of his family home upon qualifying, especially if his father or some other relative is already practising there and has hopes of passing the practice on to the next generation.

Such considerations may seldom be the only ones or even the major ones in a doctor's decision of where to practise, particularly in the case of the newly qualified doctor seeking a first appointment in general practice, but all the evidence so far suggests that quite a strong relationship exists between the places where G.Ps. choose to work and the areas where they were born, grew up and were educated. The strength of such community ties may vary from place to place, but they are an important factor in understanding the motivation to move and hence in shaping future policies. What part does the medical school play in the decision-making process, and would the deliberate establishment of new schools in areas with chronic manpower problems contribute to a long-term solution? How significant is a doctor's home area in his choice of a practice location? Are some areas losing more home-produced doctors than others, and if so, should deliberate propaganda be aimed at medical students and potential students from certain places to encourage them to return? These and similar questions must be tackled if we are to understand and control the dynamics of migration and settlement.

Previous Research

It seems often to have been assumed that doctors (especially general practitioners) tend to settle in the vicinity of their medical schools, and that consequently the careful siting of new medical schools (or the expansion of existing ones) would offer a reasonable long-term

solution to recruitment problems in certain areas. If, the argument runs, there is an increase in the number of students who are trained in a particular locality, there will also be an increase in the number who choose to settle there upon graduation². The Gillie Report in 1963. for instance. commented that "since there is a tendency for doctors to enter general practice in the part of the country in which they were trained. new medical schools and medical centres for post-graduate training should, as far as possible. be in or close to the under-doctored areas" (para. 121)³. The argument was repeated in the following year by the Working Party on General Practice⁴. "Doctors tend to settle in the areas in which they were trained and we think it important that the uneven distribution of general practitioners should be borne in mind when considering the location of new medical schools and the expansion of existing ones" (para. 1.25). Neither report cited any evidence for the argument. although both committees would have had access to the Medical Practices Committee's analysis of the Provisional Register for 1960. indicating that doctors normally settle in and about the areas where they had been educated⁵. Probably the first major survey of the settlement patterns of doctors was published in 1967 by Last⁶. His data certainly confirm the widespread belief that medical schools tend to supply G.Ps. to adjacent rather than to remoter regions. but he also found that a closer association existed between the places where G.Ps. worked and the areas of their family homes at the time they were students. In fact. just over half (51 per cent) of all the general practitioners in his nation-wide sample were practising in the same standard region as their family home. Last concluded from this that "regions short of doctors would be more effectively. expediently and economically helped to overcome the shortage by a larger recruitment of students from these regions, rather than by establishing medical schools there".

The Royal Commission on Medical Education⁷. echoing Last's conclusion. commented that "the argument about settlement introduces unnecessary and misleading considerations" into decisions about the siting of new medical schools (para. 382). The Commission pointed out that although some of the plans which had been Submitted to it about the location of new schools were based on the assumption that medical graduates tended to practise in the area of their medical schools. there was in fact no substantial evidence to support it. Last's material was used to show that the evidence which did exist pointed the other way. and indicated that general practitioners. if not consultants. preferred to return to their home areas to work*. However, the CODIDission did

* The follow-up survey by Last, published in 1970⁸. confirmed the suggestion of the earlier study that G.Ps. were more concerned than hospital doctors about their choice of locality. Twenty-six per cent of prospective G.Ps. in the original sample of medical students gave priority to choice of location rather than of specialty compared with only twelve per cent of the hospital doctors.

think that the supply of general practitioners to an area "may well be heavily dependent on the extent to which boys and girls from that area are attracted into medicine", and that one way of attracting them may be to set up a local medical school (para. 382). It would appear, then, that both home area and medical school are likely to be significant factors in the choice of a practice location, although whether or not they act independently is as yet unknown.

The more intensive studies by Brown and Walker⁹,¹⁰ in East Yorkshire Glamorgan and South Hampshire confirm this conclusion. They found that 41 per cent of the 260 doctors interviewed in these three localities had parents living in the same region (the comparable figure from Last's national survey was 51 per cent, although definitions do not exactly match), and 24 per cent had parents in the same town or village. Younger doctors were more likely to have returned to their home areas than those graduating before the war, and the Welsh doctors had closer connections than those in either of the English regions. Moreover, 68 per cent of all G.Ps. in the sample were in the areas of their first choice. At the same time, however, the results showed that the medical school also represented a considerable constraint on the range of a doctor's choice: by 1966 a third of the general practitioners in the East and West Ridings were Leeds graduates, and in Glamorgan the proportion of graduates from the Welsh National School of Medicine was 50 per cent. Brown and Walker conclude that "recruitment of general practitioners is likely to be easiest in areas that send substantial numbers of schoolboys and girls to medical school ••• We cannot dismiss the need to bear this factor in mind in siting new medical schools".

Medicine is not the only profession to illustrate the importance of community ties in residential decisions. Similar results have been obtained in studies of teachers. Jay's work in Sheffield in 1965¹¹ clearly illustrated the tendency of teachers to gravitate towards those areas with which they were already acquainted at the beginning of their careers: 57 per cent of his sample had been born in Yorkshire, and 81 per cent in Northern counties. The reinforcing effect of the college or university on the tendency to remain within a fairly small geographical area is shown in Taylor's study in 1967¹² among a large sample of students in 54 colleges of education: just over half were attending colleges within 60 miles of their homes. A more recent investigation by Duggan and Stewart¹³ among teachers in six county boroughs of mixed socio-economic composition found that more than two-thirds of them had taken up first appointments in their home areas, and that the attraction of the home area increased with successive appointments. When the teachers were asked to give their reasons for choice of work area the

responses "indicated the dominance of having 'roots' in the area and of having parents or close relatives there". Duggan and Stewart then compared these results with ones obtained from eight other (un-named) professional groups in the same boroughs, and came up with similar conclusions. They write: "the pattern was similar inasmuch that strong motivating influences in choosing where to work were associated with domestic and local ties. These included birthplace, the presence of parents and/or close relatives, having 'roots', or because wives were born in the areas".

The Influence of Community Ties: The National Picture

We look first at the relationship between home area, medical school and practice location. In this section we are concerned with the pattern across the country as a whole; in subsequent sections the analysis will be broken down by regions and counties, and will also assess the effect of these patterns on the current distribution of manpower. The figures are set out in Tables 7.1 and 7.2. Table 7.1 shows the proportion of doctors in each sample who at the time of the survey were practising in the same county and the same region as their family home.* In the designated sample almost two-fifths (39 per cent) of doctors whose family homes had been in England were, at the time of the survey, living in the same county as their family home, and 60 per cent were living in the same standard region. The corresponding proportions in the non-designated sample are 37 per cent and 60 per cent. There are obviously no differences between the two samples in this respect, and the regional figures correspond fairly well with the equivalent proportion in Last's survey (51 per cent), even though his definition of 'family home' differed slightly from the one used here. It is important to note that the figures apply only to doctors whose family homes and medical schools had been in England. Since the survey was restricted to England it would clearly have been misleading to include all the survey doctors in this analysis, as they would then not be at equal risk of being counted in their home **regions**.

The next table, 7.2, uses a similar format to show the relationship between the doctors' medical schools and their current areas of residence, again limiting the data to those whose medical schools had been in England.

* Family home area is defined by the question: "Where did you spend most of your time before going to University?"

Reading across the rows it is seen that 32 per cent of the designated sample were, at the time of the survey, practising in the same county as their medical school, and 60 per cent were practising in the same region. The corresponding proportions in the non-designated sample are 27 per cent and 54 per cent. Once again the differences between the two samples are insignificant, and it will be noticed that the "retention rate" for the medical schools and the family home areas are very similar. It therefore follows that many of the doctors must have been to a medical school not far from their homes, and the question arises of whether the influence of each is independent of the other. If the attraction of the medical school is independent of the home area then the proportion of doctors practising in the vicinity of their schools would be no different as between those whose family homes had and had not also been in the same region as their schools. In fact, as Table 7.2 clearly shows, this is not the case, for the chances of a doctor remaining in the region of his medical school are much higher if that was also his family home region. For example, the proportions of designated doctors practising in the same region as their medical school varied from 70 per cent among those trained in their home region to only 29 per cent among those trained elsewhere. In the non-designated sample the corresponding figures are 65 per cent and 29 per cent, showing an equally wide variation. Moreover, similar results are to be seen at the county level also. The proportions of designated doctors working in the same county as their medical school ranged from 48 per cent among those trained in their home county to only 16 per cent among those trained elsewhere. The corresponding figures in the non-designated sample are 46 per cent and 12 per cent.

These results demonstrate clearly and unequivocally that although the majority of English graduates settle within the regional vicinity of their universities, the attraction of the medical school is much greater when it also happens to be in the region of the family home. But the converse question, not raised in previous studies, is whether it is not equally the case that doctors are much more likely to settle in the vicinity of their family home if that also happens to include their medical school? The answer, contained in Table 7.1, is that although the differences are by no means as large as in Table 7.2, they are nonetheless highly significant. It is seen, for example, that the proportion of designated doctors working in the same standard region as their family home varied from 70 per cent among those trained in their home region to only 32 per cent among those who left their home regions to go to medical school. Similarly, the proportions of non-designated doctors working in their home regions were 65 per cent and 48 per cent respectively as between those who were and were not also educated in their home regions. As before, the same trend is also seen at the county level. In short,

students who had left their home regions and counties in order to be trained were less likely to have returned to those places to practise than those attending a medical school in their home regions and counties. The general hypothesis which emerges may be stated thus: the more connections a doctor has with any region or county the more likely he is to return to it or remain in it to practise. If the hypothesis is Valid, we should expect to find the proportion of doctors living in their home areas to increase still further if, as well as being educated there, they were also born in those places. If, in other words, it is true that a doctor's tendency to practise in any particular area increases with the length and strength of his contacts with it, then we should expect to find not only that the influence of birthplace is dependent upon home area (which is a reasonable expectation), but conversely that the effect of the home area is dependent upon birthplace (which is perhaps less obvious on common-sense grounds),

Just over half of all the English-born doctors in the survey were living in the regions in which they had been born. The proportion is similar in the designated and non-designated samples (58 per cent and 52 per cent respectively), and is a little lower than the proportions living in the regions of their family homes or medical schools (about 60 per cent in each case). As expected, respondents were much more likely to be working in the regions of their birthplace if those had also been their family home regions. In the designated sample the proportion of doctors practising in their birth regions varied from 63 per cent of those whose family homes were also in the same region to only 17 per cent among those who had been brought up elsewhere. In the non-designated sample the respective proportions are 59 per cent and 14 per cent. The differences are, obviously, highly significant, and are seen at the county level also. The important question, however, is whether or not the converse holds good: is the influence of home area dependent upon birthplace? Are the doctors more likely to be living in their home regions if they had also been born there than if they had been born elsewhere? Our hypothesis would lead us to predict a positive answer, since birthplace adds one further connection to that of upbringing and education; and the data generally bear it out. The proportions of designated doctors practising in their home regions were 63 per cent and 43 per cent respectively as between those whose birthplace and home areas were and were not in the same region, and in the non-designated sample the proportions were 59 per cent and 53 per cent respectively.

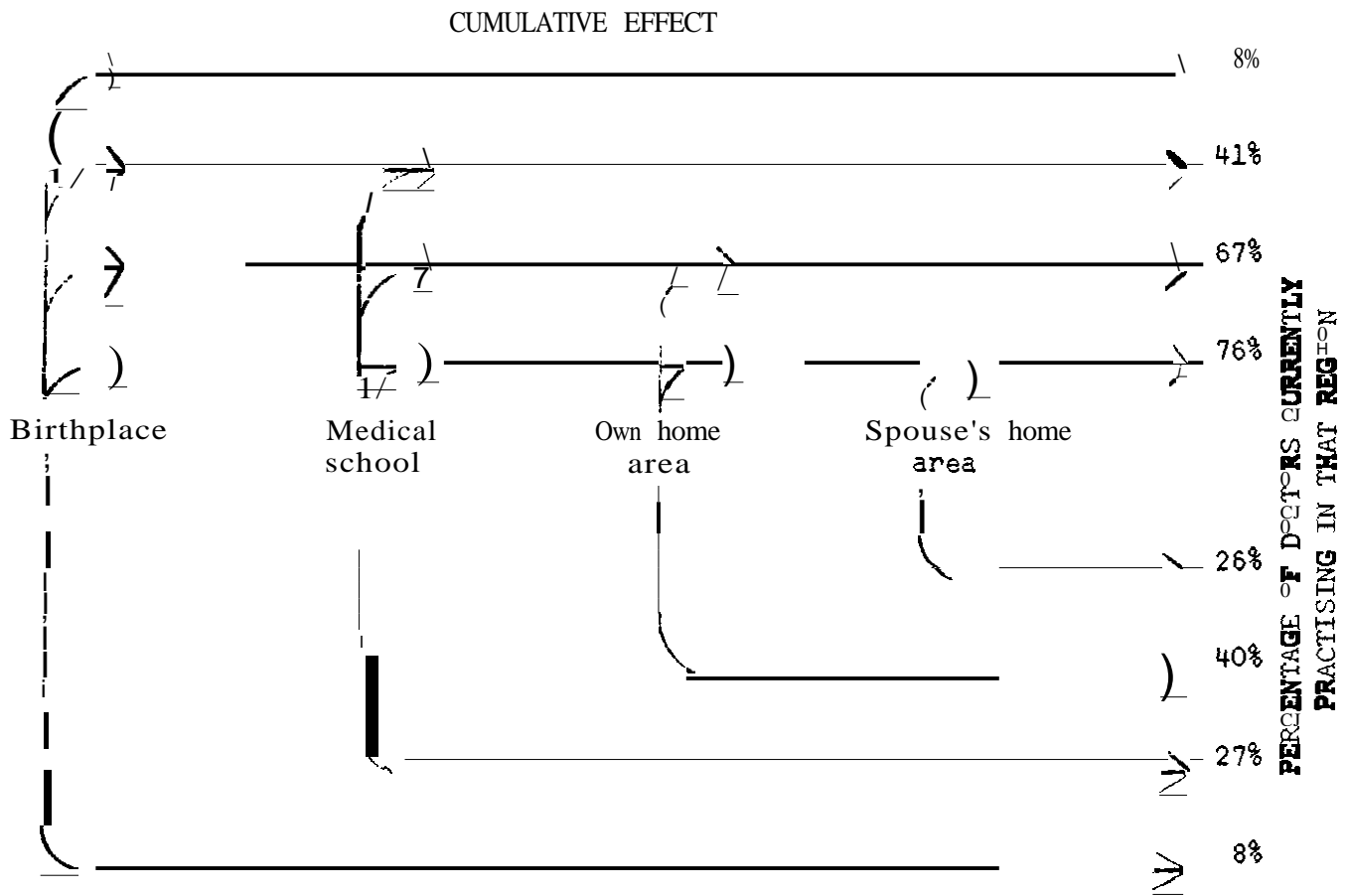
We conclude that although a doctor's birthplace has considerably less influence than either home area or medical school on his choice of practice location, it nevertheless increases the likelihood that he will return to

or remain in a familiar area by adding one more link to the chain which keeps him there. The importance of each of these links is summarised in Table 7.3. which shows the proportions of doctors living in the same regions as their birthplace, home area and medical school under the various possible combinations. For reasons stated, the data are confined to graduates from English universities who were also born and brought up in England. The percentages in the last column are based on weighted aggregates of the two samples.

Two major conclusions are drawn from this summary table. Firstly, the "retention rates" - whether for birthplace home area or medical school - increase in regular fashion as the total number of links increases. In each case the rate is lowest among doctors having one simple link with the region and highest among those who were born, brought up and educated in the same region. It is seen, for example, that, of doctors whose birthplace was in a different region than both home area and medical school, fewer than one in ten (8 per cent) were currently practising in their birthregion. When one extra link is added (either home or medical school) the proportion practising in the region rises to at least 40 per cent; and when all three links are present more than two-thirds (67 per cent) of all the respondents are included.

The second conclusion from the table is that each link has a differential effect on the likelihood of a doctor practising in the region in question. The influence of birthplace is the least strong of the three because it has the lowest retention rate in isolation and it also has the least incremental effect on the retention rate when added to either of the other two links. By similar reasoning the home area has the strongest pull, with the medical school occupying an intermediate position. Schematically the relative influence of each link can be represented in the diagram overleaf, adding for this purpose the extra link of the spouse's family home area (see chapter 8, p.).

This analysis of the relationship between home area, location of medical school and choice of practice area adds a further dimension to those of previous studies. Our results confirm the importance of encouraging more young people in under-doctored areas to consider medicine as a career, because wherever they are trained at least a third of them can be expected to return to their home regions. But we have also shown that this proportion is likely to double if students can receive their medical education in their home regions, and this is the rationale for putting new schools into areas with long-term problems of manpower, and for expanding the capacity of existing schools in such area. Our results



INDIVIDUAL EFFECT

(Note: percentages are based on weighted aggregates of both samples).

support Last's conclusion that the influence of the home is greater than that of the university, but we cannot accept the Royal Commission's argument about the irrelevance of the siting of medical schools to manpower policy. This survey has clearly shown that the influence of the home area and the location of the medical school are inter-dependent, and both should be equally considered in the formulation of policy.

The Influence of Community Ties: The Regional and County Picture

So far the analysis in this chapter has concentrated on the country as a whole. We must now see whether the general conclusions also apply to individual regions and counties, and how the influence of community ties is related to the existing distribution of family doctors. We start, in Table 7.4, with the standard regions, and with the implications of our finding that students who trained in their home regions were more likely to be living in those regions at the time of the survey than those who had moved away for their training. If this result holds good for each region, we should expect to find that those regions in which a high proportion of students had trained "at home" have also had the highest rates of retention of homebred doctors. (The table is confined to doctors whose family homes

had been in England).

The **first** column in Table 7.4 shows, for each region, the percentage of doctors who received their medical education in the same region as their family home. The **figures** are based on the weighted aggregates of both samples. The South East expectedly had the highest proportion of doctors training in their home region (88 per cent); the North, Yorkshire/Humberside, the North West and the West Midlands each had between 60 per cent and 70 per cent; and in the South West the proportion falls to little more than a quarter (27 per cent). No doctors with family homes in the East Midlands had received their medical education there, and the very low percentage in East Anglia is the direct result of our method of handling Cambridge graduates.* These regional variations partly reflect the capacity of the medical schools in each region, but it would nevertheless be possible for a higher proportion of students to be trained in their home regions than has been the case in the past (the increased proportion varies between about 20 per cent and 33 per cent, depending upon the region). Since it has been shown that newly qualified doctors **are** more likely to be practising in their home regions if they have also attended a medical school there, this might be a possible way of using existing resources to **encourage** more G.Ps. to settle in particular regions.

On the basis of our earlier analysis we should then expect to find that regions which trained a high proportion of indigenous students would also contain a high proportion of G.Ps. practising in their home regions. These latter **figures** are given in the second column of Table 7.4 and **are** based on the weighted aggregates of both samples. As expected, the retention rate was highest in the South East, where 65 per cent of doctors with family homes in the region were still practising, and lowest (by a considerable margin) in the East Midlands (39 per cent). Between these extremes the other regions **are** ranged much as expected, although in some cases the **rank positions are** determined by quite small percentage variations. The exception is the South Western region, which despite losing a very high proportion of students to other regions to be trained has nevertheless succeeded in attracting back a large number of doctors originating from the region.

Table 7.5, contains the same information as 7.4, **arranged** by geographical counties. **Very** few counties contain medical schools, but among those which do some interesting variations occurred in the proportion

* Most Cambridge graduates also recorded their clinical school, which was coded in preference to Cambridge. The four doctors listed as having been trained in East Anglia **are** therefore Cambridge graduates for whom their clinical schools are unknown. The same practice applied to Oxford graduates who received their clinical instruction elsewhere.

of doctors with family homes in them who trained at the local IDiversity. The proportion was highest in the G.L.C. area (87 per cent of the doctors with family homes in this 'county' were trained there) and lowest (apart from the anomalous position of Cambridgeshire) in Durham/Northumberland (Which, to avoid confusion over the distinction between Durham and Newcastle universities. are taken together in this table as a single 'county'). The next column in table 7.5 shows the percentage of doctors originating from each county who were still living there at the time of the survey. These percentages naturally cover a much wider range than in the case of the regions although the very small frequencies in many counties mean that the data must be treated with some caution. Counties in the South East of England generally had the lowest proportions of home-produced doctors working in them. Only Hampshire of the South Eastern counties has had a retention rate above the county average of 37 per cent, whilst no more than one in ten of the doctors with family homes in Oxfordshire, Bedfordshire and Buckinghamshire had returned to those counties. However, the retention rate for the South Eastern region as a whole was high (65 per cent), which means that although many doctors from the region had not returned to their home counties, they had at least remained within the region. Apart from those from Essex and Bedfordshire the proportion of home-bred doctors moving out of the region altogether was at or below the national average.

The counties in the Northern region seem, as a group, to have kept a higher proportion of indigenous doctors than any other regional group of counties. The North Riding had done considerably less well in this respect than the other counties of the region, which have each succeeded in retaining at least half the doctors with family homes in them. In the Yorkshire/Humberside region, the East and West Ridings together have kept a higher proportion of home-produced doctors than any other county except Cornwall (57 per cent), contrasting dramatically with the low figure of 16 per cent in the North Riding. Part of this surprising difference can be attributed to the presence of two medical schools in the East and West Ridings. In the East Midlands the constituent counties have each followed the regional trend of keeping a fairly low proportion of doctors with family homes in them. The retention rate in Nottinghamshire (41 per cent) is a little above the national average, but the other four counties have each lost a high proportion of their home-produced doctors, most of them moving out of the region altogether.

All the counties in East Anglia have succeeded in keeping at least the national average proportion of doctors with family homes in them, and so also have Devon; Cornwall, and Dorset in the South West. The remaining three counties of this region (Gloucestershire, Somerset and Wiltshire) have

not been so successful, having lost a fairly high proportion of home-produced doctors both to other counties in the region and, especially in the case of Somerset and Wiltshire, to other regions. The larger counties in the West Midlands seem to have had difficulty in retaining reasonable numbers of doctors with family homes in them: the proportion was only just over a third in Staffordshire and Warwickshire, and not much above a quarter in Worcestershire. On the other hand a fairly large proportion of these losses has been to other counties in the region, with the result that movement out of the region altogether had been no greater than average, and considerably less than the regional losses from the East Midlands. Finally, in the North West, Lancashire has retained proportionately twice as many home-bred doctors as Cheshire, which again may be due to the presence of two medical schools in Lancashire. Cheshire has suffered from the balance of movement between the two counties, and whilst the proportion of doctors moving out of the region altogether has been above average, relatively more of them have come from Cheshire than from Lancashire.

In some, there is expectedly, a less clear relationship in the counties than in the regions between the presence of a local medical school and the tendency for doctors with family homes in the area to practise there, although it remains true that counties with medical schools have generally retained a high proportion of home-produced doctors. Excluding those with fewer than ten doctors in the survey, it can be seen from Table 7.5 that counties with medical schools have generally kept a higher proportion of home-bred doctors than those without. It can at least be said from these figures that the presence of a local medical school usually ensures that a good proportion of medical students from the area will eventually return to the county as G.Ps.

The Influence of Community Ties: The Relationship to the Distribution of Manpower

The next question is whether these trends affect the distribution of family doctors. Is the failure of certain regions and counties to retain an adequate proportion of home-bred doctors a significant factor in the manpower shortage in those areas? A partial answer is found in Table 7.4, which shows that the three regions with the highest retention rates (the South East, East Anglia and the South West) also have the lowest average list sizes, whilst the two regions with the lowest retention rates (the East Midlands and the North West) both have list sizes well above 2,500. A similar pattern can be also seen for retention rates on first appointments (third column), differentiating the East Midlands and the North West even more sharply from the other regions.

It seems probable from these figures that in some regions a link exists between the capacity to retain doctors with homes in the region and the current availability of manpower. The link is revealed most explicitly in the East Midlands and the North West, which not only stand out by virtue of the low proportions of home-bred doctors taking a first appointment in them, but are also the two regions in which a low capacity to attract doctors setting up in general practice for the first time has been a main reason underlying their current shortages of G.P.s. (Table 6.7). The younger doctors which these regions have failed to attract are, in other words, those whose family homes were in the regions but who took up a first appointment elsewhere. If both regions had been able to retain an average proportion of doctors taking a first appointment in their home regions (58 per cent), the extra doctors gained would have offset the 1969 shortfalls completely. We conclude therefore that a substantial part of the manpower difficulties in these two regions is attributable to the relatively low proportion of students from homes in the regions who have subsequently returned to them to work as G.P.s., both in a first appointment and on changing practices. Moreover the situation in the East Midlands is a clear example of how recruiting problems can be intensified by the lack of local connections with a medical teaching centre, and it is expected that the opening of the new medical school at Nottingham will exert a significant long-term influence on staffing patterns in the East Midland region. This fact alone will probably lead to substantial improvements in the manpower situation in the region.

At the county level, eleven counties were listed in Table 6.7 in which the failure to attract enough doctors starting up in practice has been a principal reason underlying their current shortage of G.P.s. If the general analysis in this chapter is valid for the counties as well as for the regions we should expect these counties to show low retention rates for both first and current appointments. The eleven counties are underlined in Table 7.5 for ease of identification. The main conclusion about them can be summarised briefly: the proportion of doctors taking a first appointment in their home county and the percentage who were living in their home county at the time of the survey was lower than average for each of the eleven counties except Durham/Northumberland and Lancashire (which have medical schools in them), and Hertfordshire (which has only 2 cases and can therefore be ignored). Moreover, if each county with a below-average retention rate for doctors taking a first appointment in general practice had succeeded in reaching the average rate for all counties, the extra number of doctors gained would in every case have completely offset the existing shortfall of doctors in 1969.

This is an important and significant conclusion. Having shown that the shortage of family doctors in many counties has resulted mainly from the failure to attract enough doctors starting up in general practice, we are now able to locate the problem more specifically in the ~~very~~ low proportions of doctors originating from those counties who have returned to them as G.Ps. Whilst it is impossible to base any firm conclusions on a small number of cases it is probably no coincidence that the two counties containing medical schools (Durham/Northumberland and Lancashire) have generally shown much higher retention rates on both first and current appointments than those counties without an undergraduate medical centre. We therefore conclude that the medical school which a doctor attends is likely to be an important influence in his choice of a practice area, and moreover that in some cases it may be a significant factor in the unequal pattern of distribution of general practitioners. These results, as we have already pointed out, destroy the argument of the Todd Commission that the siting of new medical schools is irrelevant to problems of manpower distribution. Our data indicate ~~very~~ clearly that a promising way of bolstering recruitment to general practice in many under-doctored areas is by encouraging more doctors originating from those areas to return to them when qualified, and, further, that one way of achieving this is to ensure that they do not have to move far away from those areas in order to be trained.

Which Doctors Return Home?

Which doctors are most likely to be practising in their home areas? Table 7.6 sets out some characteristics of those doctors with family homes in England who, at the time of the survey, were living in the same county and region as their family home. These may not be the only factors associated with a tendency to return to familiar ~~territory~~, but they are ones which, on common-sense grounds, might be expected to characterise doctors who gravitate back to their home areas. Three characteristics included in the table discriminated decisively between those who had and had not returned to their home counties and regions. The first concerns the timing of a doctor's marriage relative to his career in general practice. We saw in Chapter Five that doctors who had ~~married~~ before starting in general practice were generally less likely to have moved than those marrying later, and we may also expect that the added constraint of their wife's home area as well as their own would reduce the chances of these doctors returning to the home localities. This expectation is confirmed by the data. Doctors in both samples who had married before entering general practice were rather more likely than the remainder to be working away from their home regions and relatively less likely to be

currently practising in their home regions and, particularly, in their home counties.

The second feature discriminating those who had and had not returned to their home areas is paternal occupation. Respondents were asked to record their fathers' occupations at the time they (the respondents) were born, and the jobs were then classified on the Registrar General's five-point scale of social class, and also according to their relationship with medicine. Respondents whose fathers had also been members of the medical profession were more likely to be practising in their home counties than those with fathers in other occupations, and conversely were less likely to be practising in a different region. The difference is consistent in both samples, but more marked among the non-designated than the designated doctors. Associated with this is the fact that doctors originating from social class I homes contained a higher proportion of those returning to their home counties and regions than doctors with fathers in other social classes. Again, the difference is greater in the non-designated than in the designated sample. Since the medical profession is allocated to class I in the Registrar General's scale it is probable that the "excess" of doctors from class I backgrounds returning to their home areas is accounted for by those whose fathers were themselves in the profession. The many important contacts which a newly qualified doctor may have in his home area by virtue of his father's practice is probably sufficient explanation for his increased incentive to return, especially if there is the prospect of a partnership in the family practice. This conclusion offers little guidance for future policy, but it may help to explain the persistence of under-doctored areas and suggests that, if the circle could but be broken, the future prospects in some of the chronically designated areas might be brighter.

The influence of age is more difficult to assess from the table because of the familiar problem that the younger doctors had not yet completed all their career moves. A correct interpretation of the slight trend (more marked in the designated than in the non-designated sample) towards an increased rate of settlement in the home region by younger doctors is therefore a hazardous matter, but in view of our finding later in this chapter that career movement have generally resulted in an increased proportion of doctors living in their home regions, it seems reasonable to assume that the younger doctors in the survey may be genuinely more likely than their older colleague to remain within the regional vicinity of their family homes throughout their careers.

The Capacity of Areas to Produce Enough Medical Students and Qualified Practitioners

In addition to the problem of how best to attract doctors back to their home areas whenever this is indicated, there is the question of whether the recruitment of medical students in certain localities is sufficiently high in the first place, and whether or not the presence of a local medical school stimulates the supply of qualified school leavers who choose to study medicine. Last⁶ concluded from his study that areas with high list sizes would do well to stimulate the supply of medical student from them, an argument based on the assumption that a more or less fixed proportion of qualified practitioners return to their home areas, and that to increase the number of returning doctors there must be a consequent increase in the supply of school leavers who opt to read medicine. Our results suggest that this argument is rather too simple, because the proportion of returning doctors varies from place to place in a way that ~~seems~~ to be related to the present distribution of medical manpower. On the basis of these results we have suggested that an improvement could be achieved instead by raising the 'retention rate' in many of these areas, and that one (though by no means the only) way of doing this is by expanding the facilities for medical education in the regions concerned. But we must also examine the possibility that an inadequate supply of medical students in the first place might be a contributory factor, and that some regions may fail to produce enough students because of the lack of undergraduate places.

The question of whether certain areas have failed to produce enough medical students to meet their demands for family doctors (given that a certain proportion of them will, or can be persuaded to, return to their home areas to practise) is complex and cannot be fully explored within the context of this project. It is, however, possible to form some tentative conclusions, for it was shown earlier in the chapter that almost all the regions and counties which have had difficulty in attracting new doctors could have solved their problems by increasing their retention of home-produced doctors to the average for that unit. Those areas which have failed to do this would obviously have been helped by producing more medical students, but if it is accepted that each region and county had the potential capacity to keep an average proportion of students originating from them, then the problem has lain not so much in an insufficient flow of students to the medical schools but in the inadequate return of qualified doctors back to their home areas. The only exceptions were Durham/Northumberland, Huntingdonshire and Lancashire where, in spite of average or above-average retention rates of doctors originating from these counties, list sizes were still high in 1969. If the analysis

is extended to all the regions and counties with high average list sizes (instead of those identified as having particular problems in getting adequate numbers of doctors starting in general practice), then Yorkshire / Humberside and the West Midland region have also produced an inadequate supply of medical students to meet current needs. and so too have Bedfordshire, Staffordshire. Warwickshire and the West Riding. In these cases, however. it must be stressed that the failure to attract adequate numbers of new doctors has not been the major reason for their shortage of doctors: the chief problem has been either the failure to retain enough of the young doctors who first started practising there, or the inability to attract doctors moving from other areas.

Whether or not local availability of medical school places stimulates the number of qualified school leavers who choose to study medicine is a question that was considered by the Royal Commission on Medical Education.⁷ The survey of medical students carried out on behalf of the Commission in 1966 showed that in 1964-65 the number of undergraduate medical students as a proportion of all full-time university undergraduates ranged from 13.6 per cent in the South East to zero in the East Midlands. with the remaining six regions ranged between 5.0 per cent in East Anglia* and 7.7 per cent in the West Midlands (Table 7.7). On the other side of the equation the number of entrants to medical school in that year as a rate per 1.000 leavers with two or more 'A' levels in each region varied from 16.2 in East Anglia to 31.1 in the West Midlands. The rank correlation on the two scores is moderately low ($\rho = 0.40$), but it did emerge from the 1966 survey that the two regions without a clinical school (i.e. the East Midlands and East Anglia) had a relatively poor record of supplying entrants to the medical school. After allowing for the degree of encouragement which teachers in different regions gave to school leavers aiming at a medical career and the social class structure of the populations. the survey authors conclude that "East Anglia and to a lesser extent the East Midlands are contributing less to medical education than the other regions and could contribute more than they do now". (para. 328). It is instructive to note that the East Midland region is consistently deficient on each measure: its school leavers receive the least encouragement from teachers to study medicine. it produces fewer medical students than most other regions. it retains the lowest proportion of them taking up their first appointments in general practice. and it has the lowest proportion of home-produced doctors currently working in the region. When all of these facts are set against the extra one that the East Midlands

* For the purpose of this analysis the pre-clinical students at Cambridge University are counted as medical students in East Anglia.

had no medical school at all when these figures were compiled. then the significance of the location of undergraduate medical **training** centres is **dramatically** highlighted.

Community Ties and Residential Mobility

To complete this chapter on the importance of **community** ties in decision about moving and settling we must consider how the associations illustrated above have been affected by geographical mobility patterns. Almost all the data discussed so far in this chapter have **related** birth-place, home **area** and medical school to the **current** addresses of the doctors at the time of the survey. but it was seen in Chapter Five that **geographical** mobility, at least across county boundaries has been the norm for most doctors. In the light of these movements the question **arises** of whether the association between home **area**, medical school and practice **area** has become more or less pronounced as doctors have **progressed** through their **careers**. Duggan and Stewart¹³, for example, found that the attraction of the home **area** for teachers increased with successive appointments; is the same also **true** for general practitioners?

The answer is found in Table 7.4 (for **regions**) and 7.5 (for counties). It was shown earlier in this chapter that 59 per cent of doctors whose family homes were in England were practising in their home **regions** at the time of the survey. The overall **proportion** of doctors who had taken a **first** appointment in their home region is virtually identical - 58 per cent. (As before, this total **figure** excludes doctors with family homes outside England). Altogether, **therefore**, the net effect of all the patterns of geographical movement described in Chapter Five has been to maintain an even proportion of doctors practising within their home **regions**. However, the results for each individual **region** reveal some interesting variations. Two **regions** (the North and Yorkshire/Humberside) have each **registered** a decrease of moderate proportions, which means that although they exerted a fairly strong attraction on newly qualified **practitioners** with homes in the **region**, they have lost some of them in the subsequent movements out of the **region**. In the case of Yorkshire/Humberside, where the above-average losses **from** the **region** have been a major factor in the **region's** **current** manpower problems, the loss is significant but could probably be fairly easily **reversed**. Three more **regions** (the South East, the South West and the West Midlands) show virtually identical **proportions** in both cases. The indigenous doctors lost **from** these **regions** in the outward flow of G.P.s. have **therefore** been replaced by others who took a first appointment away **from** their home **region** but who have **returned** to it for their **current** appointment. The remaining **three** **regions** (the East

Midlands, East Anglia and the North West) show an increase, which means that although the attractions of these regions have been weaker for home-bred doctors seeking a first appointment, they have succeeded in attracting back a high net balance of such doctors changing their practices.

The comparable figures for individual counties are seen in Table 7.5. As with the regional data, the same proportion of doctors in the full sample with family homes in England who had taken a first appointment in their home counties were also currently working in them at the time of the survey. Unlike the regional pattern, however, there was much less variation between the counties than the regions, even allowing for the fact that many of the counties had small sample frequencies. In only six counties has the difference between first and current appointments exceeded ten percentage points. In most cases the outward flow of doctors described in the last chapter must either have excluded the indigenous doctors or been almost exactly offset by other doctors moving back into their home counties for their second or subsequent appointments.

Summary

The existence of social or professional connections with an area forms one important set of factors in G.P.s. decisions about moving and settling. Although it has often been assumed in the past that doctors tend to accept appointments near to their medical schools, the results of a recent study by Last, indicating that a doctor's home area is a better predictor than his medical school of where he will settle, were accepted by the Royal Commission on Medical Education as evidence that the siting of new medical schools has no relevance to problems of manpower distribution. A subsequent study by Brown and Walker has confirmed the importance of family ties on a doctor's choice of practice location, and similar results have also been obtained in studies of the teaching profession; although these researches also indicate the persistent tendency of doctors and teachers to gravitate towards the location of their professional education.

About 60 per cent of doctors with family homes in England were, at the time of the survey, living in the standard region of their family home, and a slightly lower proportion were also living in the same region as their medical school. A large proportion of doctors had consequently attended a medical school in the same region as their home, but the important question is whether the influence of each is independent of the other. Further analyses show that the pull of a doctor's home area and the area of his medical school are interdependent: respondents were much more likely

to be practising in the region of their university if that was also their home region. and. conversely. they were significantly more likely to be living in their home region if that was also where they had been trained. The same result also obtains when the analysis is repeated for counties rather than regions. The general hypothesis from these results. that the more connections a doctor has with any region or county the more likely he is to return to it or remain in it to practise. is further reinforced when the link of birth is added. although the independent effect of birthplace is weaker than that of the medical school alone. which in turn is less powerful than the home area. This result supports Last's conclusion that the influence of the home is greater than that of the university, but it refutes the Royal Commission's conclusion that the siting of medical schools is irrelevant to problems of manpower distribution.

The next question is whether this general analysis holds good at regional and county levels. If it does, we should expect to find that those regions and counties in which a high proportion of students had trained "at home" have also had the highest retention rates of home-bred doctors. The percentage of doctors training in their home regions varied from 88 per cent in the South East perforce to zero in the East Midlands, and, as expected. the percentage of doctors living in their home regions at the time of the survey was also highest in the South East (65 per cent) and lowest by a considerable margin in the East Midlands (39 per cent). With the exception of the South West (which, despite losing a high proportion of students to other regions to be trained has nevertheless managed to get many of them back as qualified doctors) the regions are ranked on the two scores much as expected, although in some cases the rank positions were determined by quite small percentage variations. There is a less clear relationship in the counties than in the regions between the proportion of doctors attending a medical school in their home county and the proportion practising there, because only a handful of counties actually contain medical schools. Nevertheless it is clear that the presence of a local medical school usually ensures that a good proportion of medical students originating from the county will eventually return to it as G.Ps.

The next question is whether these trends affect the distribution of family doctors. Is the failure of certain regions and counties to retain an adequate proportion of home-produced doctors a significant factor in the manpower shortage in those areas? Two regions (the North West and the East Midlands) had a noticeably low proportion of home-bred doctors taking a first appointment in them (47 per cent and 32 per cent respectively, compared with the regional average of 58 per cent), and these are also the two regions,

identified in the previous chapter, in which a low capacity to attract newly qualified doctors has been the main reason underlying the current shortage of manpower. The "lost" doctors, in other words, have been those originating from the two regions but who have taken up positions elsewhere, for if each region had been able to achieve the regional average proportion of doctors returning to their home regions on first appointment the extra doctors gained would entirely have offset the shortfalls in 1969. Eleven counties have been identified in which the failure to attract enough doctors starting up in practice has been a principal reason underlying the current shortage of G.Ps. In all but three of these counties a lower than average proportion of home-bred doctors has returned to them, and if the retention rates had in fact been up to the average for counties then in each case the extra doctors would have entirely offset the shortfalls in 1969.

These results indicate very clearly that one way of bolstering recruitment to general practice in many under-doctored areas would be to encourage more doctors originating from those areas to return to them when qualified, and, further, that one way of achieving this is to ensure that they do not have to move far away from those areas for their medical training. Other characteristics, however, are also associated with the tendency to the home area to practise, notably the time at which doctors marry in relation to their careers. Respondents who had married before starting in general practice were less likely to be practising within the vicinity of their family homes than those marrying later. Decisions about a practice location which are taken after marriage seem therefore to be influenced by the wife's preference as well as by any predilection which the husband may have for familiar territory. There is also evidence that doctors from social class I backgrounds (especially those whose fathers had themselves been doctors) were more likely to return home than those with fathers in other occupations, possibly reflecting the opportunities of early partnership in the family practice.

There remains the further possibility that some regions and counties may simply have failed to produce enough medical students to meet their own needs. The problem is complex, and cannot be resolved entirely from our data, but it seems that the Yorkshire/Humberside and West Midland regions have been able to produce enough students in the past to meet current needs, and so too have Durham/Northumberland, Huntingdonshire, Lancashire, Bedfordshire, Staffordshire, Warwickshire and the West Riding. (The method adopted to produce this result was to consider the effect on each region or county with an average list above 2,500 in 1969 if each had been able to retain the regional or county average

proportion of G.Ps. originating ~~from~~ those areas). There is no clear evidence that the local availability of medical school places is related to the proportion of qualified school leavers who opt to study medicine but it is significant to note that the East Midlands, whilst being the only region without a medical school at all, also produces fewer medical students than most others, retains the lowest proportion of them taking up their first appointments in general practice, and has the lowest proportion of home-bred doctors currently working in the region.

Finally, the influence of community ties (in the sense in which they have ~~been~~ defined throughout this chapter) varies somewhat as doctors change practices throughout their careers. Attachment to the home region has increased as a result of career movement for doctors originating ~~from~~ the East Midlands, East Anglia and the North West, decreased among those with family homes in the North and Yorkshire/Humberside, and remained constant in the other regions. The net variations among the counties have been smaller, with the result that for most counties the proportion of doctors taking a first appointment in their home county is almost identical to that of doctors currently working in them at the time of the survey.

References

1. W. Watson defines spiralism as "the progressive ascent of ••• specialists ••• through a series of higher positions in one or more hierarchical structures with a concomitant residential mobility through a number of communities."
"Social mobility and social class in industrial communities", in M. Gluckman (ed.) Closed Systems and Open Minds, Oliver and Boyj, 1964.
2. K. R. Hill. "Medical Manpower: the need for more medical schools." Lancet, (1964), 11, 517.
3. Report on the Sub-Committee on the Field of Work of the Family Doctor. Gillie Report, H.M.S.O., 1963.
4. Working Party on General Practice, (Commentaries), H.M.S.O., July 1964.
5. British Medical Journal. (Supplement). (1962) 7th. July, 2-3.
6. J. M. Last. "The regional distribution of general practitioners and consultants in The National Health Service". British Medical Journal (1967), 2, 796.
7. Report of the Royal Commission on Medical Education. (Todd Report), Cmnd, 3569, H.M.S.O., 1968.
8. J. M. Last and E. Broadie. "Further careers of young British doctors". British Medical Journal, (1970), 4. 735
9. R. G. S. Brown and C. Walker. "The distribution of medical manpower." Chapter 1 in Problems and Progress in Medical Care (ed. G. McLachlan), Fifth Series. Nuffield Provincial Hospitals Trust, 1971.
10. "Motivation and Career Satisfaction in General Practice." Unpublished Paper, University of Hull, 1971.
11. L. J. Jay. "The Mobility of Teachers". Paper presented to the British Association for the Advancement of Science, Sheffield, 1966.
12. W. Taylor. "Regional Origins of Students in Colleges of Education". Education for Teaching, (1967), 74.
13. E. P. Duggan and W. A. C. Stewart." The choice of work area of teachers." The Sociological Review Monograph, No. 15, Keele University' 1970.

TABLE 7.1

RELATIONSHIP BETWEEN HOME AREA/CURRENT PRACTICE AND HOME AREA/MEDICAL SCHOOL

(Graduates of English Universities with family homes in England)

Relationship between home area and current practice	Relationship between home area and medical school			Total
	Same county	Different county same region	Differe.lt region	
DESIGNATED SAMPLE				
Same county	89 (48.4)	37 (36.3)	21 (22.6)	147 (38.8)
Different county. same region	34 (18.5)	39 (38.2)	9 (9.7)	82 (21.6)
Different region	61 (33.2)	26 (25.5)	63 (67.8)	150 (39.6)
TOTAL	184 (100)	102 (100)	93 (100)	379 (100)
NON-DESIGNATED SAMPLE				
Same County	124 (45.9)	33 (20.5)	69 (36.9)	226 (36.6)
Different county. same region	56 (20.7)	66 (41.0)	20 (10.7)	142 (23.0)
Different region	90 (33.3)	62 (38.5)	98 (52.4)	250 (40.5)
TOTAL	270 (100)	161 (100)	187 (100)	618 (100)

Percentages calculated down columns. and included in brackets

TABLE 7.2

RELATIONSHIP BETWEEN MEDICAL SCHOOL/CURRENT PRACTICE AND HOME AREA!
MEDICAL SCHOOL

(Graduates of English Universities with family homes in England)

Relationship between medical school and current practice	Relationship between home area and medical school			Total
	Same county	Different county same region	Different region	
DESIGNATED SAMPLE				
Same county	89 (48.4)	15 (14.7)	17 (18.3)	121 (31.9)
Different county, same region	34 (18.5)	61 (59.8)	10 (10.8)	105 (27.7)
Different region	61 (33.2)	26 (25.6)	66 (71.0)	153 (40.4)
TOTAL	184 (100)	102 (100)	93 (100)	379 (100)
NON-DESIGNATED SAMPLE				
Same county	124 (45.9)	20 (12.4)	22 (11.8)	166 (26.9)
Different county, same region	56 (20.7)	79 (49.1)	33 (17.6)	168 (27.2)
Different region	90 (33.3)	62 (38.5)	132 (70.6)	284 (46.0)
TOTAL	270 (100)	161 (100)	187 (100)	618 (100)

Percentages calculated down columns, and included in brackets

TABLE 7.3

SUMMARY OF INFLUENCE OF BIRTHPLACE, HOME AREA AND MEDICAL SCHOOL
ON REGION OF CURRENT PRACTICE

(Graduates of English Universities, born and with family homes in England).

Events occurring in same region	Doctors currently practising in that region:				Weighted Total %
	Designated sample		Non-designated sample		
	No.	%	No.	%	
Birthplace only	4	9.5	4	6.5	7.6
Medical school only	20	25.6	42	27.5	26.9
Home area only	4	23.5	17	45.9	40.0
Birthplace and medical school	5	50.0	9	37.5	40.6
Birthplace and home area	25	35.2	66	47.1	43.7
Home area and medical school	19	54.3	29	59.2	57.3
Birthplace, home area and medical school	165	70.8	226	65.5	67.4

Note: percentages are based upon the total number of doctors in each separate category. For example, the first cell indicates that 9.5 per cent of designated doctors whose birthplace was in a different region than both home area and medical school were **currently** practising in their birth region. The bottom cell in that column indicates that 70.8 per cent of designated doctors whose birthplace, home area and medical school were all in the same region were currently practising in that region.

TABLE 7.4

RELATIONSHIP BETWEEN FAMILY HOME AND MEDICAL SCHOOL, FIRST APPOINTMENT AND CURRENT APPOINTMENT, BY REGIONS

(Percentages based upon weighted aggregates of designated and non-designated samples)

Standard region of family home	Percentage of doctors attending medical school in the region	Percentage of doctors currently living in the region	Percentage of doctors taking first appointment in the region	% based on (N=)
North	63.1	56.4	65.3	123
Yorkshire/Humberside	68.3	56.9	61.2	133
East Midlands	-	38.9	32.1	59
East Anglia	3.1	63.1	55.4	35
South East	88.3	64.9	64.2	416
South West	27.1	59.1	59.9	77
West Midlands	59.8	56.6	56.4	86
North West	60.4	55.2	46.7	174
TOTAL, England	64.6	59.8	58.2	1,103

TABLE 7.5

RELATIONSHIP BETWEEN FAMILY HOME AND MEDICAL SCHOOL, FIRST APPOINTMENT AND CURRENT APPOINTMENT, BY COUNTIES

(Percentage based upon weighted aggregates of designated and non-designated samples)

County of family home	Percentage of doctors attending medical school in county	Percentage of doctors currently practising in county	Percentage of doctors taking first appointment in county	% based on (N=)
Bedfordshire	-	10	32	3
Berkshire	-	29	20	11
Buckinghamshire	-	10	10	10
Cambridgeshire	11	44	44	9
Cheshire	-	24	28	29
Cornwall	-	61	61	5
Cumberland	-	55	55	11
Derbyshire	-	24	7	13
Devonshire	-	57	51	18
Dorset	-	41	59	5
Durham/ Northumberland	47	42	47	94
Essex	-	16	22	18
Gloucestershire	50	36	43	26
G.L.C.	87	37	38	221
Hampshire	-	51	45	17
Herefordshire	-	26	26	4
Hertfordshire	-	15	19	26
Huntingdonshire	-	55	55	2
Kent	-	18	25	32
Lancashire	58	45	40	145
Leicestershire	-	17	17	16
Lincolnshire	-	21	21	10
Norfolk	-	48	56	13
Northamptonshire	-	25	27	8
Nottinghamshire	-	41	41	17
Oxfordshire	-	-	-	5
Shropshire	-	55	-	2
Somerset	-	30	14	14
Staffordshire	-	35	32	27

continued

TABLE 7.5. (Continued)

County of family home	Percentage of doctors attending medical school in county	Percentage of doctors currently practising in county	Percentage of doctors taking first appointment in county	based on (N=)
Suffolk	-	46	46	11
<u>Surrey</u>	-	13	10	38
<u>Sussex</u>	-	26	24	29
Wales	73	36	33	38
Westmorland	-	53	53	4
Wiltshire	-	33	33	9
Worcestershire	-	28	14	15
<u>Yorkshire. East & West Ridings</u>	69	57	63	128
<u>Yorkshire. North Riding</u>	-	16	8	14
TOTAL. England	40.7	37.3	37.6	11103

Note: Underlined counties are those in which the failure to attract enough doctors starting up in practice has been a principal reason underlying their current shortage of G.Ps. (Table 6.7)

TABLE 7.6

RELATIONSHIP BETWEEN HOME AREA AND AREA OF CURRENT PRACTICE, BY TIME OF MARRIAGE, SOCIAL CLASS, FATHER'S OCCUPATION AND PRESENT AGE

(Percentages, based on number of respondents with family homes in England)

	Relationship between home area and area of current practice						% based on (N=)	
	Same county		Different county, same region		Different region			
	D	N-D	D	N-D	D	N-D	D.	N-D
<u>Time of marriage</u>								
Before entering practice	34.5	32.0	19.2	22.8	46.3	45.2	287	491
Before present post	41.5	35.2	26.8	21.1	31.7	43.7	41	71
After present post	55.6	53.4	23.8	20.5	20.6	26.1	63	88
Other	54.5	50.0	22.7	20.0	22.7	30.0	22	40
<u>Social class of father</u>								
I	45.6	41.7	17.5	21.2	36.9	37.1	160	307
II	37.4	28.6	23.5	24.9	39.1	46.5	115	185
III	35.1	35.1	25.2	18.9	39.6	45.9	111	148
IV	50.0	50.0	12.5	-	37.5	50.0	8	6
V	-	48.1	-	51.9	100.0	-	2	27
<u>Father's occupation</u>								
Related to medicine	48.3	55.4	17.2	14.0	34.5	30.6	116	186
Unrelated to medicine	36.3	28.4	22.6	25.2	41.1	46.4	292	496
<u>Present age</u>								
Less than 35	43.8	26.3	22.9	18.8	33.3	55.0	48	80
35-44	37.8	39.4	19.4	24.7	42.8	35.9	180	231
45-54	41.9	33.3	19.7	18.8	38.5	47.9	117	213
55-64	38.9	40.2	25.9	24.4	35.2	35.4	54	127
65 and above	28.6	38.5	21.4	25.6	50.0	35.9	14	39

Note: D = designated sample; ND = non-designated sample

Percentages calculated across rows,

TABLE 7.7

AVAILABILITY OF UNDERGRADUATE MEDICAL PLACES AND ENTRANTS TO MEDICAL SCHOOL, 1964-65, BY STANDARD REGIONS

Source: Report of Royal Commission on Medical Education (Todd Report)

Standard Region	Undergraduate medical places as percentage of all full-time university undergraduates 1964-65	Entrants to medical schools per 1,000 school leavers with 2 or more 'A' levels, 1964-65
North	6.6	24.5
Yorkshire/Humberside	5.7	30.2
East Midlands	-	28.7
East Anglia*	5.0	16.2
South East	13.6	30.4
South West	5.5	30.5
West Midlands	7.7	31.1
North West	7.5	27.0

*Preclinical students at Cambridge University are counted as medical students in East Anglia.

CHAPTER 8

THE DOCTOR AS A PERSON

"My ancestors have been practising medicine in an almost unbroken line in this area since 1680".

- G.P. in Northumberland

The analysis of the survey data in the previous three chapters placed heavy emphasis on biographical and career features. We have attempted to show how the doctors in the survey had changed practices and moved **from** one location to another during the course of their **careers**, and to evaluate the significance of the historical attachments of birth, upbringing and education in the choice of practice location. The achievement of this analysis has been to specify in some detail exactly how the shortage of doctors in particular areas has arisen by linking the geographical movement of G.Ps. with their biographical attachments. The remainder of the analysis is concerned with the present, and seeks to establish the differences, **if** any, between practices and practitioners in different parts of the country and in different types of practice areas. The purpose is two-fold: **firstly**, to provide a descriptive outline of the state of general practice in different geographical settings and under different administrative conditions, and **secondly**, to elaborate the factors which **might** predispose doctors to choose certain localities or types of area in which to live. In this chapter we consider the personal attributes of **age**, sex, social class, **marriage** and family responsibilities. In subsequent chapters we concentrate on doctors as professional people, on their practices, their **neighbourhoods**, and their evaluation of the designated areas allowance.

The **age** structures of doctors in the different types of practice areas were **very** similar. Those in designated areas were **slightly** younger than their colleagues elsewhere, but the differences were not **large** (Table 8.1). The median age of doctors in designated areas was 45.7 years, compared with 47.6, 46.8 and 48.3 years respectively in open, intermediate and restricted areas. At the extremes of the age range there were, therefore, **slightly** more younger doctors and fewer older doctors in designated than in non-designated areas, suggesting that the gross decrease in manpower resulting from retirement over the next ten years or so will probably be felt most sharply in those areas which at present enjoy a relative superfluity of general practitioners. Data **are** not available of retirement rates of G.Ps. in different practice areas; **if** they were they **might** show that doctors in designated areas retired at a younger age than those elsewhere, which would account for the **slightly** lower proportion of older

practitioners in such places without endorsing our forecast of lower retirement rates in designated areas during the next decade. In the absence of such detailed information, however, our results cast considerable doubts upon the evidence submitted to the Review Body that the chronically under-doctored areas carry the greatest risks of retirement and death resulting in a serious dislocation of services. In total, 25 per cent of the designated doctors were under 40 years of age and 22 per cent were 55 or older, and this compares with corresponding proportions of 20 per cent and 29 per cent among the non-designated sample.

There were no great variations in the age structure of G.P.s. in each standard region (Table 8.2). Indeed, less than two years separated the lowest and the highest regional median ages - the East Midlands (45.6 years) and the South East and South West (47.3 years). At the extremes of the age distribution the inter-regional differences become somewhat more marked, although not dramatically so. The two Midland regions are the only ones in which more than a quarter of G.P.s. were under the age of 40 (in most regions the proportion is about a fifth), and at the other end of the age scale East Anglia, with fewer than 10 per cent of principals over the age of 60, will probably experience a slightly smaller decrease in manpower from retirement than other regions. In this respect, the South Eastern and East Midland regions can expect the greatest relative losses through retirement over the next few years, even though, paradoxically, the East Midlands also had the lowest median age. These differences, however, are largely ones of detail, and do not substantially modify the overwhelming impression that, at least in terms of their age, doctors in the different types of practice areas and in the different standard regions of the country were very similar people.

Sex

About ten per cent of all principals in England and Wales are female doctors, a sufficiently low proportion to make this part of the profession a seemingly almost insignificant factor in the problem of manpower distribution, but one which, nevertheless, represents quite a large absolute number of practitioners (1,932 unrestricted principals in England in 1969). The results of previous surveys indicate that the number of female doctors in full-time work amounts to no more than half of all those qualified, although these figures cover the complete spectrum of medical employment and are not confined solely to general practice. The question therefore arises of whether the failure to harness the full potential of female G.P.s. might be at least a contributory factor in the overall shortage of medical manpower in certain areas. The evidence from previous surveys suggests a

* The belief that this was in fact the situation seems to have strongly influenced the Review Body, in their Twelfth Report in 1970, in their recommendation for a two-tier system of payment.

negative answer, for the proportion of qualified women in full-time work is generally higher in larger urban areas where opportunities are relatively plentiful than in more sparsely populated rural stretches², and it has already been shown that these urban masses also contain many of the chronically under-doctored areas. A survey by the Medical Womens' Federation in 1964, for instance, showed that in regions which included the large conurbations - London, Manchester, Liverpool and Birmingham - over half of the women doctors were in full-time jobs and no more than a tenth were unemployed in any capacity³. In the predominantly rural areas, by contrast, both full-time and part-time work was comparatively scarce.

