

# **Problems and Progress in Medical Care**

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**Published for the Nuffield Provincial Hospitals Trust  
by the Oxford University Press 1964  
London New York Toronto**

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## Foreword

This volume of essays is an experimental venture designed to present the results of some of the research currently sponsored by the Trust. In general, the reports are of two kinds; *preliminary communications* of results, which may become the subject of longer works; or, *final reports*, possibly not requiring greater elaboration than the essay form provides. The essays themselves have been selected when the particular researches which they describe have either been completed or have produced interim results worthy of quick attention. In a different vein, 'Studies in the Spectrum of Medical Care' outlines the range of work which is now being carried out by the Medical Care Research Unit in Manchester, and discusses the implications of what it has already been able to observe.

At the same time, the volume itself may help, so it is hoped, to meet a special need, since there are few outlets in Britain for serious essays of about 10,000 words on socio-medical studies. Because of the growing awareness of the need for a wide range of studies, the backgrounds, methodologies and implications of much research in this field need to be discussed at rather more than 'digest' length. Too often the only alternative to the short article is a book, the form, length and price of which may be quite as frustrating to impact and influence as the inevitably brief abstracts appearing in the medical press or in the sociological journals.

In the last few years the Trust has sponsored much research in a wide range of health and medical services. There are sufficient projects under its sponsorship at the moment to provide more than enough material for one or two ventures such as this; yet, depending on the need, the trustees do not exclude the possibility of publishing the results of research financed by other bodies on subjects coming within the Trust's general purposes.

\*                    \*                    \*

The temptation to classify the essays which follow into categories such as 'Nursing', 'Mental Health' and 'General Practice', and so on, has been eschewed: such divisions would be arbitrary and certainly not exclusive. Thus, how should Professor Revans's essay on the morale of hospitals be considered? Under 'medical care generally', or 'hospitals', or 'nursing'? He points to the turnover of nurses in wards as a possible index not only of the morale of the nursing staff, but of the effectiveness of the medical care available in hospitals. Indeed, it is tempting to develop this theme, and speculate on the

influence which the morale, standing and effectiveness of a hospital have on the standards of general practice locally. The social welfare arrangements of the modern state, of which medical care is a part, albeit vitally important, are so complex that no one part of them may be an island.

However we may try to furnish or to avoid categorisation, there is material here for all students of health services. So much effort and passion is devoted to criticism of the structure of the National Health Service that frequently the common problems—scope and provision, demand in relation to need and the finance available, interdependence within and outside the services, etc.—which exist in all countries with high standards of living, whatever system of health services obtain, tend to be forgotten. In all countries, whether in an advanced state of civilization or not, no matter the system of providing or financing medical care, the future development of such services inevitably depends on political decisions. In the democracies, these depend on public opinion, which to be properly effective relies on the fullest information. In the health *service* field, accurate, relevant information, scientifically compiled, about the quality and scale of medical care needed, regrettably is still wanting. It would, of course, be idle to suggest that policies should wait on the results of such empirical research; but it is important to get into focus the perspective of needs and priorities for change. Thus, even if the structural panaceas which are from time to time dreamt up, were accepted and brought into being immediately, the fact by itself would contribute little to answering the universal and perplexing questions relating to the realities of the times—the deployment of skills and money available, and the establishment of policies concerned with the rate and direction of the development of health services in totally different kinds of areas.

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Indeed it is all too evident that we are suffering from the lack of a theory of administration of health services. Too often the polemics of health service policies confuse the real issues. Charges that ministerial or central control strangle local initiative have hardened into clichés. In truth, to avoid the dangers inherent in bureaucracy, the advice and decisions which come from the centre must be regarded as only applicable for the moment and one part of a dialogue. The other, and potentially more effective part of this dialogue must consist of constantly up-to-date firm and clear statements of what is actually needed at local level, based not on emotion, but on the results of hard,

fundamental research designed to discover the needs and priorities of the local communities.

\*                     \*                     \*

One of the most important points relating to the Anglesey survey on mental disorders is that the initiative to evaluate the burdens likely to be placed on the community came from the local health authority. In turn, it has not been sufficient for the surveyors merely to point to the differences between their estimates of bed requirements for the mentally ill, and those of the Ministry's extrapolations. Their further probing confirms beyond a shadow of doubt that the several specialized health and social services must be looked at as a whole. This is the logic of the surveyors' opinion that adequate local health authority residential provision and psycho-geriatric accommodation could reduce the population of the mental hospitals by as much as one-third. The general implication of such a policy in time, presupposes the continual screening of elderly patients, which by itself must add to knowledge about them and to the pressures which would then be exerted for their welfare.

If the comprehensive Anglesey study on this aspect seems to lend support to official policy, it also raises a number of questions on other aspects, which are echoed from a different viewpoint by the studies at Cambridge. (Another study sponsored by the Trust at Netherne Hospital and, at the time of writing not yet published, is also relevant.) Thus, doubts are cast on some of the reasoning on which current mental health policy has been based. From these studies it certainly seems optimistic to assume as fast a run-down of the chronic mentally ill at present in mental hospitals, as has been estimated. At the same time, the Netherne study shows that even with an active rehabilitation programme in a hospital well known for its forward-looking attitude, the official forecasts which have been made for the likely rate of discharge, particularly of schizophrenic patients, may have been on the high side.

Dr. Mandelbrote, in his study which covers the development of services and the outcome of treatment in two quite distinct provincial communities, has some pertinent observations on the various elements of current policy. The reduction of hospital populations by the adoption of a system of comprehensive care is indeed feasible, but the amount depends on a number of factors which might vary from area to area. How far these observations will find echoes, and stimulate close studies in other areas, where the real problems are more guessed at than known, will depend a great deal on the liveliness of

the various health authorities concerned with the mentally ill and how clearly they appreciate the urgent necessity to obtain the facts, without which the completion of the essential dialogues on future policy is hardly possible. In particular, despite the liberal policy now almost universally accepted in this country, and enshrined in the Mental Health Act of 1960, it is obvious that the total needs presented by the whole range of the mentally ill are not known. Yet even with what information there is, it is doubtful from the P E P study if there is a satisfactory enough official policy for the supply of social workers for the complementary health services, on which so much faith has been pinned. The authors even seem to forecast a crisis made more acute by the sense of disappointment engendered if too much optimism is placed in a swift development of local community services.

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All the essays raise questions of moment, some immediate, some with important implications for the future. Thus, in the general practice group of studies, fundamental issues are touched upon which are fresh and relevant in view of the recent report of the 'Annis Gillie Committee'.\* It would seem that, despite the provision of excellent diagnostic facilities in Edinburgh, the Family Doctor Centre is not fully used; yet its potentiality, both as a diagnostic centre and for the continuing education of doctors, may be tantalizingly glimpsed from some of the results. It is difficult to believe otherwise than that the future and status of the general practitioner must depend on his role as primary diagnostician and as leader of a team of para-medical staff which he can deploy for the good of his patient. Yet on the evidence presented by Prof. Richard Scott, the doubt must remain whether the majority of general practitioners are willing to grasp such opportunities as are offered by such a centre as that in Edinburgh. The report of Miss Collins' work in a general practice gives enough hints of how difficult it is for the para-medical worker to be accepted by the doctor, though not necessarily by the patient. Is this apparent inflexibility in the general practitioner's approach to change in how he works not part of the whole problem of future medical education? Can the current interest in postgraduate medical education be exploited to advantage in this and other directions as well as that of the furtherance of knowledge?

\* 'The Field of Work of the Family Doctor': report of the Subcommittee of the Standing Medical Advisory Committee of the Central Health Services Council: HMSO. 4s. 6d.

If the case appears from Dr. Logan's evidence that some general practitioners do not want to have para-medical help actually working from their practices, may this not call for a re-examination of how the family doctor really conceives his function and his future? Is he right in the belief that everything he deals with can be done only by a medically qualified person? Miss Collins clearly has an answer to that; and so have those general practitioners (for example in Hampshire) who have experience of the direct attachment of health visitors.

The essay on the prescribing habits of doctors is one of a series of reports on the subject being produced at the University of Liverpool. Apart from the intriguing discussions of the significance of the main sources of the prescribing habits of doctors, the essay sets out for critical examination the methods used in the investigation.

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The unit engaged in the studies of medical care at Manchester was conceived out of a series of earlier activities of the Trust which posed the need for operational research of this nature. Although the present band of studies was launched to look more closely at the character of the demand on outpatient departments of hospitals, it was soon evident that the whole spectrum of medical care had to be considered. The differences between hospitals, areas and regions, drawn from the wealth of published material, now available but hardly used, on the working of hospitals, to which Dr. Logan points, are sufficiently large and startling to warrant closer observation and study. Comparisons by themselves do not, of course, indicate any degree of the effectiveness of medical care. Yet they have an important part to play in the administration of health and social services in that the revelation of marked differences between outwardly similar institutions does lead not only to self-examination, but also prompts further questions from different angles. Hence, indeed, the special look at outpatient departments which are the sole gate of entry from the general medical services to the consultant and specialist services of the hospital. The remarkable differences between hospitals suggested by the available statistics raise certain questions which can be answered only by probing general practice in the several areas.

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Finally, the Oxford nursing studies are notable, not only as evidence of nursing interest in research, and of the pioneering work of the Oxford Regional Hospital Board in operational research, but also because they extend the horizons of scientific hospital



administration. Residential care and treatment is expensive, and pressure of demand is acute: surely nobody concerned with hospital administration can ignore the potentiality of any reporting system which can be made to indicate quickly when patients no longer need the dependency of a hospital?

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It is not intended that these essays should do more than indicate some examples of current studies sponsored by the Trust all over the United Kingdom at this particular time. They are by no means comprehensive.\* Papers on work carried out with grants from the Trust are continuously being published in many journals. In this last fifteen months alone, eight books† were published by the Trust. It is hoped that all these reports will indicate fertile areas of discussion on the principal questions which stubbornly remain, no matter what the structure of health services are or may become. Above all they are concerned with the needs of the people to be served, and with the problems endemic to that sometimes bewildering complex of services embraced by the phrase 'National Health Service'.

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Gordon McLachlan

*October 1963*

## Acknowledgements

Thanks are due to the authors of all the essays which follow and the many people in the health and social services, too numerous to mention individually by name, who helped them not only in the preparation of the manuscripts but in the surveys of which these are reports.

At the same time a very special acknowledgement is made to Captain B. S. Pemberton, R.N., whose advice in the general presentation, and direct action in the collating and correcting of proofs of the essays, enabled this volume to appear as it does.

G. McL.

\* A list of projects currently supported by the Trust will be given in its 6th triennial report, due to be published later this year.

† A current list of the most recent publications is shown on the back cover.

*Ranging on the problems raised in studying medical care*

# **Studies in the Spectrum of Medical Care**

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# Studies in the Spectrum of Medical Care

## I. Prologue

It is almost a cliché to point to the explosive development in the clinical sciences in the past two decades, but to understand much of the changes which are taking place in the field of medical care one cannot ignore its effect. Following the successes of the sanitary sciences and of primary prevention in Public Health, the discovery and application of new drugs and modern surgery are changing the pattern of disease so greatly that the load of sickness is shifting into middle and later life, and out of the hospital into care in the home and in the community. Formerly, the only difference between the good doctor and the poor one was the 'placebo' effect of the former (Pickering, 1959). Most of what the doctor did then in his hospital beds, he could and did also in general practice, and the one doctor often spanned them both (as in the Commonwealth and in North America today). In the past two decades, however, medical knowledge has surged forward into new fields to a greater extent than in the whole of the previous century. New knowledge has taken surgery into the chest, heart and brain and into the extremes of life; general medicine is concerned with molecular biology, auto-immune disease and human genetics; psychological medicine now offers some understanding of the emotions, and it is possible that new drugs may make mental asylums as obsolete as tuberculosis sanatoria.

As the old concepts of disease have been shattered with the biochemical splitting of the cell, the clinical advances bring new responsibilities to doctors in each phase of the spectrum of medical care. (The spectrum itself has been extended; at one end is pre-symptomatic silent disease; at the other end the new successes in the critical care stage widen the range of chronic handicaps.) To the specialist in hospital, the change is mainly one of degree in becoming more technically expert and in combining with a larger team of specialists in related fields. After his success in the 'primary' prevention of infectious disease, the Medical Officer of Health is struggling to find new rôles. A new strategy has to be thought out for 'secondary' prevention, the detection of those groups of people who are specially vulnerable but have not yet symptoms or signs of non-infectious disease. In this new situation the distinction between 'preventive'

and 'curative' medicine is out-moded. The realistic objective can often only be to try to take avoiding action and so delay the march of the disease process. To the GP, the doctor concerned in the phases both of primary care and of the 'tertiary' prevention of disabling handicap in after-care, rehabilitation and resettlement, the changes lie more in the nature of medical practice itself. The clinical advances throw a greater importance for early diagnosis on the doctor who first sees the patient, because it is then that there is the best hope of delaying the advance in morbidity or reducing its later handicap. Presymptomatic detection is no longer an academic question in severe hypertension, diabetes, pyelonephritis, cervical cancer, anaemia, glaucoma, cataract, depression, alcoholism, or emotionally starved children. If the family doctor does not deal with these abnormalities, or is late in dealing with them, it can be vital today; formerly, it usually mattered less if diagnosis was made in the 'silent' stage, because often this merely made the death certificate less inaccurate.

### **Changing means for delivering medical care**

The channels for the delivery of these new advances in each country must be through its existing medical services—dispensary, polyclinic, outpatients, hospital beds, public health, family doctor—and each of these institutions feels the strain in adopting function to meet the new demands. The most obvious effects are seen in the hospital setting. This is no longer a refuge for custodial care, a repository for the chronic sick, a substitute for inadequate domestic help or socially incompetent families, or the final compensation for slums. Modern hospitals are increasingly concerned with acute and critical care. In terms of turnover, more and older patients are being treated in fewer hospital beds, but their length of stay is one day less each year. Indeed it is possible to argue that the Hospital Plan for the next ten years may be too generous, though it provides only half the beds thought necessary in the early 1950's, and reduces the number available today by at least a fifth. The reduction is dramatic in mental hospitals—to about half the present number of beds, or indeed in the Manchester region to one quarter. With mental illness, old age and chronic handicaps combine to burden any system of medical care, but the available beds will not be increased. Indeed, today, in any developed country mortality is no longer a useful yardstick for measuring national ill-health when over half the population survive well into their 70's and then succumb to much the same diseases, so the counting of hospital bedsteads is equally obsolescent as a measure

of medical needs or resources. Because most patients are out of bed within a few days of entering hospital today, the need now ranges from provision for ambulant care with recreational rooms in the hospital, day hospitals, hostels, through outpatients' clinics to after-care in the home, rehabilitation, resettlement at work or adjustment to chronic handicap and the training of residual skills.

After a century or more of building up a successful system for the care of sickness, it is difficult to adapt it quickly to new demands, or to demolish it and re-allocate the resources to other fields of need. Because medicine is almost the oldest profession and doctors are deeply involved with sick individuals, it is even more resistant to change than is a technology. Yet these very advances in clinical science force both the profession and society to devise new and flexible means to make available these benefits at the points where they will do most good. At the same time there is also developing a 'revolution in the expectations' of health of the public. People today expect to enjoy health, mental as well as physical, in middle and later life rather than resign themselves to handicap or tolerate suffering. The threshold of need is translated into a request and a demand for medical treatment earlier and more readily than formerly (and of course there are no financial barriers to this in Britain). For example, a man expects to have his hernia repaired and to return to his job rather than wear a truss. Women expect not to bear the discomfort of a pelvic prolapse or even the cosmetic blemish of varicose veins. The obese ask for slimming tablets and those with emotional malaise request medicines. As the need becomes more readily appreciated by the patient and is translated into demand, so the total load of medical care increases, although the state of physical and mental health of the nation probably improves each year.

As in any science or technology, as specialist clinical knowledge advances it is bound to get further away from the generalist in hospital, and become more remote from the front line practitioner. This is the core of the problem of maintaining quality in any medical service—in reducing the time lag in applying the clinical advances of the research wards to the teaching hospitals, out to the peripheral hospitals and through to the GPs; and in maintaining professional competence in each sector along the line. It is equally difficult when the delivery scheme is divided horizontally so absolutely as in Britain, Holland and Scandinavia, or into rigid vertical compartments as in North America.

In Britain, it is the GP who is the dominant factor in deter-

mining the hospital case-load. Hospital care and home care are so intertwined as to be interdependent. Neither can function effectively without full co-operation from the other. If the hospital is not fulfilling its true functions of specialist investigation and critical care and is not interpreting clinical knowledge to the family doctor, then the scientific advances will be delayed and not passed on to the patient in the home. If family doctors do not refer patients in the early stages when treatment can be most effective, because they are not aware of these possibilities (and six out of seven principals have been qualified more than ten years), or if the patient has to shop around indiscriminately for specialist care, or if the GP receives the patient back from hospital with inadequate guidance for after-care and maintenance therapy, then the hospital will be swamped with demands for unhelpful cases, its beds will be blocked by slow discharge, or the condition of the patient will not be maintained and will deteriorate on return home. The advances in the powers open to doctors throw a new responsibility on to the profession. If advances in medical knowledge are to be delivered most effectively and with the shortest lag in time, the doctor in each phase of the medical spectrum must examine his own professional frontier and recognize that his phase is interdependent with the other stages.

Against this changing background of medicine the paramount aim of our studies is to examine ways and means of applying present and oncoming knowledge most effectively, with the shortest lag in time from the centre to the periphery, and with most humanity. The approach and methods of study and some of the results will now be described in each of the phases of the spectrum of medical care.

## II. The Spectrum of Medical Care

### Unfelt need—The presymptomatic detection of disease

The submerged part of the iceberg of disease is now increasingly recognized (Last, 1963). For example, the College of General Practitioners, in their survey of practices in Birmingham (Crombie, 1962), show that for the 10 known diabetics in the average practice there are probably a further 10 undetected (although half of these will have symptoms or signs attributable to diabetes). There may be another 20 latent or pre-diabetic cases in middle life, and at least a further 80 in the elderly, and these may not present until they have complaints from disabling complications—irreversible vascular changes in eyes, legs, kidney, heart or brain. Yet if the simplest of clinical tests were done, taking a few seconds and treatment given, much would be preventable.

**Table I**  
**Anaemia in an 'average' general practice of 2250**  
Known and unknown (in brackets)

<i>Age</i>	<i>Males</i> < 85%	<i>Females</i> < 81%
15-44	1 (10)	12 (102)
45-65	1 (22)	7 (30)
65+	1 (24)	5 (30)
	3 (56)	24 (162)

Malnutrition from inability to buy food no longer exists in affluent Britain; indeed, obesity, dental caries and anaemia are related more to 'over-nutrition'. All three can be controlled best in the pre-symptomatic stage, yet anaemia is so common in Britain that 14 per cent of all women and between 25 per cent and 30 per cent of those aged 15-34 are anaemic (haemoglobins of under 81 per cent). Such a prevalence when applied to an average GP list of 2250 registered people will give 242 anaemic persons, but only 1 in 9 is recognized and treated as a patient (Table I). Because symptoms are not specific but vague, and because the signs are not clearly discerned until the haemoglobin is below 60 per cent, the illness usually continues unrecognized by both patient and doctor. Moreover, even when one episode is treated, many patients on the ordinary British diet tend to relapse within a few years,



and again the need for treatment is often not translated into a demand.

In exploring this field of unfelt need and untreated illness in a practice, Ashworth (1959), in the Darbshire House Health Centre, invited all his patients aged between 45 and 54 to come to the surgery for examination. Although only about half of the registered age group appeared, in these 225 there were the anticipated number with low haemoglobins and 3 who were severely anaemic; 23 whose blood pressure was above 180/95 (in 2 this was over 210/110); 3 had albumenuria, 1 glycosuria and 2 had symptoms of angina. Two women had established urinary infections and 8 had gynaecological complaints, including 2 with cervical erosion. Three were grossly obese and others had chronic arthritis and skin conditions. None was previously diagnosed or treated. As the interview and examination each took some five minutes, all were seen within a few months without strain on the practice.