The present survey cannot show the total number of qualified women resident in each area, nor the proportion who were employed in general practice, but it can show the proportion of female doctors among the respondents in different areas. Failure to make the fullest possible use of women doctors might be suspected as a factor in the shortage of G.P.s. in designated areas if they were shown to constitute a lower proportion of the G.P. labour force there than in non-designated areas. The first impression from Table 8.3 is that this might in fact be the case, for there were proportionately almost twice as many women doctors in the non-designated as in the designated sample notwithstanding the probably greater employment opportunity in the latter areas. Against this, however, and virtually offsetting it, is the fact that the response rate from female doctors in designated areas was abnormally low (see Appendix , page), and after allowing for this the variation between the areas is more or less eliminated. There were, however, some fairly clear regional differences which cannot be explained in this way. The percentage of female doctors was considerably lower in the South East and South West than in the rest of the country, and was high in East Anglia, the North West and, to a lesser degree, in the two Midland regions. There is no clear relationship between the proportion of female G.P.s. in a region and the regional average list size, but if it is assumed that the number of qualified female practitioners at risk of being recruited into general practice is approximately the same in each region (relative to size) then it follows that some regions may not have fully exploited this additional resource. It is extremely unlikely that the designated areas could be entirely eliminated in this way, even if all non-employed female doctors were immediately recruited to general practice, but this extra source of "manpower" would undoubtedly make a significant improvement in some local areas, where the addition of even one whole time equivalent might reduce the average list size by as much as 200-300 patients.

Social Class and Educational Background

In studies of occupational prestige in England, doctors have consistently been ranked very highly^{4,5}. In the Registrar General's classification, doctors (along with other professional workers) are allocated to the highest class, and no distinction is made in this respect between, say, general practitioners and hospital doctors⁶. All the respondents in the survey were thus automatically assigned to social class I, but we felt that their class of origin (defined operationally by their fathers' occupations at the time they were born) may be very different, and may be significantly related to the type of area in which they were practising. Table 8.4, which classifies the doctors in each area according to their family of origin, contains several interesting points. The most striking aspect is the very large proportion of doctors in each area from social class I (Le. professional) backgrounds. In total, 32 per cent of the designated sample and 40 per cent of the non-designated sample had fathers in professional occupations (the difference is significant), and this grossly exceeds the figure for the general adult population⁷. Conversely, a very low proportion of respondents had fathers in semi-skilled and unskilled manual jobs (3 per cent and 1 per cent respectively). Other studies of the medical profession confirm this finding, both in the United States and in this country. In America, more than half the medical students graduating in 1960 had fathers who were professionals, proprietors or managers⁸, although there is some evidence of an increasing "democratization of recruitment" to the profession throughout the first half of the century⁹. In this country, Brown and Walker¹⁰ found that 43 per cent of their sample of G.Ps. in East Yorkshire, Hampshire and Glamorgan had fathers in class I occupations. and as the Todd Commission pointed out, the proportion of doctors drawn from the higher social classes is increasing¹¹. The 1966 survey of medical students carried out for the Commission showed that 34 per cent of all final-year students in 1961 and 1966 had fathers in social class I occupations, and among first-year students in 1966 the proportion was 40 per cent. (The difference is not necessarily evidence of a declining "democratization of recruitment"; the figures may merely reflect a higher attrition rate among class I students). Comparison with the general student population is difficult, but the Robbins Report on Higher Education¹² showed that 59 per cent of their sample of undergraduates in 1961 came from class I and II backgrounds, compared with the figure of 73 per cent among medical students in the A.S.M.E. survey in the same year.

The chances of becoming a doctor are therefore many times greater for a child from a professional than from a working-class background; and this is no surprise. The conclusion is entirely in line with the large amount of evidence that children from middle-class homes are much more likely to achieve educational success than those from poorer backgrounds. even when intellectual ability is taken into account¹³. In the case of

doctors, however, there is the added factor of "self-recruitment" - that is, of children following in their fathers' occupational footsteps¹⁴. Almost a quarter (23 per cent) of the G.P.s. in our survey were themselves the children of doctors, a proportion which exactly parallels that found by Brown and Walker (op **cit**), and which is similar to that among final-year medical students in 1966 (21 per cent). Self-recruitment is generally higher in medicine than in other professions¹⁵. The tendency for the children of doctors to choose a medical career themselves is doubtless due in part to the natural processes of anticipatory socialisation within the medical family¹⁶. Medically qualified parents possess the means and the motives for generating and nurturing medical ambition in their children; as Hall puts it, "only the members of a profession can translate the public protestations of the profession into the vernacular of useful advice.,¹⁷. But this type of explanation, applicable to the professions as a whole, would not explain why the factor of self-recruitment is higher among the medical profession than among any other profession. The rest of the explanation may lie in the greater visibility of medical work (especially general practice) to the children of doctors, and also in the selection procedures adopted by the medical schools which may be weighted in favour of applicants from medical families. On this latter point, the Todd Commission noted the concern of many headmasters and headmistresses that the selection of medical students in some universities was not based on clearly equitable criteria, and that a disproportionate weight was given to family connections in medicine (para. 298). It may be the case that the class distribution of applicants to medical schools is the same as that of applicants to other university faculties, and that a deliberate bias is exercised by selection committees; but very little information is at present available about those turned down.

Although the doctors in the survey were, as a whole, drawn from high-status families, there were nevertheless some consistent differences between those in the different types of practice areas. Just under a third of all doctors in the designated areas had fathers in class I jobs, and the percentage rises through the open and intermediate areas to a peak of 47 per cent among doctors in restricted areas. Against this, the other non-manual classes (II and III non-manual) were slightly over-represented among doctors in the designated sample, although not to an extent that entirely counter-balances the trend in class I. The overall result is that on a simple manual vs. non-manual dichotomy there were slightly fewer doctors from non-manual backgrounds in the designated areas (81 per cent) than in other areas, with doctors in restricted areas having the highest proportion (87 per cent).

The relatively low proportion of designated doctors with fathers in social class I occupations is partly explained by the fact that, compared with the others, fewer were themselves the children of doctors. Exactly a

fifth of these designated doctors came from medical backgrounds, and the proportion rises to 30 per cent and 27 per cent respectively among those in intermediate and restricted areas. This fact alone, however, does not entirely account for the class differences between the practice areas, for even if the designated sample had contained the same proportion of G.P.s. from medical backgrounds as the intermediate or restricted areas it would still have been relatively under-represented in social class I.

The type of secondary school which the doctors had attended is closely related to their parents' social class, but the data on school background are included to show how schooling is influenced independently by social class within each sample (Table 8.5). We first note that proportionately more doctors in the designated than in the non-designated sample had attended a grammar school (50 per cent against 40 per cent), and correspondingly fewer had been to a public school (39 per cent against 48 per cent). Even among doctors from class I backgrounds the designated sample contained a lower proportion of former public school pupils. These differences, which are highly significant, accord very closely with the results of the 1966 survey of medical students carried out for the Todd Commission (op. cit), and are consistent with our earlier finding about the differential class structure of the two samples. It is also seen, however, that consistent class differences in schooling obtained within each sample, for among both designated and non-designated doctors the chances of a public school education had been highest for those with fathers in professional and managerial jobs, and had decreased regularly as the father's status lowered.

In the light of much empirical evidence about the relationship between social class background, educational achievement and professional recruitment, it is less significant to this study either that a higher proportion of doctors than of other university graduates have middle-class origins, or that the association between paternal social class and type of secondary school holds good within each sample, than that these considerable social differences exist at all between the doctors in the different practice areas. Can they be explained in geographical terms; that is, do they disappear when geographical location is controlled? For example, the majority of designated areas may be situated in parts of the country which, for whatever reason, also have fairly low proportions of doctors from professional and managerial backgrounds. If this is indeed the case, then the significant question is not why the designated areas are under-represented in doctors from middle-class backgrounds but why certain regions are.

Table 8.6 shows the social class background of doctors practising in each standard region. The most important feature of this table is that even when practice location is controlled (at least in terms of standard region) the class differences still remain between the two samples. In other words, within every region a lower proportion of doctors in designated

than in non-designated areas had fathers in professional or managerial jobs, and conversely, a higher proportion came from working class homes. In some regions the differences were quite small, but the consistency of the trends across all the regions fosters confidence in the conclusion that real differences in social class background existed between G.P.s. in different types of practice areas which cannot be explained by regional factors. Having made that point, however, we can also see from Table 8.6 that regional variations did nevertheless occur in the class backgrounds of the doctors in the survey. In both samples the three Southern regions generally had higher proportions of doctors from professional and managerial backgrounds than the other regions, although in the non-designated sample the East Midlands and the North also ranked high on doctors from social class I.

To summarise, we have a situation in which class differences in family background existed in the distribution of general practitioners between the eight regions of the country and between designated/non-designated practice areas, but where the two distributions were not themselves inter-related. On the one hand, regions to the South of a line from the Wash to the Severn contained relatively more doctors of middle-class origins than the Midland and Northern regions; on the other hand, the designated areas within each region generally had a higher proportion of G.P.s. from working-class homes than non-designated areas. These facts can perhaps be accounted for by certain generalised features of family development. If we assume that higher status people tend to live in the "nicer" areas (which might be crudely equated with the non-designated areas), and that a substantial number of doctors return to their home areas to practise, then this would account for the higher proportion of doctors from class I backgrounds in restricted than in designated areas. The relatively high preponderance of medically qualified parents among the former group of doctors would further accentuate the tendency. By contrast, doctors from poorer backgrounds, also tending to return to their home areas as qualified practitioners, would be rather more likely to finish up in a designated area, even though many of them will obviously reside in a "better" area than their parents.

Marriage

Career decisions, particularly those involving movement from one place to another, are in many cases strongly influenced by the obligations and restraints resulting from family responsibilities at different stages of the family cycle. We have already seen how far these responsibilities and commitments may curtail the mobility potential of young doctors in general practice, for the timing of a doctor's marriage and the ages of his children may well affect his chances of moving (Chapter 5, page 120). Very few doctors had moved after their eldest children had reached secondary school age, and the earlier this occurred in a doctor's career the more likely he was to stay in the same place.

In addition to influencing mobility potential it is reasonable to ask whether these family considerations might also affect a doctor's decision about where to live. Assuming that the designated areas are short of doctors precisely because they are in crucial respects perceived to be "undesirable" places to live, it is possible that decisions about avoiding them may be strongly influenced by the stage of family development at that time. For example, the lack of adequate educational facilities is part of the folklore surrounding the designated areas, and if this is indeed a relevant consideration we might expect to find that doctors currently working in these areas were less likely than the rest to have been faced with an imminent need to educate their children at the moment of deciding to accept their current appointments*. Fewer of them might have been married at the time, or fewer might have had children. The spouses, too, are likely to have had an important influence on the decision**. It was seen in the previous chapter that doctors who had married before entering general practice or before taking up their current appointments were more likely than the rest to be working away from their home regions and counties, and this suggests that a spouse's preferences may modify or even compete with those of the doctor.

We first note that more than nine out of every ten doctors in the sample were married, and that there were no significant differences in this respect either between the different types of practice areas or between the standard regions. In each case about 4 per cent were single, 2 per cent widowed and 1 per cent divorced or separated. The only remarkable aspect of these figures is that they represent a far higher proportion of married adults between 21 and 65 than in the population generally¹⁸. Looking next at the timing of the marriage in relation to the doctor's entry into general practice we still find no significant overall differences between the practice areas (Table 8.7). In each area about two-thirds of all respondents had married before starting their careers in general practice and about a further 12 per cent had married after starting in general practice but before moving to their current appointments. The remaining minority of doctors had therefore married after starting their present jobs, and this proportion is identical in the designated (14.8 per cent) and the non-designated (14.6 per cent) samples. This evidence refutes

* Areas which were designated at the time of the survey may not have been designated when the doctors originally went to them, and vice-versa; but it is probable that the character of the areas, which for the purposes of this analysis is more important than the administrative label, has not changed substantially over the period in question.

** Although this section refers, for reasons of accuracy, to "spouses", most of them were in fact the wives of male doctors. About 8 per cent of the spouses were the husbands of female respondents.

the hypothesis that the timing of the marriage may be related to the type of practice area selected as well as to the likelihood of moving, although the figures do not show the extent to which the spouse's preferences were instrumental in the choice either for or against moving to an area that is designated. Some spouses may have been as keen to move to certain of these areas as others were to avoid them, but this is not known. All that can be concluded at this stage is that neither the fact of being married nor the timing of the marriage distinguished doctors in the different types of practice areas.

The regional distribution of the spouses' home areas was very similar to that of the doctors themselves*. The main difference was that whereas a third of the doctors had family homes outside England, less than a quarter of their spouses came from outside the country (Table 8.8). Most regions therefore had a slightly higher proportion of spouses than of doctors with family homes in them. About a third of the spouses with family homes in England were, at the time of the survey, living in the same county as their home and a further fifth were in a different county of the same region. Put another way, just over half of all doctors whose spouses had family homes in England were practising in the same standard region as their spouses' homes - slightly fewer than were working in the same region as their own homes. There were no significant differences between the designated and the non-designated samples in this respect. The variations between the regions were greater, but in general they echoed similar variations in the proportions of doctors living in the region of their family homes. The South Eastern region, for example, which had the highest proportion of doctors practising in their own home region, also contained the most doctors practising in their spouses' home region. In most regions the retention rate on both factors was between 55 and 60 per cent, although relatively few doctors who had married partners from the East Midlands had returned there.

It is clear from this analysis that the influence of the spouse's home area is closely tied up with that of the doctor's own home territory, and this is confirmed by the fact that 46 per cent of the designated sample and 43 per cent of the non-designated sample had married partners from their own home regions. The interesting question is whether the two influences operate independently. Are doctors more likely to be working in their home regions if these are also the places of their spouses' family homes? Table 8.9 presents the data to test whether the influence of a doctor's own home area

* A spouse's home area is defined by the question: "Where was your wife's (husband's) home for most of the time before her (his) marriage?"

acts ~~independently~~ of his spouse's native territory. For reasons discussed in the previous chapter the analysis is ~~necessarily~~ limited to those doctors whose ~~own~~ and ~~spouses'~~ ~~home~~ ~~areas~~ were in England. A quick glance at the table is sufficient to show that the influence is not independent. In the designated sample, 63 per cent of the doctors were living in the same standard region as their family home, but this proportion increased to 75 per cent ~~among~~ those whose spouses also came from the region, and fell to 42 per cent for those who married partners from a different region. Similarly, whereas ~~59~~ per cent of all the doctors in the non-designated sample were living in their home region, the proportions were 72 per cent and 42 per cent respectively for those whose spouses did and did not have their family homes in the same regions. The differences in both cases are highly significant, and they also hold good at the county level.

This finding is not unexpected in the light of earlier analyses, for it is ~~now~~ obvious that in many cases all the critical geographical points of a doctor's career were centered in the same area. The remaining question is therefore that of the solo effect of the spouse's home area - that ~~it~~, when the spouse's attachment to a region is the only link which a doctor has to it. It was shown in Table 7.3 that only about 8 per cent of G.Ps. were living in the region of their birthplace when that was the only previous recorded link with the place, and that the independent effect of the medical school (similarly defined) was about 27 per cent and of the doctor's ~~own~~ family area about 40 per cent. The spouse's influence, when measured in this particular way, seems to ~~rank~~ on a par with the medical school: more significant than the doctor's birthplace but less so than his ~~own~~ home area. Thus, 26 per cent of doctors for whom all the relevant geographical points were in England were currently living in the same standard region as their spouses' homes when they had none of the other recorded links with ~~it~~, and there were no differences in this respect between the ~~two~~ samples. Where the spouse's home added an additional link to the chain of association which a doctor had with a region, then the chances of his living there increased ~~still~~ further. Whereas some two-thirds of the doctors who were born, brought up and medically educated in the same region of England were currently working in that region, the figure rose to 76 per cent among doctors who had also married a partner from the region.

Family ReSponSibilities

The evidence from Chapter Five indicated that for most doctors the educational needs of their children had probably played a significant part in decisions about moving and settling. The fact that fewer than one doctor in ten had so far moved after his eldest child had reached secondary school age, regardless to a large extent of the doctor's age at the time, is strongly suggestive of a need to feel settled by this stage in the family cycle. It is worth noting in this context that doctors usually seem to have settled by

the ~~time~~ their eldest children had reached secondary school age, not primary school age. Just over ~~two-fifths~~ of all the ~~married~~ doctors in the survey had ~~started in their current~~ practices before any children were born, and about half had ~~started~~ while their children were still of primary school age, so that although mobility was fairly common among doctors with young children, the dramatic halt to movement coincided with the transition from primary to secondary school age.

The obvious and justified concern which doctors have about the education of their children might be ~~further~~ manifest in their choice of a place to work. Insofar as the designated areas are popularly supposed to have inferior educational provisions we might expect to find a relatively high proportion of doctors in these areas taking up their current appointments either before they had any children or at least while the children were still very young. In fact, however, as Table 8.10 shows, there were no significant differences at all in this respect ~~between~~ doctors in different practice areas. The designated doctors were just as likely as the rest to have ~~started~~ their current positions by the time their eldest children had reached secondary school age. We conclude that there is no evidence from the survey to show that the immediate or anticipated educational needs of their children systematically deterred doctors from taking up posts in designated areas. This does not necessarily mean that the perceived educational facilities of an area were unimportant factors in the doctors' choices of practice location, for in this respect individual designated areas may have been just as attractive or unattractive to specific doctors as were individual non-designated areas*. But it does mean that for many doctors the problems of secondary education were distant at the time when they settled down, and also that they were as distant for those moving into what are now the non-designated areas as for the rest. Whatever the perceived educational merits or demerits either of particular areas or of types of areas, the family structure of doctors in both samples made each group equally open to the importance of educational criteria in the choice of practice location. (As always, it must be remembered that the areas which were designated at the time of the survey may not have been designated when the doctors first ~~started~~ to practise in them, and the same limitation applies to the other ~~types~~ of practice areas).

Summary

To complement the historical and biographical perspectives of the preceding chapters the remainder of the survey analysis is concerned principally with the existing state of affairs at the time of the survey, and with describing some of the personal, professional and environmental

* The evaluation of local educational facilities by doctors in different areas is discussed in Chapter 11, page

differences that existed between different regions and practice areas. This chapter is concerned with some personal attributes of the doctors.

The age structure of doctors differed little either between regions or between the types of practice areas. Doctors in designated areas were slightly younger than their colleagues elsewhere, and there is no support in the data for the Review Body's fear that future depletions to the profession as the result of retirement will be felt most sharply in the designated areas. The range between the standard regions in the median ages of the doctors was less than two years: the East Midlands had the lowest median age (45.6) and the South East and South West had the highest (47.3).

The survey results are consistent with the conclusions of earlier studies that a sub-optimal use may be made of female doctors in general practice. The slight under-representation of female doctors in the designated sample was almost entirely offset by the low response rate from women G.P.s. in these areas, but there were some fairly clear regional differences in the proportions of female practitioners. If it is assumed that the number of qualified female practitioners at risk of being recruited into general practice is approximately the same in each region (relative to size) then it follows that some regions may not have fully exploited this additional resource. It is, however, extremely unlikely that the designated areas could be entirely eliminated even if all the non-employed female doctors were immediately recruited into general practice.

The analysis of the social class backgrounds of the survey doctors shows a very high proportion with fathers in professional (social class I) occupations (32 per cent and 40 per cent respectively in the designated and non-designated samples). This result is consistent with all the existing evidence about the relationship between class background and educational achievement, but there is also the added factor that almost a quarter of all the respondents were themselves the children of doctors. A significantly lower proportion of designated than non-designated doctors came from class I origins, which reflects but is not entirely explained by the fact that proportionately fewer of them had fathers who were doctors. These class differences, which are further manifest in the different educational backgrounds of the doctors in each type of practice area, remain even when a control is introduced for region of residence, although there are also consistent differences between the class structure of different regions. Two separate trends are evident. On the one hand, regions to the South of a line from the Wash to the Severn contained relatively more doctors of middle-class origins than the Midland and Northern regions; on the other hand, the designated areas within each region generally had a higher proportion of G.P.s. from working-class homes than non-designated areas.

The evidence from the survey about the relationship between family responsibilities, mobility, and choice of practice area shows an interesting

and somewhat unexpected divergence. On the one hand it is clear that in several different ways the doctors' family commitments had limited the amount of movement which they made. The earlier they had married the less likely they were to have moved at all, and in almost all cases they had settled by the time their children made the transition to secondary education. (It is interesting in this respect that, as far as the data allow such an interpretation, the 'transition' in question was that normally effected within the state system - i.e. at 11 years of age - rather than in the private system, at 13). On the other hand, however, there is very little evidence that these factors had also affected the doctors' decisions of where to practise, whether this is defined in the broad sense of the type of practice area, or in the more specific sense of the region of the country. It is true that in many cases the spouses' home areas, if they were in England, had added to the number of links which doctors had with particular regions, thereby increasing the likelihood of those families settling there, but apart from this the various measures of family development which have been used in the analyses do not themselves appear to be related to the choice. In particular, the anticipated educational requirements of the family, (determined by the ages of the children), were the same among doctors starting in what are now designated areas as among those starting in the non-designated areas. A later chapter examines the doctors' attitudes towards the educational facilities of their areas in more detail, and it may then transpire that there were in fact marked differences in the perceived adequacy and quality of the service in the different practice areas, but it is significant for the present to note that the doctors in each sample were equally open to the importance of educational criteria at the time of moving into their present posts. For most doctors it seems more important that they should be settled by the time their children start their secondary education than that they should or should not be in a particular locality or type of area.

REFERENCES

1. Review Body on Doctors' and Dentists' Remuneration. Twelfth Report, Cmnd. 4352, H.M.S.O. 1970 (para. 148).
2. M.L. Newhouse, "Surveying the women doctors". Newsletter, March 8th 1966, page 3.
3. J.E. Lawrie et al. "Working capacity of women doctors". British Medical Journal, (1966), 1, 409-412.
4. C.A. Hoser and J.R. Hall. "The social grading of occupations", in D.V. Glass (ed.) Social Mobility in Britain, Routledge and Kegan Paul, 1966.
5. D. Cunningham. "The 'circus' project". Unpublished paper, University of Kent, 1971.
6. General Register Office. Classification of Occupations. H.M.S.O., 1966.
7. D.V. Glass and J.R. Hall. "Social mobility in Great Britain: a study of inter-generation changes in status". in D.V. Glass, op. cit.
8. C.F. Schumacher. "The 1960 Medical School Graduate: his biographical history". Journal of Medical Education, (1961). 36, 398-406.
9. S. Adams. "Trends in occupational origins of physicians". American Sociological Review, (1953), 18, 404-409.
10. R.G.S. Brown and C. Walker. "Motivation and career satisfaction in general practice". Unpublished paper, University of Hull, 1971.
11. Report of the Royal Commission on Medical Education (Todd Report), Cmnd. 3569, H.M.S.O. 1968 para. 298 .
12. Report of the Committee on Higher Education (Robbins Report), Cmnd. 2154, H.M.S.O. 1963.
13. The references are legion. See, for example, J. Floud et al., Social class and educational opportunity, Heinmann 1956; B. Jackson and D. Marsden, Education and the working class, Routledge and Kegan Paul 1962; J.W.B. Douglas, The home and the school, McGibbon and Klee 1964; P. Marris, The experience of higher education, Routledge and Kegan Paul 1964; R.K. Kelsall, Report of an enquiry into application for admission to universities, Association of Universities of the British Commonwealth, London 1957.
14. N. Rogoff. Recent trends in occupational mobility. The Free Press, 1953.
15. J.R. Butler. Occupational choice: a review of the literature. Science Policy Studies No. 2, H.M.S.O. 1968.
16. P.W. Musgrave. "Towards a sociological theory of occupational choice". Sociological Review, (1967), 1, 33-46.
17. O. Hall. "The stages of a medical career". American Journal of Sociology, (1948), 53, 327-336.
18. General Register Office. Census 1966, United Kingdom General Tables. (Table 2), H.M.S.O. 1969.

TABLE 8.1

TYPE OF PRACTICE AREA, BY PRESENT AGE

Present age	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Under 30	7 (1.0)	7 (1.1)	3 (1.2)	1 (0.6)
30 - 34	53 (7.7)	46 (7.4)	24 (9.3)	9 (5.7)
35 - 39	115 (16.7)	67 (10.8)	31 (12.1)	14 (8.9)
40 - 44	141 (20.5)	121 (19.5)	53 (20.6)	28 (17.8)
45 - 49	115 (16.7)	111 (17.9)	37 (14.4)	36 (22.9)
50 - 54	107 (15.6)	84 (13.5)	39 (15.2)	25 (15.9)
55 - 59	68 (9.9)	91 (14.7)	33 (12.8)	21 (13.4)
60 - 64	47 (6.8)	52 (8.4)	15 (5.8)	13 (8.3)
65 & over	34 (4.9)	41 (6.6)	22 (8.6)	10 (6.4)
TOTAL	687 (100)	620 (100)	1257 (100)	157 (100)
MEDIAN AGE	45.7	47.6	46.8	48.3

Percentages calculated down columns, and included in brackets.

TABLE 8.2

STANDARD REGION OF CURRENT PRACTICE. BY PRESENT AGE

(Percentages based upon weighted aggregates of designated and non-designated samples)

Standard region of current practice	Present age				based on (N=)	Median age
	Less than 40	40-49	50-59	60 or more		
North	20.9	37.3	30.7	11.1	153	47.1
Yorkshire/Humberside	21.9	36.4	28.9	12.8	187	46.6
East Midlands	26.5	38.1	21.1	14.3	147	45.6
East Anglia	20.0	40.0	30.5	9.5	105	46.3
South East	20.3	36.6	26.9	16.2	557	47.3
South West	19.3	40.9	26.9	12.9	171	47.3
West Midlands	26.9	37.3	23.2	12.4	193	46.2
North West	22.1	35.1	30.3	12.5	208	46.6
TOTAL	21.9	37.3	27.2	13.6	1721	47.0

Percentages calculated across rows.

TABLE 8.3

TYPE OF PRACTICE AREA, BY SEX

Sex	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Male	651 (94.8)	560 (90.3)	237 (92.2)	140 (89.2)
Female	36 (5.2)	60 (9.7)	20 (7.8)	17 (10.8)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 8.4

TYPE OF PRACTICE AREA, BY SOCIAL CLASS OF FAMILY OF ORIGIN

Social Class of Family of Origin	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
I	221 (32.2)	230 (37.1)	114 (44.4)	73 (46.5)
II	235 (34.2)	203 (32.7)	70 (27.2)	43 (27.4)
III non-manual	105 (15.3)	90 (14.5)	31 (12.1)	21 (13.4)
III manual	72 (10.5)	57 (9.2)	20 (7.8)	6 (3.8)
IV	16 (2.3)	6 (1.0)	3 (1.2)	5 (3.2)
V	2 (0.3)	-	-	-
Not known	36 (5.2)	34 (5.5)	19 (7.4)	9 (5.7)
TOTAL	687 (100)	620 (100)	257 (100)	1157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 8.5

SOCIAL CLASS OF FAMILY OF ORIGIN, BY TYPE OF SECONDARY SCHOOL

Social class of family of origin	Type of Secondary School				Total
	Grammar	Public	Other	Not known	
DESIGNATED SAMPLE					
I	69 (31.2)	130 (58.8)	22 (10.0)	-	221 (100)
II	120 (51.1)	91 (38.7)	24 (10.2)	-	235 (100)
III non-manual	72 (68.6)	22 (21.0)	11 (10.5)	-	105 (100)
III manual	56 (77.8)	7 (9.7)	9 (12.5)	-	72 (100)
IV	14 (87.5)	2 (12.5)	-	-	16 (100)
V	2 (100)	-	-	-	2 (100)
Not known	13 (36.1)	14 (38.9)	7 (19.4)	2 (5.6)	36 (100)
TOTAL	346 (50.4)	266 (38.7)	73 (10.6)	2 (0.3)	687 (100)
NON-DESIGNATED SAMPLE					
I	108 (25.9)	272 (65.2)	36 (8.6)	1 (0.2)	417 (100)
II	158 (50.0)	115 (36.4)	43 (13.6)	-	316 (100)
III non-manual	74 (52.1)	48 (33.8)	20 (14.1)	-	142 (100)
III manual	55 (66.3)	21 (25.3)	7 (8.4)	-	83 (100)
IV	12 (85.7)	1 (7.1)	1 (7.1)	-	14 (100)
V	-	-	-	-	-
Not known	9 (14.5)	37 (59.7)	8 (12.9)	8 (12.9)	62 (100)
TOTAL	416 (40.2)	1494 (47.8)	115 (11.1)	9 (0.9)	1034 (100)

Percentages calculated across rows, and included in brackets.

TABLE 8.6

STANDARD REGION OF CURRENT PRACTICE, BY SOCIAL CLASS OF FAMILY OF ORIGIN

Standard region of current practice	Social Class of Family of Origin							Total
	I	II	III-n	III.	IV	V	Not known	
DESIGNATED SAMPLE								
North	25 (30.1)	23 (27.7)	18 (21.7)	11 (13.3)	-	-	6 (7.2)	83 (100)
Yorkshire/Humberside	23 (24.7)	29 (31.2)	25 (26.9)	11 (11.8)	-	-	5 (5.4)	93 (100)
East Midlands	22 (26.5)	34 (41.0)	10 (12.0)	6 (7.2)	4 (4.8)	2 (2.4)	5 (6.0)	83 (100)
East Anglia	13 (40.6)	15 (46.9)	2 (6.3)	2 (6.3)	-	-	-	32 (100)
South East	69 (41.8)	52 (31.5)	23 (13.9)	12 (7.3)	3 (1.8)	-	6 (3.6)	165 (100)
South West	4 (33.3)	3 (25.0)	1 (8.3)	1 (8.3)	2 (16.7)	-	1 (8.3)	12 (100)
West Midlands	39 (31.7)	38 (30.9)	18 (14.6)	17 (13.8)	3 (2.4)	-	8 (6.5)	123 (100)
North West	26 (27.1)	41 (42.7)	8 (8.3)	12 (12.5)	4 (4.2)	-	5 (5.2)	96 (100)
TOTAL	221 (32.2)	235 (34.2)	105 (15.3)	72 (10.5)	16 (2.3)	2 (0.3)	36 (5.2)	687 (100)
NON-DESIGNATED SAMPLE								
North	31 (44.3)	12 (17.1)	11 (15.7)	8 (11.4)	-	-	8 (11.4)	70 (100)
Yorkshire/Humberside	31 (33.0)	30 (31.9)	19 (20.2)	8 (8.5)	3 (3.2)	-	3 (3.2)	94 (100)
East Midlands	28 (43.8)	18 (28.1)	11 (17.2)	5 (7.8)	1 (1.6)	-	1 (1.6)	64 (100)
East Anglia	32 (43.8)	25 (34.2)	8 (11.0)	4 (5.5)	-	-	4 (5.5)	73 (100)
South East	166 (42.3)	120 (30.6)	43 (11.0)	31 (7.9)	3 (0.8)	-	29 (7.4)	392 (100)
South West	73 (45.9)	41 (25.8)	24 (15.1)	9 (5.7)	4 (2.5)	-	8 (5.0)	159 (100)
West Midlands	23 (32.9)	26 (37.1)	12 (17.1)	5 (7.1)	1 (1.4)	-	3 (4.3)	70 (100)
North West	33 (29.5)	44 (39.3)	14 (12.5)	13 (11.6)	2 (1.8)	-	6 (5.4)	112 (100)
TOTAL	417 (40.3)	1316 (30.6)	1142 (13.7)	83 (8.0)	14 (1.4)	-	62 (6.0)	1034 (100)

Percentages calculated across rows, and included in brackets.

TABLE 8.7

TYPE OF PRACTICE AREA, BY TIME OF MARRIAGE

Time of Marriage	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Before starting general practice	450 (65.5)	388 (62.6)	173 (67.3)	115 (73.2)
After starting general practice but before present position	97 (14.1)	86 (13.9)	28 (10.9)	18 (11.5)
After starting present position	102 (14.8)	100 (16.1)	34 (13.2)	17 (10.8)
Not known	12 (1.7)	16 (2.6)	9 (3.5)	1 (0.6)
Never married	26 (3.8)	30 (4.8)	13 (5.1)	6 (3.8)
TOTAL	1687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 8.8

TYPE OF PRACTICE AREA, BY STANDARD REGION OF SPOUSE'S HOME AREA

Standard Region of Spouse's Home	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
North	72 (10.5)	36 (5.8)	15 (5.8)	6 (3.8)
Yorkshire/ Humberside	76 (11.1)	53 (8.5)	21 (8.2)	13 (8.3)
East Midlands	28 (4.1)	20 (3.2)	5 (1.9)	7 (4.5)
East Anglia	11 (1.6)	11 (1.8)	7 (2.7)	5 (3.2)
South East	1123 (17.9)	1182 (29.4)	77 (30.0)	57 (36.3)
South West	23 (3.3)	30 (4.8)	15 (5.8)	10 (6.4)
West Midlands	64 (9.3)	34 (5.5)	13 (5.1)	9 (5.7)
North West	75 (10.9)	64 (10.3)	18 (7.0)	8 (5.1)
Outside England	1170 (24.7)	142 (22.9)	57 (22.2)	30 (19.1)
Not known	19 (2.8)	18 (2.9)	16 (6.2)	6 (3.8)
Never Married	26 (3.8)	30 (4.8)	13 (5.1)	6 (3.8)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns. and included in brackets.

TABLE 8.9

RELATIONSHIP BETWEEN OWN HOME AREA/CURRENT PRACTICE AND OWN HOME AREA/SPOUSE'S HOME AREA

(Married doctors whose own and whose spouses' home areas were in England)

Relationship between own home area and current practice	Relationship between spouse's home area and own home area			Total
	Same County	Different County	Different Region	
DESIGNATED SAMPLE				
same County	86 (57.3)	22 (34.4)	32 (26.9)	140 (42.0)
Different County	25 (16.7)	27 (42.2)	18 (15.1)	70 (21.0)
Different Region	39 (26.0)	15 (23.4)	69 (58.0)	123 (36.9)
TOTAL	150 (100)	64 (100)	119 (100)	333 (100)
NON-DESIGNATED SAMPLE				
same County	111 (56.9)	26 (22.4)	58 (24.6)	195 (35.6)
Different County	30 (15.4)	58 (50.0)	40 (16.9)	128 (23.4)
Different Region	54 (27.7)	32 (27.6)	138 (58.5)	224 (41.0)
TOTAL	195 (100)	116 (100)	236 (100)	547 (100)

Percentages calculated down columns, and included in brackets.

TABLE 8.10

TYPE OF PRACTICE AREA. BY AGE OF CHILDREN AT STARTING CURRENT POSITION
(Harried Respondents Only)

Ages of Children at starting current position	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
No Children	292 (45.0)	251 (43.7)	98 (41.7)	63 (42.0)
Eldest child under 11	319 (49.2)	289 (50.3)	122 (51.9)	73 (48.7)
Eldest Child over 11	38 (5.8)	34 (6.0)	15 (6.4)	14 (9.3)
TOTAL	649 (100)	574 (100)	235 (100)	150 (100)

Percentages calculated down columns, and included in brackets.

CHAPTER NINE

THE DOCTOR AS A PROFESSIONAL

"The government is already getting doctoring on the cheap in designated areas, and the strain is so great that an added inducement is needed to encourage more help. The appalling strain on a good doctor of not having time to take a proper history, or do thorough examinations, is never mentioned - but it is his conscience which suffers when there is a disaster, not the politicians."

- G.P. in London

Qualifications and Medical School

The doctors in the survey held similar primary qualifications, whichever region or whatever type of practice area they were in. There was a consistent decrease in the proportion of doctors holding only a M.B., Ch.B. (or equivalent) from 66 per cent of doctors in designated areas to 56 per cent of those in restricted areas, but this was offset by a compensating increase in the proportion of those holding an M.B., Ch.B. and conjoint (or equivalents), (Table 9.1). Those with a conjoint qualification only were equally represented in all the practice areas, and the residue of "other" responses (made up mainly of graduates from foreign universities which award M.D. as the primary qualification) was slightly more prominent in the designated areas than in the others. There were no significant variations between the practice areas in the proportions of doctors with higher qualifications.

Most of the medical schools from which these primary qualifications had been obtained were equally represented among doctors in each sample (Table 9.2). The notable exception was London University, which supplied 43 per cent of the doctors in the non-designated areas but only 28 per cent of those in designated areas. Those figures probably reflect the position of London in relation to the geographical dispersion of designated areas rather than a deliberate bias against these areas on the part of London graduates. All medical schools, regardless of their location, tend to draw their students from surrounding areas and to return most of their graduates to those areas to practise:¹ the difference in the case of London University is merely that the surrounding areas happen to contain a lower concentration of designated areas than those of most other medical teaching centres. The consistency of this explanation is borne out by the medical schools in the Midlands and North of the country, most of whose graduates were proportionately over-represented in the designated

sample (although in some cases the frequencies are admittedly low).

Graduates from medical schools outside England, and from the Royal Colleges, were fairly equally represented in each sample, and there is no consistent evidence that these doctors had been particularly biased towards or against certain types of practice areas. Doctors from Indian and Pakistani medical schools made up no more than 1.5 per cent of the total number of G.Ps. in the survey, and, given the small numbers involved, were equally represented in the ~~designated and~~ non-designated samples. These figures are instructive for the light they cast on the emotive question of foreign-born doctors in the National Health Service. The 1968 Annual Report of the Department of Health and Social Security showed that 13 per cent of all the unrestricted principals in England that year were born outside the British Isles (including the Irish Republic and the Channel Islands) - a figure that has sometimes been taken as an indicator of the proportion of Commonwealth doctors in general practice. The data from our survey for the same year recorded similar proportions - 11.3 per cent and 11.8 per cent respectively in the designated and non-designated samples (see Table 5.11), but the data also showed that the majority of these doctors had been born in non-Commonwealth countries. In fact, fewer than 5 per cent of the respondents had been born in Commonwealth countries, and even this figure over-estimates the proportion of Commonwealth citizens because birthplace does not define nationality. Many doctors in the survey who had been born in India, for example, were the sons of English parents on colonial service. If we wish to estimate the proportion of Asian doctors in general practice then the data on medical school attendance is probably a better indicator, and on this basis the maximum proportion would be set at about 2-3 per cent. At the same time, however, the proportion of Asian G.Ps. may well be increasing. Cargill's analysis² of a 10 per cent sample of all practitioners in England and Wales showed that the proportion of graduates from Asian medical schools entering general practise increased from 4 per cent in 1961-62 to 18 per cent in 1969. These figures are consistent with our conclusion that about 2 to 3 per cent of all principals currently in practice are of Asian origin, but if the proportion of such doctors entering general practice remains at this high level then we can expect to see the overall proportion rising also.

The data suggest some interesting differences in the social class backgrounds of graduates from different medical schools, although the conclusions are necessarily tentative because the denominators are incomplete. (For example, the class distributions of doctors from each school who have emigrated or entered some other branch of the profession, and who are therefore excluded from the survey, may entirely offset the

differences observed in this sample of general practitioners). The variations between the schools appear neither to reflect a greater class bias in the selection procedures adopted by some medical schools than by others, nor to explain the class differences between the two samples noted in the previous chapter. Medical faculties generally admit a higher proportion of students from middle-class homes than do other university faculties (see p.), but the differences between the medical schools in this respect are broadly consistent with the differential class structures of the population from which they draw their students. An expectedly high proportion of graduates from London and Bristol had fathers in managerial and professional occupations (the tendency for Oxford and Cambridge students to take their clinical training at London schools probably reinforces the class bias at that University), and relatively fewer graduates from the medical schools in Leeds, Liverpool and Manchester came from such backgrounds (Table 9.2). Similar trends were also seen in the 1966 survey of medical students. For most schools, however, the percentage of graduates from Class I backgrounds remained consistently higher in the non-designated than in the designated sample, whether or not the school as a whole had a high or low proportion of such doctors.

Time Spent in General Practice

Since the doctors in different practice areas and regions of the country had similar age distributions it is no surprise to find that they had also spent similar lengths of time in general practice and in their current positions (Tables 9.3 and 9.4). Most of the doctors had become G.Ps. within a few years either side of 30, depending mainly upon what military service they had done and whether or not they had studied for a post-graduate qualification, and it therefore follows that the similarity in age structure between the practice areas must be accompanied by a corresponding similarity in total length of service in general practice. It does not necessarily follow that there would also be a general similarity between the different areas in the total time which respondents had spent to date in their current practices, although this result might have been predicted on the basis of our earlier finding that doctors in different areas had made more or less the same number of professional moves (i.e. from one practice to another).

There is, however, one interesting age-related difference between the two samples, and that concerns the age by which the doctors had started in their present positions. Table 9.5 shows that those in the

designated sample had started their present positions at a **slightly** younger age than their colleagues elsewhere. It is seen, for example, that **42 per cent** of all G.Ps. in the **designated** sample had started in their **current** positions by the age of 30, compared with **37 per cent** of the others. The average age of starting was 32.2 and 32.6 years respectively. The overall difference is **very** small, but it does hold good in **every** age group between 34 and 55, suggesting that it is a genuine difference rather than a mere **quirk** of the data. It is seen, moreover, that the proportion of doctors in the 50-54 age group starting their present positions by the age of 30 was artificially low in both samples as a result of the disruptive effects of war.

We conclude that, in areas which **were** designated at the time of the survey, it has usually been possible to become a principal at a slightly younger age than in the other **areas**, and this is true for those who had made several moves as for those who had made none (Table 9.6). Naturally the **more** moves a doctor had made the older he was, on average, when he started his **current** position, but even among those who had been in **more** than one practice there remained a higher proportion of designated than non-designated doctors starting in their present positions by the age of 30. This apart, there is nothing about the inter-related **factors** of age and mobility which particularly distinguished the designated sample **from** the rest. Although one could reasonably hypothesise that the designated areas would contain significantly **more** older or younger doctors (either expectation being reasonably tenable), or that the designated G.Ps. would be relatively immobile compared with their colleagues in other **areas**, there appear to be no such inter-area variations.

Other Current Appointments

The **doctors** in the survey **were** asked whether, in addition to their responsibilities in general practice, they **currently** held any other medical appointments. About 60 per cent reported that they did, with the proportion decreasing slightly **from** the restricted **through** to the designated areas (Table 9.7). There were also some regional differences (Table 9.8). A comparatively high proportion of doctors in the Northern region reported at least one other appointment, and the proportions **were** also quite high in the West Midlands, the South East and South West, and the Yorkshire/Humber region. Conversely, G.Ps. in the North West, and the East Midlands **were** less likely to be holding such outside appointments. As significant as these regional variations, however, is the fact that within **every** region except the South East a higher percentage of doctors in non-designated than in

designated areas were engaged in some kind of medical work in addition to general practice. It seems, therefore, not only that such outside appointments were more popular (or more easily obtained) in some parts of the country than in others, but also that doctors in designated areas were in some way precluded or discouraged from accepting them. A possible explanation is that the pressures of work resulting from the high average list sizes were so great that doctors in designated areas had no spare time to engage in other professional activities. If this were the case we should expect to find that those doctors in the designated sample who happened to have lower than average lists would also be more likely to hold extra appointments; but in fact this is not the case (Table 9.9), at least when list size is dichotomised as greater or less than 2,600. Even with list size held constant in this way the differences still remained between the designated and the non-designated samples. Moreover, the very small difference between doctors with large and small list sizes within the designated sample suggests that larger list sizes increased the chances of a doctor holding an extra appointment. Since the association was reversed among doctors in non-designated areas we conclude that, the nature of the practice area is probably of greater significance than personal list size in predicting the likelihood of a G.P. being engaged in medical work beyond the immediate confines of his practice.

The nature of these additional appointments can be seen in Table 9.7. A minority of them involved hospital appointments, whether or not in conjunction with other non-hospital posts, but the proportion of hospital appointments rose from 37 per cent in the designated areas to 50 per cent among doctors in restricted areas. Not only are outside appointments apparently more easy to come by in the restricted areas (and in non-designated areas as a whole), but a higher proportion of them are likely to involve hospital work. The nature of the non-hospital appointments covered a wide span of medical practice, but industrial medicine and police work accounted for a substantial number of them in both samples.

Direct Access to Hospital Beds

The doctors were asked whether they had direct access to any N.H.S. beds where they retained full responsibility for the treatment of their patients. The form of the question was identical to that used by Dr. Ann Cartwright in her national sample survey of G.p.s.,³ and we are grateful for permission to reproduce it here. She found that 61 per cent of her sample of 415 doctors had access to no hospital beds at all; 27 per cent had access to obstetric beds only; and the remaining 12

per cent were able to care for their patients in other types of beds. The results from our survey are set out in Table 9.10, and they differ somewhat from Cartwright's. About half of all the doctors reported no access to any hospital beds, but the proportion was highest among doctors in designated areas declining regularly to those in restricted areas. Just over half of the designated sample (51 per cent) had no access to N.H.S. beds, with the proportion falling to 47 per cent and 42 per cent in the open and intermediate areas, and to 38 per cent among doctors in restricted areas. Moreover, not only does the opportunity for hospital work of this sort appear to vary quite considerably between the practice areas, but the type of beds available are also different. For the doctor working in a designated area the most common form of care which he was able to provide in hospital was obstetric: more than three-quarters of the designated doctors who reported that they had direct access to hospital beds were limited to obstetric beds only. By contrast, only a little over a third of the doctors in restricted areas were confined in their hospital work solely to the care of expectant mothers, the remainder having access, in varying degrees, to surgical, medical and geriatric beds. Conversely, whereas only ten per cent of all designated doctors had any access to beds other than obstetric, the proportion rose to 39 per cent among the restricted doctors.

These findings are consistent with our earlier conclusion that, even allowing for geographical location and list size, the designated areas appeared to offer fewer opportunities for any kind of medical work outside general practice; but it is such a significant find that it deserves a more detailed consideration. Some regions of the country had much better access facilities than others (Table 9.11). In the South West, for example, about 70 per cent of all G.Ps. had some form of hospital responsibility, even if only for the obstetric care of their patients. No other region approached as high a figure as this, although at least half of all the doctors in the East and West Midlands and the North West also reported the opportunity to care for some of their patients whilst in hospital. In Yorkshire/Humberside and the South East, by contrast, fewer than half the doctors had these facilities open to them, whilst in East Anglia the proportion was as low as 40 per cent (although numbers in this region are small). Such regional variations however, do not adequately explain the fundamental differences between the practice areas. For in almost every case the percentage of doctors with direct access to some hospital beds was higher in the non-designated than the designated sample within each region. (The magnitude of the difference is quite small in most cases, but the trend is consistent). The exceptions were the North West and Yorkshire/Humberside, but apart from these regions the

combined effect of region and practice area on the access to hospital beds is clearly seen in the table. In the South Western region, for instance, the chances of getting access to hospital beds were somewhat better for the non-designated doctors, yet at the same time the region also had the highest proportion of G.P.s. with hospital access within both the designated and the non-designated samples. (The numbers are admittedly small in the designated sample). The rank orders for the remaining regions are not absolutely consistent, but they are sufficiently uniform to support the general conclusion that both regional location and type of practice area are probably related to the opportunities which doctors have of practising in a local hospital.

The influence of list size on hospital access is not clear (Table 9.12). Among doctors with list sizes above 2,600 the difference in hospital access between the two samples was narrow: 54 per cent in the non-designated sample had some responsibility for the care of their patients in hospital compared with 50 per cent of those in the designated areas. Among doctors with list sizes below this figure, however, the difference between the two samples remained very marked, with a much higher percentage of non-designated doctors enjoying access to hospital beds. These figures do not invalidate the fact that the designated doctors had poorer access facilities even when list size is taken into account, but they do suggest that within the designated areas those doctors with lower list sizes were either presented with fewer opportunities for this kind of work, or else were less likely to accept them when offered.

To complement the factual information about the degree of access to hospital care which the doctors actually enjoyed, they were further asked whether they considered this access to be adequate. Responses were recorded on a four-point scale ranging from "most adequate" to "most inadequate", and mean scale scores were, calculated by the simple technique of assigning a value of 4 to a "most adequate" response, 3 to an "adequate" response, and so on*. The results are set out in Table 9.13

*The technique of using rating scales to gauge subjective feelings of adequacy or satisfaction was used fairly extensively in this section of the questionnaire. The results are discussed in this and succeeding chapters. It is important to note that although such scales enable us to compare the ratings given by doctors in different situations, they probably have a low validity. For instance, two doctors may have very different perceptions of what constitutes a "very satisfactory" situation, and an item which would be rated as "very satisfactory" by one doctor may be considered "unsatisfactory" by another. If, therefore, we found that, say, 80 per cent of doctors in two different areas had chosen a "very satisfactory" rating for a particular item, we would not be justified in concluding that those areas were generally very satisfactory in any objective sense. We could properly conclude, however, that the degree of perceived satisfaction was roughly the same among doctors in both places.

Two aspects of this table merit comment. Firstly, the expected association between actual access and perceived adequacy is in fact observed. Put simply, the more access doctors had the more highly they rated it, and this relationship holds good in both samples. It can perhaps best be seen in the mean scores. In the designated sample, for instance, the mean score among doctors who had clinical responsibility for obstetric and other beds was 2.8, compared with 2.2 among those with obstetric beds only, and 1.8 among G.Ps. with no beds at all. Similar scores obtained in the non-designated sample. The extreme responses in both samples are interesting. On the one hand they show that more than a quarter of the doctors with access to both obstetric and other beds nevertheless considered this to be inadequate; on the other hand they reveal that almost a quarter of those with no beds at all rated the situation as adequate.

The second relevant feature of the table is that the designated doctors were generally less satisfied with their access to N.H.S. hospital beds than the others. This follows logically from their lower degree of actual access, although the differences between the two samples were quite small. The mean scale score for all the designated doctors was 2.1 compared with a score of 2.4 among the non-designated doctors, but it is only among those with access to obstetric beds only that the non-designated sample rated their access as more adequate than the designated doctors.

Direct Access to Diagnostic Facilities

The tendency for doctors in the designated areas to have had rather fewer opportunities than their colleagues elsewhere for medical practice beyond the immediate confines of their practice is further reflected in the greater difficulties which they apparently had in using various diagnostic facilities. The respondents were asked whether they had direct access (that is, other than through a consultant or casualty) to each of four diagnostic facilities - full sized chest X-rays, bone and joint X-rays, bacteriological examination of urine, and glucose tolerance tests. This question like the previous one, was also used by Cartwright in her survey of general practitioners. She found that 54 per cent of all the G.Ps. in her sample had direct access to all four services, a lower proportion than the one found in this present study (Table 9.14). About two-thirds of all the doctors in our study reported direct access to all four services, with the proportion increasing from 65 per cent in the designated sample to 76 per cent among doctors working in restricted areas. Conversely, whereas 10 per cent of the former doctors had access to no more than one of the services, the proportion fell to 3 per cent among the latter group. The mean number

of services, ~~shown~~ in the last row of the table, increased ~~slightly~~ but regularly from 3.3 among doctors in designated areas to 3.6 among those practising in restricted areas. The inter-regional variations were much larger (Table 9.15). Doctors practising in the Northern, South Eastern, South Western and North Western regions ~~generally~~ reported a fairly high degree of access to the four listed diagnostic services, whereas those in Yorkshire/Humberside and the West Midlands were less favourably placed. (Some of these differences ~~are~~ further accentuated when inter-regional comparisons are made of doctors with access to all four services). If we then look at the differences between the designated and the non-designated sample within each region we find suprisingly, not only that the slight advantage of the non-designated doctors in this respect had disappeared, but that in most cases ~~it~~ has actually become a disadvantage. For whereas the non-designated doctors were rather better off than the others when the whole country is taken as one unit, they were somewhat worse off within each region except the North and the East and West Midlands - in some cases appreciably so.

As with the question about access to hospital beds, respondents were then asked to assess the adequacy of their local arrangements with respect to the use of diagnostic facilities, and, also following the pattern set by the earlier question, there ~~was~~ a clear association between the actual situation in each sample and the doctors' assessments of it (Table 9.16). The proportion of doctors rating their degree of access to diagnostic services as "most adequate" ranged from 39 per cent of those in designated areas to 52 per cent among doctors in restricted areas, and also increased as the number of accessible services accumulated. The main scale scores, ~~shown~~ in the last row in the table, increased regularly and substantially in both samples as the actual number of accessible services accumulated. Regional variations were, of some significance in this instance, since differences in accessibility were more pronounced between regions than between the types of practice areas. Thus, fewer than a third of all the doctors in Yorkshire/~~Humberside~~ and the West Midlands rated their local arrangements as being "most adequate", (these also being the two regions in which ~~fewest~~ doctors had direct access to all four services), whilst almost half of those in the Northern, South ~~Eastern~~ and South Western regions chose this particular rating (reflecting the fact that these three regions had the highest proportions of doctors with full access).

Getting Patients into Hospital

Respondents were asked to assess **their** local arrangements for getting elderly patients admitted to hospital, and although the responses of doctors in different areas were very similar, they remain consistent with the general impression which has emerged so far of relative isolation from the local medical care system among G.Ps. in the less well doctored areas. Difficulties in the admission of elderly patients is, necessarily, a rather crude indicator of the relationship between local doctors and hospitals, and there are likely to be many qualifying factors in any particular case which would modify the picture suggested by a single rating. Yet the problems of getting elderly patients into hospital are known to be quite considerable in certain areas⁴, and it is consistent with the earlier results of this chapter to find a higher proportion of doctors in designated areas rating their local arrangements from the admission of elderly patients as being "very poor", with a corresponding higher proportion of doctors in restricted areas than in the other areas rated them as "good" or "very good" (Table 9.17). The differences are quite small, but, as in many previous tables, it is the consistency of trends not only between the designated and the non-designated samples but also between the three types of practice areas within the non-designated sample, that is so striking.

Interestingly, the variations of response between doctors in the different regions were neither significant nor consistent in the matter of getting elderly patients into hospital. In view of the quite substantial inter-regional differences which have been noted in some other aspects of the G.Ps. contacts with various parts of the medical care system we might have expected to find them repeated here; but this is not the case. The range across the eight regions in the proportion of doctors reporting their local arrangements as being "very good" was between 5 per cent and 11 per cent, whilst at the other end of the scale all but one of the regions contained between 18 per cent and 25 per cent of their doctors rating the arrangements as "very poor". The exception was East Anglia, where the latter proportion fell to 9 per cent, and where, taking the scale as a whole, the doctors seemed generally more satisfied than elsewhere.

Communications between Hospitals and G.Ps.

At the other end of the hospitalisation process, (the communication of information from the hospital to the G.P. when patients are discharged), the doctors in the designated areas did not, for O.Doe, fare

any worse than **their** colleagues in **other** places. Table 9.18 is conspicuous for its lack of overall differences between the **practice** areas in the respondents' assessments of **their** local communication systems, although in this case the inter-regional contrasts **were** greater (Table 9.19). The Northern region and East Anglia had high overall scores in both samples (about three-quarters of the doctors in both regions rated their local communication systems as "very good" or "good"), whilst scores in the East and West Midlands and the South West **were** low. The variations between the two samples within each region **were** generally small. The main exception was in the South West, where the mean score was considerably higher for the non-designated than the designated doctors.

The results of this particular question provide a salutary corrective to the implications which might easily be drawn from the earlier results in this section. **When** dealing with tracer questions which are deliberately selected to probe a limited number of aspects of general practice there is a strong tendency to generalise the results to wider areas of application, and the pressure to do this is increased when the data appear consistently to support a broad interpretation of events which is satisfactory for the research objectives. In this case the results of the early questions seemed consistently to lead to the conclusion that doctors in the designated areas **were** working under certain professional handicaps relative to those in other types of areas, especially restricted areas. In general, the boundaries of medical practice **were** narrower for G.P.s. in the designated sample, although factors of geographical location were also significant, in many instances and the data on the doctors' reported difficulties in getting their elderly patients into hospital further reinforced the impression that things were generally worse in the designated areas than in other places. It would, however, be erroneous to make this a final conclusion, for it is now seen that professional communications (in a broad sense) are not uniformly worse in the designated areas than elsewhere. There appear to be some aspects of general practice in which the less well doctored areas as a whole **are** no less favourably placed, and in some cases are even better off, than those areas with smaller average list sizes.

Post-Graduate and In-Service Training

A traditional criticism of the structure of medical education under the National Health Service is that many medical students, having been trained to a very high degree of clinical competence within the intensive and rarefied atmosphere of the teaching hospital, are thrust out into the community when qualified, and more or less isolated from

the centres of teaching and research from which they could and should draw continuing support in the form of post-graduate training, refresher courses and the regular supply of information about new advances in medical science. Several attempts have recently been made to overcome this sense of professional isolation which many family doctors undoubtedly feel, and the growth of post-graduate medical centres throughout the country is perhaps the bravest and most successful innovation of all. But little is known of the doctors' own reactions to these developments, or whether their apparent effectiveness had been evenly felt throughout the different regions and practice areas of the country. Three questions were included in the survey about the opportunities which the doctors felt they had for this kind of professional interaction; the results point to the general conclusion that, although the inter-area contrasts were quite slight, the restricted areas were generally felt to have the worst opportunities.

First, the doctors were asked to rate their opportunities for taking post-graduate or refresher courses. In all, almost a third of the doctors rated their opportunities as "very good" and almost half reported that they were "good" (Table 9.20). We do not have any independent information against which to assess the actual situations which qualified as "very good" or "good", and the results can therefore only be used as an index of inter-area comparisons; but when used in this way it is seen that the variations between the practice areas slightly favoured the less well doctored ones. Proportionately more doctors in the designated and open areas rated their access to post-graduate and refresher courses as "very good" than did those in the intermediate and restricted areas, and the scale scores show a slight but regular decline as one moves from the designated and open areas through to the restricted areas. The differences, though statistically significant, are not very large. There were no differences between doctors of different ages in the way they rated their opportunities for further education, and the mean scale scores were virtually identical for doctors with and without higher qualifications, and for those with list sizes above and below 2,600 (Table 9.21). The inter-regional variations were also small: G.Ps. in the East Midlands East Anglia and the North West generally recorded lower scale scores than those in other regions (and they were also less likely to rate their opportunities as "very good"), but the differences were quite slight.

The second question in this block asked the respondents to rate their contacts with teaching hospitals as "frequent", "occasional", "rare", or "non-existent". Table 9.22 shows the distribution of responses between the types of practice area, and, as with the previous

question, confirms that although the inter-area differences were quite small, doctors in the restricted areas had the least amount of contact with a teaching hospital. Fewer of these doctors reported their contacts as "frequent" or "occasional", and correspondingly more rated them as "rare" or "non-existent". The designated areas fell about midway in the range: the responses were more favourable than in the restricted areas, but somewhat less so than in the open or intermediate areas. The same pattern is seen in the mean scale scores for each practice area.

Neither age nor list size influenced the amount of contact which the doctors had with teaching hospitals (Table 9.23). There was a very slight tendency for the proportion of doctors who rated their contacts as "frequent" or "occasional" to increase with age and list size, but the trend is almost imperceptible and is virtually concealed in the mean scale scores. The inter-regional variations were rather less than might have been expected, with the exception that, as anticipated, the scores for doctors in both samples in the East Midland region were markedly low. On the other hand the overall scores in the South Eastern region were not particularly high, notwithstanding the geographical ease of access which many of these doctors must have had to the teaching hospitals. The greatest differences in frequency of contact with a teaching hospital were seen between doctors who were and were not practising in the same regions as their own medical schools. In both samples the Scale scores for doctors working in the regional vicinity of their medical schools were significantly higher than among those who had left their school regions. Clearly, a sizeable proportion of the contacts which the respondents mentioned were with their own universities, and it is logical that those remaining near to them should maintain their links more easily than those moving farther afield.

The last question about post-graduate training requested the respondents to rate their contacts with post-graduate medical centres on the same four-point scale: "frequent", "occasional", "rare" or "non-existent". Although for most doctors a contact with a teaching hospital was something additional to that with a medical centre, the reverse was not the case. That is, whereas most doctors who reported their contacts with teaching hospitals as being "frequent" or "occasional" were also in regular touch with a post-graduate medical centre, the majority of those who were in regular association with a centre did not have any systematic contact with a teaching hospital (Table 9.24). This result confirms that the post-graduate centres

are in fact largely fulfilling one of their intended functions of providing a centre of medical education for G.Ps. who are geographically isolated from a larger medical teaching centre, and, consequently, a far higher proportion of G.Ps. were in regular touch with one of these centres than with a teaching hospital (Table 9.25). More than 40 per cent reported "frequent" contacts, and for a further third the contacts were "occasional"; but as in the previous question the doctors in the restricted areas were rather worse off than those in other areas: only 38 per cent of them reported their contacts with a post-graduate centre as being "frequent" compared with, for example, 49 per cent of doctors in designated areas. The distribution of mean scale scores further illustrates the relatively favourable responses of doctors in designated areas. The mean score for these respondents was 3.3, compared with 3.2 among doctors in open areas and 3.1 for those in intermediate and restricted areas.

Younger doctors in both samples had marginally higher scores for frequency of contact with medical centres than older G.Ps. over 55 (Table 9.26), and doctors with lower list sizes (less than 2,600 also recorded higher average scores. The variations in both cases were quite slight, but it is interesting that insofar as the trends did exist they ran counter to those in the previous question (reported frequency of contact with a teaching hospital increased slightly with age and list size). Doctors in both samples who were practising away from the regional vicinity of their medical schools were just as likely to be in regular touch with a post-graduate medical centre as those practising nearer to their schools, and this finding also contrasts with the comparable data for teaching hospitals. On all three factors (age, list size and location of medical school) the independent effect of the type of practice area is clearly seen: in each case the mean scores in the designated sample were the same as or higher than the corresponding scores in the non-designated sample. The same was also true within most of the regions: only East Anglia and the West Midlands reversed the pattern. Most of the inter-regional variations were quite small, but we may note the strangely schizoid appearance of the scores in the Northern region, and also the fact that doctors in the East Midlands seemed to be relatively deprived of contacts with medical centres as well as teaching hospitals.

Summary

In view of the primary aims of the survey to investigate mobility and settlement patterns among G.Ps., it was impossible to include a

full set of questions and conditions in general practice. There are many aspects of practice which might justifiably have been included, but the limits of the study were fairly clearly fixed, and the survey was not intended to furnish a descriptive account the current state of general practice. The intention has been to collect limited data to use as general indicators or tracers of the various circumstances of G.P.s. in different practice areas. The results discussed in this chapter show that in some respects the doctors in the designated sample were more favourably endowed professionally than those in other areas, in some respects they were worse off, and in yet others they were equally placed. Moreover the differences, where they existed, were seldom very large between the different practice areas, and they do not support the theory that conditions of practice in designated areas are consistently worse than elsewhere.

The respondents in the survey held very similar primary and higher qualifications, whichever region or whatever type of area they were in, and most of the medical schools from which these qualifications had been obtained were equally represented in each sample. The exception was London University, whose graduates were relatively over-represented in the non-designated sample, but this merely reflects the location of London relative to the geographical concentration of intermediate and restricted areas. Fewer than 3 per cent of the respondents in either sample had graduated from Commonwealth medical schools, and this may well be a good estimate of the proportion of Asian doctors in general practice. There were some interesting differences in the social class backgrounds of graduates from different medical schools, although they appear neither to reflect a greater class bias in the selection procedures adopted by some medical schools than by others, nor to explain the class differences between the two samples noted in the previous chapter.

The doctors in the different practice areas and regions of the country had been in general practice for similar lengths of time, and had also occupied their current appointments for similar periods. The designated doctors had, however, generally started in their current posts at a slightly younger age than the others. It seems that it had always been possible to become a principal at a younger age in designated than in non-designated areas, and also in the North, the East Midlands and the North West. The proportion of doctors holding other appointments outside general practice increased from 56 per cent in the designated areas to 66 per cent in the restricted areas, and the difference does not seem to be explained by the fact that the designated doctors, having larger average list sizes, were obliged to spend more

time on their own patients. Only a minority of outside appointments were exclusively in hospital work: the majority in both samples were in industrial medicine or police work.

Four questions were asked about the doctors' relationships with their local hospitals and the results of the first two questions point consistently to an increasingly favourable communication system as one moves from the designated through to the restricted areas. The proportion of G.Ps. having direct access to hospital beds rose from 47 per cent in the designated areas to 61 per cent among doctors in restricted areas, and the latter also had access to a wider range of cases (obstetric, medical, surgical, geriatric, etc.). The designated doctors, by contrast, were limited almost exclusively to obstetric care. Regional differences in access were wide, ranging from 70 per cent of the G.Ps. in the South West with some degree of clinical responsibility in hospitals to only 40 per cent of those in East Anglia; but the designated/non-designated differences generally remained even within each region. The extent to which the respondents were satisfied with their opportunities for hospital care was directly related to their actual chances: the more access doctors actually had, the more satisfied they were with the situation, and consequently the overall rating was slightly higher in the non-designated than in the designated sample.

The proportion of doctors having direct access to all of four listed diagnostic services increased regularly from 65 per cent of doctors in designated and open areas to 76 per cent of those in restricted areas; but this difference is nullified by the regional factor, for within most regions the proportion was higher among the designated doctors. Satisfaction with the local diagnostic services increased as the number of available services accumulated, and the overall rating was consequently higher in the non-designated than in the designated sample.

So far the results show a certain degree of consistency, and indicate that, as we move from the restricted through to the designated areas, doctors are increasingly isolated from the wider system beyond general practice - they seem less likely to hold extra appointments outside general practice, less likely to have some degree of clinical responsibility for their patients in hospital, and generally less likely to have direct access to diagnostic services (although regional variations were also a significant factor here). They are, in addition, more likely to criticise the adequacy of these various arrangements in their locality. But here the consistency ends, for the remaining questions discussed in this chapter either failed to discriminate

between the different practice areas or revealed a more favourable situation in the designated areas. There were, for example, virtually no variations between the two samples in the case with which doctors could get their elderly patients admitted to hospital, or in the way they rated the adequacy of communications from local hospitals when their patients were discharged.

Three questions about the opportunities for professional interaction and advanced training revealed that the designated doctors felt they were better off in this respect than the others, especially compared with those in restricted areas: they were more likely to be in regular touch with a post-graduate medical centre or teaching hospital and they considered that their opportunities were better for post-graduate and refresher courses. The differences between the designated and the restricted areas were not very large, but they are important in countering the assumption that practice conditions are almost uniformly worse in the under-doctored areas of the country. Neither age nor list size were associated with the amount of professional contact and interaction which the doctors reported, and although for most doctors their contact with a teaching hospital was something additional to that with a medical centre, the reverse was not the case. This result confirms that the post-graduate centres are in fact largely fulfilling their intended function of providing a centre of professional communication for those G.Ps. who are geographically isolated from a larger medical teaching centre.

In sum, it seems that although doctors in areas with favourable G.P./patient ratios were more closely integrated into the surrounding local medical care systems (especially the hospitals), those in the designated areas were more likely to have professional links with the centres of teaching, research and administration. This is doubtless caused in part by the greater concentration of designated areas around the large urban areas and conurbations where the teaching hospitals are located, but it means that the acceptance of change and innovation may be swifter in these places than in the more remote and conservative areas away from the hub of the city. The evidence for such a cultural lag is reviewed in the next chapter, which deals with certain aspects of practice structure.

References

2. D. Cargill. "Recruiting to general practice in England and Wales, 1961-1969" • Lancet, (1969), ii, 1295-6.
3. A. Cartwright. Patients and their doctors. Routledge and Kegan Paul, 1967.
4. See, for example, J. R. Butler and M. Pearson. Who goes Home? G. Bell and Sons, 1970.

TABLE 9.1:

TYPE OF PRACTICE AREA. BY PRIMARY QUALIFICATIONS

Primary Qualifications	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
MB•• Ch.B. or equivalent <u>only</u>	452 (65.8)	381 (61.5)	149 (58.0)	88 (56.1)
Conjoint or equivalent <u>only</u>	126 (18.3)	119 (19.2)	46 (17.9)	30 (19.1)
MB•• Ch.B. and conjoint or - equivalents	88 (12.8)	113 (18.2)	57 (22.2)	36 (22.9)
Others	21 (3.1)	7 (1.1)	5 (1.9)	3 (1.9)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 9.2:

MEDICAL SCHOOL ATTENDED AND SOCIAL CLASS OF FAMILY OF ORIGIN

Medical School Attended	Designated Sample			Non-Designated Sample		
	Numbers of Doctors	% of Total	% With Fathers In Social Class I	Numbers of Doctors	% of Total	% With Fathers In Social Class I
London (all)	191	27.8	44.0	446	43.1	48.2
Birmingham	48	7.0	35.4	30	2.9	33.3
Bristol	11	1.6	45.5	21	2.0	52.4
Durham/ Newcastle	49	7.1	38.8	44	4.3	40.9
Leeds	35	5.1	20.0	55	5.3	21.8
Liverpool	28	4.1	28.6	41	4.0	19.5
Manchester	32	4.7	25.0	36	3.5	33.3
Sheffield	23	3.3	34.8	18	1.7	33.3
Wales	4	0.6	50.0	10	1.0	10.0
Aberdeen	18	2.6	22.2	23	2.2	43.5
Edinburgh	38	5.5	36.8	60	5.8	33.3
Glasgow	51	7.4	27.5	60	5.8	45.0
St. Andrews/ Dundee	13	1.9	23.1	19	1.8	63.2
Belfast	28	4.1	7.1	33	3.2	27.3
Dublin (all)	36	5.2	16.7	43	4.2	34.9
Galway/Cork	15	2.2	6.7	24	2.3	20.8
India/ Pakistan	14	2.0	28.6	12	1.2	25.0
Other Commonwealth	4	0.6	25.0	3	0.3	66.7
Royal Colleges	23	3.3	21.7	27	2.6	37.0
Other/Not Know	26	3.8	19.2	29	2.81	37.9
TOTAL	687	100	32.2	1034	100	40.3

TABLE 9.3:

TYPE OF PRACTICE AREA BY COMPLETED YEARS IN GENERAL PRACTICE

Completed Years In General Practice	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Less than 5	40 (5.8)	36 (5.8)	22 (8.6)	9 (5.7)
5-9	120 (17.5)	91 (14.7)	36 (14.0)	18 (11.5)
10-14	125 (18.2)	115 (18.5)	46 (17.9)	33 (21.0)
15-19	139 (20.2)	119 (19.2)	47 (18.3)	30 (19.1)
20-29	181 (26.3)	162 (26.1)	65 (25.3)	48 (30.6)
30 or more	79 (11.5)	92 (14.8)	39 (15.2)	18 (11.5)
Not known	3 (0.5)	5 (0.8)	2 (0.8)	1 (0.6)
TOTAL	1687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 9.4:

TYPE OF PRACTICE AREA BY COMPLETED YEARS IN CURRENT POSITION

Completed Years In current position	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Less than 5	84 (12.2)	72 (11.6)	41 (16.0)	24 (15.3)
5-9	137 (19.9)	111 (17.9)	42 (16.3)	27 (17.2)
10-14	116 (16.9)	107 (17.3)	43 (16.7)	27 (17.2)
15-19	122 (17.8)	99 (16.0)	36 (14.0)	26 (16.6)
20-29	159 (23.1)	149 (24.0)	67 (26.1)	38 (24.2)
30 or more	66 (9.6)	77 (12.4)	27 (10.5)	13 (8.3)
Not known	3 (0.5)	5 (0.8)	1 (0.4)	2 (1.3)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 9.5:

PRESENT AGE BY AGE AT STARING CURRENT POSITION

Present Age	Age at Starting Current Position						Total
	Less Than 30	30-34	35-39	40-44	45 Or Older	Not known	
DESIGNATED SAMPLE							
Less than 30	7 (100.0)	-	-	-	-	-	7 (100)
30-34	41 (77.4)	12 (22.6)	-	-	-	-	53 (100)
35-39	54 (47.0)	53 (46.1)	8 (7.0)	-	-	-	15 (100)
40-44	61 (43.3)	47 (33.3)	29 (20.6)	4 (2.8)	-	-	141 (100)
45-49	49 (42.6)	38 (33.0)	13 (11.3)	13 (11.3)	2 (1.7)	-	115 (100)
50-54	29 (27.1)	52 (48.6)	15 (14.0)	4 (3.7)	7 (6.5)	-	107 (100)
55 or older	49 (32.9)	40 (26.8)	27 (18.1)	10 (6.7)	22 (14.8)	1 (0.7)	149 (100)
TOTAL	290 (42.2)	242 (35.2)	92 (13.4)	31 (4.5)	31 (4.5)	1 (0.1)	187 (100)
NON-DESIGNATED SAMPLE							
Less than 30	11 (100.0)	-	-	-	-	-	11 (100)
30-34	64 (81.0)	15 (19.0)	-	-	-	-	79 (100)
35-39	43 (38.4)	58 (51.8)	11 (9.8)	-	-	-	112 (100)
40-44	73 (36.1)	77 (38.1)	38 (18.8)	14 (6.9)	-	-	202 (100)
45-49	65 (35.3)	69 (37.5)	29 (15.8)	16 (8.7)	5 (2.7)	-	184 (100)
50-54	30 (20.3)	73 (49.3)	21 (14.2)	6 (4.1)	16 (10.8)	2 (1.4)	148 (100)
55 or older	97 (32.6)	76 (25.5)	62 (20.8)	17 (5.7)	39 (13.1)	7 (2.3)	198 (100)
TOTAL	383 (37.0)	368 (35.6)	161 (16.6)	53 (5.1)	60 (5.8)	9 (0.9)	1034(100)

Percentages calculated across rows, and included in brackets.

TABLE 9.6:

NUMBER OF POSITIONS IN GENERAL PRACTICE, BY AGE AT STARTING CURRENT POSITION

Number Of Positions In General Practice	Age at Starting Current Position					Total
	Less Than 30	30-34	35-39	40 Or More	Not Known	
DESIGNATED SAMPLE						
1	166 (58.7)	81 (28.6)	24 (8.5)	12 (4.2)	-	283 (100)
2	91 (37.1)	102 (41.6)	34 (13.9)	18 (7.3)	-	245 (100)
3 or more	33 (21.0)	59 (37.6)	34 (21.7)	30 (19.1)	1 (0.6)	157 (100)
Not known	-	-	-	-	2 (100)	2 (100)
TOTAL	290 (42.2)	242 (35.2)	92 (13.4)	60 (8.7)	3 (0.9)	687 (100)
NON-DESIGNATED SAMPLE						
1	248 (54.9)	140 (31.0)	41 (9.1)	23 (5.1)	-	452 (100)
2	93 (28.5)	134 (41.1)	58 (17.8)	39 (12.0)	2 (0.6)	326 (100)
3 or more	42 (16.7)	94 (37.5)	62 (24.7)	51 (20.3)	2 (0.8)	251 (100)
Not known	-	-	-	-	5 (100)	5 (100)
TOTAL	383 (37.0)	368 (35.6)	161 (15.6)	113 (10.9)	9 (0.9)	1034 (100)

Percentages calculated across rows, and included in brackets.

TABLE 9.7:

TYPE OF PRACTICE AREA, BY APPOINTMENTS CURRENTLY HELD OUTSIDE GENERAL PRACTICE

Appointments Currently Held	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Hospital Only	81 (11.8)	82 (13.2)	34 (13.2)	30 (19.1)
Non-hospital only	242 (35.2)	227 (36.6)	86 (33.5)	51 (32.5)
Hospital and non-hospital	63 (9.2)	83 (13.4)	39 (15.2)	22 (14.0)
None	300 (43.7)	225 (36.3)	97 (37.7)	54 (34.4)
Not known	1	3 (0.5)	1 (0.4)	-
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 9.8:

DOCTORS WITH AT LEAST ONE CURRENT APPOINTMENT OUTSIDE GENERAL PRACTICE,
BY STANDARD REGION OF CURRENT PRACTICE

Standard Region of Current Practice	Doctors Currently Holding Other Appointments			
	DESIGNATED SAMPLE No.	% of Total	NON-DESIGNATED SAMPLE No.	% of Total
North	49	59.0	55	78.6
Yorkshire/Humber	57	61.3	58	61.7
East Midlands	42	50.6	38	59.4
East Anglia	17	53.1	46	63.0
South East	103	62.4	240	61.2
South West	5	41.7	101	63.5
West Midlands	74	60.2	48	68.6
North West	39	40.6	68	60.7
TOTAL	386	56.2	654	63.2

TABLE 9.9:

DOCTORS WITH AT LEAST ONE CURRENT APPOINTMENT OUTSIDE GENERAL PRACTICE.
BY LIST SIZE

List Size	Doctors Currently Holding Other Appointments	
	Number	% of Total
DESIGNATED SAMPLE		
Below 2.600	96	54.5
2.600 and above	290	56.8
NON-DESIGNATED SAMPLE		
Below 2.600	435	64.7
2.600 and above	219	60.5

TABLE 9.10:

TYPE OF PRACTICE AREA. BY DIRECT ACCESS TO HOSPITAL BEDS

Direct Access Available To:	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Obstetric beds only	253 (36.8)	175 (28.2)	61 (23.7)	35 (22.3)
Other beds only	29 (4.2)	58 (9.4)	27 (10.5)	27 (17.2)
Obstetric and other beds	40 (5.8)	82 (13.2)	57 (22.2)	34 (21.7)
No beds at all	351 (51.1)	294 (47.4)	108 (42.0)	59 (37.6)
Not known	14 (2.0)	11 (1.8)	4 (1.6)	2 (1.3)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns. and included in brackets.

TABLE 9.11:

DOCTORS WITH DIRECT ACCESS TO ANY HOSPITAL BEDS, BY STANDARD REGION OF CURRENT PRACTICE

Standard Region of Current Practice	Doctors With Direct Access To Any Hospital Beds			
	DESIGNATED SAMPLE No.	% of Total	NON-DESIGNATED SAMPLE No.	% of Total
North	31	37.3	45	64.3
Yorkshire /Humber	47	50.5	42	44.7
East Midlands	44	53.0	37	57.8
East Anglia	7	21.9	34	46.6
South East	64	38.8	181	46.2
South West	8	66.7	113	71.1
West Midland	70	56.9	47	67.1
North West	51	53.1	57	50.9
TOTAL	322	46.9	556	53.8

TABLE 9.12:

DOCTORS WITH DIRECT ACCESS TO ANY HOSPITAL BEDS, BY LIST SIZE

List Size	Doctors With Direct Access To Any Hospital Beds	
	Number	% of Total
DESIGNATED AREAS		
Below 2,600	69	39.2
2,600 and above	253	49.5
NON-DESIGNATED AREAS		
Below 2,600	361	53.7
2,600 and above	195	53.9

TABLE 9.13:

DIRECT ACCESS TO HOSPITAL BEDS, BY PERCEIVED ADEQUACY OF ACCESS

Perceived Adequacy Of Access	Direct Access Available To:				
	Obstetric Beds Only	Obstetric/ other Beds Or Other Only	No Beds	Not known	Total
DESIGNATED SAMPLE					
Most adequate	17 (6.9)	10 (14.5)	24 <10.3)	-	51 (.9.2,
Adequate	84 (34.1)	38 (55.1)	29 (12.4)	2 (50.0)	153 (27.7)
Inadequate	99 (40.2)	17 (24.6)	50 (21.5)	-	166 (30.1)
Most inadequate	46 (18.7)	4 (5.8)	130 (55.8)	2 (50.0)	182 (33.0)
Not known	7	-	118	10	135
TOTAL	253 (100)	69 (100)	351 (100)	14 (100)	687 (100)
MEAN SCORE	2.2	2.8	1.8	-	2.1
NON-DESIGNATED SAMPLE					
Most adequate	27 (10.0)	57 (20.3)	28 (9.2)	1 (25.0)	113 (13.2)
Adequate	95 (35.3)	142 (50.5)	48 (15.7)	1 (25.0)	286 (33.3)
Inadequate	108 (40.1)	72 (25.6)	72 (23.6)	1 (25.0)	253 (29.5)
Most inadequate	39 (14.5)	10 (3.5)	157 (51.5)	1 (25.0)	207 (24.1)
Not known	2	4	156	13	175
TOTAL	271 (100)	285 (100)	461 (100)	17	1034 (100)
MEAN SCORE	2.4	2.8	1.8	-	2.4

Note: Because of the large number of "not known" responses, they have been omitted from the denominator in calculating the percentages and mean scores in each column. The mean scores are calculated by assigning a value of 4 to a "mostadequate" response, 3 to an "adequate" response, 2 to an "inadequate" response, and 1 to a "most inadequate" response.

Percentages calculated down columns, and included in brackets.

TABLE 9.14:

TYPE OF PRACTICE AREA, BY DIRECT ACCESS TO DIAGNOSTIC SERVICES

Number of Listed Services Which Are Accessible	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
None	27 (4.0)	25 (4.0)	8 (3.1)	3 (1.9)
1	41 (6.0)	22 (3.5)	2 (0.8)	2 (1.3)
2	58 (8.4)	45 (7.3)	19 (7.4)	9 (5.7)
3	107 (15.6)	120 (19.4)	38 (14.8)	19 (12.1)
4	448 (65.2)	401 (64.7)	183 (71.2)	120 (76.4)
Not known	6 (0.9)	7 (1.1)	7 (2.7)	4 (2.5)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN NO. OF SERVICES	3.3	3.4	3.5	3.6

Percentages calculated down columns, and included in brackets.

TABLE 9.15:

MEAN NUMBER OF DIAGNOSTIC SERVICES AVAILABLE ON DIRECT ACCESS, BY STANDARD REGION OF CURRENT PRACTICE

Standard Region of Current Practice	Mean No. of Diagnostic Services Available	
	Designated Sample	Non-Designated Sample
North	3.4	3.7
Yorkshire/Humberside	3.1	3.1
East Midlands	3.4	3.5
East Anglia	3.8	3.3
South East	3.5	3.5
South West	3.8	3.7
West Midlands	2.7	3.3
North West	4.6	3.4
TOTAL	3.3	3.5

TABLE 9.16:

DIRECT ACCESS TO DIAGNOSTIC SERVICES, BY PERCEIVED ADEQUACY OF ACCESS

Perceived Adequacy of Access	Number of Listed Services Which Are Accessible						
	0	1	2	3	4	Not Known	Total
DESIGNATED SAMPLE							
Most adequate	—	2 (4.9)	2 (3.4)	23 (21.5)	238 (53.11)	—	265 (38.8)
Adequate	4 (14.8)	6 (19.5)	16 (31.0)	59 (55.0)	163 (36.4)	2 (33.3)	254 (37.0)
Inadequate	6 (22.2)	22 (53.7)	29 (50.0)	22 (20.6)	43 (9.6)	—	122 (17.8)
Most Inadequate	6 (29.6)	9 (22.0)	9 (15.5)	3 (2.8)	2 (0.4)	1 (16.7)	32 (4.7)
Not known	9 (33.3)	—	—	—	2 (0.4)	3 (50.0)	14 (2.0)
TOTAL	27 (100)	41 (109)	56 (190)	107 (100)	448 (100)	6 (100)	667 (100)
MEAN SCORE	2.0	2.1	2.2	3.0	3.4	—	3.1
NON-DESIGNATED SAMPLE							
Most adequate	4 (11.1)	—	5 (6.6)	28 (15.8)	412 (58.5)	1 (5.6)	450 (43.5)
Adequate	5 (13.9)	7 (26.9)	25 (34.2)	129 (67.6)	246 (35.2)	—	495 (39.2)
Inadequate	7 (19.4)	13 (50.0)	37 (50.7)	27 (15.3)	41 (5.8)	1 (5.6)	126 (12.1)
Most Inadequate	10 (27.8)	6 (23.1)	6 (6.2)	1 (0.6)	1 (0.0)	—	24 (2.3)
Not Known	10 (27.6)	—	—	1 (0.6)	2 (0.3)	16 (66.9)	29 (2.6)
TOTAL	36 (199)	26 (100)	73 (100)	177 (100)	704 (100)	16 (100)	1034 (100)
MEAN SCORE	2.1	2.0	2.4	3.0	3.5	—	3.3

Note: Mean Scores are calculated as in Table 9.13, and exclude "not known" responses,

Percentages calculated down columns, and included in brackets,

TABLE 9.17:

RATING OF ARRANGEMENTS FOR GETTING ELDERLY PATIENTS INTO HOSPITAL,
BY TYPE OF PRACTICE AREA

Rating Of Arrangements	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very Good	42 (6.1)	43 (6.9)	15 (5.8)	12 (7.6)
Good	247 (36.0)	214 (34.5)	95 (37.0)	61 (38.9)
Poor	233 (33.9)	228 (36.8)	97 (37.8)	60 (38.2)
Very Poor	151 (22.0)	118 (19.0)	39 (15.2)	21 (13.4)
Not Known	14 (2.0)	17 (2.7)	11 (4.3)	3 (1.9)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN SCORE	2.3	2.3	2.3	2.4

Note: Mean scores are calculated as in Table 9.13, and exclude "not known" responses.

Percentages calculated down columns, and included in brackets.

TABLE 9.18:

RATING OF COMMUNICATIONS FROM HOSPITALS WHEN PATIENTS ARE DISCHARGED,
BY TYPE OF PRACTICE AREA

Communication From Hospital	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very Good	68 (9.9)	34 (5.5)	17 (6.6)	11 (7.0)
Good	351 (51.1)	346 (55.8)	140 (54.5)	83 (52.9)
Poor	218 (31.7)	187 (30.2)	67 (26.1)	47 (29.9)
Very Poor	26 (3.8)	27 (4.2)	17 (6.6)	11 (7.0)
Not Known	24 (3.5)	26 (4.2)	16 (6.2)	5 (3.2)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN SCORE	2.7	2.7	2.7	2.6

Note: Mean scores are calculated as in Table 9.13, and exclude "not known" responses.

Percentages calculated down columns and included in brackets.

TABLE 9.19:

MEAN SCALE SCORE OF COMMUNICATIONS FROM HOSPITAL, BY STANDARD REGION OF CURRENT PRACTICE

Standard Region Of Current Practice	Mean Scale Score of Conununications From Hospital	
	Designated Sample	Non-Designated Sample
North	2.9	2.9
Yorkshire/Humberside	2.8	2.7
East Midlands	2.6	2.5
East Anglia	3.0	2.8
South East	2.7	2.6
South West	2.1	2.6
West Midlands	2.6	2.5
North West	2.6	2.7
TOTAL	2.7	2.6

TABLE 9.20:

TYPE OF PRACTICE AREA, BY RATING OF OPPORTUNITIES FOR POST-GRADUATE OR REFRESHER COURSES

Opportunities For Courses	Type Of Practice Area			
	Designated	Open	Intermediate	Restricted
Very Good	218 (31.7)	222 (35.8)	67 (26.1)	39 (24.8)
Good	329 (47.9)	271 (43.7)	126 (49.0)	69 (43.9)
Poor	102 (14.8)	87 (14.0)	40 (15.6)	31 (19.7)
Very Poor	24 (3.5)	25 (4.0)	13 (5.1)	14 (8.9)
Not Known	14 (2.0)	15 (2.4)	11 (4.3)	4 (2.5)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN SCORE	3.1	3.1	3.0	2.9

Note: Mean Scores are calculated as in Table 9.13, and exclude "not known" responses.

Percentages calculated down columns, and included in brackets.

TABLE 9.21:

MEAN SCALE SCORE OF OPPORTUNITIES FOR POST-GRADUATE OR REFRESHER COURSES,
BY AGE, HIGHER QUALIFICATIONS, STANDARD REGION OF CURRENT PRACTICE AND LIST SIZE

	Mean Scale Score Of Opportunities	
	Designated Sample	Non-Designated Sample
Age		
Less than 40	3.0	3.1
40-54	3.1	3.1
55 and above	3.1	3.0
Higher Qualifications		
None	3.1	3.0
Some	3.1	3.1
Region of Current Practice		
North	3.1	3.0
Yorkshire/Humberside	3.2	3.3
East Midlands	3.1	2.9
East Anglia	2.9	2.9
South East	3.1	3.1
South West	3.3	3.0
West Midlands	3.0	3.1
North West	3.1	2.9
List Size		
Less Than 2,600	3.1	3.0
2,600 or More	3.1	3.1

TABLE 9.22:

TYPE OF PRACTICE AREA, BY RATING OF CONTACTS WITH TEACHING HOSPITALS

Contact With Teaching Hospitals	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Frequent	92 (13.4)	96 (15.5)	45 (17.5)	20 (12.7)
Occasional	221 (32.2)	221 (35.6)	87 (33.9)	40 (25.5)
Rare	212 (30.9)	174 (28.1)	77 (30.0)	50 (31.8)
Non-existent	153 (22.3)	114 (18.4)	41 (16.0)	44 (28.0)
Not Known	9 (1.3)	15 (2.4)	7 (2.7)	3 (1.9)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN SCORE	2.4	2.5	2.5	2.2

Note: Mean scores are calculated as in Table 9.13, and exclude "not know" responses.

Percentages calculated down columns, and included in brackets.

TABLE 9.23:

MEAN SCALE SCORE OF CONTACTS WITH TEACHING HOSPITALS, BY AGE, STANDARD REGION OF CURRENT PRACTICE, LIST SIZE AND LOCATION OF MEDICAL SCHOOL

	Mean Scale Score Of Contacts	
	Designated Sample	Non-Designated Sample
Less Than 40	2.3	2.5
40- 54	2.4	2.5
55 and above	2.4	2.5
<u>Region of Current Practice</u>		
North	2.7	2.6
Yorkshire/Humberisde	2.6	2.5
East Midlands	1.8	1.9
East Anglia	2.3	2.4
South East	2.4	2.6
South West	2.6	2.2
West Midlands	2.5	2.5
North West	2.3	2.5
<u>List Size</u>		
Less than 2,600		2.4
2,600 or more		2.5
<u>Location of Medical School</u>		
Same Region as Current Practice	2.6	
Different Region To Current Practice	2.2	

TABLE 9.24:

RATING OF CONTACTS WITH TEACHING HOSPITALS AND POST-GRADUATE MEDICAL CENTRES

Contact With Teaching Hospitals	Contact With Post-Graduate Centres					
	Frequent	Occasional	Rare	Non-Existent	Not Known	Total
DESIGNATED SAMPLE						
Frequent	67	17	6	1	1	92
Occasional	103	85	17	12	4	221
Rare	98	57	41	11	5	212
Non-existent	64	53	12	21	3	153
Not known	2	2	1	-	4	9
TOTAL	334	214	77	45	17	687
NON-DESIGNATED SAMPLE						
Frequent	93	48	10	7	3	161
Occasional	137	166	26	15	4	348
Rare	132	101	47	17	4	301
Non-existent	61	72	30	34	2	199
Not known	5	1	-	-	19	25
TOTAL	428	388	113	73	32	1034

TABLE 9.25:

RATING OF CONTACTS WITH POST-GRADUATE MEDICAL CENTRES, BY TYPE OF PRACTICE AREA

Contacts With Post-Graduate Centres	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Frequent	334 (48.6)	272 (43.9)	96 (37.4)	60 (38.2)
Occasional	214 (31.1)	225 (36.3)	106 (41.2)	57 (36.3)
Rare	77 (11.2)	61 (9.8)	33 (12.8)	19 (12.1)
Non-existent	45 (6.6)	44 (7.1)	13 (5.1)	16 (10.2)
Not known	17 (2.5)	18 (2.9)	9 (3.5)	5 (3.2)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
MEAN SCORE	3.3	3.2	3.1	3.1

Note: Mean scores are calculated as in Table 9.13, and exclude "not know" responses.

Percentages calculated down columns, and included in brackets.

TABLE 9.26:

MEAN SCALE SCORE OF CONTACTS WITH POST-GRADUATE MEDICAL CENTRES, BY AGE, STANDARD REGION OF CURRENT PRACTICE, LIST SIZE AND LOCATION OF MEDICAL SCHOOL

	Mean Scale Score of Contacts	
	Designated Sample	Non-Designated Sample
Age		
Less than 40	3.2	3.2
40-54	3.3	3.2
55 and above	3.2	3.1
Region of Current Practice		
North	3.6	2.9
Yorkshire/Humberside	3.2	3.0
East Midlands	3.2	2.8
East Anglia	3.1	3.3
South East	3.3	3.2
South West	3.3	3.2
West Midlands	3.3	3.4
North West	3.1	3.0
List Size		
Less than 2.600	3.3	3.2
2.600 or more	3.2	3.1
Location of Medical School		
Same Region Current Practice	3.3	3.2
Different Region To Current Practice	3.2	3.2

CHAPTER 10

THE DOCTOR AND HIS PRACTICE

"I like the challenge of 18th century medicine in a region with 11th century roads. This is one of the areas left where all-round competence is vital; the nearest hospital is 40 miles away; we work with rescue components of all three services. No place for a pen-pusher."

- G.P. in Cornwall

List Size

We have dwelt in some detail in earlier chapters on regional and area differences in average list sizes. The mean list size of a practice area defines its classification, and, reflecting their mixture of practice areas, the regions and counties of the country display a wide range in their average list sizes. At one extreme is the West Midland region and the county of Bedfordshire, with mean lists respectively of 2,643 and 2,806 in 1969; at the other end of the range lie the South West and Westmorland, with respective averages of 2,237 and 1,859. These averages may, however, conceal substantial differences between the best and worst situations represented in them. Precisely because the average is a measure of central tendency it diverts attention away from the extreme cases. The analysis in Chapter Three provides an appropriate illustration. In 1969 the East Riding of Yorkshire had more than half its principals in designated areas, yet recorded an average list size of only 2,435. This paradox is explained by the existence within the county of a fairly large number of small practices which, in calculating the average for the county, offset the bigger list sizes in the designated areas. The East Riding, in short, is a county of diverse practice sizes, a fact that is concealed by focusing exclusively on the average.

The distribution of principals by list size is given for each executive council area in the annual reports of the Department of Health and Social Security. The figures from the 1969 report (Table 6, page 148) not only confirm the imbalance in many places between average list size and the proportion of principals in designated areas, but even reveal some unexpected discrepancies between the percentage of doctors with lists above 2,500 and the proportion in designated areas. In the South Western region, for example, exactly a quarter of all principals in 1969 had lists above 2,500 and the proportion in the East Midlands was very similar (29 per cent), yet the proportions of doctors in designated areas were 7 per cent and 57 per cent respectively in the

two regions (see Table 3.1). How is it possible for two regions to have a similar proportion of practitioners with "large" lists, and yet to differ so greatly in the relative numbers working in designated areas? The answer is found in the range of list sizes within each type of practice area, and since these data are not available in published statistics we must turn to the survey results.

Table 10.1 shows the range in list size for doctors in each type of practice area. This information was obtained from the sample print-out drawn from the Doctor Index which classifies the average list size for each practice in bands of 100 and 200. Unfortunately for our purposes the interval limit in the Index does not coincide exactly with 2,500: practices of this size are contained within the band 2,400-2,599, but it is possible by means of linear intrapolation and by fitting a smooth curve to the histogram outline to arrive at an estimate of the proportion of doctors in practices with average lists above and below 2,500. The results show that, although the distribution within each practice area was obviously related to the differences between them in average list size, there was nevertheless a substantial spread within each area across the range of list sizes. In the designated areas, for example, exactly a quarter of the doctors were in practices with average lists below 2,600, and about a fifth were in practices with fewer than 2,500 patients per doctor. In other words, about one doctor in five in designated areas had average practice list sizes below the criterion for designation, and about one in ten were in practices with average lists below 2,200. Of doctors actually receiving a designated areas allowance in 1968 the same proportion (about a fifth) had average practice lists below 2,500, indicating that more than £200,000 was paid out in allowances in that year to doctors in practices below the designated size. This amount will certainly increase under the new levels of the allowance, but will not, as before, be equal to one fifth of the total amount spent on the allowance, since doctors in "unnecessary" receipt will not be equally spread between the designated and the new super-designated areas. The proportion of doctors with average practice lists of less than 2,500 rose from about a fifth in designated areas to a half in open areas, two-thirds in intermediate areas and nine-tenths in the restricted areas. Conversely, doctors with practice lists of 3,000 or more patients constituted almost half of all those in designated areas, but a quarter, one-eighth and one-fiftieth respectively of those in open, intermediate and restricted areas.

It is clear from these results that a considerable number of

doctors were in practices of inappropriate size for the classification of their areas. The one-fifth of designated doctors with practice lists below 2,500 fall into this category, and a similar typology can be applied to the other areas. In open areas about 470 doctors (three-quarters) fell outside the defining range for this type of area (i.e. between 2,100 and 2,500), and the majority of them (about 336) exceeded the upper limit - that is, their practice average lists were 2,500 or more, yet they were not eligible for a designated areas allowance. In the intermediate areas about 210 doctors (four-fifths of the total) had lists below 1,800 or above 2,100, and 84 (54 per cent) of the restricted doctors had average practice lists above 1,800. These figures do not invalidate the arithmetic of the Medical Practices Committee in calculating mean list sizes, nor do they imply an undue delay on the Committee's part in revising the classification of areas as the doctor/patient ratios change; all they show is that, by classifying an area on the basis of its mean list size, many doctors will have actual list sizes outside the defined range for the area. The discrepancy assumes financial significance at the border between open and designated areas, where the allowance is paid to a substantial number of G.Ps. with low list sizes and automatically withheld from an even larger number (i.e. those in open areas) whose individual lists nevertheless meet the criterion for designation.

Table 10.2, which shows the regional break-down of these figures, explains the apparently anomalous position of the South West noted earlier. The first columns give the number and percentage of doctors in designated areas with average practice lists below 2,500, and the last column shows the proportions of non-designated doctors in practices with lists above this figure. Although a fifth of all the designated sample had list sizes below 2,500, the proportion varied somewhat from region to region, and was exceptionally low in the South West. The number of designated doctors in this region is admittedly very low,* but the figures are consistent with the earlier finding that a far higher proportion of principals in the South West had list sizes above 2,500 than were in designated areas. In short, the variability in list sizes within the designated areas was less marked in this region than in the others, and was most noticeable in the West Midlands, where more than a quarter of the designated doctors were in practices with

*The number is, however, the total population of designated doctors in that region (see p. 105).

average lists below 2,500.

The phenomenon of doctors with "small" lists being in receipt of a designated areas allowance, though numerically significant, may have fewer policy implications than the converse situation of doctors with "large" lists (Le. 2,500 or more) being ineligible for the allowance. About two-fifths of all respondents in the non-designated sample were in practices with average lists of more than 2,500 patients, and again there was a fairly wide range between the different regions (Table 10.2). The most favoured region was the North, where little more than a quarter of the non-designated doctors had more than 2,500 patients; but the proportion increased to a half in the North West, and was also high in Yorkshire/Humberside, the East Midlands, and the South East. The effect of paying the designated areas allowance to doctors on the basis of the average list size of their practice rather than the average for their area would be to increase substantially the number of doctors receiving it. It is estimated, for example, that in 1968 just over 800 doctors in England were receiving the allowance without having personal lists above 2,500; and, conversely, some 5,500 G.Ps. with lists above this size were automatically ineligible because they were practising in a non-designated area.* If eligibility for the allowance had been on personal list size there would have been about 4,300 extra recipient doctors in that year - an increase of almost 120 per cent on the number actually receiving it. We argue in Chapter 13 (page) that there are no logical grounds for paying the allowance on the basis of personal list size, but a large number of G.Ps. must nevertheless be wondering whether the designated areas scheme is a mere fantasy. It is to be expected that where the allowance is given on the basis of an area list size some doctors will be ineligible in spite of exceeding the criterion in their personal lists, but it is surprising to find that as many as five and a half thousand G.Ps. in England might be in such a position. Of these, it is estimated that about 1,350 had very large list sizes (i.e. in excess of 3,200) yet still were ineligible, and would be for at least a further three years even if their areas had been declared designated the day after returning their questionnaires.

*It is technically possible for a doctor in a non-designated area to receive part or all of the allowance if a sufficiently large proportion of his patients resides in one (see pages 13 and 36). It is not known how many doctors were receiving the allowance under this condition, but the number is assumed to be quite small, and is in any case unlikely to affect the argument to a significant extent.

Practice Structure

Partnership Size: A consistent difference emerged from the survey data between the practice areas in the size of the practice partnerships to which respondents belonged (Table 10.3). It is seen most clearly in the distribution of G.Ps. in single-handed practices, who made up 17 per cent of the designated sample but 27 per cent of those in restricted areas. Conversely, doctors from larger partnerships (three or more partners) were relatively over-represented in the designated sample. If it is accepted that single-handed practice is becoming an obsolete and inefficient way of delivering primary medical care then the designated areas are in this respect in the vanguard of progress. The slower response in the restricted areas to structural change may reflect the greater resistance to innovation among rural and small-town communities, for these comprise large chunks of restricted territory; but there are also other factors which might encourage the perpetuation of single-handed practice in areas with a widely scattered patient population. Single-handed doctors in all areas were relatively over-represented among G.Ps. with very large and very small lists, and under-represented in the middle range between about 1,600 and 3,000 patients.* Regional differences in the proportion of respondents in single-handed practice were fairly slight (Table 10.4) although some frequencies are very low. East Anglia contained relatively few such doctors and the North West had more than average, but these variations do not account for the lower proportion of single-handed doctors in the designated areas, for the differences remained within every region except the North.

Group Practice Allowance: The group practice allowance was received equally by doctors in each type of practice area (Table 10.5). Just over half of all the principals were receiving a G.P.A. at the time of the survey, but the proportion of doctors in single-handed and two-man practices who were receiving the allowance was almost twice as great among the non-designated doctors (40 per cent) as in the designated sample (21 per cent).** The allowance was naturally distributed among G.Ps. with varying list sizes in a manner that closely followed the spread of

* Note that the figures do not refer to practices; the sample was drawn of individual doctors, and hence the chances of a practice being included increased with its size.

**A group practice allowance is normally paid where the group consists of three or more principals, who may or may not be in partnership, but who must work in close association from a common main and central surgery. The fact that a recipient of the allowance need not necessarily be in partnership accounts for the small number of single-handed doctors receiving the allowance.

partnership size: doctors in receipt of the payment tended in both samples to be over-represented among those with medium lists (i.e. between about 1,600 and 3,000) and relatively poorly represented among those with larger and smaller lists.

Clinics and Health Centres: The respondents in the survey were asked whether their main or branch consulting rooms were in a local authority clinic or health centre. The distribution of replies for each practice area is shown in Table 10.6. The overwhelming majority of doctors had no connections at all with a health centre: neither their main nor branch surgeries were located in one. But the proportion of practitioners who were connected with a centre, either through their main or branch surgeries, was three times as great in the designated as in the restricted areas, with the open and intermediate areas evenly spaced inbetween. The actual proportions are: in designated areas 12 per cent of respondents were attached to health centres, in open areas 10 per cent, in intermediate areas 6 per cent, and in restricted areas 4 per cent. As with the differences in partnership size between designated and non-designated areas, it seems that doctors in designated areas are more likely to be practising in circumstances regarded as indicative of optimum contemporary standards, but, again, there may also be factors other than the responsiveness to change which would explain the variations. One reason for building a health centre, for example, may be the inadequacy and obsolescence of existing premises: designated areas may simply have worse buildings than the others.

Ancillary Help:

The doctors were asked to indicate what ancillary help, either full-time or part-time, they had in or attached to the practice. The response categories included: secretary/receptionist; district nurse; health visitor; other S.R.N./S.E.N.; social worker, other ancillary help. Table 10.7 shows that the proportion of doctors reporting no ancillary help at all rose from 3 per cent in the designated areas through to 10 per cent in the restricted areas. The difference is quite small, but, taken in conjunction with the higher proportion of single-handed doctors in the restricted areas and the lower proportion of principals with attachments to a health centre, it adds further strength to the general impression that the organisation and conditions of practice in these areas are less attuned to contemporary notions of good general practice than in the designated areas. The fact that practices are by definition smaller on average in restricted areas than elsewhere may

mean that their need for ancillary help is less urgent than among the larger practices in designated and open areas, and this would influence the interpretation of the results. Against this, however, it may be argued that adequate supporting staff are equally necessary in more widely dispersed practices, especially in rural areas.

The type of ancillary help among those doctors to whom it was available varied little between the practice areas. About one doctor in five in each area had secretarial/receptionist services only, two in five had a secretary/receptionist and at least one nurse attached to the practice, and about a quarter had these and additional social work help. A slightly higher proportion of doctors in designated than in restricted areas had a nurse working in the practice (65 per cent against 57 per cent), whether as the sole ancillary worker or in combination with secretarial and social work help. About a quarter of the respondents in each type of area had a secretary or receptionist and a nurse and some other type of worker attached to the practice: a proportion that is surprisingly high and is cause for suspicion. In a few cases the "other" worker was identified on the questionnaire as a social worker, but in most instances the doctors merely ticked the "other" response category available on the questionnaire. We do not therefore know what particular skills these workers brought to the practice: they may possibly have been cleaners. Although the sample frequencies of doctors with no help at all are quite low they reveal a marked clustering in both samples among those with small list sizes and those in single-handed practice. Such an association is to be expected, not only because smaller practices are less likely than larger ones to require any sort of additional staff, but also because the restricted areas (which, as we have noted, contained an above-average proportion of doctors with no extra help in their practices) were also characterised by a relative preponderance of single-handed practitioners.

To complement the factual question about any additional staff which doctors actually had in their practices, they were further asked whether they rated their practices in this respect as "most adequate", "adequate", "inadequate" or "most inadequate".* The results are set out in Table 10.8 where they are compared with the actual help available. Looking first at the totals at the bottom of each half of the table it is seen that the mean scale score was identical in both samples (2.9). Nineteen per cent of each sample of doctors considered their arrangements to be "most

*See page for notes on the use of this type of rating scale.

adequate", and just over half rated them as "adequate". At the other end of the scale, only a very small proportion of respondents selected the least favourable category - "most inadequate". These results suggest that, notwithstanding the new financial arrangements governing the employment of ancillary staff introduced in 1966, the overall situation may still not be entirely satisfactory, although we have already stressed the limitations of this type of rating scale. It is worth noting, for example, that although the proportion of doctors choosing the top category ("most adequate") increased in relation to the number and type of staff actually available, **it** remained fairly low even among those who had secretarial, nursing and other help. Only 27 per cent of these doctors in the designated sample rated their help as "most adequate", and a fifth considered **it** "inadequate". The corresponding figures in the non-designated sample were 35 per cent and 13 per cent. It is impossible to tell from their replies whether these doctors remained dissatisfied with the quantity or the quality of the assistance available to them, but **if** the use of a secretary, nurse and other worker is so widely regarded as inadequate one wonders what arrangement would evoke a response of satisfaction.

Tools for the Job

The problem of devising adequate measures of quality in general practice is one that has engaged researchers for many years, and although many studies have succeeded fairly well in defining and operationalising appropriate indices of quality it is probably true to say that the search for simple, valid criteria is a chimera. The difficulty is insurmountable in a study such as this, dependent upon a short postal questionnaire in which most of the questions were necessarily directed to other matters. Yet we felt **it** would be useful to include one or two probes, and results have been presented from questions about practice size, attachment to health centres, ancillary help, and integration into the local medical care system. Together these data provide an outline sketch of some qualitative features of practice in different areas and regions of the country. A more direct probe was contained in a question about the equipment which respondents used in their consulting rooms. It is accepted that the possession of equipment is at best a very crude indicator of quality, but **it** was used in the celebrated studies of Collings² and Hadfield³ in the 1950's, and in a more recent investigation by Eimerl and Pearson⁴. No amount of equipment can make a bad doctor into a good one, but as Lord Taylor pointed out, the lack of a minimum of essential equipment can frustrate even the best doctor.⁵

The tools included in the question, drawn from among those which Eimerl and Pearson showed to be reasonably common in G.Ps. surgeries, were: height scale, E.S.R. tubes, microscope, H.B. meter, sterile gloves, proctoscope, E.C.G. machine, Wright peak flow meter, and equipped emergency bag.* The results are presented as the total number of items checked.

Table 10.9 shows the number of tools checked by doctors in different practice areas. The general impression is one of great similarity between the areas, although doctors in intermediate and restricted areas had a slightly higher mean number of items than those elsewhere. Doctors in the former areas formed a slightly higher proportion than those in designated areas on each number from 5 upwards, but the variations do not suggest any major discrepancies between the areas in the quality of care delivered to patients. Table 10.10 shows, for each sample, the mean number of tools possessed by doctors of different ages and practice circumstances. The results show little consistent discrimination, although in most cases the mean score was higher among the non-designated than the designated doctors within each category. Elderly practitioners (65+) in both samples possessed significantly fewer items of equipment than their younger colleagues, and the effect of working in a health centre is also clearly seen in the results. Designated doctors in single-handed practices possessed more tools on average than the others, and those who rated their access to hospital diagnostic services as "most inadequate" used significantly fewer items; but the reverse obtained in each case in the non-designated sample.

Night Calls

The final question in this section requested the respondents to indicate the number of nights per week, on average, when they were on call for cases other than obstetrics. The same question had been included in Cartwright's earlier survey,⁶ the results showing that "a fifth were on call every night, another fifth for five or six nights a week on average, two-fifths for three or four and a fifth for two or less". On this question, as on several others which were repeated identically from Cartwright's survey, our results differed substantially from hers. Only

* Several meticulous respondents rightly pointed out that although they kept an equipped emergency bag in their consulting rooms they seldom used it there (which is what the question asked). The mere availability of such a bag has thus been included as an item used in the surgery •

one in ten of the doctors in the present survey reported that they were generally on call every night of the week, and almost half ~~were required~~ on duty for less than three nights. But, as Table 10.11 clearly shows, these proportions varied enormously from one practice area to another, with doctors in restricted areas having by far the least number of free nights available to them. The proportion of respondents generally on call every night was almost four times higher in the restricted than in the designated areas (26 per cent against 7 per cent), and whereas over half (53 per cent) of the designated doctors were on call for two or fewer nights the proportion fell to only 22 per cent in the restricted areas. Respondents in open and intermediate areas ~~were~~ generally in a middle position between these two extremes. The more favourable position of the doctors in designated areas is not explained by regional variations, as Table 10.12 shows, for the percentage of these doctors on call for less than three nights in the week was higher than in the non-designated sample within every region except Yorkshire/Humberside and the West Midlands.

An additional factor obviously associated with night duty is the number of partners which a doctor has. Cartwright found that the proportion of doctors on call every night of the week fell from 48 per cent among single-handed doctors to only 8 per cent among those with three other partners, and the same association is found in this survey. But, as Table 10.13 reveals, partnership size does not account for the overall differences between the two samples in the current survey: both this factor and the classification of the area are independently associated with the number of nights on call each week. It is seen, for example, that whereas 30 per cent of the single-handed doctors in the designated sample ~~were~~ on duty every night the proportion was 41 per cent in the non-designated sample; and the percentages of single-handed doctors on call for two or fewer nights were 30 per cent and 19 per cent respectively. Doctors in larger partnerships were on call for correspondingly fewer nights, and hardly any respondents in practices of three or more partners were on call every night of the week. Nevertheless within each partnership size the differentials remained between the two samples.

Summary

We concluded from the previous chapter that although doctors in areas with large list sizes were in certain respects more iSolated professionally than their colleagues with better doctor/patient ratios, their practice conditions were by no means uniformly and consistently

worse. They appeared to have fewer opportunities for medical practice beyond their responsibilities as general practitioners and they also had poorer communication with the local medical care system; but against this doctors in designated areas had much better contacts with teaching hospitals and medical centres than those in restricted areas, and they also reported better opportunities for post-graduate training and refresher courses. How is this reflected in the structure and organisation of the practices in the different types of areas? The survey was not designed to permit an exhaustive study of this question, but certain probes were included in the questionnaire which throw some light onto it.

Although list size is probably the most basic item of information about a practice it is not an independent factor in the context of this study, for practice areas are classified almost exclusively on the basis of their average list size. Nevertheless, an analysis of the range of list sizes within each type of area shows that many doctors were in practices with average list sizes outside the defining limits of their particular areas. About a fifth of the designated doctors had average practice lists outside the defining criterion of designation (i.e. the lists were below 2,500), and the proportion of other G.Ps. falling outside the specified limits for their areas were, respectively, about three-quarters, four-fifths, and a half in the open, intermediate and restricted areas. These discrepancies are significant at the border between designated and other areas, for it is estimated that the allowance in 1968 was paid to about 800 doctors in England whose practice lists were below 2,500 and withheld from about 5,500 G.Ps. in practices with average lists above this size who, by practising in non-designated areas, were automatically ineligible. The effect of paying the allowance on the basis of individual list sizes rather than the average for the area would therefore have been to increase the number of recipient doctors in 1968 by about 4,300 - an increase of almost 120 per cent on the number actually receiving it.

The questionnaire included several indicators of practice structure. The size of the practices to which respondents belonged varied from area to area, most noticeably in the proportion of single-handed practitioners, who constituted 27 per cent of the restricted doctors but only 17 per cent of those in designated areas. The difference is statistically significant and is not explained by regional variations in the concentration of designated areas for it held good within each region except the North. The group practice allowance was received equally by doctors

in each type of practice area, but the physical setting of group practice differed from area to area. Proportionately three times as many designated as restricted doctors had attachments with a health centre (12 per cent against 4 per cent), further evidence that in several small but significant ways the doctors in designated areas were more likely to be practising in circumstances regarded as indicative of optimum contemporary standards.

This impression is further reinforced by evidence about the ancillary help available to respondents, although once again the differences were quite small. The percentage of doctors reporting no ancillary help at all rose from 2 per cent in designated areas through to 10 per cent in restricted areas, and the proportions with a nurse attached to the practice (either full-time or part-time) were 65 per cent and 57 per cent respectively. These differences are independent of regional variations. The more ancillary help that was available to respondents the more satisfied they were with it, but the results nevertheless suggest that the utilisation of ancillary staff may still not be entirely satisfactory. Only one doctor in five considered that his arrangements in this respect were "most adequate", and even among those with secretarial, nursing and other help the proportions rose to only 27 per cent and 35 per cent respectively in the designated and non-designated samples.