**Table II**  
**Estimate of some unrecognized diseases in an average general practice**

	<i>Known to GP</i>	<i>Total in practice</i>
Hypertensive Disease: Age 45+		
Men . . . . .	8	30 Diastolic 100 + mg Hg.
Women . . . . .	24	131
Urinary Infections:		
Females 15+ . . . . .	25	140 Bacilluria
Glaucoma: Over age 45 . . . . .	3	27 Early chronic
Epilepsy . . . . .	8	14
Rheumatoid Arthritis: 15+ . . . . .	11	25
Cancer: Cervix . . . . .	$\frac{1}{2}$	3 Invasive, 9 <i>in situ</i>
Breast . . . . .	1	10 'Lumps'
Psychiatric: Males 15+ . . . . .	32	91 'Conspicuous morbidity'
Females 15+ . . . . .	72	144
Psychotic Depression . . . . .	12	125
Suicide: Attempts . . . . .	3	6

An estimate (Logan, 1963a) of other unrecognized diseases to be expected in an average general practice is given in Table II. There would be little hesitation on further investigation of almost all and probably beginning treatment of many of the 615 unrecognized diseases. Certainly, treatment of the 27 people with signs of early chronic glaucoma would reduce the toll of preventable blindness.

Most of the 10 lumps on the breast would need a biopsy. The 3 women with symptomless invasive cervical cancer would be indeed fortunate for their early referral to a gynaecologist, while the other 9 women would be under surveillance with further smears. Of the 140 women with bacilluria, 25 would seek treatment each year with acute infection. Possibly in 1 woman this might proceed silently to malignant hypertension, chronic pyelonephritis being the commonest precursor. Mental health is still a new and difficult concept for many doctors to handle but for the 12 patients being treated for depression, probably 10 times as many would benefit from the new drugs. Many depressives are only recognized a decade later in attempted suicide, but it is salutary to note that 70 per cent of those who do commit suicide are known to have given warning either to their relatives or to their family doctor.

This iceberg image of disease raises problems for all doctors. For example, because glucose tolerance diminishes with age and blood pressure levels tend to rise, when does disease begin and when, if ever, should treatment commence? How far back into the genesis of disease does medical care extend? Already the advances in genetics offer practical counselling to parents of a mongol child. To which sector of the Health Service falls the responsibility of presymptomatic detection of disease? In Salford, the Mass Radiography Unit has extended its screening to diabetes and anaemia, and now the Medical Officer of Health has a counselling clinic for social and emotional problems.

In countries without comprehensive medical care, the first step, but only a first step, would be multiple screening from *ad hoc* clinics (Breslow, 1959), but in countries like Denmark, Holland and Britain, where the GP is responsible for a captive population registered with him, and is paid whether the patients see him or not (95 per cent of them see him at least once in every three years), a new strategy has to be thought out. The objective for the non-infectious and degenerative disease of middle and later life is not to cure, and indeed to arrest it is often impossible. The aim is to detect those persons with a high risk some ten years before the onset of symptoms, and to maintain a surveillance to try to slow down the inevitable progress. Thus the handicap for the working man is reduced so that he may continue at work until retirement, whilst invalidism is postponed until his 70s. The family doctor tries to husband the health of his registered flock.

Two studies here examine the translation of these concepts into practice. In Darbshire House, one GP aims to incorporate the

simple checks into his ordinary daily work and to detect and follow up those patients who are vulnerable. The family history includes questions on anaemia, fits, sudden death, diabetes, or strokes, and the habits of smoking and alcohol. Base lines for height, weight, blood pressure, urine and haemoglobin will act as reference points against future changes. These checks will be repeated twice a decade in middle-age and need take only a few minutes during an ordinary attendance. The high-risk cases are tabbed and reviewed more frequently when the investigation may be extended.

Later it may be possible to extend this strategy of watchful expectancy from the physical risks to the emotional and social. In the average practice population it is estimated (Logan, 1963b) there will be 50 old people living alone, about 40 children with only one parent and up to 12 problem families often known only too well to the GP as accident prone. Each year 1 adult may be sent to prison and 4 juvenile delinquents brought to court. The socially inadequate include the 4 sick alcoholics, besides the heavy drinkers, the sad, mad and bad; other families suffer from prolonged and repeated sickness absence from work of the wage-earner, and an average of 100 families may be on National Assistance. From Darbshire House, as in many general practices, old people living alone are visited regularly, whilst the greatest risk, of course, is in the surviving spouse dying within a month or so of the death of the partner.

The second experiment is in a population of 1200 people at work in a lead-accumulator factory in Manchester. Here, as well as the clinical checks as in Darbshire House, the industrial nursing sister also records on all newcomers the peak respiratory flow, visual acuity and fields. A modified Maudsley psycho-neurotic questionnaire is completed, as well as details on family, and social background and occupational history. The clinical tests are repeated twice a decade to age 45 and, if no deterioration is shown, every three years subsequently. Those showing deterioration are checked more frequently and investigation or treatment if necessary is arranged. As deterioration and ageing proceed, they may be transferred to less arduous jobs or the working week progressively shortened. The doctor in the factory aims to conserve the resources of human material in the same way as the family physician in general practice is husbanding the health of his flock. (This principle of detecting and supervising high risks is, of course, traditional in public health, e.g. it is basic in ante-natal care and is now being extended into neonatal care where Sheridan (1962) describes deafness as 14 times more common in vulnerable infants.)

## Need felt but no demand

In the picture of the iceberg of disease, the line between the unmet need below the surface and the overt demand above the water level is not sharp and clearcut because there is an irregular and varying band of need which is felt but is not translated into a demand. This was seen within the first few years of the Health Service when the need for treatment, which had been previously held back by financial barriers, was released for the provision of dentures and spectacles and for some repair surgery. With the removal of any economic hindrance to medical care, these pent-up demands soon settled down into a fairly steady annual rate. However, within the national rates peculiar differences in local rates of demand persist. These differences may be traditional or cultural, possibly in a different outlook and a more fatalistic or tolerant attitude to handicap or disease, for example, in a farming community. Some support for this speculation might be given from Table III in which cancer of the breast and cervix in women,

**Table III**

**Hospital in-patients by type of area of residence**  
Rate per 100,000 population for certain diagnoses and sex  
The Newcastle Regional Hospital Board

	<i>Conurbation</i>	<i>Urban</i>	<i>Rural</i>
<i>Female:</i> Cancer breast . .	89	56	44
Cancer cervix . .	64	54	34
Fibroid . . . .	84	50	51
Varicose veins . .	92	82	76
<i>Male:</i> Haemorrhoids . .	86	55	38
T's and A's . . . .	453	391	258
Hernia . . . . .	305	256	252
<i>Both sexes:</i> Strabismus . .	77	46	31
Cataract . . . .	47	41	42

*Source:*

Hospital IP Enquiry 1956-57, Table 5, Ministry of Health and General Register Office, London.

haemorrhoids in men and strabismus in children are treated in hospital at *twice* the rate in the conurbations of the Newcastle region as in the rural areas, despite an equality in hospital facilities and in age/sex distribution. In other cases, the fact that need is not translated into demand may be due to the doctor rather than the patient. Here the cause may be delay in appreciation of the need for clinical action, seeping out from the teaching hospital to the periphery—posing

problems in the continuing post-graduate education of the doctor and of maintaining professional competence and quality in medical care. Usually from the research in the teaching hospitals new clinical needs are first defined, for example, in Rhesus incompatibility, and there is bound to be some delay in routine being widely applied. Table IV, therefore, provides food for thought in that, although the Rhesus group was known in over 90 per cent of all births in England (but only 64 per cent in Scotland), the haemoglobin and early blood pressure were determined in less than half, although the risks from anaemia and from toxæmia have been recognized for decades. Moreover, the omission to carry out such essential tests increases as one leaves the southern counties of England, which enjoy the lowest perinatal mortality, and proceeds north. It is in this sector of medical care (when need, either felt by the patient or recognized by the doctor, is not translated into actual demand) that improvement in the quality of a Health Service can be made most readily.

**Table IV**  
**Levels of antenatal care**  
 All booked and delivered births in hospital and home by region

	<i>Percentage of cases where</i>		
	<i>Rhesus group known.</i>	<i>Haemoglobin determined</i>	<i>Blood pressure taken before 20th week</i>
Hospital . . . . .	99	90	62
Home: All U.K. . . . .	90	42	45
<i>England:</i>			
South and East . . . . .	94	54	54
Midlands and South West . . . . .	94	36	45
North West and North East . . . . .	93	40	41
<i>Wales</i> . . . . .	82	35	37
<i>Scotland</i> . . . . .	64	24	36

All births in the U.K. during 1 week in March 1958, and all perinatal deaths (stillborn or within first week) over 3 months.

The problem is not the simple one of allotting the omission to either the patient or the practitioner. In one of our pilot studies (Smith, 1962), in examining the attitudes of mothers to the maternity services and of their uptake and use of the facilities, the experience of these 'consumers' during pregnancy and childbirth and the attitudes of the

'suppliers' (the doctors and midwives) it was found that levels of expectations of both customer and supplier were low. Both sides of the equation were quite satisfied and neither had complaints even when the omissions seemed gross. Inertia against improvement may be related to the resistance against any change in an established patient-doctor relationship.

**Table V**

**Variation in dental repair to supply of dentists**

Regional distribution of dentists and their work on children age 5-14 in 1960 in England and Wales

	<i>Emergency only estimates</i>	<i>Ratio of permanent teeth Conserved/Extracted</i>	<i>Population per dentist</i>
	per cent		
Northern . . . . .	22	2.6	6000
East and West Riding . . . . .	18	3.9	5700
North Western . . . . .	20	3.7	5500
North Midlands . . . . .	26	3.5	6400
Midlands . . . . .	23	3.9	6300
Wales . . . . .	37	2.5	6200
East . . . . .	11	5.9	4500
South Western . . . . .	13	5.8	4200
South . . . . .	10	8.9	3400
London . . . . .	7	10.0	3300
England and Wales . . . . .	15	5.3	4500

*Source:*

Ministry of Health and Dental Estimates Board.

Further puzzles in this new field are raised by the figures from the Dental Service in Table V. It would seem that the school child in the North of England delays going to the dentist until forced into emergency treatment, usually resulting in extraction, over three times more often than the London child. Thus the proportion of permanent teeth conserved to those lost in the northern child is one quarter of those in the south. Although some of this gross difference may relate to there being twice as many dentists in London as in the north, there may be differences also in the personal and professional attitude of the dentist who remains in the north to those who migrate to the south, as well as in the public's wish to conserve their own teeth. These factors of personal self-selection between client and profession are still intangible and obviously call for more study if the gaps between the different standards of care are to be narrowed.

## The GP's place in medical care

### *The patient's demand on the doctor*

When the patient calls in his doctor, he translates his need for medical attention into a demand. In our studies of general practice we have been exploring how 19 GPs in a town perceive the severity of the patient's complaint, at what level do they consider they are making diagnoses and what was the therapeutic intention or expectation of the drugs prescribed. In Darbishire House we have been observing how the 4 doctors use each of the facilities and how they certify sickness absence. Another survey, in some 800 practices across the country, examines the rate and level at which the GP uses the direct access to the clinical pathology department of the local hospital for investigation of his patients, the kinds of patients he refers to OP Departments and the communication between the GP and the hospital specialist in this consultation. Questions are asked about the attitude of the family doctor to the hospital services and to the provision of a district nurse and mid-wife or a health visitor attached specifically to his practice.

**Table VI**

**Severity of illness and the GPs therapeutic intention**

Percentage of all patients and the cost of their prescriptions for 19 GPs, 1960 and 1961

<i>Severity of Illness</i>	<i>Patients</i>	<i>Cost</i>	<i>Intent of Prescription</i>	<i>Patients</i>	<i>Cost</i>
	per cent	per cent		per cent	per cent
Trivial . . . . .	26	18	Placebo . . . . .	11	7
Acute: Ordinary . . . . .	27	26	Hopeful . . . . .	28	20
Serious . . . . .	2	2	Possible . . . . .	27	25
Chronic: Ordinary . . . . .	33	35	Probable . . . . .	24	29
Serious . . . . .	12	19	Specific . . . . .	10	19

A variety of methods are being developed to meet these ends. In the first stage of the job analysis in the 19 practices above, with a combined practice population of 45,000, the information was collected about all the 9405 consultations during two sample weeks in 1960 and 1961, irrespective of when or where they occurred (Forsyth and Logan, 1962). If a prescription was written, a carbon copy was used for the return showing which drugs had been given. When no prescription was given, the return was made on a blank E.C.10 form. This simple method worked because it was so practical, as the one

certain constant thing British GPs have in common is their pad of E.C.10 forms on which they write prescriptions. As Table VI shows, the practitioners rated the severity of illness as trivial in 26 per cent, acute ordinary in 27 per cent, acute serious in 2 per cent, chronic ordinary in 33 per cent and chronic serious in 12 per cent. They believed that the treatment prescribed would act only as a placebo in 11 per cent, was hopeful for some therapeutic effect in 28 per cent, a possible therapeutic result in 27 per cent and a probable one in 24 per cent. Therapy was specific in only 10 per cent. Although some 26 per cent of patients had trivial complaints, the prescription cost for this was only 18 per cent, and although a placebo was prescribed for 11 per cent these had only cost 7 per cent of the total. On the other hand, 47 per cent of patients had chronic illness or were so ill as to involve a major adjustment in the way of life of themselves or their families and their prescriptions accounted for 56 per cent of the total cost. The burden of chronic sickness in later life is reflected in the consultation rates for men over 45 which increased by half, and which for women over 65 were twice as great as for men under 45. The cost for these elderly women was three times as much as for children up to age 15 (Forsyth, 1963).

**Table VII**

**The burden of sickness in general practice**

Distributions of consultations, patients prescribed for, with total and average costs by common diagnoses for 19 GPs. In two sample weeks, 1960 and 1961

<i>Diagnosis</i>	<i>Consultations</i>	<i>Patients prescribed for</i>	<i>Total cost</i>	<i>Average cost</i>
			£	s. d.
Functional, Nervous . . .	850	724	270	7 5
Chronic Bronchitis . . .	250	203	190	18 8
Acute Bronchitis . . .	415	312	169	10 10
Non-septic skins . . .	474	380	145	7 7
Pulm. T.B. . . .	88	58	138	47 7
'Sore throats' . . .	376	286	104	7 3
Common cold . . .	612	484	102	4 2
Arthritis, synov. burs.	260	185	96	10 8
Skin sepsis . . .	227	150	70	9 4
Asthma and allergies . .	239	173	88	10 2
C.N.S. (not vascular) . .	230	169	87	10 3
41 other groups . . .	5364	3164	1066	

The 10 diagnoses found to be the most expensive, either because they were the most frequent cause of consultation or because the average cost was relatively high, are listed in Table VII. These 10 accounted for the bulk of the town's sickness load on the GP for 43 per



cent of all doctor-patient contacts, 50 per cent of patients prescribed for and 58 per cent of a total cost. There were more functional and neurotic complaints than even the common cold, then chronic and acute bronchitis and non-septic skin conditions. Although the 88 cases of pulmonary tuberculosis rank first in average cost, and fifth in the total, these prices are minute, indeed under 1 per cent, for patients treated at home in contrast to hospital. Other conditions, such as 'rheumatism' and septic skins, although common, have cheap prescriptions and so their total cost about equalled the less common but more serious conditions, such as heart disease or diabetes, in which the cost of maintenance therapy was high.

### *Diagnosis in general practice*

Overall the 19 doctors felt they were diagnosing at a symptomatic level in 35 per cent, presumptive in 25 per cent, and definitive in 40 per cent. It is not unexpected to find a wide variation in this self-appraisal by the GP of his own level of diagnosis. One doctor felt that for 86 per cent of his female patients he could only diagnose at a symptomatic level and 7 per cent at a definitive (but this doctor was a bachelor). The other doctors with high percentages at a symptomatic level were also the youngest and the most recently married! In contrast those confident enough to reach the most definitive diagnoses, up to 64 per cent, tended to be the oldest and the most experienced. Does the confidence of maturity brook no uncertainty? On the other hand, there was surprisingly little variation in the percentage of patients allotted to the diagnostic groups from such individualistic practitioners. Indeed, the consultations falling within the above 10 diagnoses ranged only between 33 per cent and 49 per cent, and 15 of the 19 doctors fell within 38 per cent and 44 per cent. Although these small differences had little effect on an individual doctor's average cost of prescribing, there was a most striking relationship between the number of patients seen with a particular diagnosis and the average cost of prescribing for it. Table VIII shows, reading from left to right, a high correlation between the number of patients and the average cost of prescribing for psycho-neurosis, the commonest condition, and this also holds for the second most expensive condition of chronic bronchitis and emphysema. One can speculate that the family doctor may be either so interested in or so burdened by patients with emotional problems or chronic bronchitis that he either seeks the newest drugs or is driven to the expensive drugs to cope with these long-term conditions. Again, a modern and energetic doctor may be constantly seeking new drugs to

relieve these common chronic conditions and may tend to use them earlier, or indeed the perceptive patient may be attracted towards him. The high cost in such a practice could reflect the high quality of medical care and be reason for congratulation rather than blame.

**Table VIII**

**Number of patients and average cost of prescribing (in pence)**

For psycho-neurosis in 19 general practices, 1960 and 1961

GP Code Nos.	10	18	8	6	4	11	16	19	15	5	7	2	17	9	1	3	13	12	14
Cases	95	94	67	59	56	40	31	31	30	30	24	23	23	23	23	19	14	12	10
Average cost	103	104	93	117	92	105	85	81	84	62	51	93	51	78	51	61	75	85	50

Correlation coefficient: 0.68.

Source: Forsyth, G. (1963), *Medical Care*, 1, 10.

*The direct relationship between doctor and patient—Surgery or home results?*

At this stage in research such comments can only be speculative. Other methods of recording are being tried as we are privileged to sit in with the doctor in his surgery and accompany him on his visits to the home, observing him as he tackles his difficult task. The doctor-patient relationship is written about with more emotion than objectivity. There is a remarkable variation of opinion over whether the relationship takes place in the doctor's surgery or in the patient's home. Across Britain as a whole, about one third of the patient contacts are in the patient's home, and this rate has remained steady for several decades at least (perhaps too steady in view of the radical changes in caring for sick patients). In North America some evidence ('Lancet', 1963) suggests that house calls have declined by over 40 per cent in the past five years, and that one third of house calls were unnecessary. American opinions vary widely. For example:

'Modern medicine cannot be practised from a little black bag.'  
 'If the patient is too sick to leave the house he should be in hospital: if he is not that sick he should make it to the office.'

Other family doctors with a wider vision of their rôle feel that the underlying reason for the call is anxiety and this cannot be disregarded; moreover, the patient's home and family may well provide clues that may be left behind if he goes to the doctor's office. But is the young doctor trained with the insight to seek out the clues?

In Britain the tradition of home visits may stem from the old

competitive days when payment was by item of service, and to that era before chemotherapy when the doctor's rôle, to succour and support, was often more limited than today. Now, with an alleged shortage of doctors and the increase in population outstripping the supply from medical schools, there is a need to examine how the family doctor deploys his skills and utilizes his time, how often is he working at his full professional capacity, how much could be delegated to a home nurse or health visitor working closely with him, and how much time is wasted as a self-chauffeur?