A question on the number of items of equipment which respondents had in their consulting rooms (Which was included in the questionnaire as a crude qualitative indicator), failed to discriminate between the different practice areas. Doctors in intermediate and restricted areas achieved slightly higher scores than the rest, but the most significant association was with age: older doctors (65+) in both samples possessed fewer items of equipment than their younger colleagues. The effect of working in a health centre, where equipment is provided by the local authority, is also seen in the results, but the variation is not as large as one might have thought. Finally, the doctors were asked to record the number of nights per week, on average, when they were on call for cases other than obstetrics. The results from this question differed substantially from the identical one in Cartwright's survey, but they did discriminate heavily between the practice areas. Only 7 per cent of respondents in designated areas said they were normally on call every night compared with 26 per cent of restricted doctors, and correspondingly more were on call for two or fewer nights. The size of the partnership obviously affected the number of nights each week in which the doctors

were on call, but the responses clearly showed that this factor operated independently of the practice area. Whereas, for instance, 30 per cent of the single-handed doctors in the designated sample were on duty every night the proportion rose to 41 per cent in the non-designated sample. Doctors in larger partnerships were on call for correspondingly fewer nights, yet even within each partnership size the differentials remained between the two samples.

The results of this chapter are important, and will be taken up again in the concluding chapter. Their significance lies primarily in the conclusion that, contrary to much popular belief, and for whatever reasons, the conditions of general practice in designated areas are somewhat more aligned to contemporary notions of good medical care than those in restricted areas. To the extent that multiple partnerships, based on health centres with a full range of ancillary help, and with adequate free time for the G.P. to study and relax are accepted as valid signs of good general practice, then the greatest room for improvement is seen in those places with the best doctor/patient ratios. To contrast the designated and the restricted areas is, admittedly, to take the extreme cases, but the other practice areas generally fitted evenly between them, and the variations between the designated and the non-designated samples on most of the questions remained even when a control was introduced for regional location. The variations from one practice area to another are astonishingly consistent, and it is difficult to escape the conclusion that what is observed here represents a faithful reflection of what is actually happening up and down the country.

References

1. O.L. Peterson et al "An Analytic Study of North Carolina General Practice" Journal of Medical Education, (1956), 31, 12, 1-165.
2. J.S. Collings. "General Practice in England Today: A Reconnaissance" Lancet, (1950), i, 555.
3. S.J. Hadfield. "A Field Survey of General Practice 1951-2" British Medical Journal, (1953), ii, 683.
4. T.S. Eimerl and R.J.C. Pearson. "Tools for the Job" Journal of the Royal College of General Practitioners, (1968), 15, 447.
5. S. Taylor. Good General Practice, Oxford University Press, 1954.
6. A. Cartwright. Patients and Their Doctors, Routledge and Kegan Paul, 1967.

TABLE 10.1

TYPE OF PRACTICE AREA, BY LIST SIZE

List Size	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Less than 1600	20 (2.9)	41 (6.6)	28 (10.9)	47 (29.9)
1600 - 2199	51 (7.4)	112 (18.1)	83 (32.3)	76 (48.4)
2200 - 2599	105 (15.3)	175 (28.2)	83 (32.3)	27 (17.2)
2600 - 3199	301 (43.8)	203 (32.7)	48 (18.7)	5 (3.2)
3200 - 3799	191 (27.8)	74 (11.9)	14 (5.4)	- -
3800 or more	19 (2.8)	15 (2.4)	1 (0.4)	2 (1.3)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

Note: the list size of a doctor in partnership is taken as the average size of list in the partnership.

TABLE 10.2

DOCTORS WITH LIST SIZES ABOVE AND BELOW 2,500, BY STANDARD REGION OF CURRENT PRACTICE

(Estimates based upon linear intrapolation within the band 2,400 - 2,599)

Standard Region of Current Practice	Designated Sample		Non-Designated Sample	
	Doctors With Lists Below 2,500		Doctors With Lists Above 2,500	
	No.	% of Total	No.	% of Total
North	20	24.1	19	27.1
Yorkshire/Humberside	22	23.7	43	45.7
East Midlands	15	18.1	29	45.3
East Anglia	5	15.6	25	34.2
South East	37	22.4	179	45.7
South West	1	8.3	56	35.2
West Midlands	35	28.5	26	37.1
North West	15	15.6	55	49.1
TOTAL	150	21.8	432	41.8

TABLE 10.3

TYPE OF PRACTICE AREA, BY NUMBER OF PRINCIPALS IN THE PARTNERSHIP

Number of Principals in Partnership	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
1	114 (16.6)	130 (21.0)	51 (19.8)	42 (26.8)
2	176 (25.6)	167 (26.9)	73 (28.4)	49 (31.2)
3	205 (29.8)	152 (24.5)	55 (21.4)	28 (17.8)
4	99 (14.4)	94 (15.2)	42 (16.3)	21 (13.4)
5 or more	93 (13.5)	77 (12.4)	36 (14.0)	17 (10.8)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down Columns, and included in brackets

TABLE 10.4

DOCTORS IN SINGLE-HANDED PRACTICE,
BY STANDARD REGION OF CURRENT PRACTICE

Standard Region of Current Practice	Doctors in Single-handed Practice			
	Designated Sample		Non-Designated Sample	
	No.	% of Total	No.	% of Total
North	16	19.3	7	10.0
Yorkshire/Humberside	17	18.3	19	20.2
East Midlands	9	10.8	10	15.6
East Anglia	1	3.1	8	11.0
South East	26	15.8	92	23.5
South West	2	16.7	37	23.3
West Midlands	18	14.6	14	20.0
North West	25	26.0	36	32.1
TOTAL	114	16.6	223	21.6

TABLE 10.5

TYPE OF PRACTICE AREA, BY RECEIPT OF GROUP PRACTICE ALLOWANCE

Receipt of Group Practice Allowance	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
No	289 (42.1)	281 (45.3)	112 (43.6)	73 (46.5)
Yes	394 (57.4)	336 (54.2)	142 (55.3)	83 (52.9)
Not known	4 (0.5)	3 (0.5)	3 (1.2)	1 (0.6)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 10.6

TYPE OF PRACTICE AREA, BY ATTACHMENT TO LOCAL AUTHORITY CLINIC OR HEALTH CENTRE

Attachment to Clinic/Health Centre	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
No attachment	595 (86.6)	545 (87.9)	232 (90.3)	151 (96.2)
Attachment through main <u>surgery</u> only	44 (6.4)	36 (5.8)	13 (5.1)	6 (3.8)
Attachment through branch <u>surgery</u> only	33 (4.8)	20 (3.2)	3 (1.2)	-
Attachment through main and branch <u>surgeries</u>	2 (0.3)	5 (0.8)	-	-
Not known	13 (1.9)	14 (2.3)	9 (3.5)	-
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets.

TABLE 10.7
TYPE OF PRACTICE AREA,
BY ANCILLARY HELP IN THE PRACTICE

Ancillary Help in Practice	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
No help at all	17 (2.5)	26 (4.2)	10 (3.9)	16 (10.2)
Secretary/receptionist only	158 (23.0)	164 (26.5)	51 (19.8)	32 (20.4)
Secretary/receptionist and nurse(s)	268 (39.0)	233 (37.6)	113 (44.0)	47 (29.9)
Secretary/receptionist nurse(s) and other worker(s)	169 (24.6)	135 (21.8)	61 (23.7)	41 (26.1)
Other combinations	72 (10.5)	58 (9.4)	19 (7.4)	21 (13.4)
Not known	3 (0.4)	4 (0.6)	3 (1.2)	-
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)

Percentages calculated down columns, and included in brackets

Table 10.8

ANCILLARY HELP IN PRACTICE, BY PERCEIVED ADEQUACY OF HELP

Ancillary Help In Practice	Perceived Adequacy of Ancillary Help					Total
	Most Adequate	Adequate	Inadequate	Most Inadequate	Not Known	
DESIGNATED SAMPLE						
No help at all	1 (5,9)	3 (17,6)	1 (5,9)	2 (11,8)	10 (58,8)	17 (100)
Secretary/receptionist only	14 (8,9)	85 (53,8)	48 (30,4)	7 (4,4)	4 (2,5)	158 (100)
Secretary/receptionist and nurse	56 (20,9)	155 (57,8)	52 (19,4)	2 (0,7)	3 (1,1)	268 (100)
Secretary/receptionist nurse(s) and social worker(s)	45 (26,6)	88 (52,1)	29 (17,2)	4 (2,4)	3 (1,8)	169 (100)
Other combinations	12 (16,7)	32 (44,4)	23 (31,9)	2 (2,8)	3 (4,2)	72 (100)
Not known	-	1 (33,3)	2 (66,7)	-	-	3 (100)
TOTAL	128 (18,6)	364 (53,0)	1155 (22,6)	17 (2,5)	23 (3,3)	687 (100)
MEAN SCORE						2,9
NON-DESIGNATED SAMPLE						
No help at all	5 (9,6)	7 (13,5)	10 (19,2)	7 (13,5)	23 (44,2)	52 (100)
Secretary/receptionist only	36 (14,6)	137 (55,5)	64 (25,9)	6 (2,4)	4 (1,6)	247 (100)
Secretary/receptionist and nurse(s)	66 (16,8)	231 (58,8)	87 (22,1)	5 (1,3)	4 (1,0)	393 (100)
Secretary/receptionist nurse(s) and social worker(s)	82 (34,6)	121 (51,1)	30 (12,7)	1 (0,4)	3 (1,3)	237 (100)
Other combinations	8 (8,2)	58 (59,2)	28 (28,6)	1 (1,0)	3 (3,1)	98 (100)
Not known	3 (42,9)	-	3 (42,9)	-	1 (14,3)	7 (100)
TOTAL	200 (19,3)	554 (53,6)	222 (21,5)	20 (1,9)	38 (3,7)	1034 (100)
MEAN SCORE						2,9

Note: Mean scores are calculated by assigning a value of 4 to a "most adequate" response, 3 to an "adequate" response, 2 to an "Inadequate" response and 1 to a "most Inadequate" response,

Percentages calculated across rows, and included in brackets,

TABLE 10.9

TYPE OF PRACTICE AREA, BY NUMBER OF LISTED TOOLS
USED IN CONSULTING ROOM

Number of Tools Used	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Less than 3	110 (16.0)	93 (15.0)	27 (10.5)	24 (15.3)
3	128 (18.6)	130 (21.0)	55 (21.4)	23 (14.6)
4	200 (29.1)	179 (28.9)	60 (23.3)	33 (21.0)
5	116 (16.9)	101 (16.3)	46 (17.9)	33 (21.0)
6	73 (10.6)	75 (12.1)	34 (13.2)	25 (15.9)
7	35 (5.1)	18 (2.9)	17 (6.6)	13 (8.3)
8 or 9	25 (3.6)	18 (2.9)	12 (4.7)	3 (1.9)
Not known	-	6 (1.0)	6 (2.3)	3 (1.9)
TOTAL	687 (100)	620 (100)	257 (100)	157 (100)
Mean Number	4.1	4.0	4.3	4.3

Percentages calculated down columns, and included in brackets.

TABLE 10.10

MEAN NUMBER OF TOOLS USED, BY AGE, SIZE OF PARTNERSHIP,
ATTACHMENT TO HEALTH CENTRE, AND
ADEQUACY OF ACCESS TO DIAGNOSTIC SERVICES

	Mean Number of Tools Used	
	Designated Sample	Non-designated Sample
<u>Age</u>		
Less than 34	4.13	4.62
35 - 44	4.15	4.24
45 - 54	5.05	4.14
55 - 64	4.21	4.14
65 and above	3.76	3.88
<u>Partnership Size</u>		
1	4.45	3.92
2	3.66	4.14
3	4.11	4.03
4 or more	4.01	4.62
<u>Attachment to Health Centre</u>		
No	4.10	4.09
Yes	4.22	4.17
<u>Adequacy of Access to Diagnostic Services</u>		
Most adequate	4.20	4.27
Adequate	4.10	4.16
Inadequate	4.16	4.02
Most inadequate	3.94	4.42

TABLE 10.11

TYPE OF PRACTICE AREA, BY NUMBER OF NIGHTS ON CALL PER WEEK*

Number of Nights on Call per Week	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Every night	48 (7.0)	49 (7.9)	31 (12.1)	41 (26.1)
5 or 6 nights	60 (8.7)	84 (13.5)	34 (13.2)	28 (17.8)
3 or 4 nights	201 (29.3)	202 (32.6)	94 (36.6)	53 (33.8)
Less than 3 nights	364 (53.0)	271 (43.7)	95 (37.0)	35 (22.3)
Not known	14 (2.0)	14 (2.3)	3 (1.2)	-
Total	687 (100)	620 (100)	257 (100)	157 (100)

*Excluding obstetric cases.

Percentages calculated down columns, and included in brackets.

TABLE 10.12

DOCTORS ON CALL FOR LESS THAN THREE NIGHTS PER WEEK,*
BY STANDARD REGION OF CURRENT PRACTICE

Standard Region Of Current Practice	Doctors on Call for Less Than 3 Nights Per Week			
	Designated Sample		Non-designated Sample	
	No.	% of Total	No.	% of Total
North	49	59.0	32	45.7
Yorkshire/Humberside	42	45.2	45	47.9
East Midlands	52	62.7	21	32.8
East Anglia	19	59.4	24	32.9
South East	86	52.1	138	35.2
South West	9	75.0	61	38.4
West Midlands	56	45.5	32	45.7
North West	51	53.1	48	42.9
TOTAL	364	53.0	401	38.8

*Excluding obstetric cases.

TABLE 10.13

SIZE OF PARTNERSHIP, BY NUMBER OF NIGHTS ON CALL PER WEEK*

Number of Nights on Call Per Week	Number of Principals in Partnership				
	1	2	3	4 or more	Total
Designated Sample					
Every night	34 (29.8)	10 (5.7)	2 (1.0)	2 (1.0)	48 (7.0)
5 or 6 nights	24 (21.0)	14 (8.0)	12 (5.9)	10 (5.2)	60 (8.7)
3 or 4 nights	21 (18.4)	77 (43.8)	81 (39.5)	22 (11.5)	201 (29.3)
Less than 3 nights	34 (29.8)	69 (39.2)	105 (51.2)	156 (81.3)	364 (53.0)
Not known	1 (0.9)	6 (3.4)	5 (2.4)	2 (1.0)	14 (2.0)
TOTAL	114 (100)	176 (100)	205 (100)	192 (100)	687 (100)
Non-designated Sample					
Every night	92 (41.3)	22 (7.6)	3 (1.3)	4 (1.4)	121 (11.7)
5 or 6 nights	47 (21.1)	46 (15.9)	20 (8.5)	33 (11.5)	146 (14.1)
3 or 4 nights	38 (17.0)	147 (50.9)	105 (44.7)	59 (20.6)	349 (33.8)
Less than 3 nights	43 (19.3)	69 (23.9)	102 (43.4)	187 (65.2)	401 (38.8)
Not known	3 (1.4)	5 (1.7)	5 (2.1)	4 (1.4)	17 (1.6)
TOTAL	223 (100)	289 (100)	235 (100)	287 (100)	1034 (100)

*Excluding obstetric cases

Percentages calculated down columns, and included in brackets.

CHAPTER 11

THE DOCTOR AND HIS AREA

"My ideal practice would be in a salubrious area with the right middle-class neighbours to consort with, stockbrokers, solicitors, etc."

- G.P. in Essex

"There is everything a doctor needs here - fishing, a golf course, walking, not many people."

- G.P. in Devon

We were concerned in Chapter 1 with elucidating some of the confusion which has existed in the past about the objectives of the designated areas allowance. The point was made that although the original intention of the allowance was to encourage more G.Ps. to settle in areas which, in terms of doctor/patient ratios, are suffering from a shortage of manpower, the payment has sometimes been regarded as a form of compensation for doctors whose lot it is to live and work in the depressed and unattractive regions of the country.* The belief appears to be widespread among the medical profession that the designated areas and their inhabitants are, as it were, a race apart - worthy to receive general medical services, but scarcely fit places in which sensible people would voluntarily choose to live. The replies of many doctors in the survey confirmed the sharp dichotomy which exists in the minds of many G.Ps. between the underprivileged minority in the designated areas and the rest of the population who lead more normal and happy lives. But is the distinction really as sharp as this? Are the designated areas in fact as depressed and as unattractive places as the stereotypic response of many doctors suggests? The question is significant not only for the light which an answer would cast on the confusion of definitions and aims, but also for its relevance in understanding the motivations of doctors in selecting practice areas. We have seen in previous chapters that existing ties which doctors have with places (especially family ties, but also professional ones) constitute an important set of motivational factors - more so, probably, than any aspects of the actual job; but how important are the social qualities of an area?

The question is difficult to answer. How is a socially unattractive

*For example, see Chapter 1, pages 12-14.

area to be defined? One approach might be to draw up a list of area indicators (of housing amenities, educational provision, class and income distribution, open spaces, etc.) and then apply them to designated and non-designated areas, measuring the variations between the two groups. However, quite apart from the practical difficulty that the boundaries of practice areas fail to coincide with any other unit for which statistical data are regularly collected, there is the basic problem that the indicators which we, the investigators, might apply may be different from those which the doctors themselves would accept. An area may be unfavourably rated on a host of "objective" indicators, yet be wholly acceptable to the doctors practising there because their desire for, say, an urban working class environment outweighs or even reduces the extent to which they perceive such indicators to be negative or undesirable. Our historical review of the debates within the profession about the under-doctored areas has highlighted some of the main criteria which members of the profession would themselves employ in assessing the social and environmental value of an area; and prominent among these appear to be the local housing standards, the quality of the schools, the availability of "cultural" (undefined) and recreational outlets, and the proximity of countryside and coastline. Yet even these are very generalised attributes which would presumably not be endorsed by every G.P., and which would, moreover, be differentially evaluated by different doctors. Two G.Ps., for example, may disagree in their evaluation of the same locality, as may two people from any walk of life. If, therefore, we are considering the attractiveness of an area as a possible motivational factor we must focus on the doctors' perceptions of an area rather than on any objective features of it, for it is the subjective impact of a locality that will either attract or repel a prospective practitioner.

At the same time, however, we must distinguish clearly between the subjective appraisals of those actually working in the different areas and the impressions of those who have yet to embark in practice. The technique in this chapter is to contrast the perceptions of doctors in different types of areas with regard to their own localities, and we must therefore bear in mind the strong probability that people who have lived and worked in a locality for a number of years will tend to emphasise the more favourable aspects at the expense, perhaps, of those negative features which might have dismayed them at an earlier date. Ideally this chapter should be concerned with the perceptions of doctors about to enter general practice, for it is largely through these people that the stereotypes about good and bad areas are translated into

manpower terms, but the sample did not extend to medical students or qualified doctors at risk of being recruited to general practice for the first time. This deficiency should alert the reader to a keener sense of caution than usual when evaluating the results presented in this chapter.

The respondents in the survey were presented with five area characteristics, and they were invited to assess their localities for each characteristic on a four-point scale of satisfaction. The characteristics were: educational provision, cultural amenities, shopping facilities, recreational facilities, and suitable housing; and the four points on the scale were: very satisfactory, satisfactory, poor, and very poor.* Tables 11.1 to 11.5 set out the basic results of these questions. The bottom row of each table contains a mean score, derived from simple unweighted Scores of 4, 3, 2 and 1 applied respectively to the response categories 'very satisfactory', 'satisfactory', 'poor', 'very poor'. The distribution between the practice areas of choices for the highest category (very satisfactory) was very similar for each question: the highest proportions of these choices always came from doctors in the open and intermediate areas, and in the first three tables the lowest proportion was registered in the restricted areas. Within the limitations of the questions, therefore, it seems that the differential degree of satisfaction between doctors in designated and restricted areas slightly favoured the former, although G.Ps. in non-designated areas as a whole recorded a higher proportion of 'very satisfactory' responses than those in designated areas. The same pattern is seen in the distribution of mean scores. In each table the mean scores in the open and intermediate areas equalled or exceeded those in designated and restricted areas, and the score in restricted areas exceeded that of the designated areas in only one case (recreational facilities, Table 11.4). This probably reflects the marked penchant among G.Ps. for rural sports and recreations.

Although these results might perhaps have been predicted in the light of our earlier observation concerning the tendency of people to react favourably about their localities (whatever they may have felt about them before moving there), they are nevertheless somewhat surprising. In particular, the low ratings among doctors in restricted areas (which are generally assumed - seemingly by definition - to be the most attractive to doctors) are quite unexpected. Several possible

*See page 237 for notes on the use of this type of scale.

explanations are suggested. One, which is consistent with the data presented in earlier chapters, is that the restricted areas are in fact less attractive places to doctors, in the sense that a majority of G.P.s., wherever they are working, would rate them less highly than the designated areas on most of the criteria used in the survey. The important factor is probably the non-industrialised nature of many restricted areas: they are generally (but not exclusively) located in small towns and rural districts. From this would follow the relative isolation not only from the centres of medical teaching, research and administration (which was noted in Chapter 9) but also from the centres of entertainment, commerce and, probably, education. The availability of suitable housing and recreational facilities, which are less likely to depend upon proximity to a large urban area, were in fact rated just as highly in the restricted as in the designated areas - a point which further reinforces this particular interpretation. An alternative explanation of the facts, however, may be that doctors in restricted areas are, for whatever reason, a more critical breed of men than their colleagues in designated areas, and may consequently have evaluated each question against more stringent standards. They may, in other words, have had a generalised tendency to choose lower ratings, and, had they also been invited to evaluate some designated areas, would have rated them even lower than their own practice locations.

It is a weakness of a simple rating technique such as this that we cannot be sure which of these two explanations is the better one, but we are inclined towards the former. There is no obvious reason why the restricted doctors should, as a category, adopt more critical evaluative standards, and indeed the earlier evidence shows that they did not uniformly choose lower ratings than doctors in designated areas. In some cases the ratings were higher, and in earlier questions which compared the subjective assessments with more objective measures (for example, with respect to direct access to hospital beds and diagnostic facilities) it was shown that a close association existed between the two sets of replies within each sample. None of this is conclusive, but the various bits of evidence suggest that although the designated areas were generally perceived as less desirable places, socially and environmentally, than the non-designated areas as a whole, they nevertheless compared favourably with the restricted areas alone.

Can these differences be largely explained by other factors? The evidence points to a negative answer. Tables 11.6 - 11.8 show the

effects of age, region of current practice, and total length of time in current practice on the mean scores of satisfaction with respect to each of the five amenities. In almost every cell of each table the score in the non-designated sample is higher than the corresponding cell in the designated sample - clear evidence that, notwithstanding these factors which might have influenced the distribution of responses, the designated doctors generally selected lower points on the scale to describe their areas. However, these factors were also in some ways associated with the selection of satisfactory responses. Table 11.6, for example, shows that older doctors (especially those over 65) often recorded a higher degree of satisfaction than younger G.Ps., although the tendency was more marked in some questions than in others. The evaluation of educational provisions shows a clear gradient in this respect, with the mean scale scores increasing regularly with age, but it is possible that the stage of family development rather than the doctor's age was the important factor in this case. In both samples the proportion of 'very satisfactory' responses increased from about one fifth of doctors with no children, to a quarter among those with children under 11, and to almost two-fifths for doctors with children of secondary school age. The responses to the question about cultural amenities show a similar pattern of rising satisfaction with increasing age, but the availability of suitable housing, by contrast, was rated almost identically by all doctors within each sample, regardless of their age. Broadly similar trends are seen when the scale scores are distributed according to the length of time which the doctors had spent to date in their current practices (Table 11.7). This is to be expected, since age and length of time in practice are themselves positively related. It is, however, interesting to note that, with the exception of educational facilities, there was no consistent tendency for doctors to react either more or less favourably as their familiarity with the area increased. This result is significant in relation to the problem of retaining doctors in certain areas, as noted in Chapter 6.

Lastly, as Table 11.B shows, doctors in different regions varied quite widely in the degree of satisfaction which they expressed about their localities; but few clear regional patterns seem to emerge from the data. In the designated sample East Anglia ranked lowest of the eight regions on almost all counts (though the frequency in this region is admittedly low), while the North West, the East Midlands and the South East each achieved consistently high rankings. In the

non-designated sample, on the other hand, the East Anglian doctors were fairly prominent among those expressing favourable responses (along with doctors in the South East, Yorkshire/Humberside and the North West), whilst those in the East Midlands scored low. In sum, it is clear from the table that substantial inter-regional differences did exist in the doctors' ratings of their areas, but that these variations neither adequately explain the better overall ratings in the non-designated areas, nor reveal any complete consistency between designated and non-designated doctors within any region in their evaluation of their localities.

Summary

In completing our review of the features of each type of practice area which might attract or repel potential practitioners this chapter is concerned with some non-professional amenities - education, culture, shopping, recreation and housing. The data are used to test the assumption, commonly held among the profession, that the designated areas are not only deprived of manpower but are also lacking in those other amenities which go to make up a desirable and attractive practice location. Naturally, no claim is made that the selected characteristics are comprehensive indicators of the social and environmental value of a locality, although they do reflect the predominant interests expressed by representatives of the medical profession. The emphasis in the questions was on the satisfaction which doctors subjectively felt about their localities, since the attractiveness of an area as a possible motivational factor depends upon the individual's perception of the area rather than any objective feature of it. Accordingly, respondents were invited to rate each of the five characteristics on a four-point scale, ranging from 'very satisfactory' to 'very poor'.

The results show that the percentage of doctors choosing the most favourable response category ('very satisfactory') was higher in the non-designated than the designated sample for each of the five indicators. So also was a simple unweighted score of satisfaction, compiled in a way that took account of the range of responses for each indicator. On a comparison between the two samples, therefore, the designated areas commanded a lower overall rating (scale scores) than the non-designated areas, but if the latter are then broken down into their constituent parts the restricted areas emerged with the worst ratings of all - worse, in a straight comparison with the designated areas, on each indicator except the perceived availability of recreational facilities. Various

clues suggest that these results cannot be explained by a generalised tendency among the restricted doctors to choose lower ratings than the designated doctors: rather, it appears that the restricted areas, being situated predominantly in rural and small-town localities, are relatively isolated not only from the centres of medical teaching, research and administration (Chapter 9) but also from the centres of entertainment, commerce and, probably, education.

The influence of three factors which might possibly affect the way doctors evaluate their areas (age, regional distribution and length of time in the practice) is assessed, and the conclusion is drawn that they do not account for the general differences between the designated and non-designated samples. Within each sample, however, each factor does differentiate the responses to some of the questions. Thus, older doctors in both samples rated the educational provisions of their localities more highly than their younger colleagues (although the stage of family development was also related to the degree of satisfaction expressed), and they were also more satisfied with local cultural amenities. Broadly similar trends are seen when the scale scores are distributed according to the length of time which the doctors had spent to date in their current practices. Regional variations in response were somewhat less consistent between the two samples: in the designated sample, for instance, East Anglia ranked lowest of the eight regions on all five questions and the East Midlands ranked consistently high, whilst in the non-designated sample the positions of the two regions were almost exactly reversed.

TABLE 11.1

RATING OF EDUCATIONAL PROVISIONS OF AREA, BY TYPE OF PRACTICE AREA

Rating of Educational Provisions	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very satisfactory	179 (26.1)	218 (35.2)	94 (36.6)	27 (17.2)
Satisfactory	320 (46.6)	268 (43.2)	102 (39.7)	68 (43.3)
Poor	117 (17.0)	72 (11.6)	43 (16.7)	38 (24.2)
Very poor	44 (6.4)	27 (4.4)	6 (2.3)	17 (10.8)
Not known	27 (3.9)	35 (5.6)	12 (4.7)	7 (4.5)
Total	687 (100)	620 (100)	257 (100)	157 (100)
Mean Score	3.0	3.2	3.2	2.7

Percentages calculated down columns, and included in brackets.

Note: mean scores are calculated by assigning a value of 4 to a 'very satisfactory' response, 3 to a 'satisfactory' response, 2 to a 'poor' response, and 1 to a 'very poor' response. 'Not known' responses are excluded.

TABLE 11.2

RATING OF CULTURAL AMENITIES OF AREA, BY TYPE OF PRACTICE AREA

Rating of Cultural Amenities	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very satisfactory	129 (18.8)	198 (31.9)	84 (32.7)	28 (17.8)
Satisfactory	307 (44.7)	257 (41.5)	113 (44.0)	54 (34.4)
Poor	181 (26.3)	115 (18.5)	47 (18.3)	61 (38.9)
Very Poor	61 (8.9)	34 (5.5)	12 (4.7)	13 (8.3)
Not known	9 (1.3)	16 (2.6)	1 (0.4)	1 (0.6)
Total	687 (100)	620 (100)	257 (100)	157 (100)
Mean Score	2.7	3.0	3.1	2.6

Percentages calculated down columns, and included in brackets.

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.3

RATING OF SHOPPING FACILITIES OF AREA, BY TYPE OF PRACTICE AREA

Rating of Shopping Facilities	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very satisfactory	238 (34.6)	262 (42.3)	95 (37.0)	37 (23.6)
Satisfactory	339 (49.3)	295 (47.6)	126 (49.1)	81 (51.6)
Poor	84 (12.2)	44 (7.1)	32 (12.5)	34 (21.7)
Very Poor	17 (2.5)	7 (1.1)	3 (1.2)	4 (2.5)
Not known	9 (1.3)	12 (1.9)	1 (0.4)	1 (0.6)
Total	687 (100)	620 (100)	257 (100)	157 (100)
Mean Score	3.2	3.4	3.2	3.0

Percentages calculated down columns, and included in brackets.

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.4

RATING OF RECREATIONAL FACILITIES OF AREA, BY TYPE OF PRACTICE AREA

Rating of Recreational Facilities	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very satisfactory	181 (26.3)	245 (39.5)	102 (39.7)	51 (32.5)
Satisfactory	333 (48.5)	271 (43.7)	114 (44.4)	74 (47.1)
Poor	135 (19.7)	65 (10.5)	30 (11.7)	23 (14.6)
Very poor	27 (3.9)	22 (3.5)	8 (3.1)	9 (5.7)
Not known	11 (1.6)	17 (2.7)	3 (1.2)	-
Total	687 (100)	620 (100)	257 (100)	157 (100)
Mean Score	3.0	3.2	3.2	3.1

Percentages calculated down columns, and included in brackets.

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.5

RATING OF HOUSING AVAILABILITY IN AREA, BY TYPE OF PRACTICE AREA

Rating of Housing Availability	Type of Practice Area			
	Designated	Open	Intermediate	Restricted
Very satisfactory	177 (25.8)	213 (34.4)	91 (35.4)	46 (29.3)
Satisfactory	373 (54.2)	287 (46.3)	117 (45.5)	76 (48.4)
Poor	93 (13.5)	81 (13.1)	34 (13.2)	22 (14.0)
Very poor	35 (5.1)	19 (3.1)	8 (3.1)	9 (5.7)
Not known	9 (1.3)	20 (3.2)	7 (2.7)	4 (2.5)
Total	687 (100)	620 (100)	257 (100)	157 (100)
Mean Score	3.0	3.2	3.2	3.0

Percentages calculated down columns, and included in brackets.

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.6

MEAN SCALE SCORE OF SATISFACTION WITH EDUCATIONAL, CULTURAL, SHOPPING, RECREATIONAL AND HOUSING AMENITIES, BY PRESENT AGE

Mean Scale Score With Respect to:	Present Age				
	Less than 34	35-44	45-54	55-64	65 and over
<u>Designated Sample</u>					
Education	2.9	2.9	3.0	3.0	2.8
Culture	2.8	2.2	2.7	2.8	3.2
Shopping	3.3	3.1	3.2	3.2	3.4
Recreation	3.0	3.0	3.0	3.0	3.3
Housing	3.1	3.0	3.1	3.0	3.1
<u>Non-designated Sample</u>					
Education	3.0	3.0	3.1	3.2	3.2
Culture	2.9	2.9	3.0	3.0	3.1
Shopping	3.1	3.2	3.2	3.3	3.4
Recreation	3.3	3.2	3.2	3.2	3.1
Housing	3.0	3.2	3.1	3.2	3.0

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.7

MEAN SCALE SCORE OF SATISFACTION WITH EDUCATIONAL, CULTURAL, SHOPPING RECREATIONAL AND HOUSING AMENITIES, BY COMPLETED YEARS IN CURRENT POSITION

Mean Scale Score With Respect to:	Completed Years in Current Position				
	Less than 5	5-9	10-14	15-19	20 and over
<u>Designated Sample</u>					
Education	2.9	2.9	2.8	3.0	3.1
Culture	2.6	2.7	2.6	2.7	2.9
Shopping	3.3	3.1	3.0	3.2	3.3
Recreation	2.9	3.0	2.9	2.9	3.1
Housing	3.1	3.0	3.0	2.9	3.1
<u>Non-designated Sample</u>					
Education	3.1	2.9	3.1	3.0	3.2
Culture	2.9	2.9	3.0	2.9	3.0
Shopping	3.1	3.2	3.2	3.3	3.3
Recreation	3.2	3.1	3.2	3.3	3.2
Housing	3.1	3.1	3.2	3.1	3.2

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

TABLE 11.8

MEAN SCALE SCORE OF SATISFACTION WITH EDUCATIONAL, CULTURAL, SHOPPING RECREATIONAL AND HOUSING AMENITIES, BY STANDARD REGION OF CURRENT PRACTICE

Standard Region of Current Practice	Mean Scale Score With Respect to:				
	Education	Culture	Shopping	Recreation	Housing
<u>Designated Sample</u>					
North	2.9	2.6	3.1	3.1	2.9
Yorkshire/Humberside	3.0	2.7	3.2	2.9	3.0
East Midlands	3.1	2.9	3.3	3.0	3.2
East Anglia	2.4	2.2	2.9	2.4	3.1
South East	3.0	2.8	3.2	3.0	3.0
South West	2.8	2.9	3.4	3.2	3.0
West Midlands	2.9	2.7	3.2	2.9	3.0
North West	3.1	2.9	3.4	3.1	3.1
<u>Non-Designated Sample</u>					
North	3.0	2.7	3.0	3.2	2.9
Yorkshire/Humberside	3.2	3.0	3.4	3.2	3.3
East Midlands	3.0	2.7	3.0	3.0	3.0
East Anglia	2.9	2.9	3.2	3.3	3.2
South East	3.2	3.2	3.4	3.2	3.1
South West	3.0	2.8	3.2	3.3	3.1
West Midlands	2.9	2.7	2.9	3.0	3.2
North West	3.2	2.9	3.3	3.2	3.3

Note: mean scores are calculated as in Table 11.1, and exclude 'Not known' responses.

CHAPTER 12

THE DOCTORS SPEAK

"The G.P. is in the front line of the battle, but nobody bothers to ask him his opinion about things."

- G.P. in Norfolk.

In previous chapters we have used the survey data to highlight the main factors associated with mobility and with the tendency to settle in designated areas. Chapters Five and Six described the correlates of mobility, Chapter Seven assessed the influence of home area and medical school on the choice of practice location, and the last four Chapters have set out some of the professional, personal and social differences between G.Ps. in different practice areas. In this penultimate chapter we move from the objective quantitative analysis to a more subjective level by considering the doctors' own accounts of some factors which have motivated them throughout their careers. The material in this chapter is drawn partly from the free-answer questions included in the main survey, and partly from the tape-recorded follow-up interviews with a selected sub-sample of respondents (see Chapter 4, page 108). It is used mainly to illustrate some of the points contained in earlier chapters, and there is consequently no implication that the quotes included in this chapter are in any way representative of all G.Ps. in the survey.

The Designated Areas Allowance

We concluded in Chapter Two that although the designated areas allowance had been in existence for an insufficient period of time when the survey was conducted to permit a detailed assessment of its effectiveness, there was nevertheless no evidence that it had substantially influenced the distribution of doctors. The trend towards the equalisation of list sizes had been visible since about 1961 (without any disruption in 1966/67 when the allowance was first introduced), and there is no clear evidence that the recent pause in the spread of the designated areas has been due to the new allowance, since the last few years have also seen a rising net increase in the total number of G.Ps. in the country. How do the doctors themselves feel about the allowance?

In their survey of 260 male G.Ps. in East Yorkshire, South Hampshire and Glamorgan, Brown and Walker¹ asked their respondents specifically whether the allowance was likely to attract them to a designated area. Only 12 per cent thought that a £400 allowance would attract medical students to under-doctored areas, and even fewer said that they themselves would have been influenced by it. The reason for this seemed to lie in the widespread feeling among the doctors that their current incomes were reasonable compared with those of G.Ps. in other parts of the United

Kingdom: 85 per cent of that sample expressed this opinion, with the proportion rising to 93 per cent among those who had graduated since 1955. Brown and Walker conclude that "by 1968 medical incomes were so high, at least by British standards, that it would take a very large carrot indeed to make more than a marginal difference to a young doctor deciding where to practise, or to dislodge an older doctor from a practice where he was otherwise happy. In fact those who were contemplating a move within this country were considering areas where their incomes would probably be smaller."

A similar feeling of scepticism about the effectiveness of the allowance as an inducement was evident in our survey, although by no means all the respondents were hostile to the principle of the payment or wished to abandon the scheme entirely. A substantial number of doctors accepted the need for inducements and agreed in principle with the use of cash incentives, but were critical both of the current amount of the allowance and the regulations governing its payment. Expectedly, doctors in designated areas were more enthusiastic about the allowance than those not in receipt of it, and they were less critical of its administration. In all, just over a third of all the respondents expressed views about the allowance which were broadly classified as "favourable", although many of these also added riders about the scope and administration of the scheme, and several made it clear in their replies that they were judging the payment as a compensation rather than an inducement.

'I am doubtful if the allowance has any great effect in attracting doctors, although it probably provides some compensation to doctors already in the area who are overloaded.'
(038293)

'I think it should be paid. Some districts require heroes to practise in them.'
(061345)

'Any doctor practising in an industrial area is entitled to a higher remuneration because of his increased workload.'
(084949)

'I have sacrificed a larger income to find a more congenial practice and I am pleased that people practising in less pleasant surroundings should get paid more.'
(018562)

Relatively rare was the doctor in the East Midlands who felt the allowance was one of the factors which had attracted a young British graduate to his practice instead of to the twenty others from which he had had offers. Typical of the many G.Ps. who approved the payment in principle but who had reservations about it in practice were these replies:

'I think the allowance is reasonable and fair, although with taxation as it is £400 is not enough. The government is already getting doctoring in the areas on the cheap, and the added strain is so great that a heavy inducement to encourage more help is needed. The appalling strain on a good doctor of not having time to take a proper history, or do thorough examinations, is never mentioned; it is his conscience which suffers when there is a disaster, not the politicians.' (025477)

'We are all on very full lists (24,000+ between seven of us) and try as we might we can't get another partner on the basis of 3 months assistantship and 3 years to parity. If the designated area allowance was more we could offer better financial terms.' (030580)

Several reasons were offered as to why the allowance has been largely ineffective. The most important was simply that £400 (the amount of the allowance at the time of the survey) is far too small a proportion of the average G.Ps. income to be a realistic inducement.* After deducting tax (and possibly surtax also), nothing is left to compensate for the upheaval of moving, and most respondents felt that the net amount was not sufficient to attract even a new entrant to general practice if he could get a more congenial post elsewhere.

'Doctors are now in the happy position (owing to the paucity of their numbers) of being able to choose their type of practice, and £400 is poor inducement these days for an industrial practice and all it entails.' (046265)

'I am in receipt of such a payment. It is a valuable addition to my superannuable income, but it does nothing to promote an increase in the medical population locally.' (133397)

'This is a designated area and I am glad to have the extra money, but I doubt if any doctor would deliberately look for a practice in a designated area for the sake of £400 per annum.' (085622)

'If you are earning £4,500-£5,000 gross, would an extra £400 make you prepared to live in Wigan?' (015141)

'Financial benefit is little encouragement to the doctor who has an excessive workload, and an additional £400 is hardly likely to attract new doctors into an acknowledged 'difficult' area at a time when entrants to practice have so wide a choice of attractive areas which offer very good facilities medically, and early partnerships on excellent terms.' (085617)

*See Appendix F for an analysis of the items of remuneration of general practitioners.

'To be cut off - say, practising in a community of non-whites - this I think is where you need to attract them with money. But £400 just isn't enough for a practice like that where there's no decent medical centre, no night cover and no opportunity to do outside jobs. This to me would be the time when I would need compensating, but a mere £400 wouldn't be enough.' (067368)

'You take Burnley, for example. I was there in 1950. If it's the same as it was then you wouldn't get me there for less than £2,000 a year extra. I'm quite serious - it was a filthy hole.' (067372)

The allowance probably works best as an incentive to newly qualified doctors when there is moderate competition for vacancies, as may happen over the next decade. At present, with almost no competition, a carrot of this size is unlikely to overcome any doubts which a young doctor may otherwise have about a particular area when he can easily get a job elsewhere. Equally, when competition is as fierce as it was in the 1950s, an allowance is largely irrelevant to doctors who are glad to get a living anywhere. We cannot be sure what the effect of the allowance would have been had it existed in the 1950s, but most doctors, thinking back, felt that it would probably not have swayed their decisions; they would have continued applying for every advertised vacancy and accepted the first one they were offered with relief. In any case, several older G.Ps. confessed their gross ignorance about the financial aspects of general practice when they first entered, implying that they might not even have known about the allowance and the regulations governing its receipt.

'At that time I was terribly ignorant about the financing of general practice, and probably lots of applicants are at the start of their careers.' (021470)

'We were absolutely green when we went there. We didn't know what the snags were, we fell for the lot ••• Later the B.M.A. told us "you shouldn't have signed that". (009041)

Most doctors knew about the allowance and some had fairly strong views about it one way or the other (although a few had apparently never heard of it), but the impression was gained that more might be done to publicise the payment among medical students and doctors in their pre-registration year. The value of adequate publicity is likely to increase following the introduction of the new levels of payment in 1970, and against a background of increasing numbers of doctors entering general practice. The new payments were announced after the main survey had been completed, but there were some indications from the follow-up interviews that the younger G.Ps. might take the upper level as a serious inducement. This is a G.P. of 34:

'At times I suppose just after the income tax has come in you would think yes of course, if you're going to lose £750 worth of income this would be reason enough to make a move. But at other times, when life's okay and you've been enjoying things and nobody's been bloody minded in the surgery, probably not. (Later in the interview) Just to turn over in one's mind the fact of this plus or minus £750 is a most interesting concept. Yes. It clicks up a bit on the adding machine. (085625)

A second criticism of the allowance, voiced by many practitioners, concerned the disincentives inherent in the scheme. One such disincentive was clearly recognised by the Review Body when, in several reports following the introduction of the allowance, the members refused to recommend an increase on the grounds that, should it be fixed at too high a level, the loss would cause financial embarrassment or even hardship to incoming practitioners when the area ceased to be designated. The responses from the survey vindicate the Review Body's fears, for repeatedly the point was made that no doctor in his right mind would set much store by an incentive that was specifically designed to cease as soon as it succeeded. The continuation of the allowance for a concessionary period of three years was often seen as an irrelevant sop. Closely allied to this was a general dissatisfaction with the three-year qualifying period before the allowance is paid: a doctor moving to a designated area during this qualifying period may well be rendering himself ineligible, and hence the incentive to move is weak.

'The workload is present all the time, and does not wait three years.' (053328)

'This area has been designated for most of my time. When a new doctor enters the place it gets re-classified as open for a few weeks. Thus it has not been continuously designated, and the situation is ridiculous.' (027266)

'It should be paid during the period of designation, on a yearly basis, and not be paid later when the doctor may have moved or died. The money can then be used to purchase additional time-saving appliances, or to pay locums for extra off-duty, etc." (015156)

A more serious disincentive, not considered at *all* by the Review Body, is that exerted on the existing practitioners in an area, who have a very strong motivation to retain their allowance by keeping out newcomers. The motivation to preserve the status quo presumably increases in areas where the average list size is only just above the criterion, and where the loss of the allowance would not outweigh the slightly easier workloads resulting from the introduction of new doctors to the area. A similar situation is

likely to occur under the new system in areas where the average list size is slightly above 3,000. Doctors were, understandably, rather reluctant to talk about this particular disincentive, but the survey clearly indicated that in many designated areas an unwritten agreement exists to retain the classification.

'It produces a situation whereby local practitioners see to it that the area stays designated. It is certainly open to abuse.' (046378)

'Paradoxically it leads to doctors being deliberately kept out of designated areas.' (043179)

'Once an area is designated for three years there is a tendency for established practitioners not to seek a further partner if his employment would cause the designated status of the area to be lost.' (030557)

'The person coming into the designated area might be attracted because of the increased cash, but if enough people do it they're not going to get any benefit and they're also going to kipper the doctors already in there.' (069603)

Such disincentives are serious, and cannot be ignored. They will increase as the value of the allowance rises, and the introduction of a two-tier system of payment is likely to add a second point where marginal disincentives are especially high (i.e. where the average list size is just over 3,000 as well as 2,500). The Review Body's answer to the charge of disincentives (that the prospect of the withdrawal of designation from such areas is remote) is inadequate: not only does it undermine the very philosophy of the allowance, it is also based on shaky assumptions. Areas do become de-designated from time to time, and are likely to do so at an increasing rate during the next decade for reasons largely unconnected with the allowance, and the trend towards the equalisation of list sizes indicates that the possibility of an area losing its super-designation is by no means remote. We discuss various ways by which these disincentives might be removed in the following concluding chapter.

A third major criticism of the allowance centred on the arbitrary definitions involved in its administration. Under this heading, doctors complained about the narrowness of designating an area purely on its average list size, and about the anomalies involved in the arbitrary fixing of medical practice area boundaries.

'I practise on the border of a designated area into which I go to treat many of my patients. Likewise the doctors in the designated area without exception have many patients in my area. I consider

in my case this is grossly unfair and have even had a personal hearing in London. This principle still rankles a great deal.' (016527)

'I am surrounded by designated areas where strange to say there is little colour problem, few fights at night and few drunks. The morbidity is less than in my area judging from the load of work of my colleagues in these areas whenever I meet them.' (026254)

'The only proper criterion for extra payment is work done related to difficulties encountered. The present assessment is purely theoretical, e.g. by moving our surgery 200 yards down the road we would be paid £1,600 p.a. gross extra for the same workload.' (105384)

Comments such as these tend to ignore the realities of the situation: it would seem, for example, that G.Ps. who might be eligible for an allowance by virtue of having 60 per cent or more of their patients living in a designated area are not always aware of the possibility, and however the boundaries are drawn there will always be some cases of anomaly and hardship between each side. Nevertheless, there is a strong case for reconsidering the conditions upon which the allowance is contingent, for as well as the difficulties mentioned by the respondents there is the additional problem, revealed in Chapter Ten, that some 5,500 G.Ps. in practices with average lists above 2,500 were ineligible for the allowance in 1968 by virtue of practising outside a designated area. These points are taken up again in the next chapter, which reviews possible changes and amendments in the system of controls and incentives.

Finally, a small section of doctors declared themselves opposed to the allowance in principle.

'My area is designated. I feel that the number of patients in my practice (partnership of two) is huge, and we have to work very hard, day and night. We do our best to provide the best possible medical service. It is very strenuous physically and mentally. I do not think an extra payment of £400 is the answer to this problem. I personally do not think that even £1,000 is the real answer. The principle is wrong. I would very much like to reduce the number of patients and provide a better medical service.' (016541)

'Imagine Dr. A with a list of 3,000 or more. He makes more money and has a designated area allowance. Dr. B., whether in group practice or single, has a list of 2,500. He not only fails to get the allowance but also earns less as his list is smaller. You are making the rich richer and the poor poorer.' (049686)

In most cases the objection appeared to represent a specific example of a more fundamental hostility to the whole concept of a National Health Service. One doctor, for instance, described the allowance as 'a pathetic attempt to treat a symptom, not the cause', another said it was 'a terrible indictment of the Health Service that such an allowance is needed at all', and a third described his feelings about the payments as 'quite unprintable'. The politically oriented responses are typified in these answers:

'I consider this unfair, as I believe in a free-floating market for practise, with restoration of the right to buy and sell practices as before 1948. Such a problem would not then arise.' (025661)

'I strongly disagree with the principle, as indeed I disagree with the whole structure of the N.H.S. as it is at present. It is virtually impossible to get suitably qualified young doctors to come to an area such as this. If the N.H.S. were basically satisfactory one would not need a "designation allowance" for any area.' (037142)

'The real roots of the problem lie in a basic mistrust by many doctors of free medical services on demand by patients. To move into a continuously designated area would risk being swamped by the demands engendered by the lack of any brake.' (030567)

The doctors' comments about the allowance confirm the conclusion in Chapter Two that the payment has as yet had virtually no effect. There is no evidence that it has influenced the distribution of G.Ps., and, consistent with this, there were relatively few doctors who regarded the payment at the original level (£400) as a material inducement - either to themselves or to newly qualified doctors entering the service. It may have been better not to introduce the allowance at all than to pay it for four years at an insignificant level.

Choice of Area

If financial incentives have not in the past been much of an inducement, on what grounds did the doctors in the survey select their practice locations? The question has largely been answered already, for the earlier analyses have indicated three potent factors: the market situation, especially in the 1950s and early 1960s, when doctors took almost any post offered in order to secure a living; the existence of prior connections with the area through family ties; and the existence of professional contacts, stemming particularly from the medical school. Do the doctors' own explanations for their choice cast any further light upon the matter?

Subjective explanations of past events inevitably vary in their validity and potency. Memory is fallible, and is as much a process of reconstruction as of recollection. There are, moreover, different levels of explanation: a doctor may say that he accepted a particular post because he got on well with the other partners or because of the financial prospects, but may not mention that his search for a congenial position was confined to a limited geographical area, where perhaps his own or his wife's parents lived. In spite of these difficulties, subjective accounts are useful in supplementing the conclusions reached by analysing more objective data, and in this case the doctors' own accounts of why they chose their particular areas clearly confirm the conclusions outlined in preceding chapters.

Social and Family Ties

In response to the question 'What influenced your choice of this area as the one in which to practise?' two factors were mentioned more than any others - social or familial links, and professional contacts. Each 'reason' was listed by more than a fifth of the respondents. Family connections and social ties were mentioned by twice as many designated as restricted doctors, and, partly reflecting this fact, were also more significant factors in the choice of area among doctors in the North than in the South. About a third of G.P.s. in the North, Yorkshire/Humberside and the North West mentioned family connections as one of the reasons why they settled there, compared with fewer than a fifth in the South East, South West and East Anglia. Interestingly, doctors in the two Midland regions were the least likely to mention this particular factor. Sometimes the family influences were also bound up with professional considerations.

'My ancestors have been practising medicine in an almost unbroken line in this area since 1680. It has the amenities of 500 square miles of rural practice, its own cottage hospital, and a fairly stable, friendly community.' (029766)

'Strong family ties - my father and grandfather before him had been in general medical practice in this area, which I consequently knew well before entering practice here myself.' (009059)

'I should probably have settled in Edinburgh and gone into partnership with my uncle outside Edinburgh, but because I moved around and met new people, and met my wife, I ended up here. My father-in-law was in practice here: he had been working far harder than I ever had during the war, he had had a terrible war and was tired out, and he said "I want you to come right away, I can't go on much longer." So I came.' (042843)

Most respondents, however, who mentioned the importance of family ties did not have these reinforcing motives of family background.

'When I entered general practice despite many applications I only heard from two, one in Bristol and one in Sheffield. I chose this one because having qualified here I had many friends, and it was near my home and my wife's home.' (061335)

'I'm a Durham man and consider I understand the Durham miner and his ways, and these form the bulk of my practice.' (011745)

'I met a nice young lady here.' (085627)

The influence of the husband's occupational location on a married female G.P. is a special case, and one which might over-ride the woman's own preferences:

'I joined my husband who was already living here. Otherwise I would have avoided this concrete jungle where 60% of patients are adversely affected by housing problems.' (053311)

We were, in this connection, particularly interested in the reverse situation, the wife's influence on her husband's decisions. Chapter 7 explored the relationship between a doctor's current practice area and his wife's home area, and it was shown that the influence is roughly on a par with that of the medical school. It was clear from the interviews, however, that although many doctors had not in fact chosen to settle in their wives' home areas, most had regarded them as equal partners in decisions about moving.

'I think that if anybody is making a move, the place should be assessed by the wife in the first instance. I would say that this is the most important advice I could pass on to young doctors, let the wife assess the new place first.' (009041)

In some instances, in fact, the wife's views seem to have been the dominant ones.

'I think I had as much influence as a wife should have on her husband. At that time it was a mental hospital or divorce, so I suppose it was fairly strong. I scanned the B.M.A., I sent for the forms, I filled them in, and he signed them. We were both in agreement that we should move, and I went through the B.M.J. with a toothcomb and did everything.' (009043)

'I have a notice up on my door down here, "Whatever my wife says shall be done."' (069608)

At times there is an inevitable conflict between the wishes of husband and wife, which in one or two cases has precipitated the break-up of the marriage. This is a wife speaking:

'He is very easy going and I have the driving force behind me. But he won't be pushed, and it made me very obstinate. The more I pushed the more determined he was to stay. I kept saying what's the good of all the money in the world if you can't do the sort of things you'd like to do. I must have led him an awful dance; it must have been terrible for him, because it was uppermost in my mind. The first thing I thought of in the morning was, Oh! When will I leave this place. I just hated it.' (009041)

'It was a small village and I enjoyed the single-handed position I held, with the vicar and the headmaster; but I had no time off. I had the most complicated arrangements to get out socially with my wife, and then if we went out locally - to the pub for instance - I was always pestered by patients. So we just didn't do anything or go anywhere. I was content to go on, but my wife wasn't. We had matrimonial problems, and anyway we parted. My wife went to live in Birmingham and we eventually divorced.' (067368)

More commonly, a wife's difficulties were the basis for a joint decision to move.

'My wife didn't get on with my senior partner. He used to swear at her over the phone. He expected her to be there all the time to answer the phone. She was out in the garden one day hanging up nappies and was a long time answering the phone and he was quite abusive to her. Well, she was unhappy, so we decided to leave. I applied for some posts in Scotland to please my wife.' (067372)

The way in which the decision processes within a family change over time is well illustrated by this G.Ps. wife in the East Midlands:

'When we came here it was primarily John who decided; he was the one who was going to be working in whichever area it was. I came down of course and I saw the house and I saw the area and was happy to come, but I don't think the decision was really mine. But if we are going to move now it would be a family decision. There's all sorts of things, schools, and all the amenities to be taken into consideration as well. Ten years ago it was different. (021470)

Professional Contacts

Together with family and social ties, professional contacts were the most commonly mentioned reason for the choice of practice location. Unlike family connections, however, which were more significant for doctors

entering designated than non-designated areas, the importance of professional contacts was stressed equally by doctors in each type of practice area. Some cases that were classified under this heading were highly individualistic:

'A tip from my brother, a G.P. in New Zealand, that the senior partner here was 83 and contemplating retirement. I carried the old B. on my back for four painful years.' (072375)

Much more typical were these cases, which also illustrate the significance of the siting of medical schools.

'I had been attached to this practice for several weeks in my final year at medical school, as an introduction to general practice.' (011739)

'I had completed a period as surgical registrar at the local infirmary just before joining the practice. The other two principals were well known to me, and recognised in S. as very good clinicians.' (037152)

As mentioned in the previous section, for many doctors the precipitating factors in their choice were both family and profession connections, and for convenience they have been grouped under the first heading. Cases of sons joining the practices of their fathers, fathers-in-law and uncles were relatively common, and one surgery even carried the name 'Dadson'. It is difficult to disentangle the relative weights of each set of factors. Their significance is probably cumulative: the attraction of an area which is known to a doctor for both professional and family reasons is very strong, but, as suggested in Chapter 7, when considered in isolation, family considerations are likely to exert a stronger influence than professional ones.

Practice Facilities

The third most frequently mentioned reason for choosing their current practice locations was given by doctors who were attracted mainly by some feature of the practice itself. It was mentioned equally by doctors in each type of practice area, and was often given as a supporting factor to some other reason.

'I was doing locums until an attractive proposition or practice presented itself, and I had in mind the possibility of going South. But then I was doing a locum in this practice, which was growing, when I was asked if I'd stay on as an extra partner. It was conveniently near my widowed mother.' (029792)

'I wished to practise in the South of England; I was influenced more by a well-organised practice with ancillary help and good local medical facilities than the actual location of the practice.' (009021)

'I chose the practice - the area was decided by chance. It was a group practice with good hospital facilities and the possibility of anaesthetic sessions.' (009053)

'The challenge of 18th Century medicine in a region with 11th Century roads. This is one of the areas left where all-round competence is vital; the nearest hospital is 40 miles away; we work with rescue components of all three services. No place for a pen-pusher.' (006019)

And, ideallistic2lly,

'It was a designated area at the time.' (025672)

Few doctors seemed to have carried out as complete an appraisal as this one:

'An attractive advertisement specifying: 1. Rural area, 2. Dispensing practice, 3. Expanding practice, 4. Interest in scientific medicine. Discovered at interview: 1. The obviously high standard of medicine practised by the principal, 2. The fact that he would make an excellent senior partner (he did, and did better still by resigning after four years), 3. The availability of hospital sessions, 4. Access to diagnostic facilities.' (043179)

Younger doctors were generally more influenced by these considerations than older ones, and it is likely that entrants to general practice will increasingly be attracted by efficient and well-run partnerships, with adequate supporting services and opportunities for hospital work etc. The older doctors in the survey tended to deprecate this trend, arguing that modern aids and facilities do not add to a man's competence as a family doctor and can only serve to attract second-rate practitioners seeking to hide their inadequacies behind an aura of scientific medicine; but this was a minority view. Much more common was the opinion that money spent on improving practice conditions in the unattractive areas would have a much greater effect in attracting doctors to such places than a fairly small financial carrot, but such opinions seemed often to rest on the assumption that practice conditions are invariably and uniformly worse in the designated areas.

Chance and Constraint

The next most frequently mentioned reason for choosing the practice location was Classified as chance or involition. It can scarcely be called a "reason". Just under a fifth of all the doctors in the survey mentioned this as a contributory factor, but it was listed by relatively twice as many practitioners in designated as in restricted areas. In reading the replies to this question we formed the strong impression that G.Ps. in designated areas were much less likely than their colleagues else-

where to have chosen their practices for positive, volitional reasons; rather, their answers consistently bunched around the theme that they had little choice in the matter, that this was the only vacancy offered to them at a time when they had to get a job quickly. There is obviously a related regional bias here also: the importance of chance or involuntary selection increases as one moves from the South of England through the Midlands to the North East and North West; but the time factor does not explain the difference between designated doctors and the rest. It is true that the 1950s and early 1960s were years of extreme difficulty in Obtaining appointments in general practice (even assistantships without view), and most doctors who started their present posts at that time recounted tales of up to 100 applicants for relatively unattractive positions; but it was seen in Chapter B that the designated doctors were no more likely than the rest to have entered their current practices during that period. Typical of the replies classified under this heading is:

, Joined practice in 1950. 90 applicants. Short listed in London. Damn lucky to be accepted.' (014094)

Other answers were more elaborate.

'No choice at all. No money - could not have paid removal expenses - and two babies. In a full-time industrial medical officer's post as an assistant with no hope of promotion and bored to death. At that time (1953) there was an artificial surplus of doctors and jobs were hard to come by. I was offered a partnership on a very thin financial basis and took the chance. I continue to this day to live by courtesy of the Bank Manager.' (045230)

'I was pleased to get in anywhere. I retired from the Colonial Service in 1964 when Kenya became independent and found that it was extremely difficult to get into general practice in the U.K. When applying to Executive Councils I was not shortlisted for interview, and openings which I followed up personally or by answering advertisements for assistants with view came to nought when they realised I was nearly forty. In the end I was lucky to get in anywhere.' (035127)

'At that particular time (I'm talking about 1953) it was nothing to apply for 50 vacancies and not even get shortlisted. In this case I rang the man up and he told me that 200 people had applied. That meant they weren't going to get it and would have to apply elsewhere. Eventually I got an assistantship (in a sea-side town) and after 12 months they offered me a view.' (067372)

'At that time it was only necessary for someone to put in "assistant required" in one line of the B.M.J. and they got 70

replies. There were perhaps 20 or 30 jobs in each week. We had this cyclostyled thing run off and just wrote a covering letter and sent the lot off. We got a reply about once a month. probably about one in ten I should think. (067360)

'When I was looking for a job it didn't worry me where I went. The reason I happen to be here is that I applied to this Executive Council. and to about 29 others. I was interviewed for about 12 jobs; five times in Liverpool and twice in Sussex. The only reason I'm here is that I happened to get the job here. The next job might have been in Lancashire. and I'd have been there. (042842)

The enormous surplus of doctors relative to vacancies in the 1950s undoubtedly created a climate of competition and uncertainty that is unlikely to recur within the next decade at least. For a large number of doctors their choice of where to practise was simply not a choice in a volitional sense: it was a solution forced upon them and, often, gratefully accepted upon harsh or detrimental terms. Many doctors who are now well established in the chronically designated areas first entered them under these conditions, but such constraints will not work in the immediate future to produce similar movements to the under-doctored areas. The emphasis, as current policy recognises, must be on environmental, professional and financial inducements.

Environmental Factors

The last set of factors mentioned by a significant number of doctors as their reason for choosing their practice locations centred almost exclusively on the environment. In a few cases the predilection was positively in favour of an urban environment; occasionally reinforced by a special commitment to service:

'I had been in a rural practice for some years and did not want to spend the rest of my working days opening farm gates and being bitten by dogs.' (024509)

'Industrial area - highly populated where there was a shortage of doctors. I am thus fulfilling a need to the community: also this was an open area to set up practice then.' (114412)

But such doctors were rare: for the most part the utopian environment was rural, with open countryside, fishing and shooting facilities, and a small practice of loyal and uncomplaining country folk who have a due respect for the position of the family doctor. It was surprising how many doctors regarded this as their ideal (38 per cent of the whole sample said in reply to a later question that if they were to move in the future it would have to be to a rural practice), but fewer had in fact been able to achieve

their dream. The proportion of respondents who reported choosing their current practices mainly ~~for~~ their rural properties increased from 10 per cent in the designated areas to nearly half of those in restricted areas, and almost all of these latter were in the West Country or East Anglia. This reply might have come from almost any doctor in Devon, Cornwall or Somerset:

'Having been born in Somerset and living a greater part of my formative years in and around Exmoor and being very interested in all country pursuits, it was only natural that I should seize the opportunity to return when this idyllic rural practice became available.' (035132)

These further replies illustrate the theme:

'It is a quiet, rural area with a small market town and modest inland resort as its centre. The population is fairly stable, of varied type but with no extremes of poverty or affluence. We are within reasonable distance of family connections, the Welsh mountains and the Welsh coast. We are surrounded by unspoilt country of great beauty.' (033110)

'Having done locums in town and country practices I felt I could not tolerate normal impersonal town practice. After searching ~~for~~ months for a country practice with a nice period house I eventually found this place and was offered the vacancy by the Executive Council.' (037149)

'There is everything a doctor needs here - fishing, a golf course, walking, not many people.' (009039)

'General practice in a rural area is still a personal enterprise with more being done for fewer patients. If it were not for the dispensing payments this obviously would not be financially viable. My decision to leave a well-paid suburban practice was made to escape the increasing demands for primary medical care by young London office workers.' (045208)

The theme of escaping from the suffocation of the cities ran strongly through the declared motives of rural doctors - especially those in the West Country, many of whom had formerly practised in urban settings. The yearning for the peace and quiet of rural medicine undoubtedly explains the concentration of restricted areas in regions and counties with low urban densities, notwithstanding the financial loss that is involved in taking a smaller list and the greater isolation from large medical centres. There were signs, however, that younger doctors placed greater emphasis on professional satisfaction than on environmental solitude, and it is likely that in future they will be more attracted by recent innovations in the structure of general practice (for example the tendency towards group

practice, health centres, the employment of ancillary staff, increasing contacts with hospitals, the use of more sophisticated equipment etc.) than by the joys of small rural partnerships, lacking as they do many of these modern aids and innovations.

Some Case Histories

To illustrate some of the diverse routes through which G.Ps. have entered their current practices five case studies are presented of careers in general practice. They are not claimed to be typical in any sense - indeed they have been deliberately selected for their particularly interesting (and therefore unusual) features - but they usefully illustrate the complex interaction of events which determine the geographical orientation of family doctors. The studies are based on edited extracts from the tape-recorded interviews, and certain details have been eliminated or falsified to preserve the doctor's anonymity. Each doctor has given permission for his story to be published. The five doctors were among those included in the follow-up survey (see p.108), and were practising in the counties selected for the interviews. The doctors were all in their forties.

Dr. A., practising in the West Country.

'One day after the results came out in medical school a friend said where are you going to live? I said I don't care, as long as it isn't a teaching hospital. I had general practice in mind from the word go, so I knew the widest experience was to be had in general hospitals. He said I am off to Lancashire, how about joining me? So I just went off to Lancashire. I remained there for two years. It was an excellent experience because I literally worked in all hospital departments. As house surgeon you did gynaecology and eyes as well. As house physician you have the V.D. beds and the skin beds. As casualty, well you are the all-rounder in the hospital. It was very, very good experience. The hospital had 200 beds and it carried just the right basic work for general practice. From there I went to a maternity hospital in the Midlands because I wanted a D.Obst., and I was given a great deal of work that would normally have been done by registrars or senior registrars. I did eight months obstetrics and then went on to do paediatrics in the North East. And then a short time after I had finished my paediatrics I went to the orthopaedic hospital as anaesthetist looking for a post in general practice. The big fact when I applied for a new practice was nothing to do with medicine - I didn't drive. So one or two practices that I looked at said well sorry, old boy, if you can't drive you're not much good to us. That was why I had to turn down an assistantship in Cumberland. I was interviewed for other practices: there was one

at Newcastle and one near Durham. That was an awful place, rows and rows of council houses and this doctor's house almost *in* the middle of them. We arrived on a Sunday afternoon, and he was obviously interviewing several people. We sat *in* the dining room along with all the others. The previous assistant told us that he had been thrown out, and that the principal was having a series of assistants. It was a very curious set-up, the man was an alcoholic or something, and we didn't go there.

Then I was asked to go back to Lancashire where I'd done my first hospital job. It was a contact I had made through the hospital, but I wasn't very keen. It's a sleepy place, a very large Jewish community and people who come from the cotton towns. There was quite a lot of private practice but the place was over-doctored, and the opposition was strong. Eventually I got an assistantship with view *in* the Midlands. I took it because it was the only place where the partner presented the earnings ^{for} the practice and said your future here is extremely secure. He said I would inherit the private patients and the factories which were extremely lucrative. He was offering £200 more than the average at the time, a large Victorian house with 8 bedrooms and a car. I had no money at all at this time, so beggars can't be choosers. It was obvious from the moment I got there that I would have to run the practice despite the fact that he was the senior man. He did four half days a week and disappeared to the West Indies every winter, so I was literally running a one-man show, covering everything. Looking back we were absolute fools, we fell for the lot.

And my wife was unhappy from the moment we arrived. (Mrs. A: It was so dismal and drab, and I became depressed. One day was exactly like the last and I knew tomorrow would be exactly the same again and I couldn't look forward to anything. All I could see was the year ahead being exactly the same as the past one.) After three or four years it became very obvious to me that my wife would not settle there, and from about the fourth year we started looking for other practices. It became almost an obsession, so much so that I applied for practices that I knew I would damn well hate. It was quite a situation to be *in*, living *in* an environment to which neither of us was accustomed. I was from Scotland and my wife from the South West and there we were *in* the industrial Midlands. When we started looking for practices my wife was mad keen on Edinburgh, and I must have looked at five or six practices *in* Edinburgh over the years. But I wasn't all that keen. You know what Edinburgh is like, tall terraced houses, I didn't fancy that.

I was offered three practices *in* Edinburgh and turned them all down, mainly because the houses were not what I wanted. The practices were *in* many ways suitable but the housing situation wasn't. We had also got used to running a large practice with a good income so we had got used to a standard of living that no practices that we looked at *in* Scotland could provide. We liked to wine and dine a bit. We also looked at two practices *in* Aberdeenshire, but they didn't appeal to me because one of them involved running a maternity clinic of approximately 100 beds single-handed, which meant a lot of night work which I didn't fancy. The other thing that put me off was when I stopped at a place and asked a man *if* he could direct me to the late doctor's house (this was a death vacancy). He gave me full directions but I didn't understand two words he said. I said to my wife we won't bother to see the widow, I can't understand a word they say. I had really set my sights on a seaside or country practice as my ideal, and of course this was the pattern before the war when you were prepared to spend 10 years in an industrial practice to acquire the capital to buy a practice *in* a nice seaside town. I saw no reason whatsoever why the Health Service should change this practice. We applied for practice after practice *in* the South West and never got short-listed. I could never understand this. If you weren't short-listed the Executive Council told you who had been appointed, and we used to look pop-eyed at these letters which came; and I would go off to the public library and read the qualifications of these people, and they weren't nearly as good as mine. We decided that perhaps my accent was wrong.

Well, we looked at these practices regularly for about six years, in Devon and Cornwall to start with but then in Shrewsbury, Sutton Coldfield, another two in Warwickshire, and several in the Birmingham area. Then things finally came to a head just before my partner retired. We had this enormous house, you see, and I had bought a half share in it. The senior partner had had two other partners before I joined the practice, and the house was divided into two, with one partner living in each end of the house. Then out of the blue one day, without telling us, *this* family of father, mother and child arrived, asking for the key to get into the flat, whilst he was on holiday. (Mrs. A. I was about seven months pregnant and I sobbed my heart out. It was a terrible experience, you know, *it* was getting dark about seven, *it* was in October, and the man knocked at the door and said 'Can I have the key?' and I said 'What key?' He said 'To the flat next door,' so I said 'What are you going to do?' I had visions of alterations or

something, and he said 'We **are** moving in,' and I asked 'Who's we?' He said 'My wife and child and myself.' That was the end as **far** as I was concerned, and I remember they moved in on the Saturday, I saw this van **arrive** and **it** knocked down the cable for the lights to the garage. Mother came along too and knocked at the door and said which is my daughter's clothes-line. I said neither, they both belong to me. **It** was a nightmare.) Then he converted the outhouses into four garages, and we had people whizzing in and out of the back in their cars with little toddlers running around. And then the coloured people started to come in, and **all in all** that was the beginning of the end.

I started applying far more intensely for practices at this time, but by this time I was getting a bit more choosy, and I said to myself, if I am making a move I might as well make a real move. And **it was** at this time that a friend in South Africa kept pestering me, why not come and join me, I'm making £20,000 and I will give you a half share. He phoned at eight o'clock one day **all the way** from South Africa and said for God's sake come and join me here, so I said to my wife shall we go and have a look at it? I had serious reservations as to whether she would like **it**, but she said **all right**, let's get out of here anyway and go and have a look at **it**. There was a lot of trouble selling the house because the new man hadn't got any capital and couldn't raise a mortgage, and the council would only give him a £5,000 mortgage. So I attended a council meeting and I said well, to help you out (because otherwise the place would have been without a doctor) I am prepared to sell the house **for** £5,000, which means my making a loss of about £2,500. They said, **well** this is fantastically good of you, and they gave him the mortgage for **it** then. But we **didn't** do too well out of **it**.

We **arrived** in South Africa with the temperature well over 100, and I could see my wife wasn't really taken by **this**. And within a very short while **it** was obvious that my friend **didn't** really want me in with him because he **was** always showing me advertisements of practices in Durban and he kept saying, I would recommend you to go and look at these. We then discovered that he had already asked three other people out on the same pretext, but after nine years he **still** hadn't taken a **partner**. We could never work this one out at **all** because, as I said, he had even telephoned me at eight o'clock one morning to ask me to join him. He was making about £24,000 a **year** and he hoped that in subsequent years **it** would exceed £30,000, and we think his reason for asking us to go

was probably something as trivial as showing us how well he had done. Well, we came back very quickly, taking a holiday cruise on the way', and we stayed with my wife's relatives in the South West. By this time I was quite certain I did not want to practise again in an industrial area, that it would have to be a country practice, so I was quite prepared to do locums for a long spell.

I started off as a locum in a holiday camp in the North of England, which was an absolutely killing job, believe it or not, because of the numbers involved. Then someone who knew us in the Midlands wrote to say he was forming a group practice and would we go and join him. He offered £100 a week while I was making up my mind. I said I don't suppose for one moment I shall join you because I spent twelve years there and was only too glad to get out; but I'm quite happy to have £100 a week while I'm deciding. So we went there, and then several executive councils in the area heard that I was back again in the Midlands and instead of me applying for practice vacancies I was getting the clerks of the councils ringing me up saying will you come and practise in our town. But we really felt at this stage, having taken the enormous step of going to South Africa, that if we didn't make our stand then we never would. Well, after that job I had another locum in Staffordshire, and I also looked at two posts in Scotland, but we just didn't have the money at that time to buy the houses or premises. Then there were these two jobs going in the West Country so I applied almost as a matter of routine. After applying we went down to visit my wife's mother for a weekend and we came and had a look at this one, but we weren't at all inspired. My wife has always been attracted to the bright lights, and she was wondering what on earth she would do with herself. A little while later we were saying that we should have heard by now who got those two practices, and blow me the post came, and it was a letter from the Medical Practices Committee asking me to be interviewed in London on the Wednesday. I'd never heard of such a thing in my life: I thought there was something fishy about the practice. I asked some colleagues for their advice and they said I might as well go. So with a very casual letter, because this was a very foggy time, I said if the fog isn't too bad I shall appear before your Committee; if it is very foggy I shall not appear.

It was a lovely sunny day on the Wednesday, so off I went. Two were there to be interviewed, we had both recently returned from abroad, and the other one had connections in this part of the

world; so he was well placed. He was in with the Committee for half an hour, and he came out sweating. He said, they've got tabs on you, they know every move you've ever made in your life in there. I asked whether they knew about his being in Canada (because he hadn't told them) and he said yes. But they rattled through my interview in five minutes, and then they called me back and said, well, Dr. A. its the unanimous decision of this Committee that you **are** the best man to fill this vacancy. I-fill you accept? I said yes. One of them then said don't do anything yet because there will almost certainly be an appeal. Well, an appeal was duly lodged by the Executive Council over the Committee's decision to appoint a doctor over the heads of the local people and in preference to a local candidate; but the Minister turned it down, so here we are.'

Dr. B., practising in the East Midlands

'After I qualified I was allowed one year in house jobs until I had to do my national service, so I went into the Air Force for a couple of years, but wanting ultimately to do general practice. Prior to demob I started getting phone calls from a practice in Sussex asking if I would go down as a trainee assistant for a year. It had been my home, so there was no problem of accommodation, and that's where I did my assistantship. In fact I stayed in Sussex for 15 months because I started at the beginning of a summer spell, and at the end of the 12 months the partner asked me if I would stay on and cover the holidays. I'd been applying for jobs for the last nine months, but didn't have anything, so I stayed.

When I got down to the last three months the Practice Bureau started sending me things. I was applying all over the shop in the South, but I wasn't even shortlisted. They didn't want to know me. The second holiday spell finished and we set off up to our home in Lancashire on a fortnight's holiday with pay, to find, on arrival, that a letter had been dropped in earlier by a doctor in the town. His partner, who had been my wife's family doctor for years and years had died about a year previously, and poor little Dr. M. had been struggling along on his own. He had had one or two assistants who just didn't work out; either they were unsatisfactory from the working point of view, or, lending them one of his cars, they wrote it off. He hadn't had a holiday since his partner had died. I found this note, if I hadn't got anything fixed up and I was at a loose end would I be interested? So I went round and within a week I had started. But I was still

applying for jobs. We had one child and wanted to increase the family, but I thought *it* wouldn't be fair until we had settled somewhere. So I went on applying, with a testimonial from Dr. M. to add to the Sussex testimonial. You see, there was no chance of a partnership *in* that practice. The old partner, who had been my wife's family doctor, had got a son struggling through finals at Manchester and kept failing, and the old boy on his deathbed made Dr. M. promise to keep the practice open for *his* son. So after I had been with him for a bit Dr. M. said, I'd like you to stay for ever, you go down very well here, but I must keep my promise. He didn't stand *in* my way when I was applying.

We looked at lots of places. One week we ~~were~~ *in* Hampshire and a fortnight later *in* Nottinghamshire. But even when I had been shortlisted I either heard nothing or got a stereotyped note saying thank you for coming over etc. but the post has been filled by a friend of one of the partners. I wanted to go South, somewhere near the sea, but thought I was reaching out of my depth to get there. Earlier the Practices Bureau had warned me that the average waiting time from getting on their books ~~till~~ getting settled was ~~two~~ years, and people wanting to go South were waiting up to *five* years. We nearly got several posts but they were filled by friends or relatives. It went on and on like that and then a vacancy came up *in* the South East with an Indian doctor. Well frankly I couldn't care less who a person *is* if you get along all right and like them. So I went down for an interview and he seemed a *nice* chap. He presented the practice *in* glowing ~~terms~~, growing in numbers, etc., so down I ~~went~~. He took me on instantly. But within a fortnight of starting only ~~three~~ people had turned up at the surgery. A request ~~for~~ a house call came in only about ~~twice~~ a week, and altogether this didn't add up to a practice of three and a half thousand and growing. The trouble was I couldn't get him pinned down. He had a brother running a restaurant up *in* London, and most evenings he would go up there and then the next day he'd be sleeping ~~it~~ off. After a fortnight I went *in* to the Clerk of the Executive Council and said, 'Look, what is the *position*?' He said, 'Well, I am not allowed to divulge this.' I said, 'I know you aren't officially, but I have *in* fact come down here with the intention of being an assistant with view to partnership and I can't pin Dr. H. down *into* bringing me in. But *it* all sounds very, very ~~wrong~~ to me that the practice *is* being grossly misrepresented, and I would just like your confirmation one way or the other.' and he said, 'Alright, under those circumstances I will tell you. The numbers

for months have been dropping at the rate of 80 a week, the practice is now under 2,000 and still dropping.' I then confronted Dr. H. the next time we linked up, and he agreed that this was in fact the case, but he wanted me to stay and offered me instant partnership. I said the numbers left aren't really enough to support one let alone two and he said 'Well, if you stay you can have the whole of the take.' I said that was stupid. He didn't even own his own house, and he was renting surgery accommodation underneath his furnished flat. So I said, 'I'm awfully sorry, I like it here, but there's no future for two doctors in this practice.' Then I rang back to Dr. M. *in* Lancashire and asked if he'd got another assistant yet. He said no. I asked why not and he said 'I've been waiting to get a phone call from you.' So back I went. My wife had been there all the time (I'd been staying *in* a guest house in the South East) and so we had smiles and handshakes all round. The old partner's son had failed his finals again, I started applying all over again, and it was like old times.

I applied for about *five* town practices altogether *in* a bunch. I basically wanted a town practice in a partnership, but not in a city - not London or Birmingham. I'd seen enough of these lone wolves scratching around, no time off, wives acting as receptionists. I wanted to get into a partnership and climb up with time. This practice was one of the five and one evening there was a phone call from the senior partner asking us to come over on the Sunday. I said I would be delighted, but I would first have to check with Dr. M. because he might have made alternative arrangements. But the senior partner wasn't listening: he just breezed on. 'We'll see you at 11 o'clock at such-and-such a place. Cheerio! Immediately the phone went again; it was Dr. M. 'Have you just had a call from Dr. S. in --?' Yes. 'Well, the crafty old devil must have booked a couple of rapid calls and asked for me to be blocked while he was ringing you. He's just told me you're going over on Sunday:

So we came over and were taken for a quick drive round. We were given a meal at the Midland Hotel, looked at the surgery house, this, that and the other, and then went back to have tea with the other partners. Before we left the senior partner turned up again and said 'We'd like to have you but you must start a week today. If you can't come we'll get somebody else.' Just like that. So I came over the following Sunday and moved into the surgery house with the previous assistant and his wife for ten days until they moved out. We'd scarcely heard of the

place before we came here. We accepted more or less on the spur of the moment that Sunday. All we wanted was to get settled, and we didn't mind where it was then. We only wanted the house and the job. We had never thought of the people or what things were really like.'

Dr. C., practising in the West Midlands

'While I was finishing my pre-registration jobs I was looking in the journals for a suitable trainee post. I wanted to be a G.P. and I wanted to go into practice with a traineeship behind me. There was nothing in the area of my hospital so I had a free choice of the country. I was married a year before I was qualified and although we both come from Manchester, we were not committed to that area in any way. We thought we would like to try further South. We had some friends in the Midlands, and when we visited them for weekends we often thought how splendid it would be to live within easy reach of them. We had the idea then that the "county town" type practice would best suit our "image", somewhere in the band of country between Shrewsbury and Leicester, and Gloucester and Luton.

In the B.M.J. there was a traineeship advertised in Oxfordshire, which I applied for. The doctor there was delighted that someone from the North had applied and he made me very welcome. I spent a most pleasant year with him and then started looking for a good assistantship.

We began looking in the area from Hereford across to Leicester, South of Birmingham and preferably on the Worcestershire side. Every week I went through all the advertisements in the B.M.J. that were possibilities. There were perhaps 20-30 jobs each week. I had a duplicated "curriculum vitae" and I sent a copy with a covering letter to each advertisement that interested us. I also approached the Medical Practices Bureau in London, and through them I heard of an assistantship in Nottinghamshire. I went for an interview there. It was a mining village and the doctor's house was an old mansion, standing in beautiful grounds with a small bungalow at the entrance. I was offered the job, and told that I would be living in the bungalow, but we couldn't see it at that time as it was occupied. I was not getting any response to my applications and I had not enough capital to remain unemployed so I was in no position to turn it down. We spent all our spare time - and money - making the place habitable, for the first few weeks after we moved in. The bungalow we were put

was disgusting, and we had to spend about £300 on it. It hadn't been touched for 20 years. It was filthy - not just not decorated but filthy - and we disinfested it of its silver fish, cockroaches and its sundry mice and put in new fireplaces, stripped the bathroom out, well, we had got to live there. We recouped some of our money in salary I suppose, but he got a very nice bungalow out of it. The area wasn't what we had expected, either. It was a drab mining practice in a drab mining area, and as far removed from a "county town" atmosphere as it was possible to get. After about 4 months, and several disagreements with the principal over gross inequalities in the duties in the practice, I started to look for another post.

I was getting a bit more experienced. I had an interview in Worcestershire and another in Staffordshire. The doctors there had the area buttoned up, it was a monopoly organisation, and they also ran a little hospital. It was very nice, but it was a condition of entry into the practice that we bought the retiring partner's house at £8,000. All we could raise in loans was about £1,500. We didn't hear any more about that practice. I also went for an interview in Manchester, but I was eventually offered and took an assistantship with view in Herefordshire. We were only there a few months, because it became increasingly clear that I would never be offered the partnership. I was the eighth or ninth tenant of the post, and partnership had never been offered to any of them.

We had to do something other than abortive assistantships, so I thought that by doing locums instead of assistantships I would get better known among G.Ps. in an area. I was struck by the casualness of it all. You finished one locum and then you met another doctor, and it all seemed to be very friendly and casual. I certainly found that doing locums I got a much better insight into what a practice was like, through the patients and through their general attitude towards the practice. They'd got the practice weighed up far better than ever I could in a short period of time, and I soon rumbled that this was a very good way of judging a practice. I did quite a lot of locums - in North Wales, Manchester, Cheshire, Derbyshire, London, Herefordshire, Cheshire again and Staffordshire. It was a hand to mouth existence; you would do one job for a fortnight or a month, and at the end of the month you were often still looking for a job to follow on. And all the time I was still applying for interesting practice vacancies, and single-handed practices advertised by executive councils.

I was short listed for several posts, and when I talked to the other candidates I found that they were having the same difficulties in obtaining a career post. My two University friends also found this period very frustrating, and they both went to Australia, where the different situation enabled them to choose positions that suited them. I was interviewed for two jobs in Lancashire, both on the same day. The morning interview was for a vacancy where the doctor had been struck off. I was offered that one on the spot but I turned it down because I was confident of getting the second job - a death vacancy which I was already temporarily filling as a locum. In fact I was talking to one of the other applicants, a prison doctor, and he felt he was really wasting his time because the sitting tenant always got these vacancies. But in the end he got it, not me. This was all on the same day. I had to make the first decision in the morning (the one I turned down); they wouldn't let me wait until the afternoon to see if I got the death vacancy.

There were other interviews, but this practice I am now in was the only one I was offered. There were 70 applicants for it when it was advertised 12 years ago. It was about my thirtieth application for an Executive Council post and the fifth for which I had been short-listed. It took me from January 1955 until June 1958. You simply cannot talk about choosing an area under these conditions. †

Dr. D., practising in the West Country

'After I qualified I did a house job in Dublin and then went to Jersey. I'd always wanted to join the services. I'd studied medicine during the war and I'd always felt that I should have done something more active, because all my relatives had done something during the war. So I did a short term commission. I was 28 when I joined and this was one of the reasons why I didn't stay on; all the people of the same rank were a lot younger than me. Also we moved round quite a bit and with a young family coming along we felt this wasn't fair, and we'd had enough of the navy by then. I realised that having been in the service my chances of getting an assistantship with view were poor, and it seemed that I would have a better chance as a trainee assistant. I was offered three posts, one in the South (which I turned down straight away because my personality clashed with the man who interviewed me), one in East Anglia and one which I took in the Midlands. I took that one because I thought it offered a better chance of getting experience in general

practice - and **it did**: after about two or three months I was on my **own** running a dispensing practice.

I was a trainee for about a year, then I was an assistant for another year and then I became a junior partner. In fact I didn't sign the partnership agreement, although I **still** continued as a junior partner, starting at a twelfth share and **going** to a tenth share. They weren't giving me any more than this. Then one year I discovered the senior partner was paying super tax and that same year I had paid £6 in tax, and **it** seemed to me a **little** unequal. Had I not had that experience I might not have decided to leave. This was about six years after we went there. To start with we were in the most ghastly old council house and then after four years we bought our own house. And **all** the time the senior partners kept promising me things. This is the thing against a large practice: **two** of them were nice to me and promised me the earth, but when **it** came to a meeting of **all** the partners they were overruled of course. This went on and on, and being a 'tomorrow take care of itself' type, I thought **it** would **all** work out. The point when we realised **it** wouldn't came when we had to choose schools for the children and we found we **COULDN'T** afford what we wanted. Things then began to slot into place and I started applying.

I **hadn't** actually signed anything, but there was this partnership agreement I had been given, so I wrote to the B.M.A. for their advice. They said, good heavens, you **shOULDn't** sign anything like that; and they also wrote recommendations of what a fair agreement should be. I took **this** along to the next partnership meeting and said **this** is what the **B.M.A.** have advised, and the others **literally** tore the letter up. They said, of course, we can keep you to the three month's agreement, so I pointed out that I hadn't got a written agreement. Then they said they would generously not hold me to **it**. Then there was a barney over the house. We owned **it** but the practice had an option on **it**, and they wouldn't pay a fair price for **it**. I was furious, because I'd worked very hard and done more than my fair share. I was so **bitter** about **it** **all**, but on the other hand **if** they hadn't been so rotten we would never have come down here.

I spent about 18 months looking round, and I was shortlisted for quite a few jobs, including **two** in Kent. I was on holiday **in** Ireland and they sent me a cable to flyover. This improved my ego considerably. I had one look (in the **Medway** towns) and turned **it** down the next day because **it** was that **type** of semi-industrial practice

I wasn't prepared to work in at. all. There were quite a few others. I was shortlisted for one in North London. but I didn't go down for the final interview because they wanted £9,500 for the house and everything had been sold except for the actual house. It was a big old Victorian place and I could see us being lumbered for years just converting it. We had a look at quite a number of practices around London - there was one in Surrey - but we couldn't live in London. We didn't want to be too far from the sea. And then three practices came up in the West Country and I was shortlisted for all of them. I knew some people down here and they said that this practice (the one I'm in now) was the best of the three. It was advertised as suitable for one partner willing to take another very soon, or for two men willing to live on a minimum income until it built up. I had a friend in Birmingham and discussed it with him, and we applied jointly. The fact that we applied as a pair was very important for several reasons: both of us had more or less the same qualifications, we were both about the same age and both had the same experience. The fact that we already knew each other was useful because they realised that our personalities wouldn't clash.

We knew very little about this part of the world before we applied. After we applied we came down to have a look at it and we came and spoke to various people here including the local chemist. Although there were over 100 applicants I was the only one who spoke to him, and I was rather intrigued with this because I felt that if anybody from outside knows what goes on in a practice it must be the chemist. It was a financial loss coming down here - I reckon we dropped our income by about £500 a year - but it has been well worth it. The difference between the two practices is the difference between Hell and Heaven. I think the big comparison is that there I was junior of six, whereas coming down here I was more or less the senior partner. I could do what I liked when I liked. and I was able to meet the people down here and sit and talk to them; but there it was a rat race. In my last year there I was doing two surgeries and about 25 visits a day. I did a school clinic once a week, and I was seeing nearly a hundred patients a day. I see little more than that in a week down here. and you know this is better medicine to me, completely. I am more relaxed. I used to like games and to play Rugby, but I'd come in on Saturday, have a snack, go out and play a game of Rugby, come back and then have to finish off my visits. Even on Sunday mornings I used to go out; even on my weekends off I had to

do some visits, so I never really had much time off. The senior partner used to criticise me for going to London; we used to go down at least once a month and looking back it was a break that we had to have to get away, whereas down here we don't really feel the need.'

Dr. E., practising in the West Midlands

My first job was a house physician's job in Dublin. After that I came to London as a house surgeon, and later became casualty officer in the same hospital. I left that job after six months and went into general practice in North London as an assistant. I wasn't committed to general practice. I knew I wanted to do medicine but I never really knew what branch of medicine I wanted to be in. In those days you just qualified and that was it; there was very little post-graduate advice, lots of people just drifted into jobs by chance, you know.

I didn't like my first six months in practice. I was awaiting call-Up and I just wanted to see what general practice was like, but I didn't really fancy it. I did all the work for about £40 a month in those days, with a flat and a car provided. Anyway, I decided that I would like to do psychiatry, so I got a psychiatric job in London, and stayed there for nine months. By this time I was married and I thought I would like to get a place with some decent living accommodation, so I got a hospital job in Wiltshire, still working in psychiatry. While I was there I got the first part of the D.P.M. Well, then I was called up into the forces, by then I had a child, so I signed on for four years in the R.A.M.C. on a short-term commission. I was selected to do psychiatry and this I did in an Army hospital in England. Then I was posted to Catterick as what was called Area Psychiatrist, dealing with the intake of recruits, selecting them and getting rid of those who are obviously poor material. From there I went overseas to North Africa, and while I was there I signed on for an extra year, making five years in all. I spent three years in Tripoli, and then I was posted to Cyprus for my last year. Then I came back to England and by then I had two children, and I wanted to get some money.

So I decided I'd go into general practice as a locum in order to look at various practices. One job that I did was in the North East (I took it mainly because my wife was staying with her parents who then lived near Durham) and while I was there I discovered a chap in a little village nearby who wanted to retire in about a year and was looking for a partner to buy his house. This was a rather attractive proposition: I had decided that I wanted a country

practice on my own - I didn't want any partners. It was an excellent house at a price I could afford, in a village, and it meant that after a year I would be on my own. I went there, and we got on very well with this old chap, and he eventually retired and cleared off, leaving me on my own. Then I came to realise the burdens of single-handed practice. My list was 3,000. I enjoyed the position I held in the village, with the vicar and the headmaster, but I had no time off because there was nobody near enough to work a rota. I had the most complicated arrangements to get out socially with my wife, and then if we went out locally - to the pub for instance - I was always pestered by patients. This is the trouble with a small community you get friendly with some of your patients and finally they start taking advantages. They don't mean to, but they start calling on the back door and not coming to see you in surgery hours, they call you by your first name in the waiting room and there always comes a point when something suddenly crops up and you have to put your foot down, and you lose either a friend or a patient.

Well, eventually we just didn't do anything or go anywhere. I was content to go on but my wife wasn't: after all, one's wife has to be friendly with someone in the village. We had matrimonial problems, and anyway we parted. We had the two children and this was a bit traumatic, but I decided to stay in the village where I was and stick it out. My wife left and went to live in Birmingham and we eventually divorced. However, my practice didn't suffer, this was the thing that pleased me. It involved only the two of us, nobody else.

Then I decided I wanted to get married again. So I made a completely fresh start. I thought I would get far away from there, so my new wife and I went down to the South East. The practice was advertised in the B.M.J. My problems had left me with a few debts and an overdraft, and I wanted to get the maximum I could from the practice. It wasn't a very big list size at the time but it was a very good dispensing practice. I was cautious. I went down on three months trial both ways, but I didn't sign anything or get involved. It was a sort of three months locum, and I found it dreadful. There was very little to do, the surgery consisted of two or three people, with visits maybe only once or twice a day; but nevertheless you had to be tied to the house all day long. I had had this before when I was single-handed, but at least I was kept busy when I had a list of 3,000, and my day was filled with work. But in this other practice patients were very scattered, surgeries very small indeed, two or three or four people, and visits

were few; with the result that probably by 11 o'clock in the morning everything was finished and you sat around anticipating a visit or something ~~till~~ about ~~six~~ when the evening surgery began. I found this even worse. So after three months I decided I didn't want to continue.

I was almost 40 by then, and I thought that with the Emergency Treatment Service catching on I would go to a town practice with a couple of partners who had night cover. I had spoken to lots of single-handed people who had since moved to towns where they have this service, and my whole attitude to practice was changing. I was becoming rather hostile, and if the phone rang I went out, but nevertheless this hostility was there especially if it was 9 or 10 or even later at night. So I saw an advertisement in the B.M.J. again for a practice in the West Midlands and this was it. I came here fourteen years ago and things have since been very, very good.

MObility Plans

Respondents in the main survey were asked whether they were thinking of moving in order to practise in another part of the country (or abroad) in the next two years. More than 90 per cent of the doctors in each type of area gave a negative answer, which, on the basis of past mobility patterns, is probably a close approximation to the numbers who actually did move during the two years following the survey. Expectedly, younger doctors were much more likely to be planning a move than their older colleagues: of doctors under the age of 34 about 14 per cent were planning to move, with the proportion falling to 7 per cent among doctors between 35 and 54, 4 per cent for those aged 55 - 64, and 2 per cent among doctors over 65 (who presumably had it in mind to move to a smaller practice in semi-retirement).

All the respondents, whether or not they were planning to move, were then asked what considerations would be important to them in choosing an area if they were to move. The desire among G.Ps. for a rural or coastal environment, with smaller lists and more time for consultations with patients, came through strongly in the replies. Just under 40 per cent of all the doctors in the survey listed this as one of the factors which they would look for, making it the most important single consideration. Almost half (48 per cent) of doctors in restricted areas gave a rural or coastal practice as their ideal, compared with 36 per cent of the designated doctors. Whilst this may indicate a general tendency for doctors to prefer the type of area to which they have become accustomed, the figures suggest a substantial latent unhappiness among the designated doctors, for it was shown earlier that only 10 per cent of them had originally chosen their

areas for their rural qualities. Typical of the country-lovers' replies are these:

'I would not care to move to an industrial area. I should want a decent house and garden with a bit of individuality, either in a country or country-town situation. I should very much like to be able to sail on my day off and at odd weekends. The practice would have to be quite well organised and my partners easy to get on with. I should like fewer patients than I have at present. The essence of general practice is to have time to talk to people, and it doesn't matter whether one sees them in health centres, group practice premises or the humblest home. I don't agree with some modernists who reckon that home visiting is a waste of time.' (019621).

'I would go to some pleasantly situated country practice, where with fewer hospital facilities the responsibilities of practice would be greater.' (090974).

'I would move to a country practice in order to live in the country, not necessarily near the sea. I should quite like to revert to single-handed practice and go back to involving my wife closely to the centre of the practice. I think this is the one change that is spoiling general practice, that the doctor is not involving himself with the social surroundings in which he works.' (036717).

'Non metropolitan. Fresher air and more open land. Less traffic. Smaller practice and list.' (026218)

A few doctors evidently felt that this kind of practice would contain a more suitable type of person:

'A salubrious area with the right middle class neighbours to consort with, e.g. stockbrokers, solicitors, etc. This is more important than a huge list in a designated area with working class patients.' (133372).

Next in importance after a rural environment, congenial practice facilities were listed as a factor which the doctors would take into account if they were to move. About 35 per cent of all the respondents mentioned the importance of the practice facilities, and 30 per cent also referred to the need for other appropriate professional services to be available. There were no differences between doctors in different practice areas in the importance which they attached to these considerations. Listed here were such things as congenial partners, adequate time off and cover for half days and weekends; adequate hospital facilities with full access; ancillary help; the proximity of postgraduate medical centres; the availability of group practice, often from

a health centre; the availability of emergency treatment services, and so on. Given the current relationship between supply and demand, it clearly emerges from the answers that many doctors would be much more meticulous now about which practice they would join than they had in fact been when they accepted their present posts. In part this is also a result of maturation in general practice, for a doctor with, say, 20 years experience in practice is bound to evaluate a new practice in a different and perhaps more critical light than when he was deciding about accepting his current position. Yet the younger doctors in the survey (those under 40, who were at greatest risk of moving) answered this question in a similar fashion to their senior colleagues: they were just as likely to mention the importance of a rural practice and of adequate supporting services, but relatively more of them felt they would be influenced by the practice itself. This is consistent with our earlier finding that younger doctors were more influenced than older G.Ps. by aspects of the practice when deciding whether or not to take up their present posts.

Other factors were less important to doctors in deciding where to move, if they were to do so. About a quarter of the sample said they would look for adequate educational facilities for their children. The availability of cultural and recreational pursuits would be important to about one fifth of the respondents, although it was clear in many cases that this particular amenity clashed with the desire for a rural existence. Most doctors who spelled out what they understood by 'cultural facilities' limited their replies to 'the theatre', and the dilemma is well captured by this doctor:

'The fishing would have to be very good indeed, and there would have to be lots of theatres nearby.' (067366).

Not quite impossible, but almost! The availability of suitable housing was understandably low in the list of priorities, for almost any area satisfying the other more important criteria would contain an appropriate type of housing suitable to a G.Ps. income. On a similar theme, however, many doctors stated firmly that, if they were to move, there would have to be appropriate surgery premises provided at a cheap price to buy or rent and it was in this connection that health centres were most favourably commended, especially by younger doctors who had not had time to build up much capital. Finally, about one tenth of the doctors were anxious that their move, if they made it, should be to areas with a suitable type of patient. In most cases this meant white, middle-class patients, but many doctors reiterated the dream of the 'ideal' patient - loyal, respectful, considerate and always capable of making an accurate decision of when to call in the doctor. This reply is fairly typical of those classified

under this heading:

'An area of sufficient education and culture where patients would attend the doctor for the prevention and care of disease rather than for financial gain by means of certification.' (049876)

Summary

This chapter draws upon the free-answer replies in the main survey and the tape-recorded interviews in the follow-up survey to illustrate, in the doctors' own words, some of the themes contained in previous chapters.

The response to an invitation to comment on the principle and practice of paying an allowance to doctors in designated areas generally confirmed our earlier conclusion that the allowance has so far had little effect upon the distribution of family doctors, although many respondents were favourably disposed towards the principle of inducements of this kind. Just over a third of all the doctors in the survey expressed views about the allowance which were judged to be favourable, although most of them added qualifications about the adequacy or method of administration of the scheme, and many made it clear in their replies that they were judging the payment as a compensation rather than an inducement. Several reasons were offered as to why the allowance has been largely ineffective. The most important was that, at £400 (the amount at the time of the survey), it was too small a proportion of a G.Ps. gross income to constitute a realistic inducement. The allowance probably works best as an inducement to newly qualified doctors when there is moderate competition for vacancies, and more might be done to publicise the new levels of the allowance among medical students and doctors in their pre-registration year. Another criticism was that the scheme contains severe disincentives both to incoming doctors who might lose the extra income after a short time, and to existing practitioners in the area who may be motivated to keep their areas designated. The introduction of a second level of payment merely adds a further point where marginal disincentives are especially high. A third major criticism of the allowance centred on the arbitrary definitions involved in its administration. Finally, a small proportion of doctors objected to the payment on principle, often basing their criticism on a more fundamental hostility to the very concept of a National Health Service. It is concluded that it may have been better not to introduce the allowance at all than to pay it at an insignificant level (£400). On the other hand there is no evidence that a financial inducement will always be ineffective in overcoming antipathies which doctors might otherwise have towards certain areas.

In reply to the question of what influenced their choice of current practice location, more than a fifth of *all* the doctors mentioned social or family links. This factor was of greatest importance to doctors in designated areas and those in Northern England. Most doctors regarded their wives as equal partners in decisions about moving and settling, even though few had chosen to settle in the area of their wives' homes. A further fifth of the doctors reported choosing their current practice areas because of existing professional contacts in them. Often these were also of a family nature (e.g. sons joining their fathers' practices), but many contacts were made in student days or whilst working in local hospitals. The next most common reason, mentioned by almost one in five of the respondents, had been some particular aspect of the practice - that the prospective partners seemed congenial, that the income or organisation of the practice was adequate, that good hospital facilities existed in the area, etc. Such appraisals were usually made on flimsy evidence, and these factors were often given as a supplementary influence. A further important set of replies was classified as 'chance' or 'involition'. Included here were the substantial minority of doctors who accepted their positions without having any choice in the matter, mainly those entering practice in the 1950s when the competition for vacancies was very strong. Doctors in designated areas were more likely to have taken their current positions for this type of reason than the remainder, and so also were doctors in North of England. Finally, a significant minority of doctors felt that they had chosen the area rather than the particular practice. In most cases the areas had been chosen for their rural qualities (by 17 per cent overall, but by five times as many G.Ps. in restricted as in designated areas), and the yearning for the peace and quiet of rural medicine (which was much stronger throughout the whole sample than we had expected) undoubtedly explains the concentration of restricted areas in regions and counties of low urbanisation.

Several case histories are presented to illustrate some of the diverse routes through which general practitioners have entered their current practices.

Future mobility plans were tapped in two questions in the main survey. In reply to a direct question of whether they were thinking of moving within the next two years, more than 90 per cent of the doctors in each type of area gave a negative answer. Younger doctors in both samples were more likely to be thinking of moving than older G.Ps. All respondents, whether or not they were actually planning to move, were asked what considerations would be important to them in choosing an area

if they were to move. The replies tended to be Utopian. The desire for a rural practice, often single-handed and with a small list, was **very** strong indeed, being mentioned by almost 40 per cent of all the doctors in the sample. The view was also quite strongly expressed that such a practice should contain the 'right' type of patient, meaning white, middle-class, loyal, respectful and considerate people. In addition, many respondents also expected their practices to be efficient, well staffed and equipped, often based on a health centre, and with adequate links and access to the local hospital system. Further, the proximity to facilities normally associated with the city (theatres, choice of schools, etc.) reinforced the ambiguity of many G.Ps.' dreams, for hardly any place in the country combines these amenities with the solitude of rural practice. Undoubtedly the wish to escape from city medicine is deeply implanted in the profession.

References

1. R.G.S. Brown and C. Walker "Motivation and Career-Satisfaction in General Practice" Unpublished paper, University of Hull, 1971.

CHAPTER 13

CONCLUSIONS

"If we do nothing about it, others outside the profession will, and it would be surprising indeed if we found their solutions to our liking."

- Or. E. Townsend (Medical World,
September 1969).

This report has covered an investigation into the geographical location and mobility of general practitioners in England. The investigation arose out of a feeling within the Department of Health and Social Security that an assessment was needed of the effects so far of the Designated Areas allowance, introduced at a single flat rate in 1966 following the Family Doctor Charter of 1965, and amended to a two-level system in 1970. The original objects of the study were, first, to investigate the factors which might affect the movement of family doctors and their choice of practice areas, and secondly, to assess whether or not there had in fact been any significant redistribution of G.Ps. since the introduction of the allowance. It was quickly seen that in order to achieve these basic objectives, consideration would have to be given to historical and philosophical questions concerning medical and government activity in the geographical dispersion of family doctors. We have, therefore, touched upon basic issues of policy at several points in the report, and these are brought together in summary in the concluding discussions in this chapter.

The designated areas scheme: concepts and objectives

It seems clear that a number of crucially important concepts used in debates about the distribution of family doctors have not been systematically defined and are consequently employed in conflicting and ambiguous ways. The common failure to distinguish between the overall supply and the inequality in distribution of general practitioners is an example. One source of this confusion is to be seen in the B.M.A.'s tendency to interpret a rise in the number of designated areas as evidence that the allowance has failed to achieve a more even distribution of G.Ps.¹ Another source, found in the literature on the Subject, stems from the O.H.E. publication, "The Personal Health Services", in 1963,² which presented a chart (p.12) showing the number of patients residing in each type of practice area from 1952 onwards. Open and intermediate areas are described in the chart as ones of "balanced distribution", and the commentary states that "since the mid-1950s there has been less progress in obtaining a better balance in the distribution of doctors". The same chart and commentary was repeated in the R.C.G.P.'s survey of the

present state and future needs of general practice, in 1970;³ and was used most recently by Clarke,⁴ who after presenting the self-same chart comments that "attempts to distribute general practitioners more evenly have met with little success since 1963 (because) the number of people living in designated areas has risen from 9 million in 1963 to 18 million in 1968." It is, however, a matter of common sense that "even-ness of distribution" relates to the variability of list size over the country. An increasing proportion of patients in designated areas might mean that there was a growing imbalance in distribution, but it might equally be a sign that the supply of family doctors was deteriorating relative to the population. If every practice area in the country had an average list of 3,000 the total number of G.P.s. would obviously be distributed with perfect equality, yet the argument advanced by the B.M.A. and by writers such as Clarke should logically lead them to claim that such a situation was one of extreme imbalance, since the entire population would be living in heavily designated areas. In fact, it *is quite* possible to have a situation *in* which the range between areas with very large and very small *list* sizes is *narrowing*, yet where overall list sizes are large and rising. To some extent this happened *in* England during the 1960s. If the average list for the entire country *is* 2,479 (as *it* was in England and Wales *in* 1969), then *quite* small deviations from an even distribution *will* result in *quite* large numbers of designated areas - which may well be a sign that more doctors are needed *in* the system, but which cannot be taken as prima facie evidence of an increasing imbalance.

Even when *it is* clear that certain areas really do suffer a relative deprivation of medical manpower (which, notwithstanding all that we have said above, is unquestionably the case in England today), the method of assessment of progress towards an ideal solution also needs to be specified carefully. Logically, the ultimate aim of the designated areas allowance (though *it* may not in fact be desired) would be a situation in which each practice area had a more or less equal number of patients per doctor, and "There that number was below 2,500. Progress towards such an ideal may, ~~however~~, emphasise one of these two components at the expense of the other, and *it* is therefore a matter of some importance that the criteria by which progress is evaluated should be clearly specified. The two components of extent and depth were analysed *in detail in* Chapter 2 (pages 39-43); at *this* point we merely stress the obvious importance of distinguishing between the two dimensions, and of ensuring that participants in the debate about the distribution of doctors are not only aware of them, but use them consistently and unambiguously. The historical review in Chapter 1 highlighted several occasions where unnecessary confusion and misunderstanding resulted from the failure to do this.

It would become much easier to understand what was happening if some central body (possibly the Department of Health and Social Security) was made responsible for monitoring and reporting trends in the movement (as well as the distribution) of medical manpower. A useful first step in this direction would be to analyse appropriate data which are already collected, if not processed, annually by the Department. As well as presenting information in this way, the responsible organisation would have the further task of commenting on the data in a way that would recognize and draw out the distinctions which we have illustrated in this report. Such a development would provide a means of evaluating the impact of new policies (for example the recent introduction of a two-level system of payment of the designated areas allowance). But we foresee that a regular, on-going monitoring system might have even greater value in the early identification of potentially undesirable trends, suggesting ways in which action might be taken to prevent a future pattern of chronic manpower shortages in particular localities. Exactly how this could be done is a matter for further discussion, but the potential value of such an exercise might be illustrated in the following way. Chapters 5 and 6 of this report contain a certain amount of information which may be new and unexpected for those involved in policy decisions, and which may be found helpful in future planning. In particular, little or nothing appears to have been written elsewhere about the movement of G.P.s. from practice to practice and from one part of the country to another. Yet our results are the outcome of an ad hoc study with certain imperfections - not the least being the fact that we have had to use cross-sectional results to answer questions which should ideally be approached through a longitudinal design. However, much of the basic information in these two chapters is already collected on a routine basis and stored in the Doctor Index.

This Index, which is compiled and held by the Statistics Division of the Department of Health and Social Security, contains certain details, including residential location, of all principals and assistants engaged in National Health Service practice. The information is stored in written documents and on punch cards, and new cards are raised for doctors who are admitted to the Medical List for the first time and for those who change executive councils. The mechanism of updating the Index would therefore be ideally suited to a continuous monitoring of mobility patterns, but the actual method of recording and storing the information is not suitable in its present form. The Index was substantially revised in 1962, and the nature of the changes makes it impossible to undertake retrospective analyses of previous movements. At present only part of the requisite information is stored in punched form, and the fact that it may be divided between a number of different cards, none of which can be conveniently

linked with any other, means that the Index in its present form would not be suitable for monitoring future movements. We feel, however, that certain modifications in the methods of recording information could enable the Index to be used for this purpose, and the possible computerisation of records in the future would greatly enhance the sophistication of the resulting analyses. There are, obviously, administrative and political barriers to be surmounted before the Index could be used in this way, but we would recommend that the prima facie value of doing so should not be instantly disregarded.

One area in which the objectives of the designated areas allowance need clarification is therefore in the use of concepts which describe the nature and extent of the problems of distribution, and which are used to evaluate progress and change. A second major set of objectives which might usefully be reviewed is to be found in the assumptions inherent in the method by which the allowance is administered. These assumptions were set out in Chapter 1 (pages 19-20). The assumption that a list size of about 2,500 roughly represents the maximum number of patients for which a G.P. can reasonably care, (and moreover that the figure is equally valid in all parts of the country), seems to require urgent examination. It may have been a valid criterion of designation in 1952 (although even at that time there was little systematic justification of its choice), but the pace of technical and administrative development has been so rapid during the last two decades that its continuing validity is far from obvious. Perhaps the ideal solution, as we will argue below, is to abandon list size as the critical indicator and to substitute instead more sophisticated measures of medical need and workload; but even short of such a radical restructuring there remains considerable scope for sharpening the definition of an under-doctored area, both by the addition of other available, relevant information, and by incorporating a certain degree of flexibility to suit local variations from one area to another. The functioning of the Scottish Medical Practices Committee might be studied in this connection (see page 37).

The assumption that the current administration of the allowance generally ensures that the allowances reach the individual doctors with the greatest numbers of patients has been laid open to question in Chapter 10. The range of list sizes within areas is sufficiently wide to ensure that a fairly large number of G.Ps. with smallish lists receive the allowance, and conversely that quite a lot of doctors caring for more than 2,500 are automatically ineligible because their areas are not designated. It was shown in Chapter 10 that if the payment was switched from areas to individual doctors, then the numbers in receipt of the allowance might increase by as much as 120 per cent (depending upon the qualifications

stipulated for eligibility). But these figures do not provide a convincing case for basing eligibility on individual rather than area list sizes. After all, the objective of such incentives is to attract doctors into areas with high average list sizes and not to encourage them to build up and maintain large lists. It would, for example, be difficult to justify payment of the allowance to a doctor with a personal list of 2,750 if all the other doctors in the area had lists below 1,500. Such a payment would merely represent an individual bonus to that particular person, and would not in any sense constitute an incentive to other practitioners to move into the area (which would probably not require extra manpower in any case). Conversely, in an area in which all the G.P.s. had large list sizes an incoming practitioner might be denied the allowance (if it were to be paid on the basis of personal list size) while his individual list was building up to the designated level - another situation that would be difficult to defend.

It is clear that basing eligibility for the allowance on the average list size of an area makes more sense in the present context than basing it on the list size of individual doctors or practices.* The crucial question, however, is: what is to be defined as an appropriate area for this purpose? The question takes us to the very heart of the problem, for the payment of the allowance to all doctors in an area can only be justified if the area is a reasonably homogenous community in terms of the need and demand for medical care and the provision of services. The existing medical practice areas manifestly fail in many instances to meet this condition. The boundaries of existing practice areas are determined more by historical accident than rational planning, and when they were first adopted as administrative units by the Medical Practices Committee there were no indications at all that they would ever be used to regulate a component of remuneration. The initial task of the M.P.C. in the early days of the Health Service was to indicate broad geographical areas within which adequate doctor/patient ratios obtained, and the existing practice areas were entirely sufficient for this purpose. When the new allowance was introduced in 1966 the same areas were selected as the basis for determining eligibility - not because they were deemed to be the best possible units, but simply because they were the only existing areas below the level of executive councils in which list sizes were under continuous surveillance. Thus, areas which were intended for one purpose (and which fulfilled the function well enough) were adopted unchanged for a different purpose for which, in retrospect, we can see that they are ill-suited.

* This principle does not conflict with the possibility, discussed later in the chapter, that once a doctor has actually qualified for the allowance he may continue to receive it on a personal basis regardless of subsequent change in his or his area's list size.

Perhaps the main problem concerns the size of the areas: some are much too large and others are much too small. Forty nine county boroughs in England were single medical practice areas at 1st January 1970, which means that in many of the major cities and towns of the country the incentive of the allowance (where it is payable) applies to the entire city, whatever the local conditions. Most large towns contain some attractive areas which have entirely adequate medical services and other areas which are relatively poor and depressed, and where the medical care resources are stretched and overburdened. By determining eligibility for the allowance on the basis of the average list size for a town as a whole, doctors in the attractive parts may receive an extra £490 or £750 p.a. (if the whole town is designated), and conversely, doctors in the truly deprived areas may fail to benefit from the allowance (if the average list for the whole town fails to reach the specified level). The Medical Practices Committee is concerned about the anomalies of large areas and is pursuing a policy of fragmentation wherever possible, but it does not initiate major regradings of areas without the support of the local executive councils and medical committees. Where local pressure groups are determined to maintain the status of a large town as a single practice area (for example, in order to preserve the maximum possible levels of remuneration) it is often inexpedient (though legally possible) for the M.P.C. to over-ride local interests and reclassify the town into smaller units. Hence the anomalies and inconsistencies of the system are perpetuated, although there have been a few instances in recent years where the Committee has succeeded in dividing large county boroughs into several practice areas.*

At the other end of the size scale, further difficulties may occur in areas which are very small. For example, a practice area with 5,000 patients and two principals would probably be classified by the Medical Practices Committee as open. The introduction of a third principal would reduce the average list size to 1,666, indicating restriction; but if one of the two principals retired the average would rise to 5,000, which, with an "overspill" of 2,500, would clearly justify designation. The pursuit of a consistent policy is difficult under such circumstances, especially in administering the allowance. Greater flexibility is available to the M.P.C. in deciding whether or not to allow the admission of individual practitioners to restricted or intermediate areas (a restricted area, for example, may be reclassified as designated for one day only while a doctor is appointed with a type D initial practice allowance), but the same degree of discretion is not available in determining area eligibility for the allowance. The long

* At the same time the Committee has been grouping together very small practice areas, so that there is an overall tendency towards greater homogeneity of areas in respect of population size.

period of time for which an area must be designated before the allowance is actually paid means that its incentive value is virtually eliminated in small areas where the addition or loss of one practitioner can alter the classification by one or more grades.