**Table IX**

**Home visiting and prescribing in general practice**

Rank order in the amount of home visiting and average cost and frequency of prescribing for 19 GPs in two sample weeks, 1960 and 1961

GPs Code Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Home visits as per cent of total contacts	8	19	17	4	16	18	6	11	12	10	7	3	1	15	14	5	9	2	13
Average cost. Per cent contacts prescribed for	17	12	10	14	19	8	16	3	13	5	1	15	18	7	4	11	9	2	6
	15	10	19	4	13	9	14	12	17	5	6	7	18	16	11	1	2	3	8

Coefficient of concordance  $W = 0.499$ .

In the town about 30 per cent of consultations take place in the patient's home; but the range is between 19 per cent and 39 per cent, while for the rural doctors it is 50 per cent. When the frequency of visiting is checked against the frequency and average cost of prescribing, it is seen that the doctor who visits his patients in their homes often tends to prescribe infrequently and at a relatively low cost (Table IX). Clearly this will in turn be related to the circumstances and pressures of individual practices, but it is also likely to be a function of patients' (and perhaps doctors') expectations. Patients attending the surgery may expect some tangible sign in the form of a bottle, whilst visiting at the bedside may satisfy expectations which may well be rather different. This same inverse relationship between frequency of visit and frequency of cost of prescribing also holds even within the standard condition of the 4 practices in Darbishire House where one doctor, making more visits than his colleagues, has a lower rate of prescribing (but there is no relationship yet to sickness certification). Although such an order of difference may seem a promising lead for

research, the complex interaction of attitudes and expectations of both patient and family doctor are not so easy to unravel.

In a current postal survey of over 800 GPs across the country, their views are sought on the local hospital services and on nursing help in their own surgeries. Almost 600 have already replied to the question, 'If more nurses were available for domiciliary service would you like to have one attached specifically to your practice, both for home visiting and possibly also for assisting in the surgery?' Only 54 per cent would like the help of a seconded district nurse, only 25 per cent a health visitor, and indeed almost 40 stated that they would *not* like a health visitor attached to the practice. This cross-section of family doctors do not seem to view themselves as leaders of any domiciliary team, and 55 per cent of them were under the age of 45. Are busy GPs such individuals as to decline auxiliary help?

### **GP use of direct-access clinical pathology and X-ray in the hospital**

Between 80 per cent and 90 per cent of GPs have direct access to these facilities for investigation in their local hospital. In our current studies of the use made of these facilities in some 12 towns across the country, first results from Reading and Bolton show that the top 7 users of diagnostic X-ray facilities were also the top 7 in use of clinical pathology; there is, however, no association at all between the usage of direct access and rate of referral to OPs, neither was there any association with the following:

1. The doctor's size of list where it was above or below the average of 2500.
2. Whether he practised alone or in a group.
3. His age or what was known of his post-graduate training and further diplomas as recorded in the 'Medical Directory'.
4. The proximity in the town of the local hospital to the practice.

This first suggests that the decision for the GP to refer a patient to OPs or for direct-access investigation is intrinsic and within himself rather than in the external circumstances of the practice. However, one external factor suggests itself: in our third analysis in Blackpool, it is found that the highest users, besides having the highest rate of total tests, were also extending beyond the simple routine tests of haemoglobin estimation or of urine. The level of requests were in fact those of a medical registrar, and it is interesting that three of these have access

to GP beds in the local cottage hospital. The second group of users are those usually found as the top users in towns without cottage hospitals, as in Warrington. As one comes down the list, two or more intermediate groups, depending on the frequency of use of total tests and percentage of non-routine, can be differentiated before reaching the bottom group, who make few or no requests of any kind. Again it has become apparent that, as well as the facility of GP beds, the doctor who has also a clinical assistant appointment in his local hospital is found in a higher group.

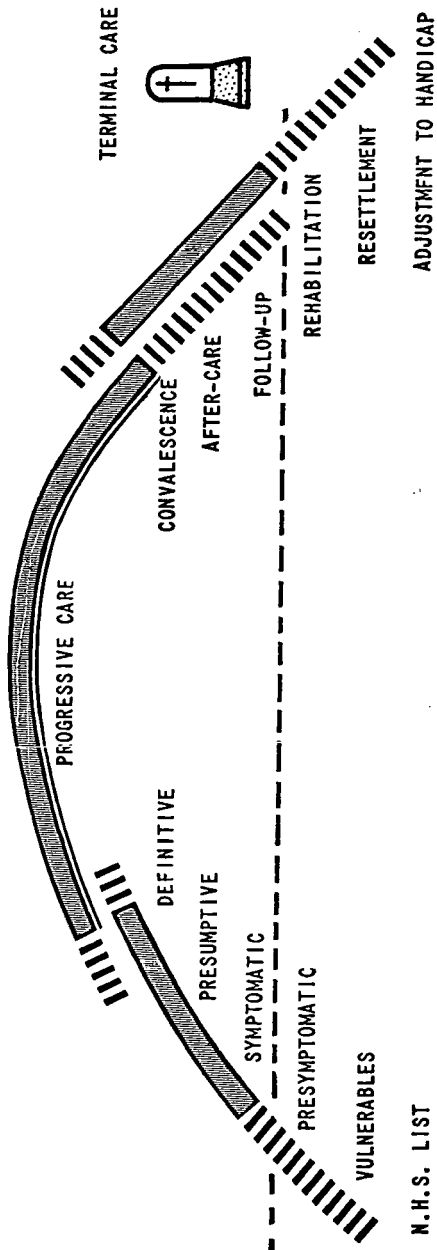
**Table X**  
**Referral rates of patients to OP clinics and directly for X-ray and clinical pathology investigations for solo GPs in Bolton**

Solo GP Code Number	Referrals per year per 1000 N.H.S. list		
	OP*	X-ray†	Pathology‡
1	93	10	12
2	100	20	11
3	53	17	5
4	42	27	5
5	29	5	2
6	105	12	23
7	50	20	11
8	83	8	12
9	47	7	31
10	52	51	67
11	62	48	36
12	66	2	34
13	35	20	13
14	35	5	12
15	61	29	10
16	67	0	2
17	36	8	17
18	54	14	12
Range all 38 practices . . . . .	29-105	0-78	0-118
Average rate referral all 38 practices .	57	19	23

\* All new OPs February to May 1962.  
† Patients from GP in alternate months 1961.  
‡ Patients from GP January to June 1962.

The scatter diagram gives the annual rate of non-routine tests requested in direct access to clinical pathology in 4 towns and 2 health centres. In Darbshire House, facilities are directly on the premises, and in the Health Centre in Stranraer they are adjacent in the adjoining premises. Nevertheless, this convenient proximity is not an absolute factor in rate of usage.

SPECTRUM OF MEDICAL CARE



G.P. CARE

HOSPITAL

FIG. 1

Table XI

Referral rates of patients to OP clinics and directly to X-ray and clinical pathology laboratory by size and type of general practice in Bolton

No. of practices*	Type of GP	No. on N.H.S. list per doctor	Referral per 1000 list per year		
			OP	X-ray	Pathology
9	Solo	< 2500	62	11	10
7	Solo	> 2500	59	20	20
10	Group	< 2500	58	21	22
8	Group	> 2500	55	20	26

\* Two 'solo' practices with assistant GPs not included.

Table XII

Use of direct access to clinical pathology facilities in the Blackpool hospitals by some GPs

Qualification and year of doctor	Total list	Total tests	Non-routine tests	
			per cent	Annual rate per 1000 list partnership (or single)
* M.B. (N.U.I.) 35 . . .	3151	482	50	76.7
* M.B. (Mc.) 51 . . .	4480	796	44	78.0
* M.R.C.S., L.R.C.P. 38 . . .	833	390	61	285.0
M.B. (Mc.) 28 . . .	5698	298	49	4.0
M.D. (Durham) 47 . . .	3609	326	42	3.8
M.B. (Newcastle) 44 . . .				
* M.B. (Mc.) 20 . . .	6877	314	28	1.3
L.R.C.P., L.R.C.S. (I) 39 . . .	2986	4	0	0
M.B. (Leeds) 25 . . .	3311	0	0	0
M.B. (Aberdeen) 36 . . .	1100	0	0	0

\* Access to GP beds in Cottage Hospitals in Lytham and St Annes.

Sample:

Alternate months in 1961.

## Sickness certification and rehabilitation

Little attention has been paid to the GP's phase of care in rehabilitation, resettlement, after-care and adjustment to chronic handicap, although in Britain the circumstances for this are particularly favourable with full employment on the one hand and a system of social security to record the data on the other. Moreover, under the

provisions of the Disabled Persons Act, Britain has the most comprehensive scheme of rehabilitation and employment of disabled workers in the world. Ashworth's study on his Darbshire House practice (1957) is still the only one in this sector.

Exploring the possible use of data collected by all Regional Medical Offices on sickness certification by every GP, Table XIII

**Table XIII**

**Results of references to regional medical office from 4 practices in Darbshire House in 1961-62 compared with estimated national average**

Dr.	Total references	Signed on for work	? Returned to work	Examined by R.M.O. and found fit for:		Total fit	Total unfit
				Own job	Light job		
W	100	12	17	7	1	37	63
X	60	3	9	4	1	17	43
Y	27	6	6	2	-	14	13
Z	87	14	9	6	2	31	56
Great Britain*	66	12	13	7	1	33	33

\* Estimated on same average population of 2750 as the 4 practices. From Annual Report of Ministry of Pensions and National Insurance.

shows the results for the 4 practices in Darbshire House. The diagnosis as written by the GP results in 100 references from 1 practice and 27 from the other, based on the standard code used by the clerk in the local office of the Ministry of Pensions and National Insurance. The results of these references were that some patients presented themselves to the family doctor for a final certificate to be signed off 'fit for work' or returned to work directly and on their own. Others were examined by the Regional Medical Service and found fit for their own job or lighter work, whilst the remainder were agreed to be totally unfit for work. It is remarkable that 1 practice had only 13 chronic patients found totally unfit for work, whilst in another there were 63. By contrast, an estimate of national figures would give a total of 66 references from a practice of 2750 for the 24 months, and of these half would be found fit. Here, then, is another example of the variation in how the GP views the illness of his patient, handicapping or debarring him from work. The problems posed by these questions take us into the very heart of family doctoring.



### III. The Hospital Phase of Medical Care

#### Out-patients

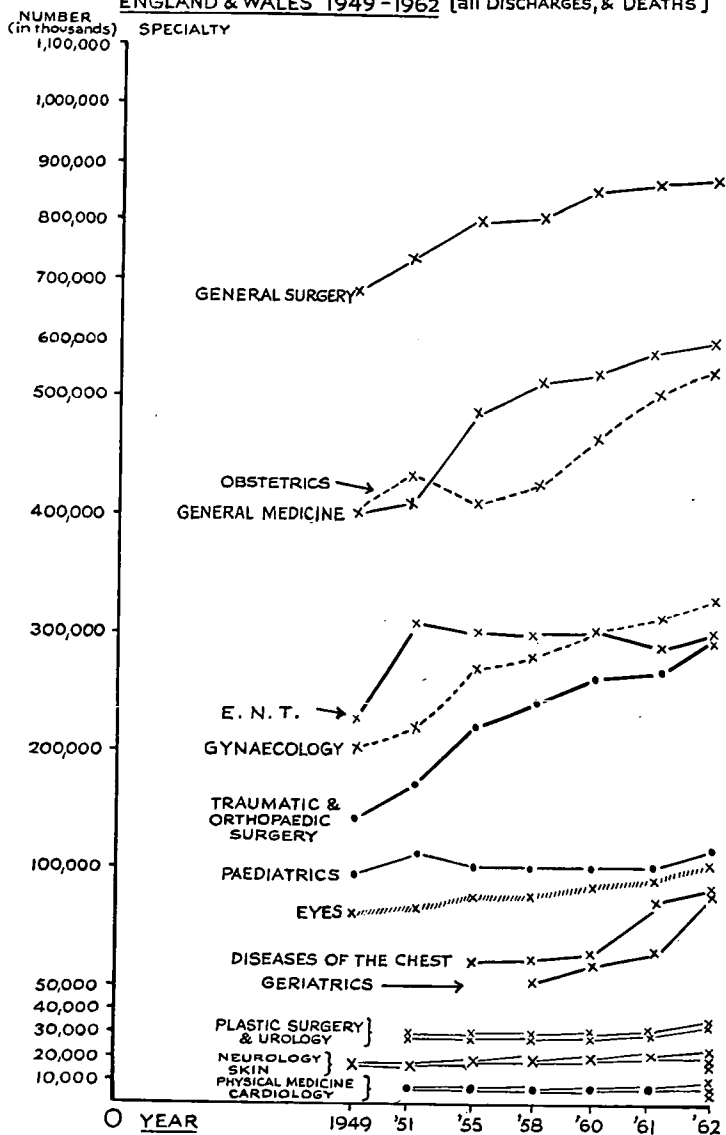
At a conference in Oxford under the Nuffield Provincial Hospitals Trust in 1957, the two problems of the Health Service were felt to be in hospital care in the Casualty Department and in OPs. A survey of a cross-section of Casualty Departments up and down England was carried out in 1958-59. The publication of this report ('Casualty Services and their Setting', 1960) stimulated other studies and there have been other reports since by the British Orthopaedic Association and a special sub-committee of the Central Health Services Council. While direct action is necessarily slow, it is probably true that hospital regions are now developing effective Accident Services. Small and inadequately staffed Casualty Departments dealing mainly with casual non-accident cases are being closed, whilst cases of serious trauma are treated in an organized accident centre under the supervision of a consultant.

This unit was concerned with the development of the Nuffield Study of new methods in assessing the caseload by the level of professional skill and facilities required: Hospital, GP or Nurse. A critical method for scoring both the range and depth of the activities of each department was a step towards measuring quality. The surgeons and nurses were observed and photographed at work, and certain standard injuries were followed as 'tracers' through each department. Similar methods are now being used in the study of OPs, which in simple terms is essentially the Nuffield Casualty Survey multiplied eight-fold.

Out-patient Consultative Departments in hospitals are a unique British institution. Ninety-seven per cent of all new OPs in all specialties are referred by the GP, with the sole exception of orthopaedic and traumatic cases of which 41 per cent are emergency injuries, mainly fractures, which after their reception in the Casualty Department are transferred to the Orthopaedic clinic. (In North America, Outpatient Clinics tend to deal with the indigent, whilst the diagnostic procedures for others are carried out in the specialist's private office.) Even in those countries with a GP service like Britain's, such as Holland, Norway and Denmark, there is much variation and in Copenhagen hospitals OPs do not seem to exist as such because the GPs of that city have their own special diagnostic clinic.

The striking trend in hospital care in Britain in the past decade has been a steady increase in hospital IPs in every specialty, except Paediatrics. This is portrayed in the Graph of Hospital IPs (Fig. 2). At

**HOSPITAL INPATIENTS by SPECIALTY. [TRENDS IN NEW INPATIENTS]**  
**ENGLAND & WALES 1949-1962 [all DISCHARGES, & DEATHS]**



[SOURCE: MINISTRY OF HEALTH, ANNUAL REPORTS [Parts 1 & 2]]

FIG. 2

the same time, other changes are occurring: most patients are out of bed within a few days and moving about the ward within the week, and the length of stay has been reduced by roughly one day each year. With this more rapid turnover in hospital beds, with the increased facilities for OP investigation, and the advances in clinical science requiring more investigation, go the pressure on hospital beds, the increase in chronic disease and often its need for maintenance supervision at OPs; all these factors would lead one to expect a similar increase in new OPs and in the total number of OP attendances. On

**Table XIV**  
**Overall trends in OPs, IPs and domiciliary visits**  
 (in thousands)

	1949	1952	1955	1958	1960	1961	1962
Number of New OPs . . . . .	6148	6606	6787	6968	7123	7216	7215
Number of OP attendances . . . . .	26001	27010	27645	28038	29063	29317	29525
Domiciliary specialist visits . . . . .	132	187	242	294	—*	307	316
IPs discharged or died . . . . .	2937	3414	3652	3889	4136	4269	4391

\* Not available.

Source:

Annual Report of Ministry of Health, 1961, Part I, Table F, page 147.

examining the Graph for OPs (Fig. 3) and Table XIV, however, one is more surprised to find:

1. There is a steady *decline* in new OPs in General Medicine, not associated with a compensatory increase in other medical specialties such as Cardiology, Neurology or Geriatrics. Referrals to consultant clinics in Eyes, and Ear, Nose and Throat have also declined.
2. After an initial decline, referrals to General Surgery and Paediatrics have remained fairly *steady* since 1955, despite the increase in population. Similarly, Dermatology has remained steady.
3. The increase in total OPs is entirely due to additional demand in two specialties:
  - (a) Orthopaedics, which has increased by over 75 per cent; overtaking demand for General Surgery in 1954, referrals to these two clinics account for one third of all new OPs.

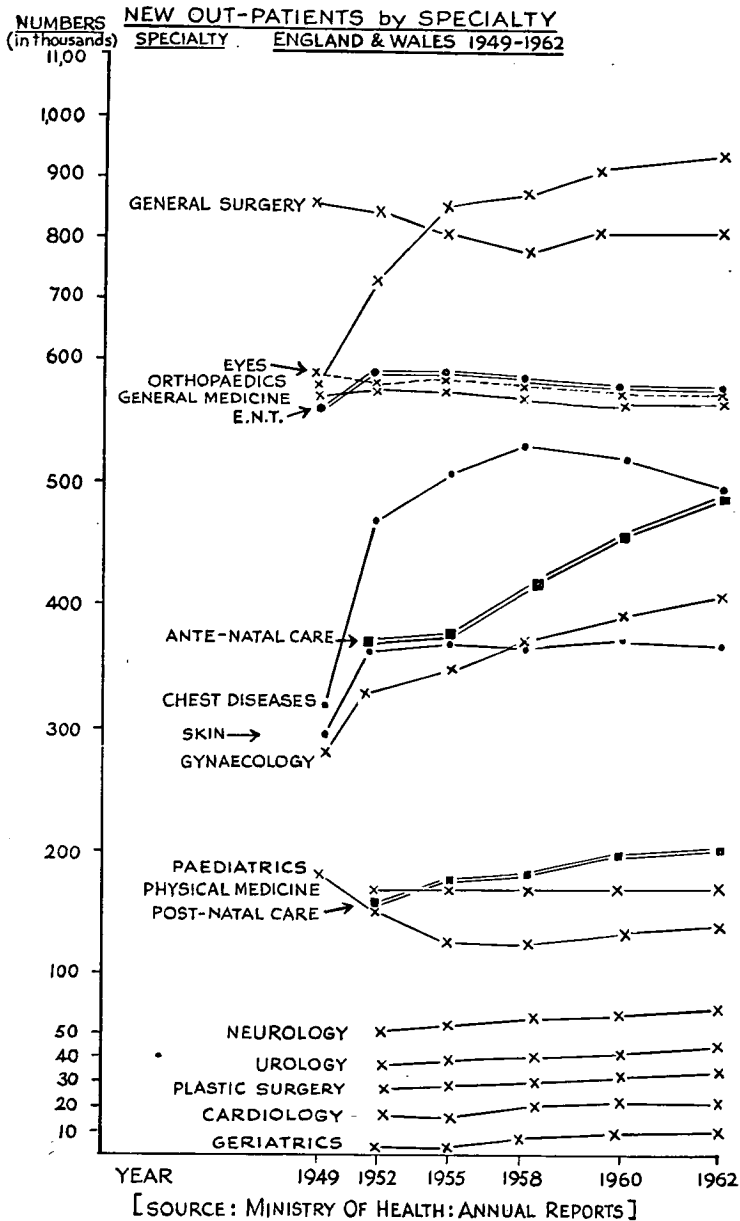


FIG. 3

and (b) Obstetrics, which continues to show the greatest rate of increase. It matches the number of births and particularly those delivered in hospital. At the same time, there has been a steady increase in referrals in Gynaecology by over one third.

These gross figures conceal a wide variation across the regions in the rate for new OPs. The total for the two highest, London and South-east England and Liverpool, are 154 per cent and 140 per cent of the lowest, which is East Anglia. Moreover, the ranking of the totals for OP referrals does not relate at all with the ranking of the IP total or availability of total hospital beds. When regions are compared by specialty, the different rates vary by an order of as much as threefold. This order of difference holds even by hospitals and towns within the regions and over all the years. Coming down to examining the next level of rates of referral to OPs from the GPs themselves in our first three towns, we get a variation of between 0 and 120 and even on the 4 practices under standard conditions in Darbshire House, the rates are 71, 84, 90 and 145, all per 1000 list (in contrast to the national rate of 125 per 1000 list).

**Table XV**

**Ratio of OPs to IPs**

Ratio of new OPs to IPs (IP discharges and death) in 1960 by specialty in eleven hospital groups

	<i>Bolton</i>	<i>Blackpool</i>	<i>Bournemouth</i>	<i>Norwich</i>	<i>Durham</i>	<i>Caerns.</i>	<i>Canterbury</i>	<i>Harrogate</i>	<i>King's Lynn</i>	<i>Scunthorpe</i>	<i>Warrington</i>
General medicine	1.0	0.9	1.0	1.9	0.9	0.8	1.9	1.2	1.1	1.2	1.1
General surgery .	0.9	1.2	1.1	1.0	1.0	0.9	0.8	1.0	0.8	0.9	1.0
Orthopaedic and traumatic surgery . . .	4.7	4.3	5.3	3.7	0.8	2.1	4.1	2.9	5.8	4.0	5.0
Gynaecology .	1.0	1.0	1.3	1.6	1.2	1.2	1.0	1.0	1.0	1.2	1.1
Paediatrics . . .	0.8	1.8	1.2	1.6	0.5	0.7	0.7	1.6	(10.2)	1.3	0.8
E.N.T. . . . .	1.5	2.3	2.7	1.7	3.4	3.2	1.9	2.4	3.7	1.7	1.9
Ophthalmology .	3.1	5.6	6.9	6.0	(166)	6.1	3.5	8.7	4.4	6.7	10.5
Dermatology .	9.6	10.8	22.5	46.5	13.9	8.4	(772)	(1014)	(?)	(22.9)	34.3

Source:

S.H.3. returns for 1960.

Faced with such wide and puzzling variations, other hospital statistics have to be examined. Although hospital administration and

the Hospital Plan for new buildings in the future has to depend mainly on the S.H.3 returns, the limitations of these in respect of OP data when compared with, for instance, the wealth of detail in the IP sample statistics in H.I.P.E., are as evident as when morbidity statistics are compared with the more finite data of mortality. It is possible to regard them as worthless and ignore them completely, or alternatively to be cautious in interpretation. In fact, one finds that the trends of the figures can be used.

On the assumption that the ratio of new OPs to new IPs might give some indication of the OP caseload, the S.H.3 returns for 1960 were examined in the 11 selected hospital groups. The similarity in Table XV in the 4 main specialties is rarely found in N.H.S. statistics and the more familiar patterns are seen in the 4 minor specialties where the variation is of the order of 200 per cent. At present one can only speculate on even the possible underlying factors; either the caseload of diagnosis or severity may differ widely, or the differences may be in the evidence of treatment carried out in OP clinics and on the wards. In one specialty with inadequate specialist resources, serious emergency cases only could be treated, and these were on the wards so that the ratio in this hospital was one sixth that of the highest hospital. The pertinent question from the figures in Table XV posed by the low ratios in the main specialties of General Medicine, Surgery, Gynaecology and Paediatrics is that for every one or two new OPs referred, one new IP is admitted to a bed. If these hospital statistics are at all reliable, then the general image of the function of the Out-patient Department in the modern hospital certainly needs revision.

Where the ratios are so similar in the 4 main specialties, this might be expected to reflect a similar load of new OPs per session. On examining this in 14 hospitals, however, it is seen in Table XVI that that total number of new OPs in the 8 main specialties varied from 37 to 83 per consultant session in these hospitals. In General Medicine the number of new OPs seen per session varied from 2 to 7, in General Surgery from 5 to 24, in Orthopaedic Surgery from 5 to 21. Even in those specialties in which one might expect less variation, that is where the clinical interest is restricted to one organ, the range is great: thus in Skin disease the range varies from 1 to 20, in Eye conditions from 2 to 11, in Gynaecology from 5 to 15, and in Ear, Nose and Throat conditions from 6 to 18. Questions regarding levels of clinical skill devoted to the patient over a timed period and compensatory factors in team work in the distribution and allocation of these professional skills become relevant. For example, what other professional help did

the consultant have in his clinic, and how is this deployed and super-vised in coping with his caseload?

**Table XVI**

**New OPs per consultant session in fourteen hospitals**

	<i>Bolton Royal Infirmary</i>	<i>Blackpool Victoria</i>	<i>Bournemouth Royal Victoria</i>	<i>Poole General</i>	<i>Dryburn County</i>	<i>Kent and Canterbury</i>	<i>Caerns. and Anglesey General</i>	<i>Llandudno General</i>	<i>Harrogate and District General</i>	<i>West Norfolk and King's Lynn General</i>	<i>Norfolk and Norwich</i>	<i>Scunthorpe and District War Memorial</i>	<i>Warrington General</i>	<i>Warrington Infirmary</i>	<i>Average</i>
General medicine . . . . .	5	7	4	5	2	5	6	4	4	4	6	7	4	3	5
Paediatrics . . . . .	6	2½ (10)	3	3	4	3	6	3	4	3	-	3	3	1	3
Dermatology . . . . .	12	20	8	10	10	9	3	-	9	3	13	9	1	9	9
General surgery . . . . .	10	24	9	11	7	8	5	7	8	7	14	8	6	9	9
E.N.T. . . . .	18	8	10	9	14	6	12	10	9	11	8	8	9	10	10
Orthopaedic surgery . . . . .	21	12	20	17	6	10	5	-	5	4	11	16	5	11	11
Ophthalmology . . . . .	11	6	8	5	7	6	7	6	5	9	9	10	2	6	7
Gynaecology . . . . .	7	15	13	11	6	5	6	7	9	6	11	7	7	8	9
Psychiatry . . . . .	3	4	1	3	-	-	-	-	-	-	-	-	-	-	-
Neurology . . . . .	-	-	9	7	8	4	-	-	-	-	-	-	-	-	-
Total (8 main specialties) . . . . .	83	95	75	71	56	52	50		53	47	78	68	37	57	

Source:

S.H.3. returns for 1961.

These problems are being explored in the prospective part of our OP Survey. To provide a cross-section of hospitals, 11 groups have been selected across the country. These comprise some 25 General Hospitals, 5 special or restricted acute hospitals, 14 Cottage Hospitals with OP sessions, and 16 other clinics, mainly for chest diseases. This conglomeration of hospitals and departments were inherited by the 11 hospital groups in 1948 and illustrate the problems that will have to be faced in amalgamating a scatter of varied hospitals into single new District General Hospitals. Certainly the facilities for OP clinics are scattered throughout the buildings that happen to be available, and therefore their procedures and habits are far from standardized.

To collect new data, three basic methods are being used:

1. To examine how the volume of work is handled and what the OP department is actually doing with its caseload, a prospective study of 50 consecutive new patients for each

consultant is being followed through each department. Besides the usual clinical data for each patient, details are taken of:

- (i) The reason for referral by GP to the Hospital OP clinic.
- (ii) The investigations which are carried out.
- (iii) Treatment, if any, which is given.
- (iv) Admission to hospital or transfer elsewhere.
- (v) The final diagnoses and the final outcome.

Also noted is the number of clinic attendances required over a given period of time.

2. To obtain the essential data on the caseload of OP clinics over twelve months, on which statistics just do not exist in the Health Service (in contrast to the gold-mine of data in the 10 per cent sample of all IPs since 1957 in the Hospital IP Enquiry Reports), the age, sex, patient's home district, name of GP, and the consultant seen in OPs is recorded every fourth week on every new OP for twelve months.
3. Because the areas selected for study are a relatively good cross-section of the country, they are not isolated (as was Barrow) and the task of establishing the effective population served by each of some 30 hospitals is beyond present resources. To offset this, the GPs served by the hospitals were approached directly by letter, which was sent to them in their weekly mail from their Local Executive Council. Each GP was asked how many patients, if any, he had referred to OP clinics outside his local hospital group in the last twelve months, and the relevant reasons. Half the doctors replied within the first week or two, and two-thirds of the 860 circularized have now replied. Opportunity was taken of this good response to seek the GP's views on his local hospital facilities. (From the hospital side it had been reported that these appeared to be working smoothly.) Two-thirds of the GPs who have already replied state that they have difficulty in obtaining OP appointments for their patients as early as they wish. Half feel that the information they get about their patients on leaving hospital is unduly delayed, and half also



feel that many patients at present retained as follow-up cases in hospital OP departments might be returned sooner to the care of the family doctor. This method, which started originally as a rough check on the effective populations served by hospital OPs, has thus been adapted and extended for the second purpose of testing the consumer's (or the GP) attitude as he 'shops' for medical care for his patients. A similar attitude survey is now being done on the consultants, and an attempt is being made to develop a method to examine the content of the communications between the GP and the consultant. Indeed, we feel that any study of any sector of medical care should try to include studies of the attitudes and communications between all the professional workers.

### **In-patients**

In contrast to the paucity of information about OP services across the country, the wealth of data on IPs for each hospital in the H.I.P.E. Reports since 1957, has already been noted. Every Regional Hospital Board now has its own duplicate of the punch cards containing the Enquiry data. The work of the Statistical Department of the Oxford Region on H.I.P.E. data is well known, and the publications of their Operational Research Unit are outstanding. By contrast, it is doubtful whether even one or two other Regional Hospital Boards are using them in other than a cursory manner.

There is now available for every hospital in England and Wales an analysis of its caseload by age, sex, diagnosis, length of stay, death if occurring in hospital, and other details such as waiting list and residence of the patient. Although it is a 10 per cent sample, now that it has been running for more than five years the data are already ample for analysis of the common conditions in even the smallest of hospitals. Yet this is known to be done only in the Oxford Region.

In 1860 Florence Nightingale said,

'I am fain to sum up with an urgent appeal for adopting this or some uniform system of publishing the statistical records of hospitals. I have applied everywhere for information, but in scarcely one instance have I been able to obtain medical records fit for any purposes of comparison.' The situation changed little for almost a century.

In 1961 Jewkes was able to say:

'In most countries less is known about the medical services than about the minor industries. If ordinary businesses knew as little about whom they serve and in what quantities as most countries know about the frequency of illness and who makes call on the medical services, these businesses would rapidly be in bankruptcy . . . there are countries which seem content to remain uninformed and give the impression that they are not very anxious to know what is going on. Britain is one of the backward countries in this respect. It is a marvel, and one on which foreign observers frequently remark, that a scheme so vast as the National Health Service can be carried on with so little comprehensive knowledge of its detailed workings'.

In quoting this, Brotherston (1963) opines:

'Perhaps we have been too preoccupied with the mechanics of provision to pause to take stock. In the past it was possible to proceed on the assumption that all provision must be good —why waste time, therefore, over the details? But there are major forces at work now affecting the medical-care systems of all advanced countries which completely invalidate such a point of view.'

To keep the hospital service going from day to day the dinosaur appears to have to rely mainly on the momentum of its habits and conditioned reflexes. Although it does have about the best intelligence service in the world for collecting and analysing the details on its actual caseload, it does not have the skilled hands or brain power to know how to use it at the regional level or for local hospitals. Neither is there a system for engaging such necessary skills for the in-service training of the necessary administrators in every Regional Board. The Annual Reports of the Enquiry publish the analysis in detail by Region but of course they produce few answers. Many of the questions posed should, however, be examined by more detailed and local study. Here we will merely indicate some of the questions raised in the H.I.P.E. data. (Logan and Heasman, 1962). In examining the supply of beds, the rate of their use, and the length of stay in them for four main standard operations in General Surgery in 1960 for all the non-metropolitan Regional Hospital Boards, it is not surprising to find that Parkinson's Law applies in hospital as elsewhere and that nature abhors an empty bed. The beds that were inherited in 1948 across the regions are certainly used if only

at an 85 per cent occupancy level. Table XVII shows that for every woman between 15 and 44 years of age in Wales whose varicose veins are treated in hospital, more than twice are so treated in Wessex: and for every three older women treated for pelvic prolapse in the Birmingham or East Anglican hospitals there are four in Leeds and Wales and up to five in the Newcastle region. In the case of men in late middle-age, for every one in the South-Western region over twice as many enter hospital for treatment of the haemorrhoids in five other regions. Other figures suggest indeed that the only surgical repair operation with a constant rate across the country is for hernia in men—(and in fact this seems to hold also for U.S.A. and Sweden and offers a crude yardstick for comparison with other conditions).

**Table XVII**

**Variation in 'repair surgery' in hospital IPs**

Rate per 10,000 population by region for selected diagnostic, sex and age groups in 1958 in England and Wales

Region	Varicose Veins	Haemorrhoids	Prolapse
	166 Female 15-44	117 Male 45-64	163 Female 45-64
Newcastle . . . .	13	17	49
Leeds . . . . .	9	19	40
Sheffield . . . .	9	11	35
Manchester . . . .	13	18	33
Liverpool . . . .	14	18	33
Birmingham . . .	12	11	30
Wales . . . . .	8	14	41
Oxford . . . . .	15	12	38
Wessex . . . . .	17	12	36
South Western . .	14	8	38
East Anglican . . .	12	16	29

In general medicine for four main conditions equally wide differences in bed usage are immediately noticeable in Table XVIII. Liverpool has three times as many medical beds as Sheffield and it is a triumph of hospital administration that these beds are not allowed to remain empty for long. The bronchitic man in Liverpool stays twice as long in hospital as he does in Oxford so that four times as many beds are used for treating male bronchitis in Liverpool as in Oxford. For lung cancer, one of the most favourable areas in Britain is rural East Anglia yet the number of beds used for its treatment is twice that in the more highly industrialized regions of the North of England. Although lung cancer is still almost invariably fatal most of

these extra beds are taken up by the excessively long stay in East Anglia. On the other hand, hospitals in the Wessex region keep their patients with peptic ulcer twice as long as the similarly rural East Anglican hospitals and thereby use 70 per cent more beds for its treatment.

Table XVIII

Supply of beds, rate of use and length of stay for four main conditions in general medicine by Region in 1960

Region	Available Beds 100,000 pop.	IPs per 100,000 pop.	Lung Cancer (male)		Bronchitis (male)		Peptic Ulcer (male)		Stroke (female)	
			Mean Stay Days	Beds used per million pop.	Mean Stay Days	Beds used per million pop.	Mean Stay Days	Beds used per million pop.	Mean Stay Days	Beds used per million pop.
Newcastle . . .	69	130	20.9	57.3	21.2	141.6	16.9	132.1	75.0	302.5
Leeds . . .	67	106	23.5	65.4	28.0	148.9	17.6	116.2	66.6	304.6
Sheffield . . .	43	84	25.2	56.8	22.0	83.9	17.9	98.2	53.6	159.2
Manchester . . .	64	107	19.3	58.5	32.5	148.2	17.5	101.2	93.8	459.6
Liverpool . . .	135	186	26.9	89.9	35.5	273.2	21.2	146.6	88.9	413.7
Birmingham . . .	55	100	24.6	55.9	30.6	114.6	16.9	80.5	81.7	246.3
Oxford . . .	52	96	24.9	90.6	16.0	59.6	17.9	85.2	97.8	473.9
Wales . . .	63	87	24.8	74.6	38.7	164.0	21.5	134.6	79.9	258.4
South Western . . .	58	107	22.6	63.8	24.1	75.2	23.2	99.5	85.7	387.0
Wessex . . .	56	106	24.8	97.5	18.3	63.5	35.5	170.4	66.0	259.1
East Anglia . . .	51	87	39.2	118.2	38.4	96.3	18.6	101.1	130.6	443.2

Similar wide differences occur in other common conditions. Men with coronary heart disease in the Oxford region stay in hospital for almost three months in contrast to about three weeks in the whole of the North of England. The lengths of stay in the hospital for the fairly standard surgical procedure of straightening of strabismus in the young girl is up to two days longer than that of boys in all regions, probably as there is more concern about the cosmetic effect in girls. However, young boys in Wessex and Oxford are discharged on the fifth day, while those in Wales leave on the eighth and in Liverpool on the ninth: but the Merseyside girls stay on until their eleventh day.

In Gynaecology, Table XIX shows the close relation between available supply of beds and rate of use per 100,000 population in all the regions outside London. Because the number of gynaecological beds in East Anglia is half or less than those in Liverpool, Leeds, Newcastle or Manchester they have a shorter duration of stay but also a smaller number of patients per unit population are being treated. For the repair of pelvic prolapse women in East Anglia return home on the fourteenth day, those in Liverpool, Wessex and Wales stay for five days longer in

hospital and the same pattern applies for the treatment of cervicitis and for fibroid. The question that has got to be asked is: what then is happening to women with prolapse in East Anglia? Are they not treated surgically but with outdated supporting appliances as OPs; or do they not even get to hospital; or perhaps, not even to the family doctor? Here again one is dealing with the question of need, both unfelt and felt, and how and when is it translated into demand in relation to the resources available. Surely these are the kinds of questions that should be the concern of the clinicians in these regions as well as of the hospital administrators and others involved in planning for the future, as well as for providing some standards of quality today.

**Table XIX**  
**Supply of beds, rate of use and length of stay for three main gynaecological conditions**  
 by Region in 1960

Region	Available beds per 100,000 pop.	IPs per 100,000 pop.	Days in Hospital		
			Prolapse	Cervicitis (including erosion)	Fibroid
Newcastle . .	22	83	14·3	4·8	13·5
Leeds . . .	21	71	16·8	4·9	15·1
Sheffield . .	16	56	15·3	5·5	15·5
Manchester . .	22	70	16·1	6·5	16·6
Liverpool . .	27	73	18·1	8·0	24·1
Birmingham .	17	59	16·1	5·2	15·4
Oxford . . .	18	65	15·1	3·8	14·2
Wales . . .	20	69	19·2	6·8	17·1
South Western.	14	54	15·7	5·1	13·6
Wessex . . .	16	59	18·5	5·5	17·1
East Anglia . .	11	47	14·8	3·9	10·5

The H.I.P.E. data also offer other clues on the efficacy of hospital use of its beds. Comparing the South-West to the Manchester region it is seen in Table XX that in the South-West a higher percentage of the mothers occupying the maternity beds suffer from complications of pregnancy and of delivery so that only 32 per cent of them are completely normal in contrast to 38 per cent in the north. Manchester has more maternity beds available, yet in the face of its perinatal mortality rate—23 per cent higher than the South West—fewer abnormal pregnancies are admitted to their hospitals for delivery. Other evidence from the Perinatal Mortality Survey (1958) supports the suggestion that although mothers in the North of England are in

greater need of the best standards in antenatal care and hospital confinement for safest childbirth (and the same necessary resources are available) they are receiving them less frequently than the mothers at lower risk in the South.

**Table XX**

**Efficacy of hospital use of maternity beds**

Maternity complications in hospital patients and perinatal death rate for two regions in England  
 Rates per cent of total births (live and still) occurring in region

	<i>South-west</i>	<i>Manchester</i>
Toxaemia . . . . .	11·3	7·1
All complications of pregnancy . . . . .	31·7	24·6
All complications of delivery . . . . .	13·8	10·8
Completely normal . . . . .	32·3	38·1
Maternity discharges . . . . .	77·1	75·9
No. of beds available/100,000 pop. . . . .	26	30
Perinatal mortality . . . . .	31	38

*Source:*  
 Hospital IP Enquiry, 1958, Table H(i).  
 Registrar General's Statistical Review, England and Wales, Part I, Medical, Table 13.