A related problem is that of identifying the boundaries of "real" areas - that is, areas which could properly be used as the basis for determining eligibility. The problem is easier to state than to resolve, and it is clear that more research is needed on the appropriate criteria for fixing meaningful boundaries. Many existing medical practice areas probably meet the optimum criteria, but it seems clear from our research on this aspect of the problem that many do not. Among these inadequate areas are those which are either too large or too small, and those which, whilst being of appropriate size, fail to delineate "natural" medical care areas. In the absence of the necessary research it is impossible to specify the characteristics of such areas in any detail. It seems desirable that areas should cover communities in which most residents are registered with the same set of general practitioners and which are broadly homogeneous as regards features likely to affect the density of doctors relative to the population. For example, one does not want to include well-doctored and insulated areas with those experiencing a real shortage of G.Ps. It seems likely that ideal areas would differ in population size, depending on such factors as demographic features, population density and natural boundaries. But as soon as an area became too large, or contained too much variation in health standards, or was split between two or more major sources of health care, then in principle it would probably cease to be of optimum value in the administration of controls and incentives.

We consider that further research is needed on the problem of area-definition, and that such research should go beyond the structures imposed by the current policy goals of ensuring an equitable distribution of practitioners in relation simply to population, and should examine the whole basis on which manpower policies should properly be structured. We discuss this theme in greater detail in the last section of this chapter. The desired changes (if any) resulting from both this present research and any further research which might flow from it, might appropriately be introduced in 1973-74 when the restructuring of the Health Services is likely to occur. It is extremely doubtful whether major changes would be politically acceptable before that time (or indeed after the new system has become accepted), but at a time of general change an innovation of this kind might stand a reasonable chance of being accepted. It would seem desirable that intelligence systems should be built into the new structure to provide area-wide medical and social data, against which the suitability of area definitions could be continuously assessed.

Influencing the spatial distribution of general practitioners: direct action

In this middle part of the chapter we concentrate on the more detailed aspects of the designated areas policy; in this section we examine the role of direct action. The term "direct action" is used to denote the structure of incentives and controls that have been deliberately created to influence the spatial distribution of family doctors.

The designated areas allowance. The fieldwork for the study was completed before the new levels of payment became operational in 1970, and we can only speculate upon the possible effects of this increased incentive. The analysis in Chapter 2, however, suggested that the introduction of the allowance in 1966 had not achieved any decisive results by 1970. It is true that the increasing spread of the designated areas seems to have been contained during the last two years, but our general analysis suggests that this is as likely to have resulted from recent increases in the total number of general practitioners as from the redistributive impact of the extra payment. The new type 1 allowance (of £490) is not expected to produce any better results since it merely restores the value of the benefit to about the same proportion of a G.P.s. gross income that it had before the Review Body's Twelfth Report in 1970.* The higher (type 2) allowance may prove to be an effective inducement to new doctors when taken in conjunction with the other financial rewards of practice in a designated area,** provided the various disincentives in the scheme (see below) are somehow eliminated. Unless the latter adjustments can successfully be made then it is unlikely that even the £750 will prove sufficiently attractive. At the other extreme there can be little doubt that if the allowance was raised by a very considerable amount (for example to £4,000 or £5,000) then the major problem might well be that of containing the rush to the designated areas. In fact the real problem is one of balance. There are obvious political and economic limits to the amount which could in fact be paid, but it is unlikely that £750 represents the current ceiling. In spite of its possible attraction for younger doctors the type 2 allowance may amount to no more than 7 or 8 per cent of the gross income (including all allowances) of practitioners receiving it, and its net value to many doctors is hardly likely to outweigh the resistances or objections which they may have to practising in such places.

* See Appendix F for notes on the remuneration of general practitioners.

** Various items of income may be higher in designated than in non-designated areas. In addition to the availability of an initial practice allowance and the increased allowance for the employment of an assistant, the difference between the average list sizes in designated and non-designated areas amounted, at existing rates of remuneration in 1969, to £562 from the standard capitation fee alone, assuming that 13% of the patients in each case were elderly.

The problem of balance arises from the fact that, although existing levels of the allowance may still be too low to radically change the distribution of family doctors, they are probably near to the point at which the disincentives inherent in the current administration of the scheme render them counter-productive. The Review Body has rightly been concerned that the allowance should not be sufficiently large to cause inconvenience or financial embarrassment to doctors who might suddenly have it cut off, and we showed in the previous chapter that many G.Ps. are worried about certain other disincentives involved in the allowance. Our opinion on reviewing the evidence is that the problem of disincentives requires more urgent attention than the question of levels of payment, and that if the former difficulty can be resolved then the current amounts payable may become more effective. (It will, however, be important to monitor changes in the distribution of manpower in a way that will evaluate the impact of the allowance independently of the increasing net supply of practitioners)•

There are two major disincentives (which become increasingly strong as the value of the allowance rises) in the scheme: the qualifying period of designation which an area must undergo before it attracts the allowance, and the cessation of the allowance after the elapse of a concessionary period following de-designation. In the first situation the possible gap of up to three years between moving to an area and receiving the payment, and the possibility in some cases of not receiving the allowance at all, are substantial and obvious reasons why doctors may not be prepared to move.* As the proportion of designated areas eligible for the allowance increases so this type of disincentive may diminish in importance, but it has been a significant barrier so far, and still remains one. It could be eliminated simply by removing the qualifying period and paying the allowance immediately to all existing practitioners in designated areas and to those who enter an area while it remains designated. As soon as the area is de-designated the allowance would cease to be payable to incoming doctors, although in order to overcome the second type of disincentive (discussed below) some basis must be established for continuing payment to those in receipt of the allowance at the time of de-designation. If the area was subsequently re-designated the allowance would again be payable immediately, either to all doctors in the area or only to those moving into it whilst it remains designated.

*But note that if he is otherwise qualified, a G.P. moving into a designated area may receive an initial practice allowance for up to four years after entry, whether or not the area has been continuously designated for three years.

The machinery for monitoring continuous change in the existing classification of areas already exists, and as well as removing an awkward disincentive the elimination of a qualifying period would add sensitivity and flexibility to the manipulation of incentives and controls. To the extent that the allowance does function as an effective inducement it would be possible to concentrate the incentive immediately and directly upon areas which have difficulty in attracting manpower, and to remove it (for incoming doctors) when the requisite doctor/patient ratios have been achieved. The main Objection in the past to suggestions that the qualifying period should be eliminated has been the alleged administrative difficulty of coping with rapid changes in classification, and of making the necessary adjustments to the remuneration of practitioners. A partial answer to this objection is to be found in our analysis of classification changes in Chapter 2, which showed that areas do not in fact change their status with any great frequency. Of greater weight, however, is the fact that the abolition of the qualifying period would merely affect the number of doctors who become eligible for the payment, and not the number who cease to be eligible. If, as we argue later, some way should be found of continuing the payment for a longer period than at present, then the additional administrative burden would merely be that of noting the increased number of doctors who satisfy the appropriate conditions, and of adding the allowance to their remuneration.

The second disincentive in the existing scheme, arising from the cessation of the allowance after the elapse of a concessionary period following de-designation, is manifest in various ways. Doctors contemplating a move to a designated area may be deterred by the possibility of losing the allowance within three years of moving; those already in the area may be reluctant to admit newcomers when this would result in their loss of payment; and practitioners who suffer a loss of the allowance may have a substantially reduced desire to remain in the locality. It is obviously difficult to find any firm evidence that the disincentive really does work in this way because we do not know what would actually happen if it were removed. Nevertheless, the deliberations of the medical profession and the replies of the doctors in our surveys (some of which were reproduced in Chapter 12) point consistently towards the counter-productive tendency arising from this fairly abrupt cessation of payment.

There are various ways in which this second type of disincentive could be minimised. One Solution might be to extend the concessionary period of payment beyond the existing period of three years to six or even twelve years. Another Solution, proposed by the Health Department in 1969⁵, would be to continue the payment on a personal basis for as long as the doctor

remained in the same practice or area, regardless of any subsequent changes in the classification of the area. A third possibility might be to increase the financial incentive the longer the doctor remained in a designated area. This could be achieved by offering doctors moving into designated areas a loan of, say, £7,500 (either interest-free or at a low rate of interest) at an agreed rate of repayment, and reducing the amount repayable by £500 for each completed year in the area. To extend the period of payment beyond the existing three years would not only remove the worst disincentive effects of the existing scheme, but would also have the positive merit of encouraging doctors to remain in designated areas - which, as the analyses in Chapter 6 indicated, is in many cases as important an aim as getting them there in the first place.

Other financial incentives. As well as (or instead of) a simple addition to the basic practice allowance for doctors in specified areas, other items of remuneration might be loaded in order to maximise incentives. It has been suggested, for example, that each year spent in a designated area should count as $1\frac{1}{2}$ years towards superannuation⁶, or as two years towards a seniority allowance⁷. This latter suggestion is reasonably logical, since doctors in designated areas, having large lists, will presumably gain experience more rapidly than those elsewhere. Another way of distributing extra money would be through the establishment of differentials between designated and non-designated areas in the allowances available for the employment of ancillary staff. The principle is established in the reimbursement to G.P.s. for the employment of assistants, and we argued in Chapter 2 that this particular differential (which at present amounts to £255 per annum) might be increased. In addition, the principle could be applied to other categories of staff, allowing designated doctors either to improve the staffing of their practices at no extra cost to themselves, or to continue with the same staff at a reduced personal cost. Similarly, a special locum allowance might be paid to enable the principal to take six or eight weeks holiday/study leave each year at no additional personal expense; or, more specifically, a Sabbatical leave or research/study period might be allowed for each completed year in a designated area.

It is not difficult to think of different ways of distributing any extra money available for use as incentives. The ideas outlined in this section directly or indirectly put extra cash into the G.P.s. pocket, either by enabling him to do more things for the same amount of personal expenditure, or by increasing his income for the same degree of activity. In principle, therefore, they do not differ substantially from the designated areas allowance or loan scheme, and it is consequently unlikely that their effect would be very different. If the value to the individual doctor is

sufficiently high and if he is not deterred by the perceived disincentives, then it may matter little in which form the money reaches him. It is arguable that a form of endowment which directly enhances personal wealth (such as the designated areas allowance or loan scheme) may be more attractive than one which either represents a deferred accretion of income (by providing favoured entitlement to superannuation benefits or seniority payments) or which is conditional upon the performance of certain prescribed actions (such as the employment of ancillary staff or the taking of study leave). In practice the distinction may not be sufficiently sharp to the individual doctor to constitute a differential incentive: if he is going to be substantially better off as a result of working in a particular locality, and if the prospect is an effective inducement for him, then it is perhaps of secondary importance in just what form the extra money reaches him.

Non-financial incentives. The suggestions discussed in the previous two sections (including the designated areas allowance) imply that the basic idea of attracting more doctors to particular areas by means of cash incentives (direct or indirect) is reasonable, even though the detailed methods of administration may need revising. The idea undoubtedly has much to commend it, for it provides an element of personal compensation as well as enabling more money to be spent on improving practice facilities and, hopefully, the standards of care. Against this, however, the view has been expressed that any money available as incentives should not increase the personal wealth of G.P.s. but should instead be used directly to improve practice premises, equipment and staffing. Doctors would not be any better off personally, but they would enjoy larger practice subsidies, and would generally be able to provide a better service to their patients. The argument is familiar enough. The Gillie Report⁵ suggested the provision of premises and of opportunities for hospital practice, public health work and medical administration. The 1964 Working Party⁹ discussed the possibility of attachment schemes for health visitors and district nurses in under-doctored places, the provision of purpose-built practice premises, and the provision of adequate living accommodation for married junior hospital doctors in the hope of encouraging them to settle and to seek openings in general practice in such places. More recently Townsend⁷ has suggested the introduction of a practice equipment allowance for the purchase of such expensive equipment as an E.C.G. machine and vitalograph. He also makes the suggestion that doctors who have spent a number of years in a designated area should be given preferential consideration when applying for more attractive posts. (In fact the M.P.C. did urge executive councils as long ago as 1951 to give full consideration to doctors who, having spent much of their lives in substantial practices in

heavy industrial areas, were seeking more modest vacancies in pleasanter areas towards the end of their careers.¹⁰ Recent decisions by the Committee confirm that more than lip service is paid to the request,¹¹ but unless a fairly systematic points system is introduced it is difficult to see how it can be fairly applied.)

The assumption which often underlies such proposals is that designated areas are not only short of doctors, but also have poorer premises, equipment, facilities and practice conditions than places with better doctor/patient ratios. Since this is the case (the argument runs) it is logical that additional resources should be employed to compensate for these professional disadvantages. Some designated areas undoubtedly are comprehensively deprived in this way, but the results of our survey indicate that as a general proposition the assumption is highly dubious. Reviewing the full range of questions included in the survey about practice structure and conditions, we are impressed with the overall similarities between the designated and non-designated areas. In a broad perspective there are no signs in the results that the under-manned areas are consistently less well endowed professionally than the others. When we look in ~~greater~~ detail at some individual results we find that in certain respects the designated doctors were less favoured than their colleagues elsewhere, and in other respects they were more favourably placed. Whereas they appeared to be somewhat more iSOlated professionally (especially in relation to the local hospitals - see Chapter 9), nevertheless they were more likely to be practising in partnerships and health centres, more likely to have ancillary help in the practice (and just as likely to be satisfied with this help), more likely to have adequate night and weekend cover, more likely to have regular contacts with post-graduate medical centres, and more likely to have opportunities for post-graduate training.

These findings are clearly incompatible with the myth of total deprivation in the designated areas, but do they also cast doubt upon the effectiveness of non-financial inducements as part of the strategy for evening the distribution of manpower? Not necessarily. It is probable that young doctors entering general practice will be attracted by the prospect of good hospital facilities and if the designated areas are that much better than the rest, so well and good. But we have already stressed the need to maintain a balanced view of health care objectives in this matter, and the deliberate improvement of facilities in areas characterised by high average list sizes is not necessarily a sensible policy in itself. Not only would it widen still further many of the important gaps between designated and restricted areas (possibly leaving the latter as the new relatively deprived areas of the country), it may also result in many cases in resources being used in areas which do not stand in the greatest

need of them. We argue at the end of this chapter that it may be wiser as a long-term strategy to try to identify areas of medical deprivation as the units for special attention than to continue with the assumptions and objectives underlying the existing designated areas scheme. At this stage we merely point out that whilst many medically deprived areas would probably also have large average lists, it is equally probable that a fair proportion of areas with large lists would not be classified as deprived.

Controls. There is nothing further that we wish to add on the question of controls beyond the comments contained in Chapter 2. It seems probable that the statutory powers of the Medical Practices Committee are as wide as can be tolerated politically, with the exception of their possible extension to include assistants as well as principals (see p.54-55). There also seems a prima facie case for the M.P.C. to tighten control over the admission of replacement practitioners in intermediate and restricted areas, although we must stress once again that because we do not know the facts surrounding each individual decision there is no way of knowing the feasibility of such a proposition.

Influencing the spatial distribution of general practitioners: indirect action

In the previous section we have discussed various measures, financial and otherwise, which may directly affect the distribution of family doctors. These measures are generally associated with deliberate policies in manpower planning. In addition, however, the results of the survey have highlighted some further factors which contribute to existing patterns of distribution and which, if controlled, might afford additional, less direct, means of influence. But there is a dilemma, for our results strongly suggest that some of the most powerful influences on settlement patterns are those least amenable to deliberate manipulation: we refer to the impact of existing links and associations which doctors have with particular areas (Chapter 7). Financial incentives will probably achieve some success among younger doctors if the correct balance can be found between effective levels and disincentive values; improved practice facilities may likewise attract younger men entering practice; but the location of a future doctor's birth-place, his home area, and his wife's family home are almost entirely beyond the control of administrators.

It is important to remember in considering this question that different areas are short of doctors for different reasons. It was seen in Chapter 6, for instance, that in some places the main problem has been that of attracting enough young doctors in the first place, in others it has been a matter of keeping them once they have started in practice, and in other areas the deficit has resulted mainly from the failure to capture doctors moving from practices elsewhere. If we had then been able to

perform a similar analysis for the patient population (which is, of course, a co-equal element in the statistic of average list size) we should probably have found similar trends: certain areas may have experienced fairly rapid movements of population which have had the effect of raising or lowering the average list sizes in them. It is, obviously, a weakness of this study that population movements have not been investigated to the same depth as G.P. movements.

The development of centres of under-graduate and post-graduate training in areas of chronic manpower shortage may be one way of harnessing the natural influence of existing contacts with an area on a doctor's choice of practice location. It is, obviously, impossible to control the areas of birth and upbringing of future G.Ps., and in any case it is impossible to predict on an individual basis which of today's schoolchildren will be tomorrow's doctors. Apart from parental influence and encouragement (which we know will endow the children of doctors with a better-than-average chance of entering the medical profession themselves) the innate capacity to study medicine is likely to be evenly distributed among children in different parts of the country. What is open to manipulation, however, is the structure of opportunities which they have to develop those capacities, and the encouragement which they are given to choose medicine as a career. More energy might, for example, be expended on stimulating interest in a medical career among qualified sixth-formers in designated areas. We concluded in Chapter 7 that no clear evidence existed of a relationship between the presence of a local medical school and the proportion of university candidates in the area who choose to study medicine, but a local centre could undoubtedly contribute greatly to the effectiveness of "recruitment" campaigns. Much of the initiative in meeting sixth-formers and in arranging a medical equivalent of the industrial short works' courses might come from the local medical community, supplemented where required by special campaigns mounted by central government and by local Youth Employment Officers.

Once the commitment to study medicine has been made by a school leaver in a designated area, the offer of a place at a local medical school would reinforce the student's natural tendency to remain in his home area. The evidence for this was discussed at length in Chapter 7. It is the cumulative influence of community ties which led us in that chapter to reject the principle of the TOOd commission's argument about the irrelevance of settlement patterns to the siting of new medical schools and the expansion of existing ones, although we recognise that a great deal of detailed information would need to underlie any decision about the location of a new school. On completing their basic training, prospective G.Ps. might be

exposed to deliberate propaganda about the geographical imbalance of doctors, and the social value might be stressed of young doctors spending the early part of their careers in the traditionally ill-staffed areas. The effectiveness of such exposure would naturally increase if the school were itself situated in such a locality. It would perhaps be over-stating the case to create the notion of "V.S.O. at home", but the idea of deliberately devoting a part of one's career to the cause of territorial equality in medical care might, if properly stimulated, appeal to the current egalitarian ethos of young professional people. Similar schemes are commonly run in developing countries, often with much success. They run the risk of encouraging a shifting and discontinuous service in the recipient areas, but in the context of the designated areas there may be compensating permanent gains of doctors who perhaps originally intend to practise for a short period only.

Lastly, there might be some value in exploring ways of increasing the opportunities for female doctors in general practice. Our data on this matter are limited, and so too must be our conclusions, but there were indications in the relevant section in Chapter 8 that female practitioners might be employed more extensively than at present. Insofar as the Medical Practices Committee pursues any deliberate policy in this respect it tends to favour the restricted and intermediate areas: a memorandum sent to executive councils in 1970 pointed out that the Committee will 'often sympathetically consider the entry of a married lady practitioner who has family commitments which restrict her mobility and make it impossible for her to provide general medical services in a less well doctored area.'¹²

Medical deprivation and the planning of health services

This report has been concerned principally with one part of the full health services system, namely with the Collection of general practitioners practising within the N.H.S. in England, and with their spatial distribution relative to the dispersion of population. We have so far left untouched the question of how far the designated areas scheme and related policies based on measures of list size really are appropriate and realistic in the light of the known variability of needs and demands and the uneven distribution of services among communities of numerically equal size. Our justification for the relatively narrow approach adopted in this report is that the research commission obliged us to examine existing policies and practices, and thus to work largely within the framework of existing assumptions and objectives about manpower policy. That in itself has been a far from trivial exercise, and many of the insights and techniques developed in this relatively simple context are, we believe,

likely to be of use in studying in greater depth the appropriate distribution of medical care resources in relation to the needs of areas. We have, nevertheless, sometimes questioned the existing assumptions and objectives, and in this concluding section we feel it is appropriate to draw together these strands in the report by carrying the discussion to a broader and, *in some senses*, more fundamental level.

It is clear, in the first place, that general practice cannot function properly as an autonomous and self-sufficient medical care system: it complements and is inter-dependent with hospital and specialist medicine at one end of the socio-medical spectrum and with the public health and welfare services at the other. Recognition of this functional inter-dependence ~~between~~ different sections of the health and social services has been a major consideration *in* recent debates and policy documents about the reorganisation of the N.H.S. It therefore follows that plans and aspirations about the structure and development of the general medical services shOUld properly take account of the patterns of provision and functioning of other parts of the health and social service system, and of the effectiveness of the whole system in meeting the full range of medical needs in the conununity. It does not in theory make good planning sense to develop criteria of adequacy and efficiency for one part of a system in relative iSOlation from the other interdependent parts of it. In practice of course it may be very difficult to avoid doing just this because of the complexity of the problems involved in attempting to do anything more ambitious •

It appears from the historical review in Chapter 1 of post-war man-~~power~~ pOlicy in general practice that the continuous debate about the *magni-*tude and distribution of the supply of G.Ps. has paid little attention either to the total medical care needs of areas, or to the implications for other parts of the health services of policies concerned with the recruitment and dispersion of family doctors. In particular, the needs of areas for general medical services have been assessed mainly in terms of average list size, and considerable efforts have been made to "move" family doctors into areas with high average lists and to discourage or even debar them from settling in areas with small lists. Yet it is already accepted that the size of the popUlation of an area is not the only measure of its volume of need for primary medical care: qualitative features are acknowledged in the recognition that the elderly frequently require more of a doctor's time and should therefore attract a higher capitation fee. But this arises more in the context of providing a fair reward for doctors rather than as part of any explicit plan to encourage doctors to work in under-doctored areas, and the same can be said for payments associated with practice in rural areas.

Many features of an area - the age/sex distribution of its population, occupational structure, environment (including whether urban or rural), and even its doctors - are all likely to be significant in influencing the demand for care, so that mere population size may be a poor indicator of the demand (let alone need) for such care in an area. Moreover the structure and functioning of the full range of health and social services in the area is likely to be as important as the simple number of G.Ps. in determining how adequately the demand is met. In this respect the Glamorgan L. M. C. was probably quite right in arguing in 1967 that the excessive work loads in the Welsh mining valleys caused by high morbidity, a large amount of chronic occupational disease, the forbidding nature of the valleys and the difficulties of obtaining suitable building sites were the real deterrents to prospective practitioners. even though list sizes in the Rhondda Fach were not excessively large (Chapter 1. p. 12-13).

It is clear that certain areas of the country are medically deprived in the broad sense that the existing services are unable to cope with the demands placed upon them, while others have a relative abundance of medical resources in relation to their needs. Hart suggests that there is an (inverse) association between the two: the availability of good medical care varies inversely with the need of the population served,¹³ He writes: "In areas with most sickness and death. general practitioners have more work. larger lists. less hospital support, and inherit more clinically ineffective traditions of consultation, than in the healthiest areas; and hospital doctors shoulder heavier case-loads with less staff and equipment, more obsolete buildings, and suffer recurrent crises in the availability of beds and replacement staff."¹⁴ The exact magnitude of the association demands careful investigation. but sufficient data already exist to support Hart's basic thesis. Ideally the aim of a distribution policy in this situation should be to channel medical care resources into areas of medical deprivation in such a way that they catch up with the more favoured places (or at least to ensure that the gap between the favoured and the deprived is narrowed). This is not always just a matter of getting more G.Ps.: the additional financial expenditure involved in attracting more doctors to localities with large lists might be more efficiently deployed in certain circumstances in building up the stock of ancillary staff. improving practice facilities, or even perhaps adding to the number of home helps. health visitors, or social workers.

The concept of a deprived area is well recognised in educational policies, and experiments are currently underway to evaluate the infusion of substantial capital resources through the Educational Priority Areas scheme and the Urban Aid Programme into communities which not only have

large classes in the primary schools, but which are in a broad sense educationally deprived, deficient in the basic social support systems which children need in order to get the best out of their education, and suffering from accumulated and multiple deprivations in housing, income maintenance, environmental amenities, economic opportunities and other social pathologies. It should be possible, in like manner, to identify areas of medical deprivation, which could then be singled out for equally comprehensive assistance in the health sphere. Such areas might well contain a large number of those which currently rank as "specially designated", but list size would be only one of the factors in the definition of medical deprivation. Others of importance would be indices of morbidity and mortality; sickness absence rates; infant mortality rates; health services utilisation data; the provision and mode of functioning of hospital resources, district nurses, health visitors, etc.; demographic data; and also measures of social and environmental conditions which foster and exacerbate disease and which add to the demands on the health services. Just as the definition of a medically deprived area would transcend the narrow statistic of list size, so the desired remedy should go far beyond that of supplying one or two more G.Ps. - which often does no more than to reveal further dimensions of need and deprivation. The form of assistance given to these areas should (as we have argued above) take account of the G.Ps.' tasks and capacities within the total health services system; it may then transpire that the real need is not for more doctors, but for more nurses perhaps, or social workers, or hospital back-up services for the G.P., or even for better housing which might in the long run improve the overall standards of health.

This approach may seem wildly idealistic to the administrator trying to do something practical about an unsatisfactory situation. He may legitimately ask who is going to define the components used to assess medical deprivation. Who is going to collect the necessary data and obtain and act upon indices of medical deprivation? What is to be taken as an appropriate area for the purposes of assessing medical deprivation? How much would it all cost? No-one would want to deny the practical difficulties involved in implementing an approach of the kind we have sketched, but it does serve as an ideal towards which we might move. It is hard to believe that we cannot go beyond crude population numbers in assessing the needs of an area for medical services - especially when we consider the lengths to which the Inland Revenue, for instance, may go to arrive at an assessment of the income tax due from an individual. It seems, moreover, that many of the practical difficulties may not be insuperable. The seeds of a monitoring system already exist in the Social Indicators movement, started in America and gaining ground in this

country. The American publication "Towards a Social Report"¹⁴ included a section on health trends, and the new General Household Survey initiated by the Office of Population Censuses and Surveys in 1970 also contains one section on health, sickness and the use of medical services. If the sample size for this Survey is eventually increased to an appropriate level, and the validity and utility of the data can be firmly established, then the Medical Practices Committee would have the means to exercise a much more fruitful monitoring of areas than they are able to do at present.¹⁵ Or it may be, as Culyer argues, that we need periodic comprehensive surveys of entire populations in order to collect routine information in a highly standardised form.¹⁶ But at least the basic skills and techniques are available if the commitment is made to apply them to this end.

The question of finance raises a number of problems. The costs of collecting and processing the data necessary in order adequately to monitor the working of the system would certainly be far greater than that spent at present on monitoring services. On the other hand, the same data could be of use to many bodies (such as local authorities) in their planning and monitoring activities, so that the costs need not all fall directly upon the health services. The costs of actually attacking relative medical deprivation may not be greater than that of working the designated areas scheme and other similar policies. The total amount spent on the health services is, after all, a government policy decision which takes into account many things other than the health and welfare of the country. The questions must be faced of how to distribute the current supply of resources in a more equitable way, and how far additional resources should be committed and distributed within the health services. The revelation of need via a sensitive monitoring system, even if it is primarily designed to effect an equitable distribution of whatever resources are available to the health services, may, however, have the affect of creating pressure for increased expenditure on the National Health Service, as has happened to some extent in education.

We have been discussing so far a total attack by the community on the problem of medical deprivation. This in turn is part of a wider problem of area deprivation. No progress, however, is likely to be made if one merely stands back and regards the system under consideration in its complex and forbidding entirety. We need a strategy for learning about the system and the problems with which it is concerned. In practice this means breaking the total learning task down into manageable and appropriate sub-tasks, so that we can progressively get nearer to understanding and manipulating the whole. This statement may seem to conflict with the opening remarks in this section and indeed it does in a sense. There will always be some discrepancy between the ideal aim and the best possible

practical attack on urgent problems. In defining the sub-tasks of the total task, therefore, it is important to define the boundaries of the problem and the sub-systems under study in a way that takes account, as far as is practicable, of the inter-dependence of these parts with the rest of the whole. It may be that by concentrating on the geographical distribution of general medical services (interpreting this to include not only the supply of doctors but supporting staff and facilities), and taking into account the sort of area features we have outlined, including the provision of other health and social services, we may arrive at an understanding of the problem which is a definite improvement on the present situation, and which would not need complete rethinking when we widen the task, say, to include the provision as a whole of health and social services in relation to the needs of an area. We cannot of course be sure that this will be so because the system as a whole is not static in time - new inventions and ideas change the nature of the inter-dependencies between the various parts of the system. But that, in essence, has been the justification for this study.

Summary of principal conclusions

1. A number of important concepts used in debates about the distribution of family doctors have not been systematically defined and are consequently employed in conflicting and ambiguous ways. (p.341).
 2. It would become much easier to understand what was happening if some central body (possibly the D.H.S.S.) was made responsible for monitoring and reporting trends in the movement (as well as the distribution) of medical manpower. (p. 343).
 3. With certain modifications in the methods of recording information, the Doctor Index could be used for this purpose. It already embodies the mechanism for data collection, and future computerisation of the Index would greatly enhance the sophistication of the resulting analyses. (p. 344).
 4. The assumptions inherent in the method by which the designated areas allowance is administered might usefully be reviewed. (P344).
 5. Urgent attention should be given to the size and definition of medical practice areas. Some are at present too large, some are too small, and many fail to delineate "natural" medical care areas. (p.345).
 6. Further research is needed on the problem of area-definition. Any changes resulting from such research might best be introduced in 1973-74. The new structure for the Health Service should contain intelligence systems to monitor the suitability of area definitions. (p. 347).
-

7. Although the existing levels of the designated areas allowance are still too low to radically alter the distribution of family doctors, they are probably near to the point at which, under present regulations, the disincentives become effective. (P.349).
8. The two major disincentives are the three-year qualifying period for areas, and the cessation of the allowance after the elapse of a concessionary period following de-designation. (p.349).
9. The first disincentive could be eliminated by removing the qualifying period and paying the allowance immediately to all existing practitioners in designated areas and to those who enter an area while it remains designated. (p.349).
10. The second disincentive is manifest in various ways, and might be overcome by extending the period of concessionary payment, by continuing the payment on a personal basis for as long as the doctor remained in the same area, or by increasing the incentive the longer the doctor remained in a designated area. (p.350).
11. As well as (or instead of) a simple addition the basic practice allowance for doctors in specified areas, other items of remuneration might be loaded to maximise incentives (p.351).
12. The argument that any extra money available as incentives could better be used directly on improving practice premises, equipment and staffing rather than enhancing the personal wealth of doctors is probably sound. (p.352).
13. The controls which are exercised over the distribution of G.Ps. might usefully be reviewed, with particular reference to the admission of doctors to restricted areas, and to the dispersion of assistants. (p.354).
14. The development of centres of under-graduate and post-graduate training in areas of chronic manpower shortage may be one way of harnessing the natural influence of existing contacts with an area on a doctor's choice of practice location. (P.355).
15. On completing their basic training, prospective G.Ps. might be exposed to deliberate propaganda about the geographical imbalance of doctors, and the social value might be stressed of young doctors spending the early part of their careers in the traditionally ill-staffed areas. (p.356).
16. There might be some value in exploring ways of increasing the opportunities for female doctors in general practice. (p.356).

17. Plans and aspirations about the structure and development of the general medical services should take account of the provision and functioning of the health and social service system, and of the effectiveness of the whole system in meeting the full range of medical needs in the community. (p.357).
18. Research attention should concentrate on areas of medical deprivation, which could then be singled out for comprehensive assistance. Just as the definition of a medically deprived area would transcend the narrow statistic of list size, so the desired remedy should go far beyond that of supplying one or two more G.Ps. (p.359).
19. There are enormous practice difficulties involved in such a scheme, but it is hard to believe that no more sophisticated measures of need can be introduced than crude population numbers. The basic skills and techniques already exist to define and monitor the needs of areas in much greater detail than is available at present (p.359).
20. The cost of such a monitoring system need not fall wholly upon the health services, and the revelation of need in particular localities may create pressures for increased expenditure on the N.H.S. (p.360).

References

1. British Medical Association. Memorandwn of Evidence to the Review Body on Doctors' and Dentists' Remuneration, November, 1967
2. Office of Health Economics. The Personal Health Services. O.H.E., 1963
3. Present State and future needs of general practice. Reports from General Practice, XIII, Royal College of General Practitioners, 1970.
4. M. Clarke. "Recent developments in general practice: Changes in list size and the effect on the practitioner's workload;". Update Plus (1971), Vol. 1, No. 5, p.337.
5. British Medical Journal (Supplement). (1969), 5th July, 3.
6. Suggested by, inter alia, a G.P. respondent in the survey.
7. E. Townsend. "Problems of 'designated areas' ". Medical World, September 1969.
8. Report of the Sub-Committee on the Field of Work of the Family Doctor (Gillie Report), H.M.S.O., 1963.
9. Working Party on General Practice, (Commentaries), H.M.S.O., July 1964.
10. Memorandwn from Medical Practices Committee, M.P.C. 2/51, 13th June, 1951.
11. Personal communication from the Secretary of the Medical Practices Committee.
12. Memorandum from Medical Practices Committee, M.P.C. 1/70, 1st January, 1970.
13. J.T. Hart. "The inverse care law". Lancet (1971), i, 405.
- 14.
15. See, for example, C.A. Moser. "Some general developments in social statistics". Social Trends (1970), No. 1, p.7.
16. A.J. Culyer. "Calculus of health". New Society, 23rd September, 1971.

APPENDIX A

The Sample

The design of any sampling scheme is determined in part by the objectives of the study to which it relates and in part by the financial and other constraints obtaining. In this case the relevant objectives of the study were to compare general practitioners working in various types of area (with particular reference to differences between those in designated and non-designated areas) in such matters as their personal and professional backgrounds; their mobility patterns; their current practices; the medical and social amenities available to them; and their views on the designated areas scheme. More generally, it was intended that the study should provide information which would facilitate a more satisfactory distribution of general practitioners over the country.

A number of factors suggested that the sample should be distributed widely over the country. For example, designated areas were to be found in most parts of the country and the collection of such areas was observed to display heterogeneity with respect to a number of social and economic characteristics. Thus, prosperous market towns in the South East and commuter areas of Outer London were among those described as designated as well as the more predictable Northern industrial towns. Non-designated areas (except perhaps those labelled as restricted) generally showed a similar degree of heterogeneity. It could be argued too that if an important object of the study was to provide information on the distribution of doctors throughout England, this also implied that the sample should be widely spread over the country and so, of necessity, fairly large. Since we were particularly interested in comparing doctors in designated and non-designated areas, this implied the need to ensure by stratified sampling that doctors in such areas throughout the country were adequately represented in the sample.

It was decided to draw the sample from the population of family doctors (strictly speaking a slightly more restricted population, see below) practising in England. Scotland and Northern Ireland were excluded as their health services were administered by different authorities and slightly different conditions and criteria obtained as far as the distribution of doctors was concerned. Wales was excluded partly because there were very few designated areas in the Principality at the time of the drawing of the sample, and also because of its relative remoteness from the University of Kent. Inevitably, the decision to exclude or include these countries (or for that matter others outside Great Britain which constitute sources or sinks with respect to general practitioner manpower) must in the last resort be

subjective in character. Given, however, that we were investigating a matter which had received relatively little attention from research workers it seemed that if we could reach some understanding of the factors affecting mobility among general practitioners currently working in England, this would be a sufficient first contribution to knowledge in this field.

The survey was essentially cross-sectional in character (i.e. based on a snap-shot of the current situation) rather than longitudinal (i.e. following a process over a period of time), because given the lack of historical information this was much the quickest way of obtaining results which were, it was understood, required with some urgency. Other factors which played some part in determining the nature of the sample were the opportunity of access to the Doctor Index for sampling purposes, and the indecision at the time of drawing the sample as to whether the questionnaire should be administered personally by the Regional Medical Officers or by post. In the event, the sample was drawn in such a way that it would be suitable for a postal survey, but could also be scaled down if necessary for the R.M.O.'s to carry out the interviewing.

The population sampled

The population consisted of those principals, giving unrestricted general medical services, for which executive councils in England were responsible. This population naturally varies in time, and the precise point in time at which the population was formally sampled is determined by the properties of the list (or sampling frame) from which the sample is drawn. The actual sample as it was at the time of carrying out the field-work of an enquiry was further affected by changes in the population between the compilation of the sampling frame and the carrying out of the survey.

The Sampling Frame

This was the relevant section of the Doctor Index held by the Department of Health and Social Security. This "list" held on punch cards related to the population at 1st October, 1967. The sampling process was set in motion in December 1968 before the revised Doctor Index (correct as at 1st October, 1968) was available. When in April 1969 the revised Doctor Index became available, the sample was checked and any changes in address or deletions due to death or retirement etc. were made to the sample. At this stage the population from which the sample was drawn was the total number of unrestricted principals (for which English executive councils were responsible) at 1st October 1967, who were also giving the same services at 1st October 1968. In particular this meant that no doctor who entered general

practice after 1st October 1967 was included in the sample. The mailing of the questionnaires for the survey took place in the period November 1969 to February 1970 by which time the relevant population of doctors already in contract with the National Health Service as at 1st October 1967 was further depleted. Many of these losses, due to death, retirement or resignation, only came to light when the questionnaires were returned by the G.P.O.

Sampling Scheme

The population was stratified by standard region and by whether the doctors were practising in a designated or non-designated area. The original intention was to obtain a sample of about 2,000 general practitioners (more rather than less if possible), three-eighths of whom would be practising in designated areas and the remainder in other types of area.

The corresponding plan was to draw a one-in-ten systematic random sample within each region from among the doctors practising in non-designated areas and a one-in-eight systematic random sample within each region among the doctors practising in designated areas.* This procedure, however, would have led to very small numbers (probably below 10) of doctors from designated areas in two regions (East Anglia and South West) and relatively small numbers of doctors from non-designated areas in four regions (North, East Midland, East Anglia and West Midland). Accordingly, the relevant sampling fractions were increased so that all doctors in designated areas in East Anglia and South West were included and so that the minimum number of doctors sampled from non-designated areas in any region was a hundred. The sample at this stage amounted to 889 doctors practising in designated areas and 1,471 doctors practising in non-designated areas - a total of 2,360 doctors. After up-dating by comparison with the Doctor Index correct as at 1st October 1968, the sample was reduced to 2,266. As described elsewhere, the pilot survey consumed a further hundred of this total. Subsequent reductions in the numbers due to death, retirement etc. discovered at the time of the mailing of

*These figures are approximate. Strictly, the minimum sampling fractions were $\frac{1250}{12886}$ and $\frac{750}{5763}$ respectively for doctors practising in non-designated and designated areas.

questionnaires via the Divisional Medical Officers resulted in a final sample for the main survey of 2,031 of which 816 were in designated areas and 1,215 in non-designated areas.*

Table A1 compares the distribution of general practitioners within the sample with that for all principals in England and Wales at 1st October 1968 in terms of area, sex, age, type of practice, and list size. The two distributions are not strictly comparable: the population data relate to principals in all areas in England and Wales, whereas the sample data cover G.Ps. in England only, and are sub-divided among those in designated and non-designated areas. Nevertheless, the comparison clearly confirms that in most major respects the sample was entirely adequate with respect to the characteristics under consideration.

One interesting difficulty associated with the sample lay in the decision to include all doctors working in designated areas in two standard regions. It turned out that these doctors tended to be concentrated in one quite small area in each region and so we were faced with, for example, a band of suspicious doctors comprising virtually the entire general practitioner population of a largish town in Wiltshire seriously questioning the assertion, in a letter accompanying the questionnaire, that they had fallen into the sample by a one-in-ten chance. (This assertion was true in a global sense but not of course for them personally.) However, most of them generously accepted the statistical explanation given to them (even if they did not entirely understand it), and we are grateful for their forbearance under circumstances which might easily have reinforced the hostility of general practitioners towards statisticians and sociologists.

*A point of interest is the fact that the reductions due to death, resignation, etc. in the non-designated areas were proportionately greater than those for designated areas. An explanation for this stems from the fact that the classification of doctors in the sample according to whether they practised in designated or non-designated areas was based on the classification of the areas as at 1st October 1968. By this time a number of areas which were not designated at 1st October 1967, had become designated. This number was greater and affected a greater number of doctors than that of designated areas which became de-designated.

TABLE A.1
SOME CHARACTERISTICS OF DOCTORS IN THE FINAL SAMPLE,
AND ALL PRINCIPALS IN ENGLAND AND WALES, 1968

	England and Wales		Sample			
	All principals, 1968		Designated areas		Non-designated areas	
	No.	%	No.	%	No.	%
<u>Classification of area</u>						
Designated	6,656	33.3	1 816			
Open	7,983	40.0			736	
Intermediate	3,301	16.5			304	
Restricted	2,030	10.2			175	
<u>Sex</u>						
Male	18,005	90.4	764	93.6	1,097	90.3
Female	1,918	9.6	52	6.4	118	9.7
<u>Age</u>						
under 30	626	3.1	7	0.9	12	1.0
30-34	2,059	10.3	58	7.1	89	7.3
35-39	2,778	13.9	126	15.4	128	10.5
40-44	3,530	17.7	166	20.3	224	18.4
45-49	3,133	15.7	139	17.0	210	17.2
50-54	2,762	13.9	125	15.3	173	14.2
55-59	2,075	10.4	87	10.7	175	14.4
60-64	1,558	7.8	57	7.0	100	8.2
65+	1,402	7.2	51	6.3	104	8.8
<u>Type of practice</u>						
Single-handed	4,501	22.6	147	18.0	296	24.4
In partnership	15,422	77.4	669	92.0	919	75.6
<u>List size</u>						
Under 1,600	2,067	10.4	34	4.2	150	12.3
1,600-2,499*	8,069	40.4	191	23.4	647	53.3
2,500 and over	9,834	49.2	591	72.4	418	34.4
<u>Average list size in designated areas</u>		2,819		2,864		

* Cut-off point is 2,599 in sample

APPENDIX B

The Surveys

THE PILOT SURVEY

The pilot survey of a sub-sample of doctors drawn from the main sample was carried out in June - August 1969 to test alternative methods of data collection, and to permit the evaluation of questions.

Methods of data collection

At the outset of the project two alternative methods of data collection seemed possible for the main survey: one involving a postal questionnaire sent out from the University of Kent, and the other placing responsibility for gathering the information in the hands of the Divisional Medical Officers. As a test of each method, some of the doctors in the pilot survey were interviewed by one method and some by the other, and the results derived from each technique were compared. Two main comparisons were used: response rates and the content of responses.

The two methods. For the postal survey a systematic sub-sample of 53 doctors was drawn from the main sample. Sampling fractions of 1/45 among doctors in designated areas and 1/42 for the remainder yielded 19 and 34 doctors respectively. The materials were mailed first class on 11th June, and consisted of a covering letter, a questionnaire, and a stamped reply envelope. The covering letter and the questionnaire were printed, and the names and addresses of the doctors were typed individually on the letters. The salutations were informal - "Dear Dr. Smith Yours sincerely," and the letters were signed personally by the Senior Research Associate. The tone of the letter, however, was rather formal, and it contained the minimum amount of information about the purpose of the study. The assistance and approval of the medical profession in designing the study was particularly stressed.

The doctors to be interviewed in the second part of the pilot survey by the Regional Medical Officers were selected in a different fashion. In order to reduce the number of R.M.Os. involved only three Divisions* were included, and they had to contain a fairly large number of doctors in both designated and non-designated areas to ensure that the main sample would not be irreparably decimated. The Western Division

*The Divisions referred to throughout this chapter are the D.H.S.S. Divisions within which the general medical services are administered. They do not correspond with any other geographical unit used in this study, and they are incorporated in this section solely for reasons of administrative convenience.

and the Greater London Council area of the Eastern and Southern Divisions were chosen as satisfying these criteria, and a systematic sample of 47 doctors was drawn from them. Of these, 17 were in designated areas (6 in the G.L.C. region and 11 in the Western Division), and 30 were in non-designated areas (18 in the G.L.C. region and 12 in the Western Division). The difference in sampling methods between the two parts of the pilot survey is important, as the variations in response may have been due as much to the sampling differences as to the actual methods of data collection.

The distribution of questionnaires to the three Divisional Offices was done in June through the Department of Health and Social Security. The materials which were distributed consisted solely of the questionnaires and the names and addresses of the doctors. No instructions were given about the administration of the questionnaires, although it was assumed that the interviews would be done on a face-to-face basis, with the R.M.Os. recording the responses. In fact this assumption was incorrect, for, as far as can be ascertained, the questionnaires were filled in by the doctors themselves: that is, the actual recording of the data was exactly the same as in the postal survey. The initial approach to the doctors did, however, vary. In some cases personal visits were made by the R.M.Os. and in others the initial contact was by telephone, with the questionnaire subsequently being sent by mail. Other methods may have been used. The overall impression of this second part of the pilot is that it paralleled the postal survey in its technical aspects, but that it involved a very different kind of contact and motivation by virtue of the different sponsorship which it was seen to have.

Response rates. The postal survey yielded a total of 32 completed questionnaires (60 per cent). The response rate was identical from doctors in designated and non-designated areas. One positive refusal was received, and no reply was received from the remaining 20 doctors. No letters were returned by the G.P.O., which suggests that all the mailings actually reached their intended recipients, whether at their home or surgery addresses. In view of the pilot nature of the survey no follow-ups were sent at all, but the question arose of the probable response rate if a full follow-up procedure had been carried out. Of recent surveys of G.Ps. in England, Cartwright achieved a response of 76 per cent with a longer questionnaire than the one used here, and Last achieved 87 per cent with a much shorter list of questions. Mechanic obtained a response rate of 73 per cent in 1966, although this figure appears to include responses to a follow-up mailing containing an abbreviated questionnaire. In the first two studies two follow-ups were sent to doctors who did not respond to the initial mailing. From past experience it therefore seemed reasonable to assume that a response of about 80 per cent could be achieved with

this questionnaire. As a rough rule the first follow-up will yield about a third of the remaining questionnaires and the second follow-up about a quarter, and on this basis a final response rate of about 80 per cent would have been achieved in the pilot with two follow-up mailings.

Of the 47 doctors in the second part of the pilot survey, 4 were withdrawn from the sample: one had emigrated, one had retired, one had been incorrectly listed, and one had already appeared in the postal survey. A total of 43 doctors were therefore included in the final denominator, and completed questionnaires were received from 36 of them (a response rate of 84 per cent). As with the postal survey, the response rates were very similar between doctors in designated and non-designated areas, but they did differ between the three Divisions. Of the doctors in the Western Division, 95 per cent returned completed questionnaires, compared with 75 per cent in the Southern Division and 71 per cent in the Eastern Division. The reason for the differential response rates is not known, and they may merely have reflected a lower degree of co-operation by London doctors. It is possible, however, that the diligence of the R.M.Os. was an important factor, and the scanty evidence which is available certainly suggests that the Western Division was the most conscientious of the three in persuading doctors to co-operate.

As with the postal survey, no efforts were made to follow up the non-respondents in this second part of the survey, and again the question arose of the likely response rate if a follow-up procedure had been carried out. It may well have been almost 100 per cent for only one doctor is known to have given a positive refusal. In any case it was clear that the involvement of the Divisional Officers had produced a higher response rate than was achieved under the University sponsorship, and it seemed reasonable to assume that motivation to respond increases when the survey is seen to have the backing of the Divisional Medical Officers.

Non-respondents. The point has already been made that no difference emerged from the postal survey between the responses of doctors in designated and non-designated areas, and it did not therefore seem that any direct concern with the subject of the survey was a factor in response. There was no evidence, for example, that hopes of an increase or fears of a reduction in the designated areas allowance either encouraged or inhibited the return of the questionnaires. There were, however, two major differences between respondents and non-respondents. First, there was a much higher response rate from doctors with degree qualifications (e.g. M.B., Ch.B.) than from those with licentiate qualifications only, (71 per cent against 27 per cent) and secondly, the median age of non-

respondents in the postal survey was appreciably higher than that of the respondents (54 against 44). Altogether, 69 per cent of the doctors under 50 replied, compared with only 40 per cent of those over this age. The association between age and response is well established in mail surveys, but in this case it may have been intensified by the subject of the survey. Many of the questions centred on future events (especially the likelihood of moving), and older G.Ps. may well have felt that their replies would not have been useful to the study. The qualification and age differences suggested ways in which the covering letter was subsequently improved, in particular by stressing much more heavily the importance of receiving replies from all doctors, regardless of their age, their future intentions or any other modifying factor.

Other minor differences between respondents and non-respondents in the postal survey were noted. Male doctors replied much more frequently than female doctors (60 per cent as against 25 per cent), but the number of female doctors was very small. List sizes were slightly higher among those who replied, in spite of the fact that response rates from doctors in designated and non-designated areas were identical. Variations between the two categories in the year of registration closely reflected the age differences, and finally there were some slight differences in the number of principals in the practices of respondents and non-respondents.

Comparisons between respondents and non-respondents in the second part of the pilot survey (that is, those approached by the R.M.Os.) had to be treated with even greater caution as the number of non-respondents (7) was very low. With this in mind, however, some small differences were observed: a slightly higher proportion of doctors in non-designated than in designated areas responded (82 per cent against 77 per cent); a higher proportion of older doctors replied (91 per cent of those over 50, compared with 76 per cent of those under 50); and the response rate steadily increased from doctors working in practices of increasing size. It is probable that none of these factors was as instrumental in determining the response rate as the procedures adopted by the Divisional Medical Officers to enlist the co-operation of the doctors in the first place.

Comparability of responses. The original intention of the pilot survey was to compare the responses of doctors in two different interview situations, but the fact that both parts of the survey were virtually identical at the point of data recording destroyed much of the value of this procedure. However, the two groups had different perceptions of who would actually read their responses, and in view of the proposed method of conducting the main survey it was desirable to

know whether the direct involvement of the R.M.Os. inhibited or affected the responses. In evaluating this section it must be remembered that the two sub-samples were not drawn in the same way, and hence differences in response may be due as much to sampling as to interviewing procedures. The numbers involved in each case are extremely small, and this adds to the hazard of estimating the significance of observed differences.

The overwhelmingly obvious fact about the two sets of responses was their very close comparability. In the case of almost every question the answers of the doctors in the postal survey were virtually the same as those for whom the R.M.Os. organised the interviews. Such differences as did occur could be attributed almost entirely to the sampling variations. For example, among the "R.M.O. sample" there was a much higher proportion of doctors having associations with London and the West Midlands than among the sample who were interviewed by post. They were more likely to have been born there, to have graduated from medical schools in London and Birmingham, to have married women whose homes were in these areas, and to have started general practice in them.

These items of information, which best discriminated between the two groups, were factual and almost impersonal, and it is improbable that the differences resulted from the different interview situations. It is much more likely that they either arose by chance or were connected with the sampling procedures. Of the other questions, only three yielded substantially differing responses. One concerned the availability of direct access to diagnostic aids, in which the postal sample had a rather better access; the second revealed that the "R.M.O. sample" had substantially better contacts with teaching hospitals; and in the third question the same set of doctors were less able to specify a figure which they felt would be a realistic inducement for established G.Ps. to move to designated areas. Although the differences were quite large, in each case it was unlikely that they were significantly related to the different interview situations. The overall conclusion from this part of the pilot survey was that the involvement of the R.M.Os. did not affect the responses as compared with the alternative method of a University-sponsored postal survey.

Conclusions. The first aim of the pilot survey was to test alternative methods of data collection, but for reasons given this aim was not wholly fulfilled. However, the experience in the pilot survey showed that the questionnaire was appropriate for use in a mail survey, and that doctors were generally capable of following the instructions and providing relevant replies to each question. No direct evidence was available about the validity and reliability of the questions, but the

comparability of the replies between the two categories of doctors suggested that they were probably acceptable. The questions were subject to all the limitations of a postal questionnaire, but within these constraints it was believed that appropriate data could be collected in this way. In the absence of conflicting evidence, therefore, the first conclusion from the pilot study was that a postal survey was an appropriate technique for the main phase of the study.

The major problem surrounding a postal survey is that of the response rate. The evidence from the pilot survey suggested that a rate of about 80 per cent could be achieved by means of a straightforward mail survey under University sponsorship, and with the considerable amount of information that would already be known about non-respondents from the sampling frame it would if necessary be possible to introduce elaborate weighting techniques to improve the data. On the other hand there was no reason why reasonable steps should not be taken to obtain the highest possible response rate, and the evidence from the pilot survey suggested that the involvement of Regional Medical Officers might be a significant factor in heightening the motivation to respond. The second conclusion from the pilot study was therefore that the survey should be seen to be sponsored by the Divisional Medical Officers. The administration and organisation of the survey was therefore centred in Canterbury, the questionnaires and covering letters were prepared there, the completed questionnaires were returned directly to the University for processing, and the follow-up procedures were carried out directly from the University. The covering letters, however, were seen to come from the Regional Medical Officers, they were printed on Divisional notepaper, and each letter was personally signed by the appropriate R.M.O. Queries relating to the survey were directed to the Divisional Offices, and the direct return of the questionnaires to the University was justified on administrative grounds.

THE MAIN SURVEY

The first mailing

The first mailing consisted of a questionnaire, a covering letter signed personally by the appropriate Regional Medical Officer, and a stamped reply envelope. These materials were sent out in Official Paid H.M.S.O. envelopes, with the Department's name printed in the lower corner. It was hoped that an official envelope from the D.H.S.S. would be less likely to be mislaid, unopened or thrown away than any other kind of letter, and in fact the replies to the two subsequent follow-ups indicated that probably no more than a dozen of the original mailings had failed to reach their intended recipients.

The questionnaire, which was constructed on the basis of the pilot replies, is included in Appendix C. It was a seven-page foolscap

document, reproduced by offset-litho to a standard of appearances very close to that achieved by printing. The address of the University was added to the end of the questionnaire in case respondents lost the reply envelopes, but in fact only half a dozen questionnaires were returned in envelopes other than the ones provided. Serial identification numbers were stamped prominently on the front and back of the questionnaires so that the respondents were fully aware that their particular questionnaires could be individually identified. A successful postal survey must include a way of identifying completed questionnaires, but investigators seem to be divided over the desirability of making the serial numbers prominently visible. In this case the view was taken that the promise of confidentiality (as opposed to anonymity) was an adequate safeguard for the doctors, and that consequently nothing of a surreptitious or secret nature should be done. The wisdom of this opinion is reflected in the fact that only one out of the 1,721 doctors who returned their questionnaires had obliterated the serial numbers before returning the document, although it may of course be the case that a larger number of doctors would have responded if the questionnaires had not contained any obvious marking system.

The covering letter in this first mailing is reproduced in Appendix C. It was based on the conclusion of the pilot study that the letter should be seen to come from the Divisional Office, should be on Divisional notepaper, and should be personally signed by the Regional Medical Officers. Supplies of headed notepaper were obtained from each of the six Divisions, and the letters were then produced in Canterbury and returned to the Divisional Offices for the R.M.Os.' signatures. The method of production was by offset litho, but the names and addresses of the doctors was individually typed at the head of the letters and the salutation used was "Dear Dr. Smith". A "personal circular" is probably the best description of this hybrid technique. Each letter was personally signed by the appropriate R.M.O. The content of the letter stressed the support which the Divisional Offices gave to the survey, and mentioned the designated area allowance as one of the reasons behind the study. The role of the University in designing the survey and processing the data was explained, and a guarantee of confidentiality was given. The letter invited questions and comments about the survey, and some notes had been prepared for the guidance of the R.M.Os. in answering questions, but very few doctors are known to have accepted the invitation.

The first mailing was sent out by Divisions as each Division was ready. The first Divisions, the Southern and the North Eastern, were sent out on November 5th 1969, and the last, the North Western Division, was sent on November 29th. The failure to send out all the letters on the same date may have had a slight effect upon the response rate, for it meant that doctors in the later Divisions were receiving their questionnaires at the beginning of an influenza outbreak in December. The full mailing dates are set out in Table B.1.