## **IV. Comparative Study in Medical Care: Implications and Applications**

The field of studies in medical care is both wide and far-ranging. Many of the most difficult problems of planning health services on a national scale pose questions which involve a probing in depth of the various constituent elements which make up medical care in the comprehensive sense. The Manchester Unit is currently engaged in two exercises; one concerned with comparisons drawn initially from the information contained in the Hospital In-patient Enquiry, the other with rather more crude international comparisons.

### **The application of H.I.P.E. and other data to hospital planning in Liverpool**

About half the hospitals in Britain today were built before 1891, and a quarter over a hundred years ago. Since there has been hardly any hospital building in the last 30 years the origins of the present supply of hospitals is therefore deeply rooted in the past, and they were built to meet the conditions of those days. With little experience to go on, but with a target fixed for 1972 of reducing the number of hospital beds by one fifth of those at present available, it is not surprising that the problem of how to contract will be felt most acutely in the hospital region which inherited the most beds.

In this century, Merseyside supplied itself with more hospital beds per unit population than any other region in England, and when its Regional Hospital Board was set up in 1948 it inherited this supply. In its distribution of these resources between the specialities, Liverpool has twice as many general medical beds as most other regions and three times as many as Sheffield (although its supply of beds for Geriatrics and the chronic sick is little different from that of Sheffield). For all acute specialities, the Liverpool rate is 5.6 per thousand population; the average for England and Wales is 3.9, and for Sheffield it is 3.2. The Hospital Plan is to reduce the acute index to 3.5 in Liverpool, the national average to 3.4, and Sheffield to 3.0, although there is scant evidence why the supply of planned beds on one side of the Pennines should be so different from that on the other. Nevertheless, the reactions on Merseyside were to the effect that it would be impossible to reduce the overall figure to 3.5, even though this was the highest ratio in the country, because all the beds were being used and they had waiting lists. It seems the number of IPs accommodated in acute general beds in the Merseyside hospitals has always been larger than that of any other

# DURATION OF STAY

## REGIONAL AVERAGES - GENERAL MEDICINE 1954 TO 1960

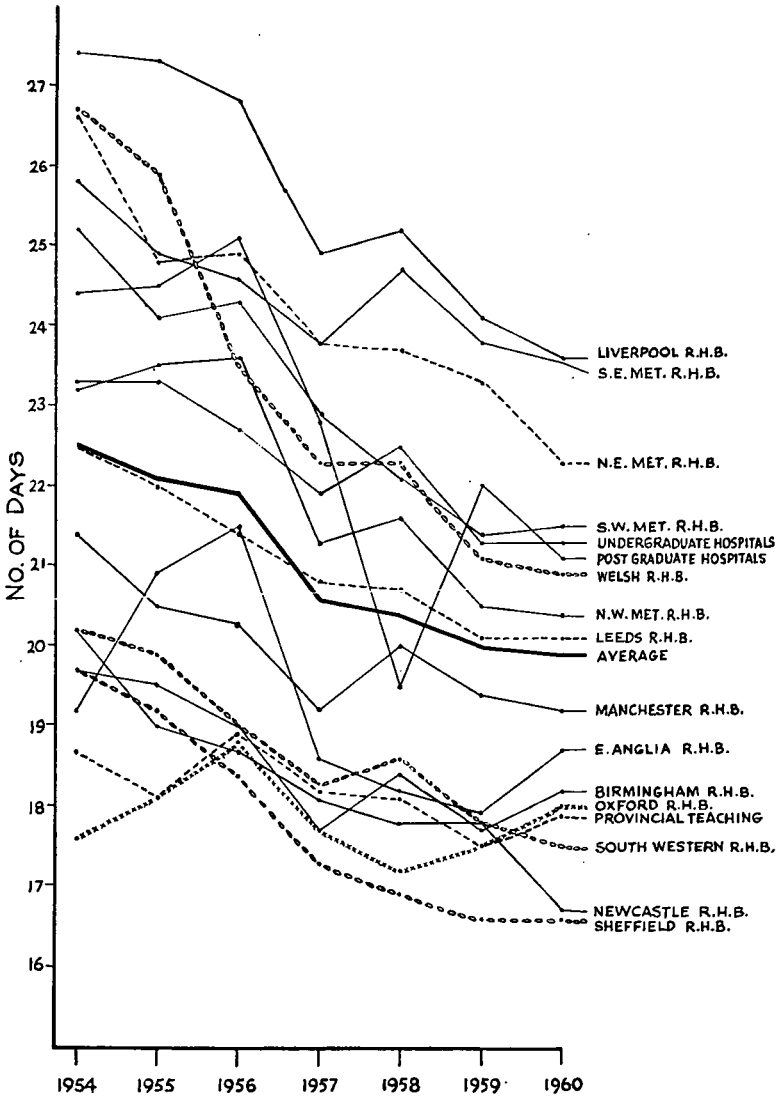


FIG. 4



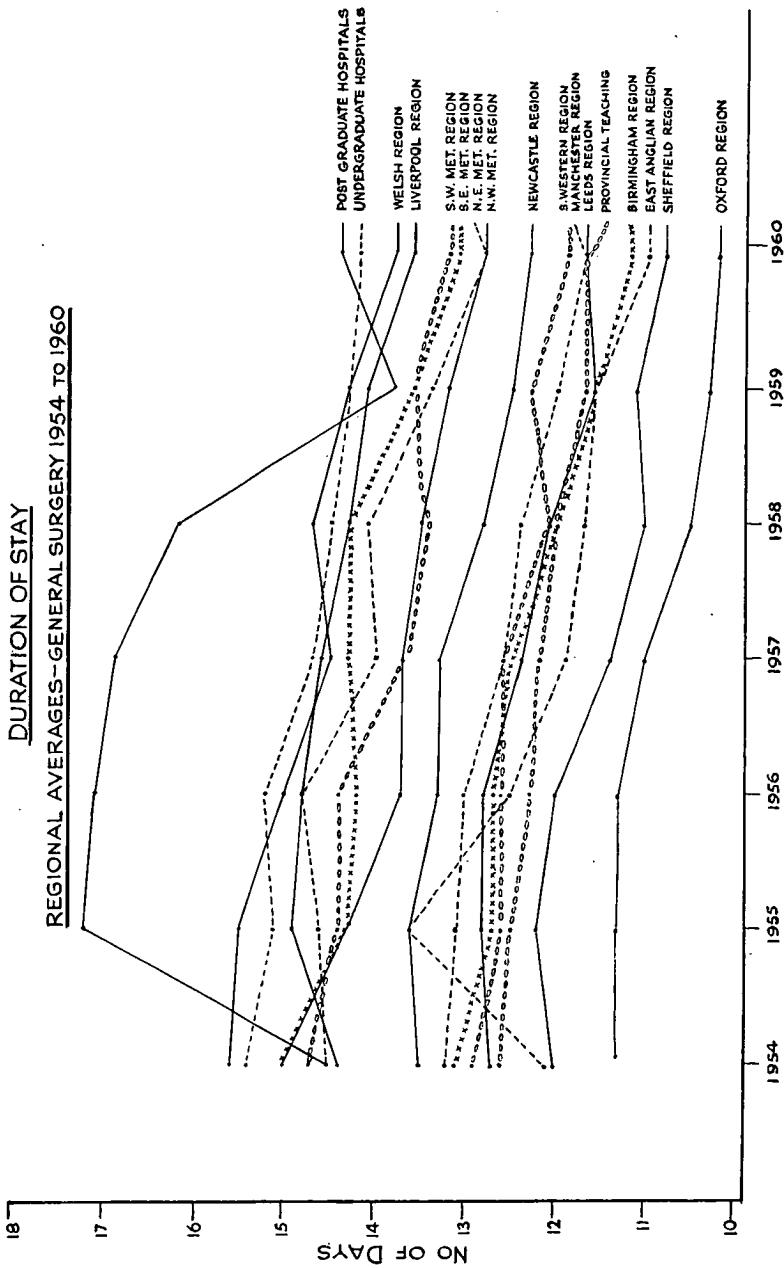


FIG. 5

region, and in most of the specialties. Indeed, in General Medicine there are twice as many IPs dealt with in Liverpool as in Sheffield, Oxford or East Anglia. It is also interesting that the Liverpool hospitals had more new OPs than any other region. There have been few empty beds on Merseyside because the average length of stay has been the longest in the country. As shown in Fig. 4, since 1954, the average stay in General Medicine has always been longer in Liverpool. There has been little tendency for the gap to narrow so that today the patient stays in the medical bed in Liverpool over half as long again as in the Sheffield and Newcastle regions. Figure 5, for the average stay in General Surgery, shows Liverpool at the top, although competing with Wales, but again the gap is not narrowing and surgical patients on Merseyside now stay for an average of 14 days compared with 11 days in the Sheffield and Oxford regions. Thus, the cost per case tends to average over £50, whilst in other general non-teaching hospitals in the country the average cost varies around the £40 mark. But when this is multiplied by the greater numbers admitted to a hospital bed per thousand population, then the Liverpool hospital cost per thousand population could be 50 per cent more than some other regions.

**Table XXI**

**Spells of illness in hospital per 10,000 population by age group and sex for some regions in 1958**

	<i>Males</i>					<i>All ages</i>
	0-	5-	15-	45-	65-	
Liverpool . . .	1012	619	498	944	1706	770
Manchester . . .	909	635	400	665	1159	622
Sheffield . . .	694	529	373	616	923	537
East Anglia . . .	600	507	332	602	1277	543
All regions . . .	912	639	452	770	1349	685

	<i>Females</i>					<i>All ages</i>
	0-	5-	15-	45-	65-	
Liverpool . . .	733	508	1292	768	1128	976
Manchester . . .	710	541	1126	562	812	816
Sheffield . . .	478	421	974	493	720	697
East Anglia . . .	368	412	866	502	812	663
All regions . . .	648	527	1185	652	957	882

*Source:*  
Hospital IP Enquiry 1958, Part II, Table 4.

The H.I.P.E. data throw some light on where the Liverpool hospitals might be particularly overloaded, and offer some suggestions on where their medical administrators and clinicians might first look if they are to meet the target of pruning their supply by 37 per cent. The published data for the age distribution, by sex, for each region immediately shows that it is in middle age and after that the Liverpool hospitals have the greater load, and in men more than in women (Table XXI). In Liverpool, men between 45 and 64 have half as many more spells in hospital than in the Manchester or Sheffield regions, while the extreme of those over 65 rises to over 80 per cent. Further examination of the H.I.P.E. data on the clinical diagnoses for these men reveals that the clinical conditions are mainly medical. Indeed, for the common load of surgical repair there is little difference across the northern regions, neither is there much difference for specific medical conditions, such as the common peptic ulcer, coronary heart disease and osteo-arthritis. The differences, in fact, tend to be in the non-

**Table XXII**

**Chronic disease in hospital in men of 45 and over**

Spells in hospital per 10,000 population in 1958 for selected diagnoses in four northern hospital regions for men aged 45-64 and 65 and over

	<i>Newcastle</i>	<i>Leeds</i>	<i>Manchester</i>	<i>Liverpool</i>
Malignant lung . . . 45-64	28	22	20	34
65+	23	30	28	65
All cancer . . . 45-64	78	78	67	89
65+	171	180	166	224
Haemorrhoids . . . 65+	6	9	5	19
All C.V.S. . . . 45-64	104	116	105	132
65+	198	292	203	277
Pneumonia . . . 45-64	22	16	15	30
65+	59	62	42	115
Bronchitis . . . 45-64	33	32	24	49
65+	56	91	45	126
Other digestive . . . 65+	41	41	36	60
All bones and move- ment . . . . 45-64	38	29	30	49
Symptoms, senility and ill-defined . . . 45-64	50	35	34	65
65+	104	101	100	112
Total all causes . . . 45-64	824	737	665	944
65+	1292	1451	1160	1706

*Source:*

Hospital IP Enquiry 1958, Part II, Table 4.

specific and ill-defined clinical diagnoses, as shown in Table XXII. These seven clinical groups account for about 50 per cent of all admissions of middle-aged men and 60 per cent of older men in Liverpool. Further analysis of the duplicate punch cards shows that it is the non-teaching hospitals in Liverpool itself, rather than in the other towns of the region, in which these tend to concentrate: but there are peculiar over-loadings in some of the towns, and by younger age groups and for unexpected diagnoses. Such local variations can best be explored by *ad hoc* prospective studies in collaboration with the clinicians themselves.

Further study of the H.I.P.E. data shows that, before they enjoyed the services of specialists in hospitals, many residents from North Wales were catered for in Liverpool, but since 1948 this practice has become less frequent and indeed today the Liverpool region caters for fewer outsiders than does the Manchester region. Merseyside, in common with other northern industrial conurbations, has a shortage of GPs, a high average size of GP list, and is near the top of the league for frequency and cost of drug prescribing. It has, of course, also suffered from a chronic high rate of unemployment for some decades, as well as from a high level of poor housing and slums, which more-over are being cleared at a slower rate than other northern cities, as shown in Table XXIII. At the same time, it supplies itself with well

**Table XXIII**  
**Slum clearance in northern cities**  
 Number of unfit houses in 1955 and 1962 in five cities and percentage cleared

	Unfit houses 1955	Cleared by 1962	Unfit houses 1962	Per cent cleared
Liverpool . . .	88,000	7700	80,300	9
Manchester . . .	68,000	9500	58,500	14
Birmingham . . .	50,200	10,300	39,900	20
Leeds . . . . .	22,500	11,900	10,600	53
Sheffield . . . .	13,500	6000	7500	44

Source:  
 'The Economist', 19th January 1963, p. 216 (from figures published January 1963 by the Association of Public Health Inspectors).

below the national average for Home Helps, being 40 per cent below that of Newcastle and well below Sheffield, Leeds, Manchester and Salford. Moreover, the average cost per case attended by a Home Help in Liverpool is £22, compared with £26 in Manchester, £31 in Leeds, £37 in Sheffield, £43 in Newcastle, and £49 in Birmingham.

This information suggests that the Liverpool cases are either less chronic or have fewer visits. However, why should the standard for labour and childbirth in the home, with apparent equal need for care from the midwife, cost only £14 per mother in Liverpool, but £16 in Leeds, £17 in Sheffield and £23 in Newcastle?

Liverpool's residential accommodation for the care of the elderly and the infirm is also below the national average and below the other northern cities of Manchester, Salford, Leeds and Newcastle. Moreover, although faced with slums and low in Home services, their planned targets for the next ten years are well below those of most of these other cities, as shown in Table XXIV. Salford, already with more Home Helps, Midwives and Social Workers than the Liverpool target, plans to double its present supply, while its provision for places for the elderly in Homes will be 50 per cent higher than Liverpool. It is interesting that Sheffield has, in fact, fewer places for the elderly than Liverpool, and its target is the present Liverpool supply, yet its hospitals are not overburdened as in Liverpool. But it has not had the long period

**Table XXIV**

**Home services in some English cities in 1962 and planned for 1972**

Domiciliary Services per 100,000 population for Home Help, Home Nurse, Midwife, Social Worker and places in Homes for the elderly.

Top line: number available in 1962

Bottom line: number planned by local authority by 1972

<i>Town and population</i>	<i>Home Help</i>	<i>Home Nurse</i>	<i>Midwife</i>	<i>Social Worker</i>	<i>Home for Elderly</i>
Liverpool . . .	19	15	8	7	18
745,000 . . .	72	24	12	13	20
Birkenhead . . .	29	13	8	4	14
143,000 . . .	38	14	9	6	16
Manchester . . .	35	15	13	5	25
630,000 . . .	86	22	14	9	30
Salford . . .	75	10	14	11	24
154,000 . . .	146	28	31	27	29
Sheffield . . .	64	16	9	7	12
495,000 . . .	80	21	13	11	18
London C.C. . .	86	19	5	8	21
3,185,000 . . .	112	20	7	14	25

*Source:*

H.M.S.O. Health and Welfare, The Development of Community Care, Plans for the Health and Welfare Services of the Local Authorities of England and Wales. (H.M.S.O. Comnd. 1973, April 1963).

of suffering from unemployment that has plagued Merseyside. It is possible that the younger and fitter workers have tended to leave Liverpool to seek jobs in the Midlands and the prosperous south, whilst the disabled and chronic sick have been left behind. Again, the Liverpool Hospital Region is dominated by its conurbation more so than any other Hospital Region, so that it does not have the low rate of demand from large rural areas. The problem may be even more complex in that the migration from Liverpool may also apply to the professional classes, including doctors and nurses; they may all be reactive to their local culture and environment. In this acute and urgent problem in the Liverpool region, although the H.I.P.E. data suggest where and how to look for immediate pruning, it also raises more complex questions which lead to the very heart of the problem:—the attitudes of the patients, the GPs, the consultants, the Medical Officers of Health and Local Authority provision toward the need, supply, demand and delivery, and local costs of providing medical and social care.

### **Comparison of hospital usage in three western countries**

Although there are such differences in the supply of resources of hospital beds across England, the differences are wider still for all resources between three Western countries—England, Sweden and the U.S.A. In fact, because of the comprehensive nature of the National Health Service, one has to seek ‘experiments of opportunity’ outside the N.H.S. by looking at the picture in other countries which practise the same brand of modern medicine but have gross differences in the supply and usage of their resources. Indeed, with the scientific advances in Medicine and the social demands for higher standards of medical care so sharply increasing the cost of its provision, those responsible must seek all possible means of increasing the efficiency in the delivery of medical skills to the patient. The need is for efficiency in the sense of the best return for money and other expenditure, in terms of the improvement and comfort of the patient. This is no small matter when all hospital staff employed in England and Wales totals 455,000,—a labour force close to that of the the National Coal Board, (employing 551,000), which is the biggest employer of labour in the world outside the U.S.A. By the very nature of the task of medicine—in preserving life and postponing death, particularly in chronic disease—the total cost seems bound to increase and the economic returns on the efforts expended likely to diminish. Thus, we in

Britain must show more than curiosity when Sweden maintains its lead of a decade, lower death rates with fewer doctors—and most of these in hospital, but meeting patients much less frequently than in Britain. Sweden, however, with almost twice the number of nurses as Britain and the U.S.A., feels it still has too few. The beds in their new hospitals seem to be rather on the expensive side for the country, and are double the number of the British target. America, with the most doctors and the greatest turnover in hospital beds, still feels severely short in all resources and wonders when the ceiling will be reached. The figures in Table XXV show that there is still more than enough reason, based on self-interest, for the comparative studies being explored by the Uppsala, Harvard and Manchester Medical Schools.

**Table XXV**  
**Medical resources and annual rates of use in three western countries**

	<i>All doctors</i>	<i>Ratio of 10 GPs to hospital doctors</i>	<i>Annual doctor contacts per person</i>	<i>Hospital beds exclusive T.B. and mental</i>	<i>Annual admissions</i>	<i>Average stay in hospital (days)</i>	<i>New OPs</i>	<i>All nurses</i>
England	11	8	4	39	880	19	1560	44
Sweden	8	30	2.5	75	1290	14	2640	80
U.S.A.	14	10+	5+	50	1360	8	>500	47

The first stage in any international collaboration is, of course, concerned with understanding the sources and nature of the data in each country before attempting comparisons, particularly when each corner of the triangle thinks it is practising the same kind of medicine in the same way as the other two. Again, there is the difficulty of getting a truly comparable denominator for the population which is consuming the hospital resources. Some of these difficulties may have been overcome in the sources of the data in Table XXVI which shows the variation in surgical rates from the H.I.P.E. national sample in Britain and the sample of the U.S.A. National Health Survey, compared with a district hospital in Sweden, whose finances come entirely from a local rate and to which the local inhabitants are 'captive'. Other comparisons are to Saskatchewan and to the Health Insurance Plan of New York, each of which is comprehensive. Obviously, the same standard of surgical operations have different backgrounds in relation to the method of payment—a fee for service in the U.S.A., not always covered by insurance in contrast to Sweden, and its absence in Britain. One can only speculate on what lies behind such figures, when tonsils are

removed three times as often in Canada as in Sweden, and the uterus and haemorrhoids are removed twice or three times as often in North America as in Sweden; on the other hand, veins are treated in hospital and the gall bladder and prostate removed up to twice as often in Sweden as in America.

**Table XXVI**

**Variations in surgical rates in North America, Britain and Sweden**

Rates for selected surgical operations per 10,000 population in Saskatchewan, U.S.A., H.I.P. New York, England and Wales\* and Sweden\*

	Saskatchewan	U.S.A.	H.I.P.	England and Wales	Sweden
T's and A's removal . . . . .	111	60	52	42	30
Appendectomy . . . . .	39	22	11	14 to 29	30
D. and C.† . . . . .	61	—	58	60 (a)	—
Hysterectomy† . . . . .	30	31	22	24 (a)	8
Caesarian† . . . . .	13	11	—	8	1·0
(Per cent all deliveries) . . . . .	2·4	3·0	—	2·3	1·6
Cholecystectomy . . . . .	16	15	9	9	26
Hernioplasty . . . . .	29	25	24	23	17
Haemorrhoidectomy . . . . .	10	13	9	5	5
Venous ligation or strip . . . . .	8	5	6	10	15
Cystocele and Rectocele . . . . .	24	—	—	20	3
Prostatectomy‡ . . . . .	6	—	10	11 (a)	14
Circumcision‡ . . . . .	—	—	68	4	3
All operations . . . . .	616	626	365	444	

*Notes:*

\* Listed as Diagnostic Group: Surgical operation is not noted except for T's and A's.

† Estimated from ALL admissions to all surgical departments plus Ophthalmology, Urology, and Gynaecology, but not Obstetrics. Surgical operations estimated in 90 per cent, i.e. total 400.

‡ Rates for single sex only.

*Sources:*

Saskatchewan Hospital Services Plan, Annual Report, Table B.7.1960, Canada. Health Statistics, Series B.7., Table 17 and 21, U.S. National Health Survey 1957-58.

H.I.P. Statistical Report 1959, Table 10, New York.

Hospital In-Patient Enquiry 1959, Part I, Table I, Ministry of Health and G.R.O. London.

Centrallasarettet, Sodertalje, Sweden, Arsberattelse 1959.

(a) Barrow-in-Furness, 'The Demand for Medical Care' by Gordon Forsyth and R.F.L. Logan, O.U.P., 1960.

As well as these wide differences in rates of repair or removal, there are equally wide differences in the average duration of stay for these apparently standard surgical procedures, as shown in Table XXVII. Patients in both medical and surgical wards in Britain stay over twice as long as in North America, whilst the duration of stay for



Table XXVII

Average duration of stay (days) in hospital for certain conditions in U.S.A., England and Wales, and Sweden

Operation	Sweden*	U.S.A.†	England and Wales‡
Varicose veins . . . . .	11	8	14
T. and A. . . . .	3	2	4
Appendicectomy . . . . .	7	7	11
Hernia . . . . .	9	9	14
Haemorrhoids . . . . .	8	8	13
Gall bladder . . . . .	11	14	20
Hysterectomy . . . . .	-	10	13§
Caesarian delivery . . . . .	-	8	14§
Other delivery . . . . .	8	4	12
Average (all surgical) . . . . .	-	7	15
Heart disease: medical . . . . .	21	15	35
Peptic ulcer . . . . .	14	8	23
Average (non-surgical) . . . . .	18	10	20

*Source:*

\* Sweden. Centrallasarettet: Sodertalje. Arsberattelse, 1959.

† U.S. National Health Survey, U.S. Public Health Service, Publication No. 584-B-7, Washington 1959.

‡ Hospital In-Patients Enquiry 1956-57, Ministry of Health and General Register Officer, H.M.S.O., 1961.

§ Forsyth, G. and Logan, R. F. L., *The Demand for Medical Care*, Oxford University Press, London, 1960.

Sweden falls between these extremes. It cannot be assumed that the clinical condition and procedure for medical diagnoses can be compared between the three countries, and certainly not without standardizing at least for age. To examine these differences further, several of these surgical procedures must first be checked between the three countries, to establish that they are in fact similar and standard. A group of patients, without complications and within a decade of age, must then be followed through as markers to trace out the tempo of the hospital system of medical care. The elements of such a tempo include a time analysis of the hospital activities for the obvious events, such as days of waiting before operation, when ambulant, and when discharged. This must of course be selected for a comparatively simple procedure, for example, the repair of an uncomplicated inguinal hernia in 20 consecutive men aged between 30 and 39. The second focus is on the severity of the condition admitted to hospital for treatment, for example the extent and the degree of varicose veins in women aged between 40 and 49, with or without local complications, or the clinical indications and number of episodes of cholecystitis preceding the re-

removal of the gall bladder. Even in such an apparently standard condition as child birth, it seems that the average short stay of four days in America is achieved by the discharge home of 'false labours' after twelve hours, for later re-admission. Such a custom is almost unknown in the European countries.

These two approaches for comparative studies of medicine could provide a simple vehicle for more detailed comparisons between three countries which have such different resources and make such different use of them.

## V. Epilogue

'Medicine is possibly alone among the great professions of the world with real pretensions to a universal civilizing mission, in that there are no political barriers to the spread of the knowledge which its members are always ready to impart' (McLachlan, 1963). Some results of the studies here outlined suggest that in our own country there are barriers between, and even within, the several institutions which make up the National Health Service and of which the medical profession are the leaders. This is only to be expected when scientific advances suddenly and unexpectedly are taken up and applied by a humane profession whose capacity for doing good has, hitherto within an established social order, mainly been concerned with 'curing sometimes, relieving often and comforting always'. With its sights fixed for centuries on a personal service and on the whole to alleviating sickness, it would be unreal to expect the habits of the profession to change within a decade. Moreover the breakthroughs have only occurred in some specialties and, indeed in contrast to the very successes in these fields, the diseases of ageing, cancer, and most degenerative and mental sickness are still impregnable against attack or control. In caring for these resistant ills, which combine to constitute the main burden of sickness to-day, the attending physician has, in fact, to fall back on his erstwhile rôle merely to relieve suffering and make survival more tolerable. Nevertheless even when a minor advance occurs there is a professional responsibility, especially in a National Health Service, to see that the conditions allow its benefits to be applied as quickly as possible to all sick individuals who need them. Unfortunately there seems to be little recognition in any branch of medicine of the new challenge to medical organization arising from the changed pattern of disease. This is not surprising when advances of technology reach an old profession. However, there are now signs emerging—perhaps no more than a ground swell, but still significant—of some measure of appreciation of the issues involved and the fact that they are not confined to one branch of the profession or one sector of the health services. Society is now increasingly being led to expect a great deal more than hitherto from the new science as well as the old art of medicine, and all the professions concerned with its practice will almost certainly be faced with a radical reconstruction of function and redeployment of their resources so that the undoubted potential can be translated into effective benefit.

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*Staff turnover as a measure of morale and effectiveness?*

# **The Morale and Effectiveness of General Hospitals**

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# The Morale and Effectiveness of General Hospitals

## Student nurse wastage statistics

A group of research workers at the Manchester College of Science and Technology have produced a report of approximately 50,000 words on this very wide subject. The study, on which work has been proceeding in a large number of hospitals over the last five years, and which was financed by the Nuffield Provincial Hospitals Trust, began with an examination of student nurse wastage rates; after crude figures of these had been obtained from a large number of hospitals in the Manchester region, a group of five acute general

**Table I**

Showing, for five comparable hospitals over five years, 1950-1955, totals of student nurses who entered; who completed training, class (i); who withdrew on their own account, class (ii); and who left for other reasons, including marriage, sickness or rejection by the hospital, class (iii).

Student Nurse Category	Hospital				
	A	B	C	D	E
Class (i) . . .	197	65	140	103	110
Class (ii) . . .	44	21	80	79	146
Class (iii) . . .	78	25	38	57	50
Total . . .	319	111	258	239	306

We may consider class (iii) to be those who were either badly selected for entry in the first place or subjects of forces that have nothing to do with their attitudes towards nursing or their preferences between nursing and another occupation. The ratios of entries in class (i) to those in class (ii) thus gives a rating by the girls themselves, of the five hospitals as social instruments for enabling student nurses to qualify for a career. These ratios are respectively

4.4      3.1      1.75      1.30      0.75;

this is a consistent progression of preferences from highly favourable to highly unfavourable.

hospitals of approximately the same size were chosen for detailed examination. They were selected because their total average wastage rate over a five-year period was about the same as the national average, which means that about half the girls who entered the training schools failed to complete their three-year course; the average rates of the five different hospitals, however, varied from as low as 38 per cent to as high as 64 per cent; the five hospitals could on that account be graded by wastage rate as very low, low, average, high and very high.

The student nurses who failed to qualify were then divided into three classes, namely, those who were rejected, for whatever stated reason, by the hospital; those who withdrew, for whatever stated reason, of their own volition; and those who were the subjects of a *force majeure*, such as prolonged illness or early marriage. It was shown, as in Table I, that the highly significant differences between the total wastage rates of the five hospitals were almost entirely accounted for by the differences within the second class, namely, of girls who withdrew of their own volition.

### Staff wastage an organic effect

There was something about two of the hospitals that kept the girls rather more than the national average, and about two others something that the girls did not seem to like. This result suggested to the team that there might be organic qualities about the hospitals which might influence not only student nurses but other classes of nurses as well. The wastage patterns of the other main classes of nurses were therefore determined and it was found that the hospitals which could not keep student nurses, could not keep ward sisters, staff nurses, and assistant nurses; their record with matrons and domestics was also indifferent. Table II, which places the five hospitals

**Table II**

Showing rank order of average length of service of four categories of nursing staff in five hospitals, 1950-55.

Hospital	Ward Sisters	Staff Nurses	Assistant Nurses	Student Nurses
A	2	2	1	1
B	1	1	2	2
C	4	3	4	3
D	5	4	5	4
E	3	5	3	5

in rank order of staff wastage, shows a strong tendency for low or high wastage rates to be associated within particular hospitals. This seemed to suggest that the high or low wastage rate of student nurses in particular hospitals had little, perhaps, to do with the student nurses themselves, but rather that it was a quality of any particular hospital.

### Other statistics about student nurse wastage

The likelihood of this hypothesis was strengthened by two further examinations of the facts. Firstly, as in Table III, the town in



which the student nurse wastage rate was abnormally high was shown to display highly stable employment patterns in other trades employing girls, while the hospital with the highly stable population of student nurses was in a town with high labour turnover among other adolescent girls. Secondly, it was found, as in Table IV, that in all five hospitals, the girls who voluntarily gave up their training displayed a significantly higher sickness rate than those in the other two classes; it is suggested that before deciding to leave the hospital, for whatever given reason, such girls were under abnormal stress.

**Table III**

Showing, for three department stores of the same organization, numbers of girls on books over a period of five years, and mean length of stay in employment; and for comparison, voluntary wastage rates of student nurses in same towns over the same five-year period.

<i>Town of Hospital</i>	<i>No. of employees in dept. store</i>	<i>Mean duration of employment</i>	<i>Mean voluntary wastage of student nurses</i>
A	174	5 yrs. 2 mths.	14 per cent
C	232	2 yrs. 2 mths.	31 per cent
E	154	5 yrs. 0 mths.	48 per cent

**Table IV**

Showing for five hospitals, percentage sickness absence rates for three classes of student nurses referred to in Table I.

<i>Student Nurse Category</i>	<i>Hospital</i>				
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Class (i) . .	2·51	2·82	3·72	3·78	2·66
Class (ii) . .	4·38	3·75	6·68	6·44	5·47
Class (iii) . .	2·45	2·47	5·63	4·15	2·96

*Notes:*

- (a) Class (iii) excludes girls who gave up on account of ill-health.
- (b) The sickness records of Hospitals *D* and *E* seem better than those of Hospital *C*, while their wastage rates are significantly worse. Further enquiry revealed that at Hospitals *D* and *E*, student nurses would report sick only as a last resort.

### Statistics about length of patient stay

These further results suggested to the team that the hospitals which had difficulty in keeping their nursing staffs would have difficulty also in treating their patients. This relationship could be looked at in more than one way; it might be said that the ward permanently short of staff could not provide treatment for the patients

to the level of that provided in the hospital with a stable staff, and that the patients would take longer to get better, simply because there were too few nurses to look after them. Or it might be suggested that the tensions or anxieties of which the student nurses themselves become the victims (as revealed by the high sickness rates of those who give up) would also produce anxieties among the patients. An examination of the length of stay of five main classes of patients in the five hospitals showed that those hospitals with the stable staffs had short periods of patient stay and *vice versa*. The rank orders of length of stay of all patients in these five classes treated during one whole year are given in Table V. The concordance between the rank orders of staff stability and patient stay was so great that it could not possibly have occurred by chance once in a million times. The differences between these hospitals in average length of patient stay, irrespective of diagnostic group, were of the order of 50 per cent; these differences had nothing whatever to do with the length of waiting lists at the hospitals. Indeed the hospitals with the shortest length of patient stay had the shortest waiting list and *vice versa*; this result is intelligible to the operational research worker as a simple queuing situation with variable service times.

**Table V**

Showing, for five hospitals, rank orders of length of patient stay for five common diagnoses.

Hospital	Diagnostic Group				
	App.	HR	Chol.	PG	Resp.
A	1	1	1	2	1
B	2	2	3	3	2
C	3	3	2	1	3
D	4	5	4	5	5
E	5	4	5	4	4

Key: App., Appendicectomy; HR, Hernia Repair; Chol., Cholecystectomy; PG, Partial Gastrectomy, Resp., Asthma, Bronchitis, Pneumonia.

### Studies of ward activity

The research team later turned from statistics to an examination of ward activities. They made exhaustive studies, by random sampling methods, of the work of nursing teams on hospital wards; they also examined other aspects of the hospital organization, from cadet schemes to the division of responsibilities within the matrons' offices. They became especially interested in the duties of ward sisters,

and in the amount of time that the ward sisters devoted to their first year student nurses. Activity samplings of the ward sister's day showed that whereas one of them would devote up to 60 per cent of her time to 'administration', in one form or another, she might give less than 1 per cent to her first year student nurse. Table VI gives a sample of her contacts. The team were impressed with what seemed to them a lack of contact between many ward sisters and their junior nurses; they also discovered that the junior nurses tended to be shifted from one ward to another before they had time to understand fully what was going on around them; they must often have had great difficulty in perceiving themselves as useful members of the ward team.

**Table VI**

Showing, by length of time and by members of subordinate ward staff, distribution of conversations of ward sisters over approximately 30 hours, in large acute general hospital of average nurse wastage.

Grade of Ward Staff	Number and lengths of conversations (Minutes)					
	0-½	½-1	1-2	2-5	Above 5	All
Junior Sister . . .	16	3	2	1	0	22
Staff Nurse . . .	31	1	2	3	2	39
3rd yr. student . . .	40	0	2	2	1	45
2nd yr. student . . .	37	0	1	0	0	38
1st yr. student . . .	13	0	0	1	0	14
All . . . . .	137	4	7	7	3	158

### The scope of attitude surveys

These ward activity samplings led naturally to an examination of the attitudes of those employed on the wards. One hospital management committee, in an effort to suggest standards of ward staffing, invited the team to conduct a major attitude survey among its ward staffs; and from this some simple conclusions were drawn. First, many girls could detect little meaning in their daily work patterns; many others could see only contradiction between methods they had been taught in the training school, methods they were supposed to use on one ward and methods they were supposed to use on another. Secondly, many of them often found it impossible, or perceived it as impossible, to get explanations of what they were supposed to be doing at all; at times they even felt themselves denied courteous replies to questions intended to relieve their bewilderment. Thirdly, these difficulties of the girls seemed to be ill understood by those in charge of them, who sought

to explain their local difficulties of ward staffing by a decline in the quality of recruits. Fourthly, the survey revealed deep conflicts between the ward sisters and the hospital training staff, from which it was evident that the student nurses would be bound to suffer.

### A statistical measurement of sisters attitudes

Since it became clear from this general attitude survey that the extent to which the girls felt themselves able to adjust to life on the ward was of primary importance; and since they also perceived that the ease of this adjustment was strongly determined by the extent to which they could communicate with those in charge of the wards, the team devised an instrument specifically to determine the attitudes of the ward sisters towards hospital life in general and towards student nurses in particular. This instrument, originally based upon remarks passed by sisters during the attitude survey, went through many stages of development; it ultimately showed that the attitude of the ward sisters towards their nurses reflected very strongly their perception of their superiors. This effect appeared at two levels. As is shown in Table VII, individual

**Table VII**

Showing the distribution of 622 ward sisters, by impressions gained of their superiors, *P*; and by attitudes expressed towards their own subordinates, *T*.

<i>T. or attitude towards their own subordinates</i>	<i>P, or impression gained of superiors</i>			
	<i>Forthcoming</i>	<i>Responsive</i>	<i>Aloof</i>	<i>Hostile</i>
Solicitous . . .	58	42	23	9
Aware . . . . .	60	47	44	36
Indifferent . . .	32	53	50	41
Disparaging . . .	10	24	36	57

sisters who had confidence in their superiors displayed sympathetic attitudes towards the student nurses and *vice versa*; hospitals in which the sisters *as a whole* had confidence in their superiors *as a whole* also treated the student nurses *as a whole* with sympathy. These results were statistically highly significant and eventually led the team to make detailed studies of attitudes in many hospitals and the communications suggested by them.

### Attitudes, staff stability and patient stay

In the course of these studies the team had moved away from the original five hospitals to make brief surveys of about twenty others.

Eventually a sample of fifteen large acute general hospitals, none connected with a university and all in the provinces, were chosen and five simple qualities measured in each of them. Two measured 'atmosphere on the ward', namely, the attitude of the sister towards her superiors and the attitude of the sister towards her nurses; a third suggested the stability of the qualified nursing staff at the hospital, measured by the extent to which the establishment ratio of qualified nurses was maintained over a year; the fourth and fifth were the mean lengths of patient stay in general medical and in general surgical specialties. It is shown in Table VIII that these five qualities were highly

**Table VIII**

Showing the rank order of 15 acute general hospitals for five parameters.

*P* : Sisters' opinions of senior staff

*K* : Sisters' attitudes to student nurses

*Q* : Stability of qualified nursing staff

*M* : Mean length of patient stay: general medical

*S* : Mean length of patient stay: general surgical

Hospital	Rank Order by Five Parameters				
	<i>P</i>	<i>K</i>	<i>Q</i>	<i>M</i>	<i>S</i>
A	1	5	2	1	1
B	2	1	9	2	3
C	7	6	1	5	6
D	4	3	12	8	2
E	3	2	6	6	14
F	6	4	7	7	7
G	8	12	3	4	9
H	5	10	5	14	13
I	14	11	10	3	10
J	13	15	4	12	4
K	11	9	13	9	8
L	9	13	8	11	11
M	12	7	15	13	5
N	15	8	11	10	12
O	10	14	14	15	15

concordant. Hospitals, in other words, with good ward atmospheres, tended to have both stable nursing staffs and rapid recovery; and *vice versa*. The result, which had first been found for the five Lancashire hospitals, namely, that staff stability and patient recovery are concordant, was extended to fifteen further hospitals; in this study, however, there was included another hospital quality, namely, 'the atmosphere of the ward.'

## Hospital characteristics and consultants

The suggestion that there is some organic quality about the hospital as a whole that permeates the wards themselves and affects both the adjustment of the student nurses and the recovery of the patients is not supported by these arguments alone. The research went on to examine statistically how far the average length of patient stay in a particular hospital was influenced by the medical staff themselves. For this purpose they enquired of the hospital records whether the average length of stay varied, in any one hospital, between the consultants under whom the patients were treated. The question posed was this: 'Since there are significant differences between the average lengths of stay of, say, all hernia repairs between hospitals X and Y, what, if any, are the differences between the average lengths of stay of the different groups of hernia repairs treated by the different surgeons of hospital X? What are the differences between the average lengths of stay of the different groups of hernia repairs treated by the different surgeons of hospital Y?' The answer was simple. There were, as Table IX suggests, no

**Table IX**

Showing, for eight consultants in two hospitals, mean length of stay of appendicectomies.