The second mailing

Doctors who had not replied within about two weeks of the first mailing received a follow-up letter, which is reproduced in Appendix C. The letter was duplicated, with individual names and addresses typed at the head, and it was sent on University paper and signed by the Senior Research Associate. The initiative in following up non-responses was thus seen to move from the R.M.Os. to the University. The letter merely pointed out that no questionnaire had yet been received, and stressed once again the importance of achieving a high response rate. A further reassurance was given about the confidentiality with which replies would be treated.

These first follow-ups were sent on various dates between November 19th and December 15th (Table B.1). By the time the letters were sent to the later Divisions the influenza epidemic was well under way, and the postal service was congested with Christmas mail. Both events may have affected the response in a slight way, for the response rate at this stage was highest among the Divisions which were mailed first and lowest for the last Division (North West).

The third mailing

By the time the replies to the second mailing had ceased to come in the overall response rate was just under 80 per cent and a decision had to be taken about the value of sending a second reminder. The second follow-up, if it is used, is generally considered to bring in about a quarter of the remaining replies in a postal survey, and on this basis a final rate of 85 per cent could have been expected in this survey. The two most recent postal surveys among a national sample of G.Ps., by Cartwright and Last, both employed a second follow-up, and McChanic sent no less than four follow-ups, but no details are given of their impact on the overall response. From the available evidence it seemed probable that a second follow-up would be worth the extra time and money, but in order to get more information in the context of this particular survey a "pilot" follow-up was made in the Division which at that stage had the lowest response rate (North West).

The third mailing in this one Division was made on 22nd January, and consisted of a covering letter, a new questionnaire, and a further reply envelope. A new questionnaire was sent because it was felt that, even if doctors became motivated to reply, many of them would probably have lost their original ones. As with the first mailing, the serial numbers were stamped prominently in the top right-hand corner. The covering letter used this time was again duplicated on University notepaper and signed by the Senior Research Associate (see Appendix C). and it

acknowledged the possibility of questionnaires having been mislaid in the rush of coping with the (then) recent influenza outbreak. It also seemed appropriate to give a brief explanation about the apparently crazy timing of the survey - i.e. just before Christmas, and in the middle of the busiest part of the G.Ps. year. Within two weeks of sending the third mailing to the North Western Division the response had increased by 7 per cent overall, or by 30 per cent of the remainder. This result exceeded the expected response, and provided a final justification for extending the third mailing to the remaining Divisions. They were sent during the second week of February, and consisted of the same covering letter that had been used in the North West, another questionnaire, and a further reply envelope.

Response

The full figures are set out in Table B.2. Of the 2,166 doctors in the sample at the beginning of the survey, 135 were removed from the sample denominator as their circumstances were revealed during the survey. Twenty of them had died, 83 had ~~retired~~ or resigned from general practice, or, in one case, had been struck off the list of N.H.S. doctors, and in a further 24 cases the letters were returned by the G.P.O. because the doctors were not known or could not be traced. In addition, 8 doctors were removed from the sample denominator for special reasons which meant that they were not actually practising as N.H.S. principals at the time of the survey: 5 were in long-term hospital ~~care~~ and incapable of completing the questionnaire, and 3 were abroad. Summing these four categories, a total of 135 doctors were, for the purposes of calculating response rates, considered to be outside the population because they were not practising at the time of the survey. It must be pointed out, however, that there is some disagreement between researchers as to the categories which can properly be considered as non-population rather than non-response. There would be general agreement that doctors who had died, retired or resigned should properly be removed from the sample denominator, but some would argue that those who were not known, who could not be traced or who were too ill to reply ought strictly to be counted as non-responses. If this is done, the final overall response rate becomes 83.5 per cent instead of ~~84.7~~ per cent. We have taken the view in this survey that these doctors can be classified as non-population because they were not actually in practice at the time of the survey, and hence all response rates ~~are~~ based on the smaller denominator of 2,031.

Of this total of 2,031 eligible respondents almost two-thirds (64 per cent) replied to the first mailing, which is to say that they had returned their completed questionnaires within about two weeks of the mailing. This initial response was high by the standards of other reported postal surveys and was about the figure expected on the basis of the pilot survey. The rate was somewhat lower in the Eastern and North Western Divisions than in the others. In the latter case the reason may be the coincidence of the first mailing with the beginning of the influenza outbreak; in the former case the deficit is accounted for almost entirely by the very low response from doctors in the London area.

The second mailing yielded a further 15 per cent of the total sample, or just over two-fifths of what was left. These figures were a little higher than expected. There was some slight variation between the Divisions in the response to this first follow-up. It was lowest in the North West (probably as a result of the closeness of Christmas), where the mailing yielded only 13 per cent of the total or a third of the remainder, and highest in the North East (which had also had the highest response to the first mailing) where the respective figures were 17 per cent and 53 per cent.

The third and final mailing in fact had less effect nationally than the 'pilot' in the North West had led us to expect. It yielded a further 6 per cent of the total sample, or just over a quarter of what was left, and this is about the figure that had originally been predicted. Again there were some slight variations between the Divisions, with the North East and the North West netting a higher proportion of outstanding replies than the other Divisions. In the case of the North East this seems to reflect the greater readiness of doctors to reply at all stages of the survey, and in the North West the higher rate merely had the effect of bringing the overall response of the Division into line with the others.

The final response rates are shown in the last column of Table B.2. The overall rate is 84.7 per cent (or 83.5 per cent on the reduced denominator), which is good by the standards of other reported surveys, and is a little higher than the predicted rate on the basis of the pilot survey. Table B.3. shows the breakdown of responses by Executive Councils. Of the 112 Executive Councils which were represented in the sample (including some combinations of Executive Councils). 21 had a response rate of less than 80 per cent, but 13 of these contained fewer than ten doctors in the denominator and cannot therefore be considered as significant. Of the larger Executive Councils the response was particularly low in Inner London (68.3 per cent). Liverpool (71.4 per cent). Walsall (73.3 per cent), Warwickshire (74.1 per cent) and Birmingham (75.4 per cent). Manchester, Nottinghamshire and N.E. London were other

large Executive Councils with a lower than average response rate. Thirty Executive Councils had response rates of 100 per cent.

The last column of Table B.3. expresses the completed replies as a percentage of all principals in each Executive Council at 1st October 1968, which is the date to which the sample was corrected. Overall, almost one in every ten principals in England was represented in the survey, but the figure varied quite considerably between different Executive Councils, from 2.5 per cent in Blackburn to 34.8 per cent in Huntingdonshire. Much of this variation was the result of fairly small numbers in many of the Executive Councils, but it is clear nevertheless that the sampling design allocated a variable proportion of doctors in individual Executive Councils as eligible for inclusion in the survey, and the differential response rates further increased the disparities.

In general it seems that response rates were higher in rural than in urban areas, and lowest in the large cities and conurbations of the country - London, Birmingham, Manchester, Liverpool. Proximity to London does not appear to be a factor in response, although the rate for Inner London itself is significantly low. It is probable that personal and professional characteristics rather than geographical location are important in determining who does and who does not respond. The pilot survey obtained a better response from younger and from better-qualified doctors, and Cartwright found that "the response was comparatively higher among more recently and better-qualified doctors, and among those working in partnerships of four or more doctors". The same trend is reported by Mechanic. How significant was the non-response bias in this survey?

Non-respondents

Sufficient information about the doctors was made available from the sampling frame to allow quite detailed comparisons between respondents and non-respondents in the survey. Five points of comparison are used (classification of practice area, sex, age, list size and number of principals in the practice) which cover some of the main objective features of general practice. No comparative information is available for the less tangible aspects of quality of practice, and indeed there are hardly any indicators that could be applied to non-respondents. Cartwright obtained a higher response from Members of the College of General Practitioners than from non-members, and also from doctors with post-graduate qualifications than from those with graduate or licentiate qualifications only. This suggests that the "better" doctors (at least in terms of qualifications) may be relatively over-represented among respondents in postal surveys, but we have no comparable data from this study.

Table B.4. sets out the variations in response on each of the five points of comparison. Because of the differential sampling fraction in designated and non-designated areas it is necessary to present the results separately for the two types of practice area. The most striking overall fact from this table is that the variations in response were generally quite small, and in fact there were no statistically significant differences on any of the five variables between the actual frequencies and the frequencies that would be expected if each variable had no effect upon the probability of response ($p > 0.05$ in each case). Thus, we can say with some confidence that the doctors who returned their completed questionnaires were a satisfactory cross-section of all the doctors originally drawn in the sample.

It is clear from the table, however, that respondents were under-represented at the extremes of some of the variables, and this happened most often where the sampling frequencies were low. For example, female doctors in designated areas were under-represented among the respondents, and so too were elderly doctors and doctors with small list sizes in both designated and non-designated areas. With the exception of the female doctors in the designated areas, the characteristics of non-response (elderly, single-handed and with a small list size) tended to be associated with each other. Thus among the non-respondents, 56 per cent of doctors over 65 were in single-handed practice and 27 per cent had list sizes of less than 1,600, compared with proportions of 31 per cent and 11 per cent respectively among the under 65s. Although these extremes become insignificant when set against the full range of the variables they are important when results are considered which relate specifically to them. It may, for instance, be desirable to look in some detail at the interesting group of doctors in designated areas who have fewer than 2,000 patients on their lists, but it must be constantly borne in mind that the non-response bias is greatest among these extreme categories.

In general, however, a high degree of confidence can be placed on the survey results as being representative of the state of general practice in England today.

Costs

If the problem of low response can be overcome the chief virtue of the postal survey as a research tool is its cheapness, particularly when, as in this case, the sample is a national one and scattered throughout all the counties of England. It is, of course, difficult to estimate the probable cost per interview if all the interviews had been done in person, for much would depend upon the nature and method of employment of the interviewing force; but it is unlikely that this particular sample could

have been covered for much less than £3 per interview. On this basis, the final cost would have been in the region of £5,000 - £5,500.

The actual costs are set out below.

	£.	s.	d.
Supply of paper and producing 2,550 questionnaires, and first covering letter	51.	12.	11.
2,550 Official Paid O.H.M.S. Envelopes	74.	7.	6.
2,452 stamps at 4d. (for reply)	40.	17.	3.
732 Stamps at 4d. (second mailing)	12.	4.	
2,452 manilla envelopes (for- reply)	2.	3.	
732 cartridge envelopes (second mailing)	2.	2.	
1,200 sheets quarto duplicating paper (second and third covering letter)	1.	2.	
Cost of typist's time (addressing letters and envelopes)	48.		
Estimated cost of Senior Research Associates time	180.		
GRAND TOTAL	<u>£412.</u>	<u>8.</u>	<u>8.</u>

The cost of the materials includes all postal charges, but excludes the cost of the Divisional notepaper used in the first mailing, for which the price is not known. The cost of the typist's time includes all work done in preparing sample master sheets and typing names and addresses on letters and envelopes, and the last item is an estimate of the time spent by the Senior Research Associate in administering the survey.

The average cost of materials per completed questionnaire was 2s.2d., and the total average cost per completed questionnaire was 5s.9d.

PROCESSING THE DATA

Coding

A team of eleven coders had already been formed and trained by the Unit in connection with a previous study. All were housewives, recruited through the University Wives Club, and working at home in their own times. Previous experiments into optimum coding conditions on health surveys indicate that accuracy is highest when environmental disturbance is low (apart from the presence of background music), and when coding is carried out in short spells with frequent rest breaks. This pattern of work is much more suited to the part-time housewife working in her own home than to the full-time coder in an office situation. The women employed were aged between 25 and 40, and the majority had pre-school children.

The coding took place between December 1969 and March 1970, and seven coders worked on the data for the whole of that period. One was employed almost exclusively on transferring data from the sample print-outs to the questionnaires preparatory to coding, and on collating information on non-respondents, and the remaining three women worked on the project for varying periods of time. The supervisor remained on the books for four weeks after completion of the coding to deal with errors and discrepancies which arose at the stage of cleaning the data.

Payment of coders was on an hourly basis of 7/6d., and to avoid payment of S.E.T. their work was limited to 8 hours per week. All the coders opted out of flat rate National Insurance contributions, as they were entitled to do, and they were not eligible to pay graduated contributions as none earned more than £9 per week. The only deduction was the industrial injuries contribution. The total cost of the coding, including the cost of the supervisor's time but excluding the small amount of time spent directly on coding administration by the Senior Research Associate, was £244, or a little under 3/- per coded questionnaire. The free-answer questions, which were coded as a separate operation, cost £52 to code.

Training of coders

As a result of their participation in the earlier study, the coders were already familiar with the principles of coding, and had had experience of coding fairly simple data. It was felt that one training session would suffice to familiarize the coders with this questionnaire; and the session was held in November 1969. The participants were first told about the purpose and progress to date of the study, and were given copies of the questionnaire and coding frame which they would be using. The coding was then discussed in detail question by question, with the coders using actual completed questionnaires as test material. A review was also made of the administrative arrangements for the distribution of work by the supervisor, feedback of errors, completion of time sheets, etc. The confidential nature of the research was stressed very carefully, and coders were informed that any known breach of confidentiality, including loss of questionnaires and allowing them to be read by unauthorised persons, would mean instant dismissal from the study. At the end of the session each coder was given six completed questionnaires to take home for trial coding, and these were then checked by the supervisor before the first quota of work was distributed.

The chief difficulty in the training session was instructing the coders about the handling of unedited data. For reasons of time and cost it was decided to omit the editing stage of the survey and to pass the questionnaires for coding exactly as they were returned by the doctors.

Thus, the coders were continually presented with material that was incomplete, **ambiguous**, inconsistent and often illegible, and in each case they had to make a decision about handling it. The general rule was established that such queries were to be referred back to the supervisor for a decision, although in many cases the solution was obvious and could be handled adequately by the coder.

Coding procedure

The coding took place between December and March, and a total of 1,721 completed questionnaires were coded, together with partial data from the 310 non-respondents. Each coder received sufficient work for one week, and the coders were paired, exchanging their work at the end of the week and re-coding each other's work without looking at the first code sheets. The second coder then compared the two independent codes and listed any queries and discrepancies for the supervisor. The coders did not resolve discrepancies themselves. At the end of the fortnight the work was returned to the supervisor, who re-checked the two sets of code sheets for discrepancies, and then compared her list of errors and discrepancies with those noted by the second coder. This method, which was followed throughout the survey, ensured that a double independent check was made at the coding stage. The pairs were changed round as much as possible to ensure that systematic errors (such as one coder habitually misreading another coder's figures) were not perpetuated.

The main coding problems appeared in the first batch of questionnaires and resulted in long lists of queries for the supervisor to resolve. The unedited data proved a stumbling block for coders who were unsure what to do with information recorded in **wrong** places, dates put out of order, **ambiguous** answers, and so on. Most of these problems were quickly surmounted by making slight changes to the coding frame, and by instructing the coders that some items of information, such as medical school, qualifications and current area of practice, could be checked against other sources. Apart from editing, the most common problems concerned the assignment of geographical codes to small towns and villages, and decisions about which areas in the home counties came within the G.L.C. and which remained in the surrounding counties. In time the coders became skilled in the use of atlases and gazeteers, and the process of double-coding always ensured that two opinions were available in each case. A third common difficulty was Over the identification of hospital and non-hospital appointments in questions 5 and 6, but these queries were easily resolved as the experience of the coders increased and the types of possible appointments became more familiar. In some questionnaires difficulty was experienced in reading the doctor's handwriting, and in a few cases this meant that some answers could not be coded.

Coding errors

All questionnaires had been coded and checked by the beginning of April. The total number of detected errors and discrepancies was 1,056, which gives a rate of 0.6 errors per questionnaire or approximately 8 errors per 1,000 individual coding decisions. An error rate of this size is well within the accepted limits of tolerance, and it must be stressed in addition that, due to the use of unedited data, many of the recorded discrepancies were probably differences of opinion rather than outright errors. It is thus possible that the error rate in the strict sense was in fact lower than that given above. Against this, several further errors were discovered at the stage of data cleaning, and in addition all survey data inevitably contain a small proportion of undetected coding errors. We are confident in this case that the total magnitude of undetected coding error was very small indeed, because of the rigorous checks and consistency tests that were built into each stage of the data processing.

Punching and cleaning

The data were punched from the code sheets onto 80-column I.B.M. cards, and were verified by machine. The cards were then cleaned on a counter-sorter before being transferred to tape for computer analysis. The cleaning process involved two kinds of Checks. First, each column on each card was scrutinised to check that all codes were within the specified range for each variable; and secondly all possible internal consistency checks were carried out. Thus, for instance, if a doctor was not married, there had to be "not applicable"; codes in the questions about date of marriage, wife's home area, and number of children. The most important consistency checks of this nature concerned the geographical mobility codes (columns 65-79), and about a dozen errors were detected in this group of codes.

The computer analysis was done by using the Datch and Bangor programmes for survey data.

SUMMARY

Postal surveys are a cheap method of collecting information from a geographically scattered sample provided the response rate is adequate and the questionnaire is fairly short and straightforward. In this case the average cost per completed interview, even including the time spent by the academic staff in administering the survey, was many times lower than it would have been if interviewers had been used, and the final response rate was also almost as good as could have been obtained in any other way.

There are, however, several additional limitations to postal surveys quite apart from the risk of a low response rate. First, the questions must be sufficiently simple and straightforward to be understood with the help of the given instructions. Ambiguous and vague questions must be particularly avoided, and questions cannot be asked which need depth probing or which invite long and elaborate answers. This first limitation meant that in this case detailed questions about reasons for moving or about the possible effect of the designated areas allowance could not satisfactorily be included. Secondly, the answers to a mail questionnaire have to be accepted as final. There is virtually no opportunity to probe beyond the given answer, to clarify an ambiguous one, or to overcome the respondent's unwillingness to answer a particular question. There are therefore, necessarily more gaps and uncertainties in the data than we would have wished. Thirdly, a postal survey cannot be used to test respondents' levels of knowledge about things, or to ask questions to which an answer is given in a later question. In this survey, for example, it was impossible to ask what the respondents knew about the designated areas scheme for they may merely have checked the details from an appropriate source before answering. The final limitation of a postal survey is that it provides no opportunity to supplement a respondent's answers with observational data. Several questions were asked about the organisation of practices and the equipment and auxiliary help in them, but it was not possible to add to these any direct observations about the surgery premises or the way the practices were run.

Each of these four limitations affected this survey in some measure and constrained the nature and content of some of the questions, but our final judgement is that a mail survey was by far the most appropriate technique in this particular situation. The savings in time and cost more than offset the limitations of content. The major problem of low response rates seems to be surmountable in the case of English G.P.s. as three national surveys have each achieved a rate of more than 75 per cent in the past three years. There is, however, an obvious limit to the willingness of G.P.s. to keep on answering postal questionnaires, and there is some evidence from this survey that it may soon be reached. Many doctors pointed out the increasing frequency with which they are being asked to provide research material, and in fact this was the most commonly stated reason among doctors who explicitly refused to take part.

TABLE B.1. MAILING DATES IN MAIN SURVEY

<i>Division</i>	Date of:		
	First mailing	Second mailing	Third mailing
Western	17 November 1969	2 December 1969	11 February 1970
East Midland	10 November 1969	25 November 1969	11 February 1970
North Eastern	5 November 1969	19 November 1969	10 February 1970
Eastern	21 November 1969	8 December 1969	13 February 1970
Southern	5 November 1969	19 November 1969	11 February 1970
North Western	29 November 1969	15 December 1969	22 January 1970

TABLE B.2. RESPONSE RATES, BY DIVISIONS

Division	Total no. in division	Removed from sample:				Sample denominator	Response rates:									
		Died	Returned By G.P.O.	Left G.P.	Other reasons		First mailing		Second mailing		Third mailing		Total			
						No.	%	No.	% of total	% of remainder	No.	% of total	% of remainder	No.	%	
WESTERN	442	5	3	19	5	410	274	66.8	61	14.9	44.9	17	4.1	22.7	352	85.9
EAST MIDLAND	280	6	5	8	2	259	168	64.9	37	14.3	40.7	13	5.0	24.1	218	84.2
NORTH EASTERN	311	2	3	13	-	293	196	66.9	51	17.4	52.6	15	5.1	32.6	262	89.4
EASTERN	456	3	2	25	1	425	253	59.5	65	15.3	37.8	25	5.9	23.4	343	80.7
SOUTHERN	382	-	7	11	-	364	234	64.3	62	17.0	47.7	17	4.7	25.0	313	86.0
NORTH WESTERN	295	4	4	7	-	280	174	61.9	35	12.5	33.0	24	8.6	33.8	233	83.2
TOTAL	2166	20	24	83	8	2031	1299	64.0	311	15.3	42.5	111	5.5	26.4	1721	84.7

TABLE B.3. RESPONSE RATES, BY EXECUTIVE COUNCILS

(Note: for simplicity of presentation some E.Cs. have been combined)

Executive council	Sample denominator	Response rate:		Total number of G.Ps.1968	Replies as % of total G.Ps
		Number	Percentage		
Bedfordshire	15	12	80.0	169	7.1
Berkshire	25	21	84.0	195	10.8
Reading	1	-	-	64	-
Buckinghamshire	18	17	94.4	217	7.8
Cambridgeshire	28	25	89.3	129	19.4
Cheshire	41	37	90.2	391	9.5
Chester	4	4	100.0	36	11.1
Birkenhead	5	4	80.0	62	6.5
Stockport	6	5	83.3	65	7.7
Wallasey	3	3	100.0	44	6.8
Cornwall	19	17	89.5	182	9.3
Cumberland	15	13	86.7	104	12.5
Carlisle	3	3	100.0	30	10.0
Derbyshire	36	30	83.3	251	12.0
Derby	6	6	100.0	91	6.6
Devon	42	40	95.2	315	12.7
Plymouth	10	9	90.0	100	9.0
Dorset	12	10	83.3	159	6.3
Durham	43	39	90.7	295	13.2
Darlington	2	2	100.0	31	6.5
Gateshead	11	9	81.8	42	21.4
Hartlepool	3	2	66.7	34	5.9
South Shields	8	7	87.5	41	17.1
Sunderland	13	11	84.6	78	14.1
Essex	38	34	89.5	427	8.0
Southend	7	7	100.0	68	10.3
Gloucestershire	21	16	76.2	274	5.8
Bristol	21	21	100.0	187	11.2
Hampshire	41	38	92.7	431	8.8
Bournemouth	8	5	62.5	74	6.8
Portsmouth	13	11	84.6	88	12.5
Southampton	12	11	91.7	90	12.2
Herefordshire	14	14	100.0	64	21.9
Hertfordshire	34	29	85.3	358	8.1
Huntingdonshire	27	25	92.6	69	36.2

- continued

TABLE B.3. continued:

Executive council	Sample denominator	Response rate:		Total number of G.Ps.1968	Replies as % of total G.Ps.
		Number	Percentage		
Lancashire	81	67	82.7	818	8.2
Barrow	2	2	100.0	26	7.7
Blackburn	3	1	33.3	40	2.5
Blackpool	4	4	100.0	70	5.7
Bolton	9	9	100.0	66	7.3
Bootle	3	3	100.0	34	8.8
Burnley	3	2	66.7	37	5.4
Bury	2	2	100.0	23	8.7
Liverpool	28	20	71.4	294	6.8
Manchester	18	14	77.8	248	5.6
Oldham	8	4	50.0	46	8.7
Preston	5	4	80.0	52	7.7
Rochdale	1	1	100.0	32	3.1
St. Helens	8	8	100.0	42	19.0
Salford	3	3	100.0	69	4.3
Southport	1	1	100.0	37	2.7
Warrington	8	7	87.5	40	17.5
Wigan	3	3	100.0	32	9.4
Leicestershire	21	17	81.0	175	9.7
Leicester	22	18	81.8	119	15.1
Lincolnshire (combined)	28	24	85.7	254	9.4
Grimsby	3	2	66.7	38	5.3
Lincoln	2	2	100.0	33	6.1
London, N.E.	61	48	78.7	462	10.4
London, Inner	126	86	68.3	1,463	5.9
London, S.E.	65	59	90.8	769	7.7
London, S.W.	82	69	84.1	844	8.2
Middlesex	80	63	78.8	889	7.1
Norfolk	21	20	95.2	184	10.9
Great Yarmouth	3	3	100.0	22	13.6
Norwich	6	4	66.7	55	7.3
Northamptonshire	12	11	91.7	120	9.2
Northampton	7	7	100.0	54	13.0
Northumberland	28	26	92.9	212	12.3
Newcastle	15	15	100.0	113	13.3
Tynemouth	1	1	100.0	23	4.3
Nottinghamshire	54	42	77.8	360	11.7
Oxfordshire	11	10	90.9	152	6.6
Shropshire	15	14	93.3	143	9.8

TABLE B.3. continued

Executive council	Sample denominator	Response rate:		Total number of G.Ps.1968	Replies as % of total G.Ps.
		Number	Percentage		
Sanerset	22	19	86.4	259	7.3
Bath	2	2	100.0	39	5.1
Staffordshire	26	24	92.3	235	10.2
Stoke	7	6	85.7	106	5.7
Wolverhampton	12	10	83.3	98	10.2
Walsall	15	11	73.3	64	17.2
West Bromwich	4	4	100.0	58	6.9
Burton	-	-	-	24	-
Warley	9	9	100.0	75	12.0
Suffolk (combined)	21	19	90.5	177	10.7
J Ipswich	10	9	90.0	54	16.7
Sussex (combined)	26	25	96.2	400	6.3
Brighton	8	5	62.5	87	5.7
Eastbourne	4	4	100.0	32	12.5
Hastings	5	4	80.0	30	13.3
Warwickshire	27	20	74.1	246	8.1
Birmingham	57	43	75.4	440	9.8
Coventry	14	13	92.9	130	10.0
Westmoreland	8	7	87.5	39	17.9
Wiltshire	46	36	78.3	184	19.6
Worcestershire	18	17	94.4	167	10.2
Dudley	7	5	71.4	57	8.8
Worcester	4	3	75.0	31	9.7
Yorkshire E.R.	10	8	80.0	104	7.7
Hull	21	17	81.0	115	14.8
Yorkshire N.R.	22	18	81.8	131	13.7
Teesside	6	4	66.7	147	2.7
Yorkshire W.R.	68	61	89.7	647	9.4
Barnsley	2	2	100.0	26	7.7
Bradford	13	13	100.0	117	11.1
Dewsbury	2	2	100.0	23	8.7
Doncaster	2	2	100.0	37	5.4
Halifax	5	4	80.0	35	11.4
Huddersfield	8	6	75.0	52	11.5
I Leeds	21	20	95.2	207	9.7
Rotherham	5	4	80.0	33	12.1
Sheffield	23	19	82.6	207	9.2
Wakefield	4	4	100.0	27	14.8
York	9	9	100.0	60	15.0
TOTAL, ENGLAND	2,031	1,721	84.7	18,745	9.2

TABLE B.4. THE PROPORTIONS OF DOCTORS WHO RESPONDED, BY TYPE OF AREA, SEX, AGE, NUMBER OF PRINCIPALS IN THE PRACTICE, AND LIST SIZE

	In designated areas		In non-designated areas	
	Number of doctors approached	Percentage Proportion who responded	Number of doctors approached	Percentage Proportion who responded
<u>Classification of area</u>				
Designated, + allowance	497	83.3		
Designated, - allowance	319	85.6		
Intermediate			304	84.5
Restricted			175	89.7
open			736	84.2
<u>Sex</u>				
Male	764	85.2	1,097	85.4
Female	52	69.2	118	82.2
<u>Age</u>				
Under 30	7	100.0	12	91.7
30-34	58	91.4	89	88.8
35-39	126	91.3	128	87.5
40-44	166	84.9	224	90.2
45-49	139	82.7	210	87.6
50-54	125	85.1	173	85.5
55-59	87	78.2	175	82.9
60-64	57	82.5	100	80.0
65 and over	51	66.7	104	70.2
<u>Principals in practice</u>				
1	147	77.6	296	75.3
2	220	80.0	337	85.8
3	229	89.5	261	90.0
4	116	85.3	178	88.2
5	62	93.5	73	89.0
6 or more	42	83.3	70	92.9
<u>List size</u>				
under 1,000	12	25.0	32	62.5
1,000-1,599	22	77.3	118	81.4
1,600-2,199	65	78.5	326	83.1
2,200-2,599	126	83.3	321	88.8
2,600-3,199	348	86.5	293	87.4
3,200-3,799	220	86.8	106	83.0
3,800+	23	82.6	19	94.7

APPENDIX C

Survey materials

1. Covering letter sent with initial mailing in main survey

This letter was printed on Divisional Office notepaper, and personally signed by the Regional Medical Officers.

Address of local Divisional Medical
Office

Dear Dr. - - - - - ,

I am writing to ask for your help with a survey that is being carried out by the University of Kent into certain aspects of General Practice. The survey is supported by the Department of Health and Social Security, and a number of general practitioners have participated in the planning of it. In addition the General Medical Services Committee has examined the questionnaire and has given its approval to the study. I myself believe that this is a valuable and worthwhile piece of research, and I hope that you will agree to help by completing the enclosed questionnaire.

The study is particularly concerned with regional variations in the provision of general medical services. You know, of course, that average list sizes vary quite considerably between different areas, and that the addition to the basic practice allowance for doctors practising in designated areas was intended to some extent to narrow these variations. It is hoped that the survey will show a broad profile of general practice in different regions of the country, of the movement of doctors between areas, and of factors that influence the choice of where to practise.

To do this, about 2,000 general practitioners are being sent the questionnaires, and your name has - by about a 1 in 10 chance - fallen into the sample. The University has asked me to stress how important it is that a 100% response rate should be achieved, for otherwise the results will not represent a true cross-section of the profession. Your replies are important even though you may have no intentions at all of moving or changing practices.

All the information collected in the survey will, of course, be treated in the strictest confidence, and nothing will be included in any report or publication that could possibly lead to the identification of any individual doctor. The data will be processed centrally at the University of Kent, and it would therefore be convenient if you will kindly return your completed questionnaire directly to them, using the enclosed envelope. I will, however, be pleased to elaborate upon any aspect of the study.

The problem underlying this research is of fundamental importance to the future of general practice, and it is one that has greatly concerned the a.M.A. and the Health Departments in recent years. This project is the first national investigation into the problem, and I hope that you will share our belief in the value of it.

Thank you very much,

Yours sincerely,

Regional Medical Officer

2. Covering letter sent with second mailing in main survey

This letter was duplicated on University headed notepaper, and signed by the Senior Research Associate.

University of Kent at Canterbury
Centre for Research in the Social Sciences

Dear Dr. _____

I am writing to you about the General Practice survey which this University is **carrying** out in conjunction with the Divisional Medical Officers. About two weeks ago you **received** a letter from the Regional Medical Officer asking if you would kindly co-operate in the survey; by completing the questionnaire that was enclosed and **returning** it to me. The **response** so far has been **extremely** good, but I note from our records that we have not yet **received** your **reply**.

It is most **important** that we hear from all the doctors in the sample, as otherwise the **results** will not **represent** a true cross-section of the profession. Even if you have no intention of moving in the next few years your reply is **extremely** valuable, and I hope you will feel able to help us by **returning** the completed questionnaire.

I might perhaps add that the **strictest** standards of confidentiality **are** being **observed** in this survey, and of course nothing will be published which could lead to the identity of any doctor.

I hope to receive **your** questionnaire at **your** convenience. Thank you **very** much for your help.

Yours sincerely,

J. R. BUTLER
Senior Research Associate

3. Covering letter sent with third mailing in main survey

This letter was duplicated on University headed notepaper, and signed by the Senior Research Associate.

University of Kent at Canterbury
Centre for Research in the Social Sciences

Dear Dr. ----- ,

A study in General Practice

I am so sorry to trouble you further at an exceptionally busy time of the year, but I note that I have not yet received your completed questionnaire and I am most anxious to reach as high a response rate as possible. At the moment four out of every five doctors approached have returned their questionnaires, but several have written to us in the last few days to say that they have mislaid the questionnaires in the rush of coping with the influenza outbreak. In case you have also mislaid the original mailing and would still like to participate I am enclosing another questionnaire and reply envelope for your use.

I very much regret that the timing of the total project forced us to carry out the survey during winter months when work loads are particularly high, and of course the unexpected outbreak of influenza in the middle of the survey has further added to the difficulties. I am therefore especially grateful to the many doctors throughout the country who have found time to complete and return their questionnaires, and I hope that you will now feel able to help us.

I might perhaps add that since I first wrote to you I have been in touch with the Department of Health and Social Security about disseminating the principal research results, and we are now planning to send a summary of the results to all participating doctors on completion of the project.

I hope to receive your questionnaire shortly, and thank you very much for your help.

Yours sincerely,

J. R. BUTLER
Senior Research Associate

4. The questionnaire

PLEASE START HERE

1. Which Medical School(s) did you attend?

2. What primary qualifications do you have? (Please tick)

M.B., Ch.B. or equivalent	<input checked="" type="checkbox"/>
Conjoint or equivalent	<input type="checkbox"/>
M.B., Ch.B. <u>and</u> Conjoint or equivalents	<input type="checkbox"/>
Other	<input type="checkbox"/>

3. What other qualifications do you have? Please include all higher degrees, diplomas, memberships, etc., and state the year in which they were obtained.

Qualification	Year

4. Please complete the following table for all positions you have ever held in general practice, except as a locum. Include your present position as the latest one, and specify the number of years you have spent in it so far. A change of position means a change of practices, and does not include promotions within a practice. If any position has been split between two or more locations, please state the location in which the majority of your time was spent.

Position	Year of starting	Location (town and county)	Duration (number of years)
1			
2			
3			
4			
5			
6			

5. Since full registration, how many years have you spent altogether in full-time paid positions in:

hospital work?	years	months
military service?	years	months
other medical appointments <u>apart</u> <u>from</u> general practice?	years	months

6. What other medical appointments do you currently hold outside the provision of general medical services?

Appointment	Type of appointment
1	
2	
3	
4	

7. Do you receive a group practice allowance? (Please tick)

No **L**
Yes **D**

8. What ancillary help, either full-time or part-time, do you have in or attached to the practice? (Please tick all that apply)

No ancillary help	<input type="checkbox"/>
Secretary/receptionist	<input type="checkbox"/>
District Nurse	<input type="checkbox"/>
Health Visitor	<input type="checkbox"/>
Other S.R.N./S.E.N.	<input checked="" type="checkbox"/> L <input checked="" type="checkbox"/> J
Social Worker	<input type="checkbox"/>
Other ancillary help	<input type="checkbox"/>

9. Do you feel that the ancillary help provided in your practice is:

(Please tick)

- most adequate?
- adequate?
- inadequate?
- most inadequate?

10. Are your main or branch consulting rooms in a Local Authority Clinic or a Health Centre? (Please tick)

- | | No | Yes |
|-------------------------|-------------------------------------|--------------------------|
| Main consulting rooms | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Branch consulting rooms | <input type="checkbox"/> | <input type="checkbox"/> |

11. How many nights of the week are you on call, on the average, for cases other than obstetrics? (Please tick)

- Every night
- 5 or 6 nights
- 3 or 4 nights
- 2 or fewer nights

12. Do you have direct access to any N.H.S. beds where you retain full responsibility for the treatment of your patients whilst in hospital? (Please tick all that apply)

- No beds at all
- Obstetric
- Medical
- Surgical
- Geriatric
- Other

13. Do you feel that the direct access which you have to N.H.S. beds is: (Please tick)

- most adequate?
- adequate?
- inadequate?
- most inadequate?

14. To which of the following facilities do you have direct access (i.e. not through a consultant or casualty)? (Please tick all that apply)

Full size chest X-rays	<input checked="" type="checkbox"/>
Bone and joint X-rays	<input checked="" type="checkbox"/>
Bacteriological examination of urine	<input checked="" type="checkbox"/>
Glucose tolerance tests	<input checked="" type="checkbox"/>
None of these	<input checked="" type="checkbox"/>

15. Do you feel that the direct access which you have to diagnostic facilities is: (Please tick)

most adequate?	<input checked="" type="checkbox"/>
adequate?	<input checked="" type="checkbox"/>
inadequate?	<input type="checkbox"/>
most inadequate?	<input type="checkbox"/>

16. In general, how would you describe: Very good Good Poor Very poor

Arrangements for getting your elderly patients into hospital?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Communications from hospital when patients have been discharged?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your opportunities for taking post-graduate or refresher courses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Frequent Occasional Rare Non-existent

Your contacts with teaching hospitals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your contacts with post-graduate medical centres	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Do you use the following equipment in your consulting room? (Please tick all that apply)

Height scale	<input type="checkbox"/>
E.S.R. tubes	<input type="checkbox"/>
Microscope	<input type="checkbox"/>
H.B. meter	<input type="checkbox"/>
Sterile gloves	<input checked="" type="checkbox"/>
Proctoscope	<input type="checkbox"/>
E.C.G. machin8	<input type="checkbox"/>
Wright Peak Flow meter	<input type="checkbox"/>
Equipped emergency bag	<input type="checkbox"/>

18. How far do you live from your main consulting room? (Please tick)

- Main consulting room as part of residence
- Less than 2 miles
- 2 - 5 miles
- 6 - 10 miles
- More than 10 miles

19. What influenced your choice of this area as the one in which to practise?

20. In general, how satisfactory is this area for the needs of you and your family in the following ways? (Please tick)

	<u>Very satisfactory</u>	<u>Satisfactory</u>	<u>Poor</u>	<u>Very Poor</u>
Educational provisions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural amenities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreational facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of suitable <u>housing!</u> :		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

21. Are you thinking of moving in order to practise in another part of the country (or abroad) in the next two years? (Please tick)

- No
- Yes

22. What considerations would be important to you in choosing an area in which to practise if you were to move?

23. Do you have any comments on the principle or value of paying an additional allowance of £400 per annum to doctors practising in areas that have been continuously designated for at least three years?

24. Where were you born? (Please state town and county)

25. What is your marital status? (Please tick)

Never married	<input type="checkbox"/>	Now go to question 27
Married	<input type="checkbox"/>	Now go to question 26
Widowed	<input type="checkbox"/>	
Divorced	<input type="checkbox"/>	

26. (a) In what year did you get married? _____

(b) Please list the ages of your children. if any. _____

(c) Where was your wife's/husband's home for most of the time before her/his marriage? (Please state town and county)

27. Where was your home for most of the time before you went to University? (Please state town and county)

28. What type of secondary school did you go to? (Please tick)

Gralllllar	<input type="checkbox"/>
Public	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/> _____

29. What was your father's occupation at the time you were born?

Thank you very much for your help. Please return this questionnaire to Mr. J.R. Butler. Centre for Research in the Social Sciences, University of Kent, Canterbury, Kent.

APPENDIX D

Areas Designated at 1st January 1969

COUNTIES

Bedfordshire and Luton	Bedford; Biggleswade; Dunstable; Leighton Buzzard; Luton.
Berkshire	Abingdon B. and R.D.; Bracknell New Town (excluding Wildridings) (Easthampstead R.D.); Earley and Woodley (Wokingham R.D.); Ilokingham Borough.
Buckinghamshire	Bletchley (excluding later Eaton Housing Estate); Chesham; High Wycombe; New Bradwell, Stony Stratford and Ilolvertton; Slough and District.
Cambridgeshire and Isle of Ely	Wisbech
Cheshire	Hazel Grove and Bramhall; Cheadle and Gatley; Cheadle Hulme; Ellesmere Port; Crewe and Haslington; Hollingworth, Mottram, Hattersley and Tintwistle; Macclesfield; Mount Pleasant (Winsford); Sale; New Ferry, Bebington, Bromborough and Eastham.
Comwall	Nil
Cumberland	Nil
Derbyshire	Alfreton U.D.; Blackwell R.D.; Chesterfield Borough; Chesterfield R.D.; Claycross U.D.; Dronfield U.D.; Glossop Borough; Heanor U.D.; Long Eaton U.D.; Swadlingcote U.D.
Devon and Exeter	Nil
Dorset	Nil
Durham	Billingham U.D.; Bishop Auckland U.D. (including Bishop Auckland Town); Blaydon U.D.; Ryton U.D. and Whickham U.D.; Boldon U.D.; Chester-le-Street U. and R.D.; Consett U.D.; Durham R.D.; Easington R.D.; Felling U.D.; Hetton U.D.; Houghton-le-Spring U.D.; Newton Aycliffe; Seaham U.D.; Sedgfield R.D. (except Sedgfield Village and Stillington); Spenny-moor U.D.; Stanley U.D.; Stockton-on-Tees M.B. (with Norton-on-Tees); Washington U.D.
Essex	Basildon U.D. (except Wickford and Basildon New Town); Basildon New Town Area 1 (North of the Railway); Basildon New Town Area 3 Laindon and Langdon Hills); Benfleet U.D.; Brentwood U.D.; Chelmsford M.B.; Chigwell U.D.; Colchester M.B. (except Greenstead); Harlow U.D. Area 1 (Old Harlow, Markhall Group and Nettleswell); Greenstead

	(Colchester M.B.); Rochford R.D.; Thurrock U.D. (except Aveley Housing Estate); District of Wickford (Basildon U.D.); Waltham Holy Cross U.D.
Gloucester County and City	Chipping Sodbury and Yate; Churchdown; Mangotsfield; Stonehouse and Stroud.
Hampshire	Basingstoke; Gosport; Purbrook and Waterlooville.
Herefordshire	Nil
Hertfordshire	Berkharnstead U.D.; Cheshunt and Gaffs Oak Districts; Elstree and Boreham Wood Districts; Hatfield R.D.; Hemel Hempstead M.B. (excluding Grove Hill Neighbourhood); Oxhey (Watford R.D.); Potters Bar U.D.; St. Albans City (with St. Stephens and London Colney); Stevenage U.D. (excluding Chells and Pin Green neighbourhoods); Waltham Cross District (Cheshunt U.D.); Ware U.D. and R.D.; Welwyn Garden City U.D.
Huntingdon and Peterborough	Nil
Inner London	S.W.9
Isle of Wight	Nil
Lancashire	Abram, Hindley and Ince-in-Makerfield; Adlington, Chorley R.D. and Withnell; Ashton-in-Makerfield; Aspull. Standish with Langtree and Wigan R.D.; Bacup and Whitworth; Billinge and Winstanley, Upholland and Orrell; Chadderton; Chorley; Church, Accrington, Clayton-le-Moors and Oswaldtwistle; Darwen; Denton; Droylsden and Audenshaw; Failsworth; Haslingdon; Haydock; Heywood; Huyton with Roby; Irlam; Kirkby; Leigh; Litherland; Little Lever and Radcliffe; Middleton; Milnrow and Littleborough; Mossley and Ashton under Lyne; Royton and Crompton; Skelrnersdale; Swinton and Pendlebury; Tottington and Ramsbottom; Tyldesley and Worsley; Walton-le-Dale; Widnes.
Leicestershire and Rutland	Birstall; Coalville; Hinckley; Loughborough Borough; Loughborough Rural; North West Leicester.
Lincolnshire (Holland)	Boston Borough and parts of Boston R.D., Le. Parishes of Butterwick, Freiston, Fishtoft and Wyberton; Spalding U.D. and parts of Spalding R.D., i.e. Cowbit, Deeping St. Nicholas, Moulton, Weston, Pinchbeck and Surfleet.
Lincolnshire (Kesteven)	Grantham; Washingborough (Heighington).
Lincolnshire (Lindsey)	Cleethorpes Borough; Scunthorpe.

Middlesex	Friern Barnet; Heston and Isleworth; Ruislip/Northwood; Southgate; Willesden - Harlesden. Roundwood and Stonebridge Wards.
Norfolk	King's Lynn M.B.
Northamptonshire	Corby; Kettering; Rushden. Higham Ferrers and Irchester.
North East London	Canning Town; Custom House - Silvertown; East Ham; Ilford; Hornchurch U.D.; Romford; Dagenham.
Northumberland	Bedlingtonshire; Blyth; Newburn; Wallsend; Whitley Bay.
Nottingham County and City	Blidworth and Rainworth; Edwinstowe and Ollerton; Hucknall; Kirkby-in-Ashfield; Nottingham City (W); Nottingham City (N.E.); Nottingham City (N.W.); Nottingham City (S); Nottingham City (Clifton Estate). Mansfield Borough; Mansfield Woodhouse; Sutton-in-Ashfield; Warsop; West Bridgeford; Worksop.
Oxford County and City	Banbury M.B.
Shropshire	Wellington
Somerset	Midsomer Norton and Radstock U.D.
South East London and Kent	Bexley B. ; Bromley B. ; Chatham B. ; Chislehurst and Sidcup U.D. ; Dartford B. ; Dartford R.D. ; Gravesend B. and Northfleet U.D. ; Gillingham Town; Penge U.D. ; Rochester B. ; Rainham and West Swale; Sittingbourne and Milton Regis U.D. and Central Swale; Whitstable U.D.
South West London and Surrey	Caterham and Warlingham U.D. ; Croydon North; Frimley and Camberley U.D. ; Mitcham; Sunbury-on-Thames U.D. ; Surbiton Borough.
Staffordshire	Newcastle Borough; Biddulph U.D. ; Lichfield R.D. and Burntwood; Aldridge and Brownhills U.D. ; Tamworth Borough; Cannock U.D. ; Stone U.D. ; Stafford Borough; Rugeley U.D.
East Suffolk	Nil
West Suffolk	Sudbury M.B. (including Great Cornard).
Sussex East	Nil
Sussex West	Nil
Warwickshire and Solihull	Bedworth; Chelmsley Wood area; Falcon Lodge/Springfield Crescent area; Kingsbury/Polesworth; Leamington Spa; North Solihull; Nuneaton; Sutton Coldfield (except Falcon Lodge Estate)•
Westmoreland	Nil

Wiltshire	Devizes; Swindon (excluding Walcot); Walcot (Swindon).
Worcestershire	Halesowen; Kidderminster; Stourbridge.
East Riding of Yorkshire	Nil
North Riding of Yorkshire	Eston U.D.; Guisborough U.D.; Saltburn and Marske U.D.; Thornaby Borough.
West Riding of Yorkshire	Adwick-le-Street and Bentley with Arksey U.D.; Batley M.B.; Brighouse M.B.; Castleford Borough; Colne Valley U.D.; Cudworth U.D.; Dearne U.D.; Dodworth U.D.; Doncaster R.D.; Heckmondwyke U.D. and Spenborough M.B.; Hemsworth U. and R.D. (except Badsworth, etc.); Hoyland Nether U.D., Wombwell U.D. and Darfield U.D.; Kiveton Park R.D., Rotherham R.D. and Maltby U.D.; Mexborough U.D., Conisborough U.D., Denaby Main and Swinton U.D.; Morley M.B.; Queensburg and Shelf U.D.; Rothwell U.D. and Stanley U.D.; Selby U. and R.D.; Sowerby Bridge U.D.; Stocksbridge and Wortley R.D.; Thorne R.D.**

COUNTY BOROUGHS

Barnsley	
Barrow-in-Furness	
Birmingham	All Saints Parliamentary Division; Aston; Erdington Municipal Ward; Hall Green Parlia- mentary Division; Handsworth Parliamentary Division; Ladywood Parliamentary Division; Northfield Parliamentary Division; Perry Barr Parliamentary Division; Small Heath Parlia- mentary Division; Sparkbrook Parliamentary Division; Stechford Parliamentary Division.
Blackburn	
Bolton	
Bootle	
Bradford	North; South; West.
Bristol	Bedminster
Burton-Upon-Trent	
Bury	
Carlisle	
Coventry	North; South Central; South (Remainder); East.
Darlington	
Derby	
Doncaster	
Dudley	Northern; South Eastern; South Western.
Gateshead	

Great Yarmouth	
Grimsby	
Halifax	
Hartlepool	
Kingston-upon-Hull	East (excluding Bransholme Housing Estate); Central; West.
Leeds	Eastern; North Eastern; South Eastern; South Western (1) and (2); Southern.
Leicester	
Lincoln	(excluding Birchwood Housing Estate).
Manchester	Collyhurst; Fallowfield, Withington and Didsbury; Gorton, West Gorton and Higher Openshaw; Harpurhey and Blackley; Longsight and Levenshulme; Miles Platting, Newton Heath and Moston; Northenden, Gatley and Wythenshawe .
Newcastle Upon Tyne	East Area; West Area (excluding sub-section).
Northampton	
Oldham	
Preston	
Rochdale	
Rotherham	
St. Helens	
Sheffield	Arbourthorne and Gleadless; Attercliffe and Darnall; Burngreave; Hackenthorpe/Mossborough; Highfield and Heeley; Shiregreen; Walkley; Woodhouse; Woodseats.
Southampton	
Southend-on-Sea	Southend and Thorpe Bay.
South Shields	
Stoke-on-Trent	Fenton, Blurton and Longton; Hanley, Shelton, Buckhall, Abbey Hulton, Milton and Baddeley Green; Longport, Burslem, Smallthorne and Norton; Norrnacot, Meir and Weston Coyney; Tunstall, Goldenhill, Brindley, Ford and Chell.
Sunderland	
Teesside	Eston U.D.; Middlesbrough; Stockton-on-Tees M.B.
Tynemouth	
Wakefield	
Walsall	East; West.
Warley	West.
West Bromwich	
Wigan	
Wolverhampton	Tettenhall U.D.; Wednesfield U.D.; Wolverhampton.
Worcester	

APPENDIX E

Some descriptive regional statistics

Much of the survey data analysed in this report has been classified by the standard region of the doctors' practices. In this Appendix other information is presented about certain demographic, social and economic aspects of the regions in order to fill out the regional impressions left by the survey data. The figures presented here, which are based largely on revisions of Hammond's initial compilation,* are drawn from a variety of different sources, and wherever possible relate to current regional boundaries (see footnote, p.68). The regional boundaries were, however, extensively revised in 1965, which means that figures going back beyond that date are not strictly comparable with more recent figures. In these cases a certain amount of estimating has been necessary. For convenience in this Appendix, and following Hammond's terminology, "the North" will refer to the combined group of regions consisting of the North West, Yorkshire/Humberside, the Northern region, and Wales and Scotland. Conversely, "the South" is made up of the two Midland regions, East Anglia, the South West and the South East. "Northern England" will be used to denote the three English regions in "the North" - that is, without Wales and Scotland; "the Midlands" will comprise the two Midland Regions; and "Southern England" will be made up of East Anglia, the South East and the South West. Where possible, information for a single year is updated to 1968 - the year to which the sample was corrected.

Population

The mid-year estimates for 1968 show that almost half the population of England were living in Southern England, about a third in Northern England and the remainder in the Midlands.¹ The rate at which the population has grown in each region since 1951 has, however, been far from even.² The three regions in Northern England have all expanded their populations by similar amounts, but the rate of growth there has been very slow in comparison with the Midlands and Southern England. In fact the South as a whole had a growth rate between 1951 and 1968 more than twice as high as Northern England (13.9 per cent against 6.2 per cent). Of individual regions in the South, East Anglia has experienced the largest relative growth, with a population increase of 17.9 per cent during the period. Then comes the West Midlands (14.9 per cent), the East Midlands (14.1 per cent), the South West (14.0 per cent) and the South East (13.2 per cent). Moreover, official projections through to 1991 anticipate a continuation of this trend, except in the South Eastern region.³ Thus, between 1968 and 1991 the three regions of Northern England are expected to expand

*E. Hammond. An analysis of regional economic and social statistics, University of Durham Rowntree Research Unit, 1968.

their populations by between 9 per cent and 11 per cent whereas the anticipated rate of expansion in the Southern regions (except the South East) is between 15 per cent and 21 per cent. East Anglia is likely to continue as the most rapidly expanding region of all, with the East Midlands and to a lesser extent the West Midlands and South West also growing quite rapidly. Altogether the projected differential rate of expansion between North and South during the period 1968 - 1991 involves the equivalent of a shift from Northern to Southern England of over 250,000 people.

The reasons for the comparatively slow population growth in Northern England, both in the past and in future projections, are to be found in the relationship between birth and death rates on the one hand and the net balance of migratory movements on the other. Taking the births first, the ratio of adjusted regional birth rates to the national rate shows no great inter-regional differences: the range between the English regions, in fact, was only 94 - 106 in 1968 (England and Wales = 100).⁴ The North West has had a persistently high ratio in post-war years and East Anglia and the South East have always tended to have low ratios, but it is clear that the higher birth rate experienced by the North in past years has now virtually disappeared. By 1968 the regional differences in births were by no means as large as the variations in the adjusted death rates. The pattern of deaths across the country is one of a systematic decrease in standard mortality ratios as one moves from Northern England through the Midlands to the South.⁵ When adjusted for age and sex structures the ratio to the national rate in 1968 (England and Wales = 100) was 113 in the North West, 111 in the North, 107 in Yorkshire/Humberside, 103 in the West Midlands, 100 in the East Midlands, 93 in the South West and South East, and 92 in East Anglia. Expressing the widest difference in another way; for every 100 people who died in East Anglia in 1968, 121 died in the North West.

The equalisation of birth rates throughout the regions, combined with no corresponding shifts in the death rates, means that the North has been securing a decreasing share of the natural increase of the population (that is, the excess of births over deaths).⁶ Between 1951 and 1955, for example, the North secured 47 per cent of the natural increase and the South had 53 per cent, but by the period 1961 - 68 the relative proportions had changed to 41 per cent and 59 per cent. Moreover, the official projections through to at least 1981 indicate that the South is likely to experience a slightly higher birth rate than the North (especially in the East Midlands and East Anglia), and this is one reason for the anticipated higher rate of total population growth. Various factors are responsible for the projected higher birth rates in the South. One is the considerably greater increase in the South in the number and proportion of women of child-bearing age.⁷ The decade between 1951 and 1961 saw a decrease of 8 per cent of

women aged 15 - 44 in the North, compared with only 2 per cent in the South, and the differential is expected to continue at least until 1981. Between 1965 and 1981, for example, the number of women of child-bearing age is expected to increase by 6 per cent in the North, but by 14 per cent in the South. Again, East Anglia, the East Midlands and the South West are likely to be the regions with the biggest proportional growth in the number of these women.

As well as the actual number of women of child-bearing age, the rate at which they get married is also likely to affect future changes in the birth rate. The pattern here is slightly confusing. On the one hand the increase between 1951 and 1966 in the proportion of married women of childbearing age slightly favoured the North, although obviously not to an extent to counterbalance the adverse shifts in numbers and fertility.⁸ On the other hand, the recent trends in the rate at which people are marrying show more growth in the South than in the North,⁹ The percentage increase in the number of marriages taking place between 1951 and 1961 was higher in every Southern region than in any region of Northern England. By 1968 the trend had continued to favour the South, particularly in the high growth regions of East Anglia and the East Midlands, and this is undoubtedly a contributory factor in the higher projected birth rates in these areas.

The difference between the net balance of natural increase and total population growth is made up of the factor of immigration. During the 1950s there was a net shift Southwards of some 600,000 people, and most of these were moving into the South Eastern region,¹⁰ The figures at the beginning of the 1960s seemed to indicate a reversal of this trend, but in subsequent years there has been a pattern of net migration very similar to that of the 1950s. Thus between 1962 and 1966 the three Northern regions had a net outward migration of 88,000, of which 67,000 were to other parts of England and Wales and 13,000 to outside places. By contrast, the two Midland regions gained 58,000 people in this period of whom only 5,000 were from England and Wales, and Southern England gained a net total of 197,000 people, 50,000 of whom were from England and Wales.¹¹ Altogether, between 1968 and 1991 Northern England is expected to suffer a net loss of 418,000 through migration, and the South is expected to make a net gain of 519,000 people.¹²

These figures point to two further significant facts. The first is that immigration from outside England and Wales is not primarily a Northern problem: the brunt of this "external" immigration is borne by the South. In particular, the South Eastern region gained a net total of 161,000 "external" immigrants between 1962 and 1966, which represents three-quarters of all such immigrants into England and Wales. The second significant fact is that the recent belief that the drift to the South has been

halted *is* only partly true: what has really occurred *is* a change *in* the destinations of migrants into Southern England. with the South East playing a much smaller part than either East Anglia or the South West. People are still drifting South *in* a broad geographical sense, but not to the South East. Indeed, when migration within England and Wales alone *is* considered, the South Eastern region *is* seen to have a net loss of some 100,000 people during the first half of the 1960s (although it has been pointed out that this was more than offset by the number of immigrants from outside England and Wales). In the future, the brunt of the burden of migration to Southern England will be borne predominantly by the South West and East Anglia. The 196B projections of the trend through to 1991 show that between these two dates the two regions are expected to have a combined total net migration of +641,000, compared with a loss of 199,000 from the South Eastern region. Of the Northern regions during this period, the North West *is* expected to lose some 216,000 people, Yorkshire/Humberside 124,000 and the North 7B,000.¹²

The 1966 Census Migration Tables give the clearest available picture of internal movements within England and Wales.¹³ In the 12 months preceding the census date the three regions of Northern England experienced a total net loss of almost 7,000 migrants to other parts of England, with the Northern region contributing more than half of the total. Of these three regions, Yorkshire/Humberside had the lowest net loss - 720 people. In the Midlands, the net gain by the East Midlands (of 8,800 people) just offset the net loss from the West Midlands (of 7,730 people), and in fact the East Midlands was the only region in England which experienced a net gain from every other region. East Anglia and the South West were the only other regions with a net overall gain during the year. The South West recorded the largest net gain of any region (19,630 people) mainly from the South East and the West Midlands; East Anglia gained almost 12,000 people, almost all of whom came from the South East. The Southern region itself gained some 4,000 people during the year but lost almost 30,000, so that the net loss from the region (26,000) was by far the highest of any region *in* the country. The 15-24 age group *is* apparently the most important in migrational flows, accounting for two-fifths of all people moving aged 15 and above, and for three-quarters of the migration into the South East.¹⁴ Migration also seems to be significant in the pre-65 age group, presumably reflecting the tendency for professional people to move on their retirement, and also younger wives moving with retired husbands. The South West is clearly the most popular region to which to retire, although the Northern Midlands and the Northern region also have a part to play.