<i>Hospital</i>	<i>Consultant</i>	<i>No. of cases treated</i>	<i>Mean length of stay in days</i>
X	(i)	28	8·8
	(ii)	47	8·1
	(iii)	23	8·5
	(iv)	55	8·1
Y	(v)	32	11·0
	(vi)	47	11·2
	(vii)	51	11·1
	(viii)	20	11·4

significant differences between the average lengths of stay of the different groups of patients under the different consultants in hospital X; there were no significant differences between the average lengths of stay of the different groups of patients under different consultants in hospital Y. In other words, all the consultants in hospital X followed one pattern; all of those in hospital Y followed a pattern significantly different. The organic differences between the hospitals were reflected by all the consultants in each hospital, and hence by the registrars and others responsible to the consultants. This analysis was extended to

seven different hospitals, to four different diagnostic groups in each hospital and to the individual wards on which the patients were treated. In no case did the average length of patient stay associated with any ward, consultant or diagnostic group deviate significantly from the overall pattern set by the particular hospital. The organic tendencies detectable in the hospitals could not therefore be attributed to the idiosyncrasies of particular surgeons, particular wards, or particular patients; they inhere somehow in the hospitals as collective unities.

### **Need to analyse patient progress through hospital**

The team did not have the resources to investigate this result in the detail that it seems to deserve. It should be possible to trace the progress of a sample of patients through hospitals with significantly different average lengths of stay and to record precisely what happens to them. This should be attempted before, for example, any national hospital plan is settled upon. What is, as it were, the cutting edge of the hospital system? What actually happens to a patient in hospital? He must pass, and perhaps re-pass, through a series of five stages—admission, diagnosis, treatment, control and discharge; it is on this cycle that the organism of the hospital is built. But with its limited resources the team could do no more than answer a simple question. If certain surgical patients in one hospital remain 50 per cent longer in it than the corresponding surgical patients in another, are they also prepared more slowly for their operations? This was examined in seven different hospitals for four common surgical operations and it was found to be so: hospitals which were slow to prepare their patients for the operation were slow in discharging them afterwards and *vice versa*.

### **The social dependence of medical patients**

The third examination which the team made of the length of patient stay statistics was rather more sophisticated and there may be some difficulty in explaining precisely what it was. Suppose that the organic quality of the hospital is the extent to which it can communicate useful information to those who need it, (and this hypothesis will be developed at length below), then it must follow that patients whose complaints demand treatment from the physician will respond to the hospital organism more sensitively than those patients whose complaints require the attention of the surgeon. It is a commonplace of hospital lore that the 'real' nurses are those on the medical wards; the medical patient is more socially dependent, since his complaint may be more difficult to identify than that of the surgical patient. There is often in

medicine no such decisive act possible as the opening-up of a patient to discover what is really wrong with him. The physician must often depend upon signs more subtle and more puzzling than those sought by the surgeon, and, in the opinion of the writer these differences are often reflected in temperamental differences between the two classes of specialist.

It is significant that whereas the assistant physician was known as the clerk, the assistant surgeon was merely the dresser. Nor is this all. The physician often depends upon his nurses and upon the paramedical departments for reports about the responses of his patients during treatment and this dependence may last many days; the surgical patient, after a brief if often desperate period of crisis following his operation, may require no attention other than periodic and routine treatment of his wounds. This may demand, of course, great technical skill on the part of the nurse, but rarely that subtle observation and meticulous recording of transitory detail that displays the quality of the medical nurse. One would therefore expect that in a hospital with a poor communication system the medical patients would be at a comparative disadvantage; on the contrary, in the hospital with a good communication system, the medical patients would draw comparative benefit. The surgical patients in either hospital, although to some extent sensitive to the quality of the communications, would be more in the hands of the individual surgeons by whom they were treated. One would therefore expect to find that the treatment of all the medical patients, whatever their diagnostic group, would be more than averagely effective in some hospitals; all the medical patients, whatever their diagnostic group, would, by the same argument, recover comparatively slowly in others. The surgical patients, on the contrary, would show less response to these hospital characteristics, whatever the communication system. It was not easy, in fact, to test this hypothesis, but eventually the statistics were obtained for twelve different diagnostic groups treated in twelve acute general hospitals in the same region. At least twenty patients discharged home were included per diagnostic group per hospital. Six of these diagnostic groups were treated largely or entirely by physicians, six largely or entirely by surgeons. The results are shown in Table X. The concordance between the twelve hospitals by the six diagnostic groups of medical patients was significantly greater than the concordance between the twelve hospitals by the six diagnostic groups of surgical patients. The medical patients are, in other words, more dependent upon hospital factors than the surgical, and this, with other evidence, supports the



view that the communication system significantly determines the quality of the hospital in speeding or delaying the discharge of its patients.

**Table X**

Showing for 12 acute general hospitals in the same Region, rank order by length of patient stay in six common medical and six common surgical diagnostic groups.

Hospital	Medical Groups						Surgical Groups					
	OR	P	H	OD	AE	N	A	HR	O	MG	BN	FG
I	1	3	1	1	1	1	1	5	4	3	3 $\frac{1}{2}$	10
II	2	2	7	4	4	2 $\frac{1}{2}$	3	1	5	5	5	1
III	3	10	9	8	5	8	2	2	3	2	11	7 $\frac{1}{2}$
IV	10	8	10	10	3	2 $\frac{1}{2}$	6	10	2	11	2	2
V	5	1	3	2	7	6	10	6	6	8	9	6
VI	11	12	8	11	8	7	5	9	1	1	8	12
VII	4	7	4	5	2	5	9	7	8	9	12	3 $\frac{1}{2}$
VIII	6	5	2	7	6	4	12	11	11	6	10	5
IX	9	4	6	3	10	10	8	4	9	4	3 $\frac{1}{2}$	7 $\frac{1}{2}$
X	7	6	5	9	9	12	4	3	7	7	1	3 $\frac{1}{2}$
XI	12	11	11	12	11	9	7	12	12	12	6	11
XII	8	9	12	6	12	11	11	8	10	10	7	9

Key: OR, Other respiratory disease; P, Pneumonia; H, Diseases of the heart; OD, Other diseases of digestive system; AE, Allergic and endocrinal diseases; N, Diseases of the central nervous system. A, Appendicectomy; HR, Hernia Repair; O, Diseases of bones and of organs of locomotion; MG, Diseases of male genitals; BN, Benign neoplasms; FG, Diseases of female genitals.

## Communications and learning processes

The communication system of a hospital is normally intended to bring rapid and accurate information about patients, or about services provided for patients, to the attention of those in senior positions; both the doctor and the matron wish to be quickly aware of emergencies that arise on the ward. If, from time to time, serious trouble develops that is not effectively dealt with, the management committee or the senior officers will hold an enquiry and any faults revealed in the communication system will be treated at least in a formal way; new instructions may be issued or new forms of report may be devised. But it is not generally recognized that the junior members of the hospital staff and the patients alike are also in need of information; and what is more, at the moment when it is important to them, rather than at a time not inconvenient to their superiors. A patient who is anxious about his condition or a junior nurse who has been given incomplete

or contradictory instructions may experience serious anxiety as a result. This anxiety can be relieved only if an explanation intelligible to the patient or the nurse is forthcoming; whether or not this is possible depends upon the relations existing between the patient and the nurse or between the nurse and her superior. An explanation that is intelligible and convincing to a staff nurse or a registrar may be harmfully incomprehensible to a first year student or to the average patient. This survey suggested, by many incidents reported during the attitude surveys, that where the junior nurse is unable readily to approach the sister, the patient cannot approach the junior nurse. Moreover, where the sister is not on easy terms with the consultant she cannot be on easy terms with her own ward staff. The mechanism is a simple one; if the consultant appreciates the suggestions of the ward sisters or may even seek their opinion, the ward sisters will be anxious to have the maximum information available about the patients. This will mean that they encourage their own nurses to discuss the patients with them, the sisters. This in turn will mean that the nurses will tend to communicate more with the patients, and this communication will encourage the patients in turn to ask questions. If, on the other hand, the consultants do not regard their ward sisters as an important source of information or advice about the patients, the ward sisters in turn will have little cause for encouraging the nurses to report about the patients in detail. The nurses therefore will not be motivated to observe closely the patients. In these conditions the junior nurses and the patients will be deprived of those conversations which are the chief media of their learning and of their adjustment. There is a simple cycle known in engineering terms as the feedback loop; a machine is controlled by a device that monitors its performance, slowing the machine down should it be too fast, speeding it up should it be too slow. Learning is also a feedback process, and it consists essentially of seeing the effect of one's own behaviour. Unless one receives intelligible responses to, or clarifying information about, what one is trying to do, it is impossible to learn. Somebody in doubt may have his doubt resolved if he receives an answer to his question about his doubt; his doubt is not removed if he is given information, in whatever quantity, not in response to a statement or question about his doubt. Sometimes he may even need help in the framing of his question, because the doubt is of so deep an order that he is completely unable to express it. Hence, if his superior is too busy, too impatient, or too authoritarian to help him in the framing of his own questions, he will not learn. This is essentially the situation of many patients and of many nurses on the hospital ward.

## **Anxiety as a prevalent quality of the hospital**

Hospitals are institutions cradled in anxiety. Patients are anxious not only about their own health but about their families. Junior nurses are anxious about the difficulties of learning and often tormented by the fear that they may be inadequate in their treatment of the patients. Sisters are often anxious about the good order of their wards and about their relations with their matrons and their consultants; even although the task of ward sister must, taken over the whole year, be one of the most satisfying in the whole calendar of human employment, it is charged with frequent emotional crises that reveal the sister in a flash of revolt against her superiors. Consultants, for all their marmoreal composure, are often at heart anxious men because they are constantly taking important decisions on incomplete information. Not a few principal officers of hospitals are uneasy about their relations with the hospital management committees; hospital management committees often work off their anxieties by envisaging regional boards as arbitrary and dictatorial bureaucrats knowing little of hospital life. All this is evidence of an ever-present uncertainty. It is a striking fact that on most hospital wards the only persons who seem permanently secure are the cleaners; middle-class patients rarely fail to comment about the cheerfulness and equanimity of the domestics, and frequently turn to them for information or help rather than to the nursing staff. This is not a matter of temperament; it is a freedom from insecurity, since the cleaner knows precisely what she has to do and, in an atmosphere of tension and anxiety, radiates an effulgent calm.

## **The onset of parataxis**

A patient must, nevertheless, have confidence in those who treat him. A man with a dependent family, unhinged by pain or even by the fear of death, demands that those who look after him know their business. The doctor must therefore, at least to the majority of his patients, give an appearance of omniscience. But what if the doctor is asked a question by the nurse or by the patient to which he does not know the answer? It would be unprofessional to fabricate some reply that might mislead the questioner, although many young ward sisters confess that they often bluff their junior nurses. But one simple way of dealing with questions to which one does not know the answer is to discourage all questions from being asked, and the staff in some hospitals seem to employ this device on many occasions. Such behaviour sets in motion a regenerative process. Anxiety, always latent, is enhanced by uncertainty. Uncertainty in turn is magnified by communication

failure. But the difficulties of communicating and of being communicated with are in turn heightened by unrealistic ideas of one's own rôle, knowledge, status and other features of the self; those who believe that the way to deal with questions to which they do not know the answer is to discourage such questions have unrealistically defensive images of their positions. Anthropology has a term for such misperception: parataxis. Parataxis inhibits the very communication from which alone patients or nurses may learn. Hence the regenerative process proceeds cycle by cycle. Anxiety produces uncertainty; uncertainty blocks communication; poor communication enhances parataxis; parataxis breeds further anxiety. The intensity of the process reaches a level that not only the junior nurse, but also the ward sister, can no longer endure and they leave the hospital. The attitude surveys conducted by the team show these same reactions at work upon the matrons.

### **Parataxis and social learning**

A hospital in this condition is faced with a gigantic problem of understanding itself. Its first need is to obtain a clear picture of the problems with which it is beset. The staff in many hospitals, from the secretary to the porters, are often intellectually aware of specific difficulties that confront them, such as an inefficient records system or ill-feeling produced by the preparation of the nurses' off-duty rota. Such infelicities may be widely and painfully experienced. But it is one thing to sense such trouble; it is another thing to be clear about its impact upon the hospital as a whole and something else altogether to be clear about one's own responsibility for causing or helping to cause it. It is one thing for a patient to be aware of pain or discomfort; it is quite another thing to know specifically what is wrong in order to treat it, and something else altogether to effect in him a change of habit or behaviour to bring about a cure. A general attitude survey conducted by outsiders may produce an emotional map of the hospital that in its entirety would be unknown to the hospital staff as a whole, although individuals might be well aware of its local features. The results of such a survey might then be used for generating enquiry and discussion among those involved in the hospital processes; the researches of bodies such as the Tavistock Institute in Britain and the National Training Laboratories of America break new ground by showing that such enquiry and discussion could be conducted so that those in the hospital might learn from it in a true and deep sense. They might gain, in other words, a more realistic view of their own place in the hospital and of the effect of their own behaviour upon others. This would tend to

diminish parataxis and, with it, anxiety. Such change would not be easy. We know at the moment little about the processes of social learning in circumstances of extreme anxiety, from which participants perceive better both the system to which they belong, and also their own personal influence upon the functioning of that system. It is only learning at this emotional depth which is going to help the hospital. Parataxis is not to be cured by resolutions of management committees nor by memoranda circulated by Government officials. Such action will, if anything, tend to make parataxis worse by reinforcing in those in positions of nominal authority an unrealistic view of their real power to improve the hospital communication system. The process of social learning, of course, involves the hospital management committee no less than it involves the ward sisters or the consultants; if a hospital management committee has, for example, a view of what should be its relations with the matron, different from that of the matron herself, and if, as a result, the matron feels that she is not supported by her committee, she in turn cannot support her sisters. There is evidence to suggest that the information about any hospital on which the views of its management committee must inevitably be formed is often incomplete and, not seldom, biased by the perceptions of the secretary or of other individuals. Indeed, the whole question of what ought to govern the relations of a hospital management committee to its senior officers and, *a fortiori*, those of a regional board to a hospital management committee, is one to which our answers are at present shadowy and incomplete. And yet the evidence is that these vitally affect what happens on the wards, and, in particular, the fate of the individual patient and of the student nurse whose desire it is to care for him.

# **Operational Research in Nursing**

*Oxford Regional Hospital Board*

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# Operational Research in Nursing

## 1 *Nursing, Research and Patient Care*

### **Introduction**

At the invitation of the Oxford Regional Hospital Board a group of four matrons and eleven ward sisters began late in 1959 to study the items of nursing care given to patients in the various medical disciplines represented by the group, namely medicine, surgery, gynaecology and chest diseases. All the members of that research party were experienced in the practice of their craft and they took on the task of recording data that was additional to their routine report writing with some doubts but in a spirit of adventure. From the beginning the nurses participated actively in the work, re-designing the forms used for recording purposes after a trial run of 6 months and discussing from time to time the analysis of the data they had recorded with the officers of the Operational Research Unit. In other words the whole exercise was one of group participation by nurses, doctors and the statistician.

### **The nurse and research**

Whilst there is a long history and tradition of medical research, nurses have been late in the field of objective study of their own work. Nevertheless, they may recall with some pride that in 1858 Florence Nightingale was elected a member of the Statistical Society and gave a paper at the Statistical Society Congress in 1860 on 'Miss Nightingale's Scheme for Uniform Hospital Statistics'. The passion for statistics which the founder of modern nursing possessed seems rarely to be one of the many admirable qualities of her successors. The compilation of hospital statistics later became the special province of other people, sometimes outside hospitals. But all the time nurses were (and are) recording in day and night reports the most valuable details about the care they give to their patients. Unfortunately the form of those records does not permit simple mechanical analysis. Therefore, although interested nurse-administrators might wish to consult with



ward sisters on the nursing load which the hospital is being required to meet, there is no ready index at hand by which they can do so.

### **The nursing research group of the Oxford region**

It was to construct such an index or simple ready reckoner of nursing activities that the group aimed. As the work progressed, discussion flourished, sometimes in a good-humoured atmosphere of disagreement; but amongst the early results were shown in a factual way familiar situations which the nurses recognized only too well. The see-saw of demands for nursing service was shown, with the relevant time intervals. Comparisons were made possible of the demands for nursing care made by male and female patients and of the different requirements in various specialities. It was not long before the reasons for fluctuations in nursing load were being advanced and the group began to speculate on ways in which certain factors in the demand for nursing care might be controlled so that total demand became more geared to a pre-arranged plan.

In an attempt to meet this problem of eliminating at any rate the peak points of requirement for nursing service, Mr Barr the statistician assembled data, as described elsewhere, on a series of uncomplicated gynaecological operations and presented it to a group of three consultant gynaecologists accompanied by their respective ward sisters. From that discussion emerged the study chronicled in this publication by Miss Tobin and Miss Butler, a study in which the consultant gynaecologist Mr Struan Robertson and his staff were as enthusiastic as the nurses. Other members of the research group have also consulted with medical staff and consequently made changes in the management of their patients and wards which have been to the benefit of the patients, and made for the more effective use of the skilled nursing staff.

### **The potential use of recording nursing care**

The recording of nursing care must be shown to be of practical value to the nurses in the situation in which they find themselves throughout the period of day or night duty. If routine records were to be instituted it must be demonstrated that the flow of that information would be directed to persons who are not only capable of interpreting it, but of taking action speedily on the situation presented. That is the crux of the problem and in essence this is part of the daily task in every Matron's office.

In a hospital which is sufficiently small for the lay-out of its wards and departments to be observed closely by the matron and her staff the problems of impending and actual nursing crises are easily recognized even if difficult to solve. In a large hospital, however, the nurse-administrators must rely for information on their ward rounds, and on written reports or telephone calls from ward sisters or medical staff. The action senior nursing staff must take to ensure that patients are cared for in emergency crises can only be pre-planned within the limits of such channels of communication. A system of ensuring a constant flow of more detailed information to the matron's office would be of the utmost value if it provided extra time for the movement of nursing staff from one case to another. On all sides matrons comment on their difficulties in meeting crisis demands and high as their standards are, they are often less than satisfied with the solution to the problem. For not only is that solution a question of hurriedly transferring staff but it is often also one of making room for increasing emergencies by preparing patients for discharge or transfer in an atmosphere which is not conducive to good patient care. Ideally, therefore, the senior nursing staff should have available to them not only an easily assimilated analysis of the nursing care that is being given in all areas, but also a visual aid representing the whole hospital which would allow them to plot on it the care group for each patient in every ward. Such a visual aid should be viewed as a part of the policy of providing nursing staff with the most effective tools to do the job. Indeed, such a system whilst as yet unfamiliar to the hospital world, is often used as a routine in other complex organizations. It is only necessary to reflect on the detailed minute-to-minute control of operations exercised at airports, for instance, to open up a wide field of speculation. The analogy is not absolute of course, but it would seem that many of the factors in airport control such as dealing with grave risks, pre-planning, coping with emergencies and making the best use of the facilities available are common also to hospitals. It is interesting to muse on the possibilities of a hospital control room, equipped with appropriate mechanical aids, presenting nurses, doctors and hospital administrators with a visual picture of changes of bed occupation and levels of nursing demand. Yet such a set-up may be necessary eventually to deal with the increasing number of patients who are using hospitals. All those who are engaged in the planning of the complex District General Hospitals of the future are well aware that the organization of such modern hospitals will be highly involved.