The allegation that migration removes the younger element from the losing area, leaving it with an ageing population, is not entirely true, for although the net movement of migration is from North to South, the Northern regions generally have a younger population than the Southern ones. In 1968, for example, the number of children under 15 per 1,000 population was 248 in the Northern region, 244 in the North West and 239 in Yorkshire/Humberside, and these compare with corresponding figures of 230, 223 and 225 respectively in the South West, East Anglia and the South East.¹⁵ The converse, of course, is that on the whole the Southern regions had higher proportions of elderly people (65+) than the North, and this is especially true in the South West and East Anglia. The net result is that the overall ratio of dependents (i.e. children under 15 and adults over 65) to workers has recently been moving in a way that slightly lessens the South's advantages, but the consequences may not be entirely to the benefit of the North. The high proportion of children in the Northern regions is probably associated with large families and with all the consequent problems of housing, finance, space and education. Young children, moreover, tend to be among the high consumers of medical care, throwing an extra load onto the G.P. services. It is true that this load may in part be offset by the lower proportion of elderly people in the North, but this is itself the result of higher mortality rates, especially among the 45-65 age group.

Finally in connection with population structure it is worth noting that the ratio of women to men shows considerable regional variations. In general, Northern England has more females per thousand males than either the Midlands or Southern England, and the ratio is particularly high in the North West (1.075 females per 1,000 males in 1968).¹⁶ This undoubtedly reflects the traditional availability of female labour in that area. However, the ratio is also very high in the South Eastern region (1.074), again indicating its diversity of job opportunities for women. East Anglia almost has numerical parity between the sexes, and the number of women per thousand males is well below the national figure in the East and West Midlands also.

Employment

The growth of employment opportunities has varied over time and between regions with the result that it is not too easy to separate out the trends. Between 1951 and 1961 the North gained 54 more employees for every 100 additional people, and the South gained 78, but between 1961-66 the respective figures fell to 36 and 54.¹⁷ Thus, although the South has been more affected than the North by the generally unfavourable trend, the North nevertheless still experiences a less favourable ratio. This is particularly true when the male employment figures are considered

separately. Apart from the North West, which has always had a high proportion of women at work, female employment in the Northern regions had been growing as quickly between 1951 and 1968 as in the South, and sometimes faster. Among the men, however, the picture is different, and in fact between 1961 and 1968 there was a decrease in male employees in both the Northern (-4.6 per cent) and North Western (-0.2 per cent) regions, although this was offset by an increase (of 7.1 per cent) in Yorkshire/Humberside.¹⁸ By contrast, the East and West Midlands increased their numbers of male insured employees by 1.8 per cent and 5.4 per cent respectively during this period, the South West increased by 1.9 per cent and the South East and East Anglia by 3.6 per cent.

The problem stems from the disproportionate concentration in the North of manufacturing industries in general, and the shrinking industries (such as mining) in particular. The broad pattern of industrial change during the last two decades is one of a decline in manufacturing industries and a corresponding increase in the importance of service industries, and the geographical distribution of industry has allowed the South to withstand the change much better than the North. It is only the decline in agricultural employment that has affected the Southern regions more, and this has been particularly so during the 1960s. The services sector has grown everywhere. The North-South gap in the proportions of insured employees working in service industries has been closing slightly since 1960, but Southern England still has the largest proportions (666 persons per 1,000 employees in the South East in 1968, and 640 in the South West), and the Midlands the lowest proportions (471 and 444 per 1,000 employees respectively in the East and West Midlands).¹⁹ Within the service sector itself, the South Eastern region had a higher proportion than any other region in seven of the eight constituent industries in 1968, the exception being construction, where only the West Midlands and the North West had lower rates. The South East had its greatest "excess" share of employment in insurance, banking and finance (67 per cent above the national rate in 1968) then miscellaneous (32 per cent), public administration (28 per cent), transport and communications (29 per cent) and distributive trades (19 per cent). By contrast all the three Northern regions were below the national rate in almost every service industry, and the two Midland regions had even lower proportions of employees in service industries.

Various other figures confirm the dominance of the South Eastern region among the service industries. The region has about 80 per cent of the total rateable value of all offices in England and Wales. Which, even allowing for the inflation of rateable values in London, is a formidable degree of concentration.²⁰ The South East also provides almost two-fifths of the clerical jobs entered by school leavers, and although it has the

unusual characteristic of employing a high proportion of boys *in* clerical jobs. nevertheless *in* 1968 almost half of the girls entering employment in the South East went into clerical jobs.²¹ The region is getting about half of **all** the national computer installations (1964).²² and almost the same proportion of scientific and industrial research units (but not necessarily of jobs).²³ Northern England and the Midlands **are** quite **poorly** represented in this respect. as they are also in the proportions of F.R.S's who reside in their regions.²⁴ and in the schools and universities which contribute recruits to the administrative grade of the Civil Service.²⁵

The regional pattern of unemployment is well known, with Northern England generally faring worse than either the Midlands or Southern England. When the average monthly percentage of unemployed is expressed as a ratio of the national average (G.B. =100) the 1968 figures are: North 195, Yorkshire/Humberside 108, North West 104, West Midlands 92. East Midlands 79, East Anglia 75. South East 67 and South West 104.²⁶ The Northern region had an extremely high index. and although the figure for the South West was rather higher than the remainder of the South. nevertheless the overall North-South split is clearly evident. Among female workers the ratios are generally much the same as **for** men. with the Northern region having a very high index. and the South West having proportionately more unemployment than the rest of the South. These unusual figures in the South West probably reflect the region's attraction as a retirement area for professional workers.

Not only does Northern England have higher unemployment rates. **it** also has more long-term unemployment. In January 1969, for example, 37 per cent of men who were currently unemployed in the Northern region had been so for at least 26 weeks, and the corresponding figures for Yorkshire/Humberside and the North West were 32 per cent and 28 per cent respectively.²⁷ By contrast. in London and the South East the proportion of long-term unemployed men was 22 per cent, although **it** was *high in* the South West (31 per cent). However, given the higher rate of unemployment in Northern England, the age spread of the unemployed does not vary much across the country. There is a slight tendency for the Northern regions to have a higher proportion of under 20s among those out of work, but in every region at least four-fifths of the long-term unemployed (i.e. 26+ ~~weeks~~) were over 40 in 1969.

Housing

Housing statistics are among the most difficult to interpret, but the census data for 1951 and 1966 show a general increase in the ratio of dwellings to households, with the South steadily getting up to the ratios experienced by the Northern regions. In 1951, the three regions of

Northern England together had 115,000 more households than dwellings,²⁸ but by 1966 the deficit had been turned into a surplus of 51,000 dwellings.²⁹ During the same period, the deficit of dwellings in the South had been reduced from 702,000 to 309,000, but even by 1966 there were nearly a third of a million more households than dwellings. They were confined particularly to the South East, which was the only region of the country in 1966 to have a numerical deficit of dwellings in relation to households. The result is a much higher proportion of shared dwellings in the South, and particularly the South East, than in the rest of the country. In 1966, for example, 14 per cent of all households in the region were in shared dwellings, and in the South West the proportion was 7 per cent. By contrast, the North West had only 4 per cent of its households in shared dwellings, and the Northern Region and Yorkshire/Humberside each had 2 per cent.

The simple ratio of households to dwellings is a fairly crude measure of housing needs, for it takes no account of the size, age or condition of the dwelling, or of the relationship between household and dwelling size. When these factors are considered, the housing situation in the South improves relative to the North. In general, the South had a higher proportion of large dwellings in 1966 than the North, and Southern England in particular had a lot of big houses. About a half of all the dwellings in each of the three regions in Southern England had five or more rooms (census definition) in 1966, compared with only a third in the Northern region and Yorkshire/Humberside. As a result of these variations in dwelling size, the South as a whole has a slightly lower rate of overcrowding than Northern England. Taking a household density of more than one person per room as a measure of overcrowding, the Northern region was the worst of the English regions in 1966, having 15 per cent of all residents in private households in overcrowded conditions. The proportion was 12 per cent in the other two regions of Northern England, and also in the West Midlands, but dropped to 11 per cent, 9 per cent and 8 per cent respectively in the South East, South West and East Anglia. The reduction in household densities between 1951 and 1966 favoured Northern England considerably more than the South, and the regional differences today are much less than they were in the early 1950s.

The condition of the housing stock, measured by the availability of standard amenities, is surprisingly uniform throughout the country. Although changes of definition make inter-census comparisons difficult, it seems that the worst regions in 1951 have generally made the greatest progress since then, so that by 1966 the regional differences were quite small in the availability of a hot tap, a fixed bath and an inside W.C. East Anglia, the North West and the East Midlands were the worst regions in this respect in 1966, and the South East and South West were the best

provided, although there was quite a lot of sharing of facilities in the South East. The largest difference between Southern England and the remainder of the country was in the proportion of households without an inside W.E. - the rate in the three regions of Northern England (about a quarter) was twice that in the South East (12 per cent). The condition of a dwelling is in part a function of its age, and it is here that the Southern regions are generally better off: in 1961 they had a generally lower proportion of pre-1919 dwellings than the Northern ones, although the proportion in the South West (50 per cent) was as high as anywhere in Northern England. The proportion of pre-1919 dwellings was lowest in the West Midlands (41 per cent) and the South East (43 per cent). By 1966 the proportions had of course dropped in all the regions as a result of slum clearance programmes, but the pre-1919 houses are disappearing at a slightly faster rate in the North than in the South.³⁰

A critical indication of the housing problem in the Northern regions is that, although slum clearance has been progressing at a faster rate there than in the South, these regions still have a higher number and proportion of unfit dwellings. Thus, although numerically the Northern regions have a surplus of dwellings over households, the dwellings there are in a worse state than in the South. Southerners do mere sharing, but in better buildings. The rate of slum clearance has been particularly high in the North West, where 175,000 houses were demolished or closed between 1955 and 1969, and altogether the three regions in Northern England had almost 400,000 dwellings demolished or closed between these times.³¹ In the South, the South Eastern region was the only one to approach this volume of slum clearance with 138,000 demolished in the fifteen years, and in fact the five regions in the South between them only just exceeded the total demolitions in Northern England. In spite of the faster slum clearance programme in the North, however, it is the Northern regions which still have the highest proportions of unfit dwellings.³² In the North West, for example, 13 per cent of all dwellings in 1965 were estimated to be unfit, and the respective proportions for Yorkshire/Humberside and the Northern region were 9 per cent and 5 per cent. The Midlands had a slightly lower overall proportion, but it fell sharply in Southern England to 2 per cent in the South East and South West, and 4 per cent in East Anglia. Thus, although in every region the proportion of unfit houses has been declining in the years 1955-65, the proportion in Northern England is still between two and three times that of the South, and the North West - South East difference is sixfold.

The total number of new permanent dwellings completed per 1,000 population between 1961 and 1968 was higher in all but one of the Southern regions than in any region of Northern England; East Anglia, the South West

and the Midland regions had the highest rates, and the North Western and Northern regions had the lowest.³³ Of those latter two, the Northern region's annual replacement remained almost static between 1956 and 1966, although it has improved slightly in the last two years, but in the North West the rate has been steadily rising each year. In the single year of 1968, East Anglia and the South Western regions had the highest rates of completion (10.3 and 9.0 dwellings per 1,000 population respectively), and the South East and North West had the lowest rates (7.0). Both Midland regions had completion rates in excess of those of any of the three regions in Northern England. The private sector's share of new housing has recently been double that of the first fifteen post-War years, but in the North (and particularly in the Northern region) it is still well below the rate in the South, and also of course below the rate of the inter-war years. Between 1961 and 1968 only 46 per cent of all completed new dwellings in the Northern region were in the private sector, and this compared with 55 per cent in Yorkshire/Humberside, 57 per cent in the North West and the West Midlands, 60 per cent in the South East, 67 per cent in East Anglia, 68 per cent in the East Midlands and 70 per cent in the South West.³⁴ These figures are further reflected in the patterns of tenure, which show the Northern region having the lowest proportion of owner-occupiers in 1966 (367 per 1,000 households) and the highest proportion of council tenants (346 per 1,000 households).³⁵ The highest proportions of owner-occupiers were in the South West (533 per 1,000 households in 1966) and, interestingly, the North West (491); and the lowest proportions of council tenants were in East Anglia (248) and the South East (215). Renting in the private sector was spread fairly evenly throughout the country, although the South East had a noticeably high proportion of furnished dwellings.

Regional variations in house prices, and also in rents, are largely a matter of the South East in comparison with the rest of the country. The index of average prices for 1966, with the Midlands as the index base (=100), showed the Greater London area with an index of 177 for new houses and 167 for other properties.³⁶ In the rest of Southern England the respective figures were 130 and 139, in the Midlands the index was by definition 100, and in the three regions of Northern England combined the index was 92 and 86 for new and other properties respectively. The average price of a detached house in the United Kingdom in the first half of 1966 was £4,699, but such houses were selling for an average of £6,485 in the South East and £4,135 in the Northern region. The range was even greater in the case of semi-detached and terraced houses, but not of bungalows. The average mortgage is a third to a half higher in the London area than elsewhere, and the average deposit is nearly twice as large.³⁷ Despite this and higher incomes, mortgage repayments make a bigger cut into incomes in London and the South East than elsewhere, and in fact the proportion

of income spent on mortgage repayments systematically decreases as one moves further North. Hence, purchase is clearly much easier in Northern England to those on low incomes and with small amounts to put down on deposit. The Midland regions are much more like the Northern than the Southern ones in this respect.

Education

In the section on Population, mention was made of Northern England's extra economic and financial liabilities arising from its higher proportion of children. The relative differences in the amount of spending money available per child is illustrated more specifically in figures of the proportion of L.E.A. pupils among the total school population, which show Southern England with a somewhat smaller proportion of such pupils than either the Midlands or Northern England. In 1968, 90 per cent of pupils in East Anglia and the South East and 89 per cent of pupils in the South West were in maintained schools, and this compares with 95 per cent and 94 per cent in the East and West Midlands. 92 per cent in the North West, and 95 per cent in Yorkshire/Humberside and the Northern region.³⁸ The figures show that the majority of pupils in non-L.E.A. schools are in Southern England, and in fact in January 1968 over two-fifths of all such pupils in England were in the South Eastern region - more than all three Northern regions put together. The regional distribution by different types of non-L.E.A. schools show the South East having more than half the country's pupils in each type of independent school except the Direct Grant Grammar Schools. These are a particular feature of the North West, which also has the largest proportion of pupils in Church of England and Roman Catholic schools of any region.³⁹

The North West also fares somewhat better than its neighbouring Northern regions in its pupil/teacher ratios, particularly at the secondary level. In 1968 the average number of pupils per teacher in secondary schools in the region was 18.3, and this compares with 19.2 in the Northern region and 18.6 in Yorkshire/Humberside.⁴⁰ In the Midlands and the South West the ratio was 18.3, in East Anglia 17.9 and in the G.L.C. area the ratio fell to 17.1. In fact Greater London was the only area in 1968 with a lower proportion of secondary school pupils in classes of over 30 than the North West,⁴¹ a fact that is all the more surprising since the North West (together with East Anglia) in that year had the highest proportion of secondary school pupils in Modern schools.⁴² In the North West 57 per cent and in East Anglia 74 per cent of secondary pupils were in Modern schools, and this compares with, for example, only 46 per cent in the East Midlands and 47 per cent in the Northern region. The North West also had the highest proportion of Grammar school pupils in 1968 (23 per cent) although the range of proportions across the regions was very narrow.

In terms of achievement in public examinations, Southern England stands out with a much better record of success than any other part of the country. In 1968, 16 per cent of all boys leaving school in the South East and 18 per cent of boys leaving in the South West had two or more 'A' levels, and this compares with 13 per cent in Yorkshire/Humberside, 12 per cent in the Midlands and only 10 per cent in the Northern region.⁴³ The actual percentages were lower for girls leaving school, but the relative achievements across the regions remained much the same. At the other end of the scale, 53 per cent of boys in the South East left with no 'O' levels at all in 1968, and the proportion rose to 64 per cent through the West Midlands to 67 per cent in the Northern region. These regional variations in examination success reflect closely the ages at which children leave school in different parts of the country, and this in turn suggests that the greater success of Southern children in public examinations may be due much more to their better access to sixth form education than to any higher innate intelligence. In 1968, for example, fewer than a third (30 per cent) of all boys in the South East left school at the minimum age, and the proportion rose to 47 per cent through the West Midland region to 49 per cent in the Northern region. The proportion of children leaving school at the minimum legal age has been declining across the whole country in recent years, but the decline has been slightly greater in the South East than elsewhere.

The destination of school leavers is not entirely consistent with the regional patterns of school leaving and examination achievement. Southern England (but not the G.L.C. area) expectedly had a higher proportion of school leavers going on to full-time further education, and particularly to Universities, than the rest of the country in 1968, but the Midlands had proportionately fewer pupils going either to Universities or to any form of further education than any region in Northern England.⁴⁴ The same pattern also held for girls leaving school. It may be that the Midlands (and also to a less extent Lancashire and Yorkshire) place more emphasis on part-time and vocational evening classes, thus enabling more school leavers to go straight into employment. But Northern England also enters relatively more pupils for teacher training than Southern England, and its quota going to University is (except for the Northern region) not very far short of Southern England.

Health

Reference was made in the section on population to the higher death rates in the North than in the South, and this applies to most age groups for both males and females. The Standard Mortality Ratio (all ages) was highest in the North West for both men and women in 1968 (110 and 107 respectively: England and Wales = 100), and the other two Northern regions

each had ratios in excess of any region in the South.^{45*} East Anglia had the lowest S.M.R. for men and women (90 and 94) and the Midland regions occupied intermediate positions between Northern and Southern England. When deaths are expressed as a rate per 10,000 population in each group, it is seen that in 1968 the North East and the Northern region had the highest rates in almost every male age group above 25, and Yorkshire/Humberside also had higher rates than most Southern regions above this age. The broad North-South differences in mortality trends were most marked in the first year of life, and in the middle years between 35 and 65, but the overall geographical trend is one of decreasing deaths per unit of population in every age group as one moves further South.

Stillbirths and neonatal deaths also followed a similar pattern of regional distribution in 1968, and the North-South differences were even more marked among post-neonatal deaths (i.e. between one month and one year of life). Thus, while the index of stillbirths and neonatal deaths in Northern England in 1968 was 109 and 108 respectively (England and Wales = 100), the index for post-neonatal deaths rose to 118.⁴⁶ In Southern England the trend was reversed, with ratios of 91, 92 and 89 respectively. Expressing the widest differences in a slightly different way, for every 100 deaths in East Anglia and the South West of children in the first year of life in 1968, there were 135 in Yorkshire/Humberside and 126 in the North and the North West. Moreover, although infant mortality rates have been falling across the whole country in the past fifteen years, the differential between Northern and Southern England has not altered - that is, the proportionate decline in mortality has been no greater in the North than in the South. The fact that an identical pattern has been observed for infant deaths by social class over the period 1949-1965 suggests that home conditions are relatively more adverse than the quality of obstetrical care.⁴⁷

Regional variations in the main causes of death are probably due more to the differing age and occupational structures than to any other factor, although the high death rates from bronchitis in the North West are doubtless due in part to climatic conditions.⁴⁸ Thus, the diseases which tend to strike older people (pneumonia, degenerative heart diseases and cancers) are somewhat more important as causes of death in the South East and the South West, whilst the more important causes in the North (strokes, accidents and arterio-sclerotic heart disease) tend to strike

*The S.M.R. 's for the South Eastern region are in fact given as 135 for men and 136 for women, but these are obviously errors. The listed death rates in each age group are also grossly out of line with the preceding and following years.

the younger population. One of the effects of earlier deaths in Northern England is to leave relatively more widowed people than in the South, especially among the elderly, who make fairly high demands on the health and welfare services. The index of elderly (65+) widowed persons as a percentage of married persons in their age group showed quite significant North-South variations in the 1966 census, with the Northern region having the highest proportion of elderly widowers, and the North West with the most widows.⁴⁹ The South East had proportionately fewest widowers, and East Anglia ranked lowest for the elderly widows. A similar North-South difference remains when all "spouse-less" elderly people are considered (that is, single, widowed and divorced people together).

Morbidity rates are notoriously difficult to define and construct, but the overall pattern appears to be one of a higher rate of sickness in Northern England than in the South, and this pattern holds within age groups, for men and women, within similar occupations, and by broad diagnostic categories. Taking first the new claims for sickness and industrial injuries benefits, Northern England not only has higher rates of sickness benefit claims per 1,000 insured employees, but has actually had an increasing rate of claiming since 1950 in comparison with the South. The North-South differences are widening each year. By 1968 the index of claims for sickness benefit (England and Wales = 100) was 137 in the Northern region, 126 in Yorkshire/Humberside, and 124 in the North West. 50 By contrast, in the East and West Midlands the index was 108 and 87 respectively, in the South West it was 101 and in East Anglia and the South East the index was 82. Thus, for every 100 new claims in the South East in 1968 there were 167 in the Northern region. Claims for industrial injuries benefits followed a similar pattern, with the South East having a very low rate, but the North West had proportionately far fewer claims (41 per 1,000 insured employees) than either the Northern region (81) or Yorkshire/Humberside (70).

Indices of incapacity for work because of illness show a similar North-South split in inception rates and in total days off. The 1965 report from the then M.P.N.I., relating to the year 1961-2, gave indices of 118, 115 and 109 respectively in the Northern region, the North West and the East and West Ridings (G.B. = 100) for inception rates for men, compared with indices of between 90 and 100 in the Midland region and the South West, and indices of less than 90 in East Anglia and the South East.⁵¹ Among female employees the North West had a much higher inception rate than the other regions, and the East and West Ridings had a rate that was slightly below the national average. The indices for total days off work for male employees were 124 in the Northern region, 119 in the North West and the East and West Ridings, 95 and 97 respectively in the West and

North Midlands, 88 in the South West, and 74 in East Anglia and the South East. The age-standardised figures of the major causes of incapacity for work showed that bronchitis, influenza, acute upper respiratory infections, arthritis and rheumatism and diseases of the stomach and duodenum were much more important in Northern than in Southern England; but, regardless of diagnosis, the higher rates of incapacity for work among Northern men remained fairly consistent across each age group. The broad North-South differences were as significant among the under-25s as among the over-60s.

Other available figures support the general impression of a greater load of sickness in Northern England than in the South. For example, the numbers of disabled persons on local authority registers in 1968 showed fairly high regional variations.⁵² In general the Midlands and the South East had a lower than average proportion of registered blind, handicapped and deaf-and-dumb people, whilst the South West, East Anglia and the regions of Northern England had generally higher proportions. The Northern region, curiously, has tended to be low in its proportion of registered and handicapped people, but very high in its proportion of deaf-and-dumb people. It is, of course, impossible to estimate the extent to which these figures represent the actual number of disabled people or merely those who are registered with the local authorities. The Northern regions also experience relatively more industrial accidents (including fatalities) than either the Midlands or Southern England,⁵³ yet in 1961 they had fewer workers covered by employer's sick pay and industrial accident schemes.⁵⁴ The lower rate of industrial accidents in the South partly reflects the greater proportion of workers in sedentary jobs. In London, one out of every two male workers aged 21-64 were in sedentary occupations in 1962-63, and the proportion was also high in East Anglia and the rest of the South East.⁵⁵ The proportion was somewhat lower, however, in the South West and the Midland regions, and unexpectedly high (42 per cent) in the East and West Ridings. But in spite of having so many sedentary workers, the protein value of the food consumed in London in 1963 is estimated to be higher than in any other region.⁵⁶

In view of the greater amount of illness and the proportionately fewer doctors *in* Northern England, it is scarcely surprising to find a greater number of prescriptions per person being written there. The 1968 index (England and Wales = 100) was 109 in the North West, 105 in the Northern region and 104 in Yorkshire/Humberside.⁵⁷ These, plus the South West (102) were the only regions to exceed the national average, and the figures compare with 96 in East Anglia, 94 in the West Midlands and South East, and 91 *in* the East Midlands. Moreover, the average net ingredient cost per person was higher in Northern England than in the South, with the Northern

region having a higher cost than any other region of England and Wales.⁵⁸ Some general regional characteristics can also be seen in the main therapeutic groups for which prescriptions are written. In 1967 preparations acting on the cardiovascular system were prescribed relatively frequently in East Anglia and the South West; those acting on the lower respiratory system were most common in Yorkshire, the West Midlands and the North West; prescriptions for infections were above average in the Northern region and considerably below average in the South West; preparations used in rheumatic diseases were prescribed most frequently in East Anglia and the South West.⁵⁹

Information on regional variations in G.P. consultation rates is scarce, and in fact the somewhat dated study by the G.R.O. and the R.C.G.P. remains the best source.⁶⁰ These data, relating to 1955-56, showed very slight regional differences in the proportions of patients consulting their G.Ps. East Anglia and the Northern region had noticeably fewer patients seeing their G.Ps. than the rest of the country, but the regional variations were by no means as marked as in prescribing habits, and bore no obvious relationship to the incidence or prevalence of disease. The proportions of consultations, however, showed a significantly lower rate in London and the South East than in the rest of the country, and a somewhat higher rate in the South West and, to a lesser degree, in the North West and Yorkshire. This pattern held for both men and women. Thus taking the patient and consultation rates together, the South Eastern part of England seems to have as many patients but fewer recurrent consultations than the rest of the country, perhaps reflecting a lower burden of chronic illness. The analysis of consultations by diagnosis may reflect the doctor's training and interests as much as any objective features of the presenting complaints, but it is interesting to note that consultation rates were significantly higher in London for psycho-neurotic disorders, in the Western regions of the country for common cold, and in the Northern regions for anaemia.

Dentists, as well as doctors, prefer to work in Southern England, especially in the South East. The 1968 index of persons per dentist (England and Wales = 100) was 74 in the South East and 90 in the South West.⁶¹ East Anglia was less like these regions in the provision of dentists than of doctors (the 1968 index there was 120), but, as with G.Ps., the Midland regions had the highest indices of all (137). Moreover, the trends since 1963 show the three regions in Southern England improving their indices relative to the national average, at the expense mainly of the Northern region and the West Midlands.

On the hospital side, the South East and South West had the greatest number of allocated beds per 10,000 population in 1968, but the three regions of Northern England all had a higher rate of bed provision than any of the other regions.⁶² Thus, taking Northern England as a whole, the quantitative provision of in-patient care was better than in the Midlands, and only a little behind that of Southern England. The annual throughput of patients (discharges and deaths per 10,000 population) closely follows the regional variations in the availability of beds, with the South East having the highest throughput in 1968 followed by the three Northern regions, and with the Midlands having the lowest throughput.⁶³ It is impossible from these figures to judge whether the regional differences are due to actual differences in the distribution and severity of illness or merely to the differences in the availability of beds, but the figures are at least consistent with the sustained impression of a lower overall standard of health in the North. With the exception of the South East, hospital staffing ratios (w.t.e.'s.) are not unfavourable to Northern England (especially in comparison with the Midlands)⁶⁴ and the share of capital expenditure which the area is securing seems to be in proportion.⁶⁵ But the South East does hold a growing proportion of distinction awards to consultants, and particularly of 'A plus' and 'A' awards. In 1968, 38 per cent of all consultants in the Metropolitan hospital regions held distinction awards compared with, for example, only 27 per cent in Birmingham and Manchester, and 28 per cent in Leeds and Sheffield.⁶⁶ The distribution of distinction awards is probably related closely to the geographical location of medical schools. In the years 1961-64 the Universities in the South Eastern region conferred 34 per cent of all first degrees in medicine in Great Britain, 32 per cent of all higher degrees, and 80 per cent of all diplomas.⁶⁷ No other region approached these figures: the next highest was East Anglia, with 18 per cent of first degrees, 12 per cent of higher degrees and no diplomas.

Finally, the 1965 estimate of the local authority health and welfare services programmes through to 1971 (and tentatively to 1975) show that, apart from the South Eastern region, most areas are planning to reach similar targets, and in fact the target number of domiciliary workers per 1,000 population is higher in each region of Northern England than in any region of the South (including the South East).⁶⁸ This reflects the present North-South disparities, but of course with proportionately fewer doctors and a greater burden of morbidity, the higher ratios of domiciliary services personnel in Northern England may still be unable to provide as adequate a service as the South.

Cultural, recreational and environmental amenities

The distribution of health, illness and medical care services is reported by G.Ps. as a major factor in their evaluation of an area. A second important set of considerations comprises the general environment, including cultural and recreational facilities, retail trading, land use and transport services.

The 1966 Census of Distribution showed that the index of retail spending per head of population was considerably higher in the South East (118) than in any other part of the country (G.B. = 100).⁶⁹ The rest of the South had a slightly higher rate of spending than Northern England, and the trend over time seems to be favouring the South. The period between 1961 and 1966 widened the existing overall North-South gap in spending per head, per shop and per shopworker, and these factors in turn are likely to influence the general development of retail trade to the relative advantage of the South. The higher rate of spending in the South (particularly in the South East) held for most of the major categories of retail trading and was most noticeable in the South East among the "luxury" goods - confectionery, tobacco, books, photographic equipment, jewellery, leather and sports goods etc.

The cinema has been declining in recent years as a source of entertainment, and the percentage decline in cinema seats per unit population between 1951 and 1968 has been greater in Northern England than in the South - possibly reflecting more conversions to bowling alleys and bingo halls.⁷⁰ Nevertheless, even in 1968 Northern England had slightly more cinema seats per 1,000 population (26.0) than the Midlands (24.4), although Southern England had a rather higher figure (30.7). The rate of provision was highest in the South East (31.6 seats per 1,000 population) and the Northern region (29.7), and lowest in Yorkshire/Humberside (23.4). Occupancy rates were similar across the regions, so that total cinema admissions per 1,000 population followed the same trend as the provision of seats.⁷¹ The people of Southern England enjoy a much greater theatre capacity than the Midlands or Northern England, and this is by no means due to the predominance of London theatres, for the South Eastern region had proportionately fewer seats in 1966 than either East Anglia or the South West.⁷² The two Midland regions ranked very low indeed in theatre capacity, and although Northern England (particularly the North West) was better in comparison, it still lagged far behind Southern England. The very poor showing of the Midlands and the good provision in the North West probably reflects the importance of coastal resort theatres. Civic efforts outside resorts to maintain the theatre where it is commercially weak are more noticeable in the North.

The generally better amenities of Southern England extend also to pubs, restaurants, hotels and inns - or at least to those recommended in the "Egon Ronay/B.M.C. Guide". In the 1956 edition, 62 per cent of the recommended pubs in Great Britain, 53 per cent of the restaurants and 41 per cent of hotels were in the South East, whilst the combined share of the three regions in Northern England was only 12 per cent, 14 per cent and 16 per cent respectively.⁷³ Next to the South East, the South Western region was the best supplied, particularly in inns, and when related to population size, East Anglia also came out well. Raymond Postgate ("Good Food Guide") seems to share similar tastes, for he too favoured the cooking of Southern England in 1955.⁷⁴

Land use is an important aspect of environment, and once out of the towns it is the Northern regions which possess the greatest share (69 per cent) of England's rough grazing land, which can more or less be equated with public access or walking country.⁷⁵ Southern England, on the other hand, has the greatest share of the country's arable land (54 per cent) which not only offers a strong visual contrast with the North but is more productive financially. And while the National Parks lie mostly in the North, and particularly in the Northern region, the South offsets this by having most of the Areas of Outstanding Natural Beauty.⁷⁵ The Northern region also has a much higher proportion of land owned by the National Trust than any other region of England, but again to offset this Southern England contains almost two-thirds of all National Trust properties open to the public.⁷⁷

The abiding legacies of industrial development are dereliction and smoke. In 1965, Northern England had relatively twice as much derelict land as the South, and the high value of land in the South East ensured that the index in that region remained low.⁷⁸ In fact, the North West had proportionately almost ten times as much derelict land as the South East. The West Midlands also had a fairly high proportion of land in a derelict state. The total area of derelict land in the country seems to be growing, and the South is generally making better progress in treating it. The West Midlands made the best progress in 1964-65, treating 14 per cent of the derelict land of the region, but Yorkshire/Humberside (3 per cent) and the Northern region (2 per cent) had poor records. In treating derelict land, the North tends to go in for landscaping, with the Midland regions favouring reclamation. Smoke control is difficult to compare between regions, but the general picture seems to be one of considerable progress in the South East and, to a lesser degree, in the North West and Yorkshire/Humberside, with the other regions falling some way behind, and with East Anglia and the South West having very few smoke control orders in operation per 1,000 urban population in 1966.⁷⁹

The number of vehicles in Northern England is less than in the South, whether expressed in relation to population or road mileage, and the same is also true of cars only.⁸⁰ In 1968 the number of cars per 1,000 population was between 230 and 250 in the regions of Southern England, 215 and 216 respectively in the West and East Midlands, and about 160 in each region of Northern England. The congested regions in that year were the South East, with exactly 100 cars per mile of road, the North West (82) and the West Midlands (67). Because of their high urban densities, these were also the regions with the lowest mileage of roads per 1,000 population. It might be thought that the lower vehicle densities in the North would result in fewer road deaths, but this is not the case. In 1968, the male S.M.Rs. from motor vehicle accidents were highest in Yorkshire/Humberside and the East Midlands, with the West Midlands in third rank.⁸¹ The three regions in Southern England had the lowest fatality rates in the country,^{*} with the South East having the lowest rate of all, probably reflecting the extensive use of public transport services in London.

Economic and Social

The regional distributions of gross personal incomes in 1966/67 showed the South East and the West Midlands well ahead of the rest of the country, with mean incomes before tax of £1,194 and £1,140 respectively.⁸² The East Midlands, East Anglia and the South West each had a similar figure (£1,070 - £1,073), the North West and Yorkshire/Humberside had slightly lower figures (£1,061 and £1,058 respectively), and the Northern region had the lowest mean income by a considerably margin (£1,030). Smaller incomes (that is, less than £1,000) were most common in the Northern, East Anglian and South Western regions, where they accounted for well over half of all incomes; and the West Midlands was the most prominent in the middle range of incomes between £1,000 and £1,500. The less affluent regions have been gaining ground recently in this middle bracket, but they have been falling increasingly further behind the South East beyond this limit. In its share of incomes above £2,000, the South Eastern region is quite unrivalled, and its disparity increases the higher one goes up the income scale. Thus, the region had 19 per cent of all incomes in England above £2,000 in 1966-67, 53 per cent of all incomes above £5,000 and 59 per cent of all incomes above £20,000. Incomes in excess of £5,000 are not only more numerous in the South East than elsewhere, but on average they are considerably larger as well. Net income from investments is also a prominent feature of the financial scene in the South East: in 1966/67

*See footnote on page 419.

the region had two-fifths of all investment incomes in England, and they yielded exactly half of the total money earned by investments. However, the proportional tax bill was also higher in the South East than in any other region in 1966/67: 17 per cent of gross income was deducted in taxation, compared with 13 per cent in the North West and Yorkshire/Humberside, and 12 per cent in the Northern regions.⁸³

The generally lower level of incomes in Northern England is further reflected in the regional pattern of payment of Supplementary Benefits. The 1968 index of regular weekly payments (England = 100) showed that all three Northern regions were above the national rate compared with only one region (the South West) in the South.⁸⁴ The Northern region in particular had a high index (139), and this contrasts with 86 in the South East, 92 in the West Midlands and 93 in the East Midlands and East Anglia.

As well as regional differences in income, there are substantial variations in household expenditure between different parts of the country. The first point to note is that the difference between average income and average expenditure per person is rather greater in the South East and the Midlands than elsewhere, and that households in East Anglia and the South West have the least money left over for saving - whether in absolute monetary terms or as a percentage of total income.⁸⁵ For example, the amount per person left for saving in 1967-68 was £2.25 in the South East and £2.15 in the Midland regions, but only £1.75 in East Anglia and £1.30 in the South West. Families in the South East and South West spent a higher proportion of the household budget on housing than any other region (this being for many families the major or only form of investment), whilst Northern and Yorkshire households spent the lowest proportions. Households in Southern England allocated a relatively large proportion of their budgets to transport and vehicles, but their proportional expenditure was below the national rate for food, alcohol and tobacco. In terms of absolute amounts spent each week by households, Yorkshire/Humberside and the Northern region (but not the North West) had lower expenditures than the national average in 1967-68 on virtually every category of commodities, whereas the South East exceeded national spending on all but alcohol and tobacco. The East Midlands also fell below the national rate of expenditure on most categories, and in East Anglia the only excess spending above the national rate was on durable household goods and transport. Spending by families was high in the West Midlands in most categories except housing and clothing, and the North West also ranked well.

Information on hire purchase agreements is not readily available, but the annual reports and accounts of the Gas and Electricity Councils show

no great North-South differences in the use of hire purchase agreements for their domestic appliances, except for the North West, which had a significantly higher proportion of sales on hire purchase than any other region between 1963 and 1966.⁸⁶ Gross National Savings per head are higher in the North, particularly in the North West, and have been increasing at a faster rate than in Southern England; but Southerners show a marked preference for Premium Bonds, and for the tax advantages of Savings Certificates and Development Bonds.⁸⁷

Many of the regional differences outlined above can be summarised in a shorthand fashion by saying that the social class distributions show a greater concentration of class I and II people in the South, and of IV and V people in the North. The 1966 census showed that 23 per cent of economically active and retired males in the South East were in classes I and II, compared with for example only 16 per cent in the Northern region.⁸⁸ The corresponding proportions for classes IV and V in the two regions were 25 per cent and 33 per cent. Unskilled workers have been decreasing as a proportion of all workers across the entire country in recent years, but the change between 1951 and 1961 shows a slightly greater rate of decrease in the North than in the South. These social class differences find some traditional expression in voting patterns, with the three regions in Northern England returning almost half of the Labour M.Ps. but less than a quarter of the Conservative M.Ps. elected in English constituencies in 1966.⁸⁹ The distribution of votes was more even between the regions, although a steadily growing percentage of Conservative votes and representation in the House of Commons is being won in the South,

Finally, the regional variations in the distribution of certain social problems show the older areas of urban spread in the South East and North West as generally having the greatest difficulties to cope with. Proportionately more criminal offences were known to the police in the South East and the North West in 1964-65 than in the other regions, and this was true for both indictable and non-indictable offences.⁹⁰ Crime rates were very low in the more rural areas of East Anglia and the South West, but also (somewhat surprisingly) in the Midland regions. Offences of violence generally followed the same pattern, with the notable exception of the crime of causing death by dangerous driving, where the South East and North West ranked very low in 1963-65 and East Anglia and the South West had by far the highest rates. Murder and felonious wounding were particular characteristics of crime in the North West, as also was house-breaking and cruelty to Children, whereas obtaining by false pretences was the speciality of criminals in the South. Overall, the North-South differences in crime rates were negligible, although there

was a slightly greater proportion of young offenders in the North, again with the North West having a particularly high rate.

Standard Mortality Ratios (England and Wales = 100) for suicide and other self-inflicted injuries in 1968 showed some differences between regions in the case of men. They were highest in the North West (115) and the South East (146)*, and particularly low in the East (83) and West Midlands (76).⁹¹ Among women the range across regions was much wider (70-158), and the ratios were highest in the South East (158)* and Yorkshire (109). The West Midlands had the lowest female S.M.R. - 70. Suicide is much more prevalent among people over 35 than at younger ages, but the South Eastern region is remarkable for its high proportion of suicides among the under 35s. At the other end of the life cycle, illegitimate birth rates rose everywhere in the 1950s, but most rapidly in the South East and West Midlands.⁹² Since 1961 these two regions, along with East Anglia, have experienced the lowest overall increase in the illegitimacy rate (about 30 per cent between 1961 and 1968), and have been overtaken by the Northern region (74 per cent), the North West (63 per cent), and Yorkshire/Humberside (54 per cent).⁹³ But the change is only relative, for in the single year of 1968 the South East (together with the North West) still recorded the highest rate (92 illegitimacies per 1,000 total live births), closely followed by Yorkshire/Humberside (88) and the East Midlands (82). The lowest rate was in East Anglia (72). In Northern England and the Midlands illegitimacy rates increased in each successive maternal age group in 1968, and in Southern England they decreased, but teenage mothers accounted for less than a third of all illegitimate births.

*See footnote on page 419.

References

1. Registrar General's Quarterly Return for England and Wales. Quarter ending 31st December 1968, Appendix I.
2. Ibid.
3. Registrar General's Statistical Review of England and Wales, 1968. Part II, Table A6.
4. Op. cit., Table E.
5. Ibid.
6. Registrar General's Statistical Reviews, 1951-68, Table E.
7. Registrar General's Quarterly Return for England and Wales. Quarter ending 31st March, 1966.
8. Sample Census 1966, Great Britain, Summary Tables, Table 3.
9. Registrar General's Statistical Reviews, 1951-68, Table F.
10. Census 1961, England and Wales, Preliminary Report, Table C.
11. Registrar General's Quarterly Return for England and Wales. Quarter ending 31st December 1966, Appendix E.
12. Registrar General's Statistical Review of England and Wales, 1968. Part 11, Table A6.
13. Abstract of Regional Statistics, No. 5, 1969, Table 8.
14. Sample Census 1966, England and Wales, Migration Summary Tables, Part I, Tables 3A and 3B.
15. Registrar General's Statistical Review of England and Wales, 1968. Part II, Table A4.
16. Ibid.
17. Ministry of Labour Gazette/Employment and Productivity Gazette.
18. Abstract of Regional Statistics, No. 5, 1969, Table 9.
19. Op. cit., Table 10.
20. Rates and Rateable Values in England and Wales, 1968-69. Ministry of Housing and Local Government and Welsh Office.
21. Abstract of Regional Statistics, No. 5, 1969, Table 12.
22. Ministry of Labour, Manpower Study No. 4.
23. Industrial Research in Britain, 5th Edition (ed. I.D.L. Ball) Harrap Research Publications. Figures calculated by Hammond, op. cit., Table 2.6.3.
24. Yearbook of the Royal Society, 1966. Figures calculated by Hammond, op. cit. Table 2.6.4.
25. Civil Service Commissioners Annual Reports. Figures calculated by Hammond, op. cit. Table 2.7.3.
26. Employment and Productivity Gazette, 1969.
27. Op. cit., p. 152-153.
28. Census 1951, England and Wales, Housing Report.
29. Sample Census 1966, England and Wales, Housing Tables. Part I.
30. Housing Statistics, Great Britain, Nos. 1 and 5. Ministry of Housing and Local Government. Figures calculated by E. Hammond, op. cit. Table 3.3.2.
31. Housing Statistics, Great Britain, No. 22, Table 36.
32. Hammond, op. cit., Table 3.3.1. (b)
33. Abstract of Regional Statistics, No. 5, 1969, Table 32.
34. Housing Statistics, Great Britain, No. 22, Table 3(b).

35. Sample Census 1966, England and Wales, Housing Tables, Part I, Table 7.
 36. Hammond, *op. cit.*, Table 3.4.1.
 37. *Op. cit.*, Table 3.4.2.
 - 3B. Abstract of Regional Statistics, No. 5, 1969, Table 62.
 39. Hammond, *op. cit.*, Table 4.1.2.
 40. Abstract of Regional Statistics, No. 5, 1969, Table 62.
 41. Statistics of Education, Vol. 1 (Schools), 1968, Table 22.
 42. *Op. cit.*, Table 2.
 43. Statistics of Education, Vol. 2 (School leavers), 196B, Table 15.
 44. *Ibid.*
 45. Registrar General's Statistical Review of England and Wales, 196B, Part I, Table 19.
 46. *Op. cit.*, Table 13.
 47. C.C. Spicer and L. Lipworth. "Regional and Social Factors in Infant Mortality". Studies on Medical and Population Subjects, No. 19, G.R.O. 1966.
 48. Registrar General's Statistical Review of England and Wales, 196B, Part I, Table 19.
 49. Sample Census 1966, Great Britain, Summary Tables, Table 3.
 50. Annual Report of the Department of Health and Social Security, 196B, Cmnd. 4100, Appendix VI, Table 2.
 51. Ministry of Pensions and National Insurance, Report of an inquiry into the incidence of incapacity for work, 1965, Part 11.
 52. Institute of Municipal Treasurers and Accountants and the Society of County Treasurers, Welfare Services Statistics, 1967-6B.
 53. Employment and Productivity Gazette, May 1969, p. 444, Table 1.
 54. Annual Report of the Ministry of Pensions and National Insurance, 1962, Cmnd. 2069, Table 40.
 55. Hammond, *op. cit.*, Table 5.2.4.
 56. *Ibid.*
 57. Annual Report of the Department of Health and Social Security, 196B, Cmnd. 4100, Appendix I, Table 14.
 - 5B. *Ibid.*
 59. Digest of Health Statistics for England and Wales, 1969, Table 5.10.
 60. W.P.D. Logan and A.A. Cushion. Morbidity Statistics from General Practice, Vol. 1, 195B and Vol. III, 1962. General Register Office.
 61. Digest of Health Statistics for England and Wales, 1969, Table 3.20.
 62. Abstract of Regional Statistics, No. 5, 1969, Table 60.
 63. *Ibid.*
 64. *Op. cit.*, Table 61.
 65. Digest of Health Statistics for England and Wales, 1969, Table 2.5.
 66. Annual Report of the Department of Health and Social Security, 196B, Cmnd. 4100, Appendix IV, Table 67.3.
 67. Hammond, *op. cit.*, Table 5.4.3.
 - 6B. Health and Welfare: the development of community care. Cmnd. 3022, 1966.
 69. Board of Trade, Report on the Census of Distribution and Other Services, 1966. H.M.S.O., 1970.
 70. Annual Abstracts of Statistics No. 105, 1969, Table B7.
-

71. *Ibid.*
72. Hammond, *op. cit.*, Table 6.3.4.
73. *Op. cit.*, Table 6.3.5.
74. *Op. cit.*, Table 6.3.6.
75. Abstract of Regional Statistics, No. 5, 1969, Table 1.
76. Hammond, *op. cit.*, Table 6.4.2.
77. *Op. cit.*, Table 6.4.3.
78. *Op. cit.*, Table 6.4.6.
79. *Op. cit.*, Table 6.4.7.
80. Abstract of Regional Statistics, No. 5, 1969, Tables 39 and 41.
81. Registrar General's Statistical Review of England and Wales, 1968, Part I, Table 19.
82. Abstract of Regional Statistics, No. 5, 1969, Table 50.
83. *Op. cit.*, Table 49.
84. Annual Report of the Department of Health and Social Security, 1968, Cmnd. 4100, Part II, Table 28.
85. Department of Employment and Productivity. Family Expenditure Survey, 1968, Table 36.
86. Hammond, *op. cit.*, Table 7.3.3.
87. *Op. cit.*, Table 7.3.4.
88. Sample Census, 1966, England and Wales, Economic Activity Tables, Part 3, Table 30.
89. Hammond, *op. cit.*, Table 7.5.1.
90. *Op. cit.*, Table 7.7.1.
91. Registrar General's Statistical Review of England and Wales, 1968, Part I, Table 19.
92. Registrar General's Statistical Review of England and Wales, 1962, Part III, Table LII.
93. Registrar General's Statistical Review of England and Wales, 1968, Part I, Table E.

APPENDIX F

Some Notes on List Size and Remuneration

The designated areas allowance was introduced in 1966 at a time when the entire system of G.P. remuneration was restructured. The new system retained the traditional capitation fee as one of the components of a doctor's income, but most doctors received a much smaller proportion of their total income from capitation fees than they had done before 1966. Hence the relationship between list size and total income became less clear, and the financial advantages of, say, an additional 500 patients were less readily calculable. In this situation the question arises of the relative value of the designated areas allowance as compared with the increased income from other sources resulting from the larger list sizes. In this Appendix we attempt to answer the question by considering the gross income of doctors with different list sizes at each point in time since October 1966 when levels of remuneration have changed. The base line of the analysis is the existing levels of payment at 1st October 1966 (ECL 102/66, ECN 572): alterations were subsequently made at 1st April 1967 (ECL 4/67, ECN 587), 1st April 1968 (ECL 72/68, ECN 679), 1st January 1969 (ECL 39/69, ECN 732), and 1st April 1970 (ECL 89/70, ECN 817).

Any analysis of the gross income of family doctors inevitably involves enormous assumptions and simplifications. The results presented in this Appendix are based upon the following assumptions.

1. The list is split equally between male and female patients.
2. 15% of the list consists of elderly patients.*
3. The G.Ps. are eligible for the full basic practice allowance.
4. The G.Ps. qualify for a group practice allowance and second seniority allowance.
5. The G.P. with a list of 2,500 qualifies for a type 1 designated areas allowance.
6. The G.P. with a list of 3,000 qualifies for a type 2 designated areas allowance in 1970.
7. The G.Ps. qualify for an allowance for the employment of a full-time assistant.
8. The G.Ps. qualify for a full-rate supplementary practice allowance for out-of-hours responsibilities, and a supplementary capitation fee for a list in excess of 1,000.
9. One night visit per annum is made for each 100 patients on the list.

*15% was selected for simplicity of calculation. The proportion for the whole of England was 13.2% at 1st October 1970, the latest date available •

10. 5 vaccinations/immunisations (at the lowest rate) are performed each year for each 100 patients on the list.
11. 2 cervical cytology tests are performed each year for each 100 female patients on the list.
12. The G.Ps. are on the obstetric list and have 4 full-fee maternity cases each year for each 100 female patients on the list.
13. The G.Ps. earn flat-rate emergency fees regardless of list size at the rate of £50 p.a. between 1966 and 1969, and £65 in 1970.
14. The G.Ps. receive flat-rate reimbursements for rent and rates regardless of list size at the rate of £300 in 1966/67, £350 in 1968, £400 in 1969, and £450 in 1970.
15. The G.Ps. expend £750 per year on ancillary staff wages.
16. No other N.H.S. fees, emoluments or allowances are received.

To the extent that these assumptions are varied so will the results differ, but they provide a basic framework within which income variations according to list size can be analysed. The proportions of services allowed in the above assumptions are based upon a detailed study of the practice accounts of one group practice in the North of England, but there is very little available evidence about their universal validity. Certain other general assumptions are inherent in the analysis - for example, that the G.Ps. are on parity in their partnerships, and that the number of items of a particular service per 100 patients on the list remains constant regardless of list size.

The basic results are presented in Chart F1, which shows the gross income (plus the stated allowances) at each year for doctors with list sizes of 1,500, 2,000, 2,500 and 3,000. It is seen that the income differentials between doctors with different list sizes have remained fairly constant between 1966 and 1970, although the effect of the increased allowances for practice in designated areas is seen in a slight widening of the differential in 1970. Whereas, for example, the gross income of the doctor with 1,500 patients was 53 per cent higher in 1970 than in 1966, the increase was 58 per cent for the doctor with 3,000 patients. Put another way, the index of deviation from the national average was 80 and 120 respectively in 1966 for doctors with lists of 1,500 and 3,000, but had widened to 79 and 123 by 1970. In relative as well as absolute terms the G.Ps. in designated areas have benefitted more than their colleagues elsewhere from the recent Review Body awards. The poor have become rich, but the rich have become even richer.

The value in cash terms of an extra 500 patients varies according to whether or not the doctor practises in a designated area. The 1970 difference between 1,500 and 2,000 patients, for example (£1,017) was similar to that between 2,500 and 3,000 (£1,286); but both were narrower than the difference between 2,000 and 2,500 patients (£1,772) - which in this analysis represents the difference between practising in a designated and a non-designated area. In fact, as Chart F2 shows, the designated/non-designated split is currently worth almost an extra 500 patients. In this chart two separate calculations are made for the practice of 2,500 patients - one based on the assumption that no designated areas allowance is payable, and the other on the assumption that it is. For the practice of 3,000 patients three calculations are made - one assuming no allowance, one assuming a type 1 allowance in 1970, and one assuming a type 2 allowance in 1970.

At 1st October 1966 the difference between working in a designated and a non-designated area was £300 for a doctor with a list of 2,000, compared with £710 as the difference between practices of 2,000 and 2,500, both in non-designated areas. From April 1967, however, when the allowance was first paid at the full rate, the range between the two values has narrowed considerably. By 1970 the designated/non-designated factor was worth £745 between practices of the same size, compared with £1,027 as the value of an extra 500 patients on a list in a non-designated area. At the highest level, the difference in 1970 between two doctors with lists of 3,000, one of whom was in a non-designated area and the other drawing a type 2 allowance, was almost exactly the same value as an additional 500 patients (£1,005 compared with £1,027).

CHART FJ

**GROSS INCOME (PLUS STATED ALLOWANCES) OF DOCTORS
WITH LISTS OF 1.500, 2.000, 2.500 AND 3.000**

(See text for details of underlying assumptions)

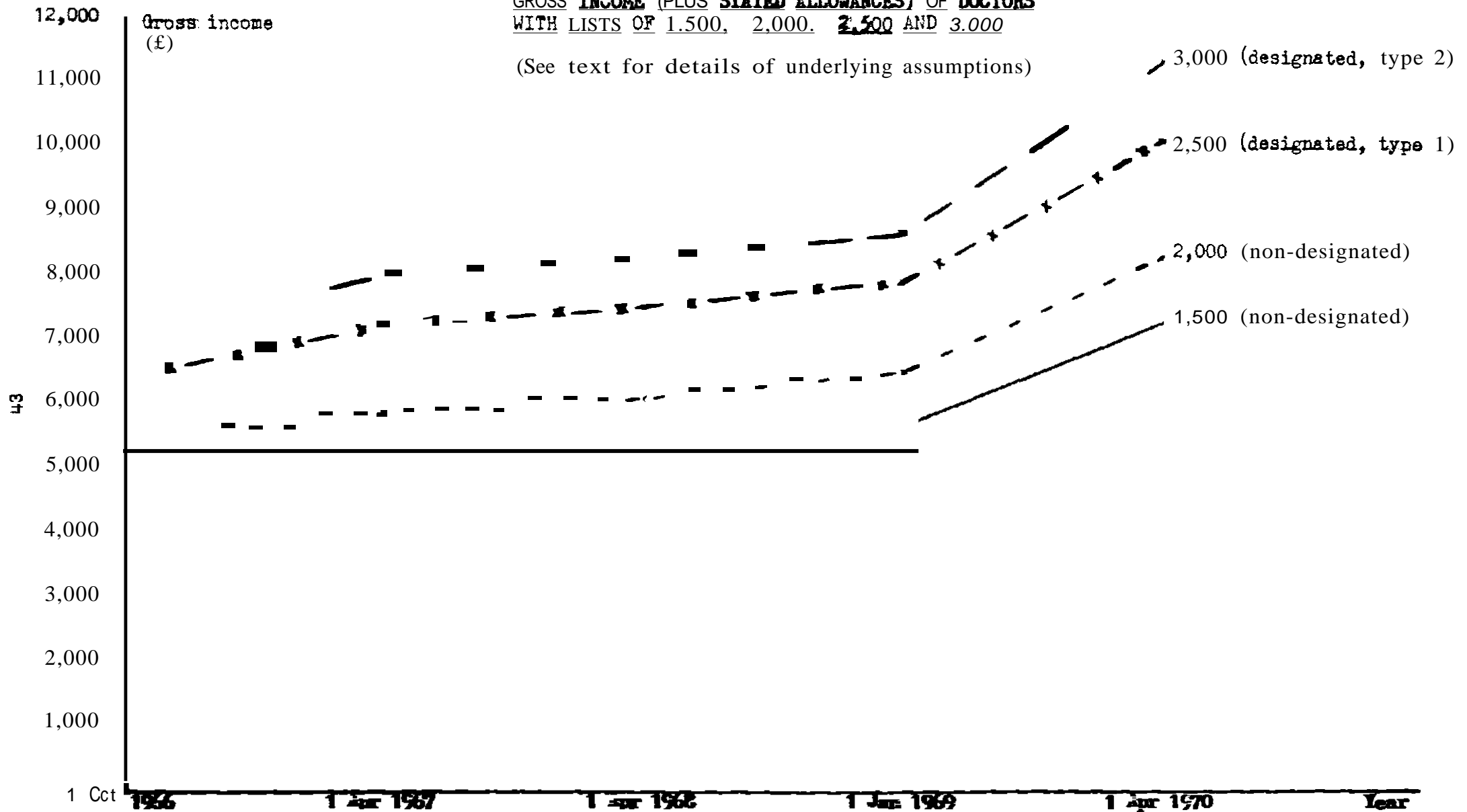


CHART F2

GROSS INCOME (PLUS STATED ALLOWANCES) OF DOCTORS
WITH LISTS OF 2,000, 2,500 AND 3,000 IN DESIGN-
NATED AND NON-DESIGNATED AREAS

(See text for details of underlying assumptions)