## **The impact and impetus of recording nursing care**

The work of the research group has shown quite clearly that the constant recording by the nurses of the patient care they have given sets up a chain reaction leading to a greater awareness of how their wards are working as well as experiments to stream-line activities as far as facilities may permit. Thus not only did the group pin-point simple problems of ward administration but they also started to consider patterns of nursing such as progressive patient care. The work of these nurses thus lent impetus to other studies now proceeding in various parts of the Region aimed at assessing (albeit modestly) intensive care and at estimating the number of patients who may be in hospital for other very good reasons but who are not receiving nursing care. In these extended individual studies a total of no fewer than 52 sisters have been or are taking part. It is gratifying that such busy people will willingly lend their aid to this new type of research. Yet it is imperative that they should do so. Only by participating actively in research programmes can nurses effectively engineer changes in their own profession and in the nursing care of their patients. There seems no better way for nurses to face the future than to keep the facts about events which influence their work constantly before them and to demand that all skills should be mobilized to deal with those problems which they themselves find insurmountable. Those skills may be represented by the specialist engineer to give the matron and her staff (and maybe others) a visual aid system to indicate on the basis of the sisters' recordings a quick and constant reference to the nursing load in the hospital. The aid of the mathematician and statistician may be called upon to predict probabilities in work load, and computers may be brought into use to solve hospital problems. Such a battery of scientific aids may seem a very long way away from the very personal patient care which is long established as the bed-rock of the British nursing profession. It is to ensure that nurses may practice that craft in the most favourable conditions that the various suggestions made in this and other papers are advanced.

Nurses have started to look about them and to show in a new research field the versatility which has long served patients and clinicians so well.

## 2 *Measuring Nursing Care*

### **Introduction**

To many people the measurement of nursing care may appear to be impossible and, in any case, unnecessary. Nursing, unlike many other occupations, involves a high degree of personal service and a sense of vocation which cannot be assessed in monetary or statistical terms. Nevertheless if a rational choice is to be made between alternative methods of employing nurses, then some means of assessing the volume of work falling on the nursing staff must be found. To be effective the measuring process must be simple, reliable, useful, and generally applicable. Any scheme which involves laborious or time-consuming work on the part of the nursing staff, however desirable from a theoretical point of view, is obviously impractical. The problem then is to devise a method of measuring nursing care which combines the minimum amount of work on the part of the ward staff with the maximum amount of information about the patients undergoing treatment. This paper describes one method of tackling this problem and some of the results that have been obtained from the studies undertaken so far.

### **How to measure**

Ward sisters commonly arrange the bed placing of their patients so that those who are seriously ill are in a position to receive maximum supervision. This subjective assessment, which has been practised for a long time, is perfectly adequate for the management of the ward. It reflects the need for the ward sister to organize her forces to cope with the most responsible work effectively. However, such subjective assessment can hardly be used as a basis for constructing an index of work load or in comparing the work of two wards. A more objective method must be devised so as to overcome possible variations in interpretation of the patient's nursing needs by different observers.

Fortunately, sufficient varied forms of nursing care are performed that a distinction can be made between patients requiring

various degrees of attention. At the one end of the scale there is the patient who is admitted to hospital for some investigation but who requires virtually no nursing attention. On the other hand, an unconscious patient may require considerable nursing skill and treatment. Thus the first task is to evolve a list of procedures which will reflect differences between patients in terms of nursing requirements. These items are then arranged in some convenient order on a form so that the tasks performed by the ward staff for each patient can be chronicled simply by making a tick in an appropriate square.

Several such forms are now in use in the Oxford Region but all of them follow the basic pattern shown in Appendix 1. As will be seen, one side of the form provides the basic social and medical information like name, age, sex, family doctor, operation, etc. while the other is a daily record of the nursing care required by the patient. The basic information may be completed either at the time of admission or on discharge, whichever is the more convenient. Nursing details, however, must be entered daily. Because of this it has been found convenient to keep the current forms for each ward in a ring binder, thus any one form can be located easily. When a new patient is admitted to the ward a form is added to the file and when a patient is discharged the appropriate form is checked for completeness and removed from the binder, so that the binder consists of all the forms for patients in the ward at any one time.

The rhythm of hospital work is such that any study, if it is to be reliable, must be based on a sufficiently long period of time. Four months is probably the shortest period which should be taken. To complete such a seemingly complicated form for such a long time may appear to be making unreasonable demands on nursing time but it has been found that ward sisters, after a little practice, can cope with the forms for a ward of twenty to twenty-five beds in a matter of ten minutes per day. The amount of information which can be obtained from the form relating to the work of the ward is well worth the effort expended.

### **What to measure**

The next step is to draw up a series of definitions of different levels of nursing care. In the Oxford Studies, three care groups have been defined as follows:\*

\* The care group definitions were drawn up by Dr. I. J. Jeffery, Department of Health, New Zealand and Miss I. James and Miss E. M. Logan, Nursing Officers of the Oxford Regional Hospital Board.

### Care Group 1 (Self Care)

I. Patients aged 12-75 years of age, up at least four hours daily, and recorded as:

- (a) Ambulatory . self
- (b) Bathroom . self
- (c) Toilet . . self
- (d) Feeding . . self

II. Patients aged 12-60 years, up at least four hours daily, and recorded as:

- (a) Chair . . self
- (b) Bathroom . self
- (c) Toilet . . self
- (d) Feeding . . self

Patients under 12 years of age or over 75 years and patients aged 60 years or more in chairs are considered as either care group 2 or care group 3. A check mark on the form on any other line than those mentioned above indicates that the patient is not care group 1.

### Care Group 2 (Intermediate Care).

All patients not classified as care group 1 or 3.

### Care Group 3 (Intensive Care).

Patients recorded as:

I. Unconscious or

II. Specialled of necessity, or

- III. Undergoing
- Any three of the following six; or
  - any two if combined with marked confusion; or
  - any two if patient is over 70 years of age.
- (a) Tube feeding
  - (b) Intravenous
  - (c) Suction
  - (d) Oxygen
  - (e) Blood
  - (f) Drainage

The information given on the form will enable the patient to be classified in one or other of these three groups on each day's stay in hospital. It is usually most convenient to limit the details

on the form to the treatment actually given in the ward. Thus, if a patient undergoes an operation and is returned to the ward unconscious this fact, along with other relevant treatment details (for example, suction, drainage, etc.), is recorded in the usual way. On the other hand, if the patient is returned to the ward conscious then only the treatment needed, if any, is recorded.

### Use of measure

It will be clear that the systematic chronicling of patients in this way specifies directly the number of ambulant patients (care group 1) and patients making high demands on nursing time (care group 3). Although the total ward work is governed to a large extent by the seriously ill patients, it is useful to have some means of combining the three groups into a general index. This can be achieved by allocating a score approximately equivalent to the ratio of the nursing time required by the particular care group, thus:

Care Group 1	Score 1
Care Group 2	Score 2
Care Group 3	Score 5

Studies have shown that care group 3 patients require on average five times the nursing time required by care group 1 patients, while care group 2 require on average about twice the time of care group 1. The total score or index for any day can be obtained by multiplying the number of patients with the appropriate score. For example, if there are 8 care group 1 patients, 15 care group 2 patients and 3 care group 3 patients, then the work load index is:

$$(8 \times 1) + (15 \times 2) + (3 \times 5) = 53$$

In addition to being easy to derive, the index is suitable for a wide range of statistical techniques. Analysis, therefore, is worthwhile.

### Results of measurement

In a short paper it is impossible to present the detailed results of the nursing care in any one hospital, let alone several different hospitals. These will form the subject of separate reports; in this paper only one or two topics will be considered briefly more by way of illustrating the results rather than giving a comprehensive account. To preserve their anonymity, the names of the hospitals have been replaced by letters. Reference is made to two surveys, one covering

twelve selected wards in five hospitals over a period of 150 days while the other relates to all wards in a single hospital for 261 days. The text makes clear to which survey the details apply.

That there are wide differences between wards in the volume of work is well known. The nature of these differences is brought out to some extent in Table I which shows the average number of patients in each care group per day in twelve selected wards over a period of five months. It will be seen that the average percentage of patients in Care Group 3, based on the 150 days, range from 1.6 per cent to 16.4 per cent—which is equivalent to saying that the number of patients making heavy demands on nursing time was as much as ten times as great in one ward as another. Within the same speciality the greatest differences were sevenfold.

**Table I**

**Average number of patients in each care group during 150 days observation in twelve wards of five hospitals**

Speciality	Sex	Hospital*	Bed complement	Average number of patients in care group				% Total patients in care group 3
				1	2	3	All groups	
Medicine	M	A1	17	1.8	14.3	0.3	16.3	1.8
		B1	20	1.8	12.9	2.0	16.7	12.1
	F	A2	17	4.8	10.3	0.5	15.6	3.0
		B2	20	5.9	11.1	0.3	17.3	1.6
Surgery	M	C1	20	5.1	12.5	0.9	18.5	5.1
		D1	23	6.0	11.9	1.7	19.6	8.5
	F	C2	28	9.2	18.8	1.3	29.2	4.5
		D2	23	8.7	11.0	1.5	21.2	6.9
Gynaecology	F	B3	25	9.0	9.7	3.7	22.3	16.4
		E1	12	5.7	5.2	0.7	11.6	6.4
		E2	18	8.5	4.8	2.2	15.4	14.0
Chest	M	D3	26	8.4	13.6	1.5	23.5	6.3

\* Each letter denotes a separate hospital and the number relates to the ward within the hospital.

These ward variations are not confined to different hospitals but can be found within the one hospital as Table II shows. Here the range is not as great but nevertheless it is large enough to merit attention.



**Table II**

**Average number of patients in each care group in seven wards of one hospital during 261 days observation (230 days in ward 4)**

Speciality	Sex	Ward	Bed complement	Average number of patients in care group				% Total patients in care group 3
				1	2	3	All groups	
Medicine.	M	1	26	0.9	22.3	1.5	24.7	6.1
	F	2	23	0.7	11.1	0.6	12.4	4.8
Surgery . .	M	*3	14	0.1	10.5	0.6	11.2	5.4
		4	15	0.04	14.2	1.0	15.2	6.6
		5	20	3.9	11.0	0.9	15.8	5.7
Gynaecology.	F	6	28	4.0	20.3	1.6	25.9	6.2
		7	22	0.9	8.4	0.7	10.0	7.0

\* Orthopaedic surgery.

The analysis so far only gives the average number of patients; there is a considerable variation from day to day in the number of patients in Care Group 1 and Care Group 3 in a hospital as Figs. 1 and 2 illustrate. For half of the time in this particular hospital there were 7 patients or more in Care Group 3 and the number reached as high as 13 or more patients on about four days in every hundred. The range was relatively as great for Care Group 1; for half of the time there were approximately 15 patients or more while 25 or more patients in this care group were not unknown.

Knowing these figures and the way in which the numbers fluctuate from day to day it is possible, using statistical theory, to estimate with a fair degree of confidence the likely number of cases that would be present during a given time. This would be of practical interest in, say, estimating the bed needs for Care Group 3 patients or in estimating the accommodation required by the ambulant group.

A more comprehensive picture of the overall work load on the ward can be obtained by using the scoring method already described. The daily gyrations of the work load found in the ward are well exemplified in Fig. 3 which shows the daily work load index for ward D2. The frequency distribution of the total work load in one hospital is shown in Fig. 4. As will be seen it follows a bell-shaped curve (or normal distribution) which is of interest in statistical work.

One consequence of this is that theoretically the amount of variation will tend to diminish as the ward units grow in size.

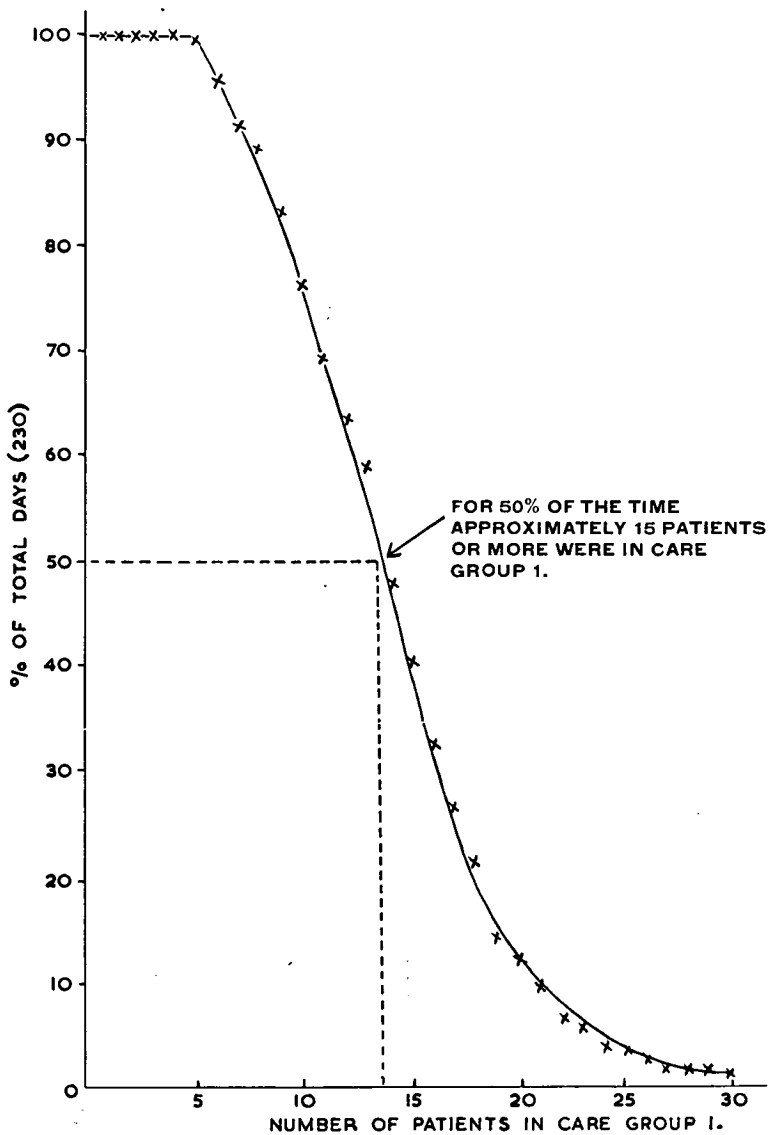


FIG. 1. Percentage of total time when number of patients in Care Group I was at least number stated.

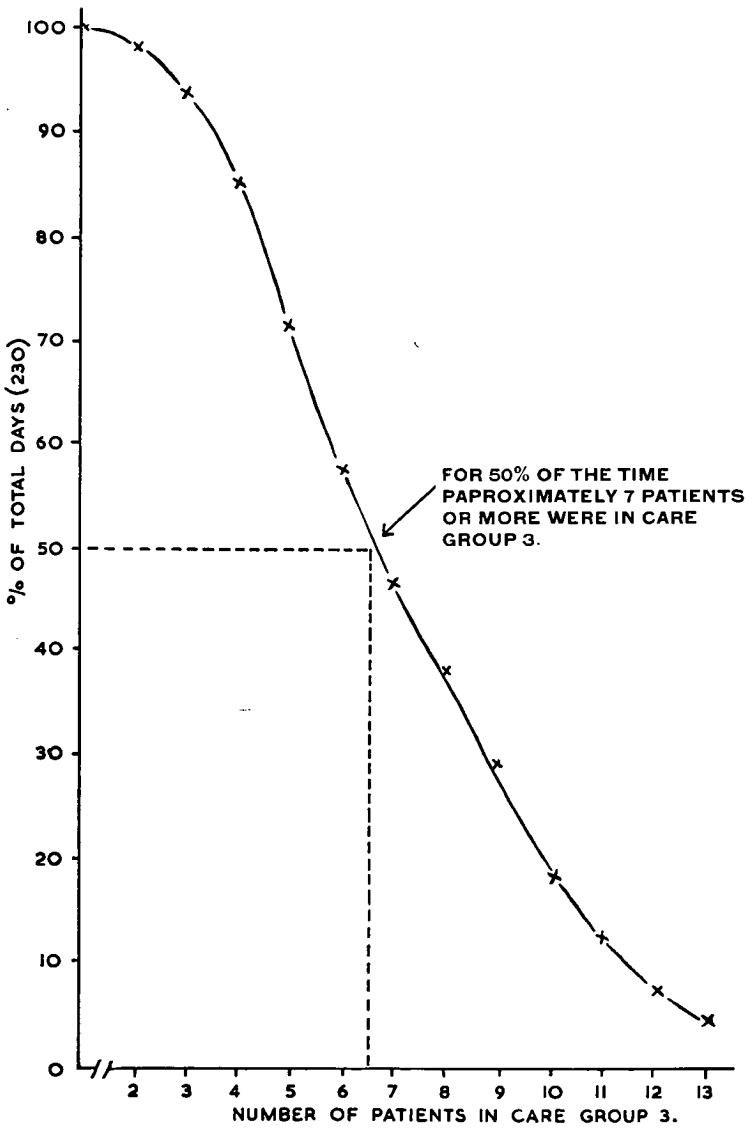


FIG. 2. Percentage of total time when number of patients in Care Group 3 was at least the number stated.

WARD C2, GENERAL SURGERY, FEMALE.

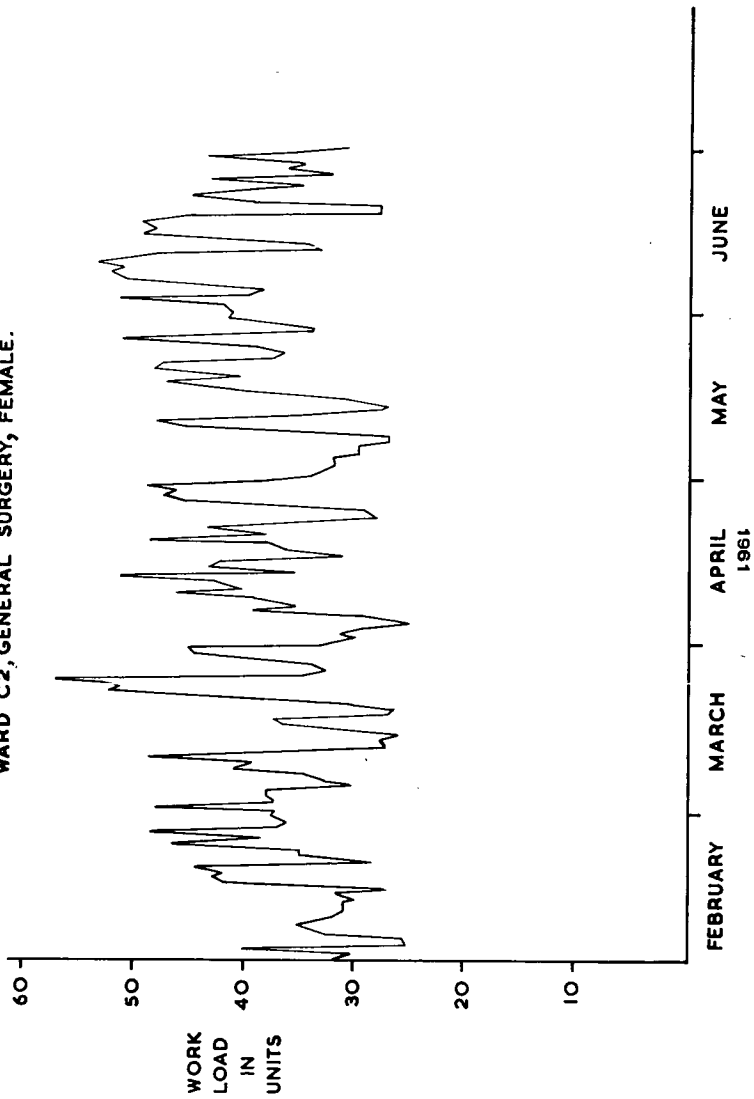


FIG. 3. Daily work load expressed in working units.

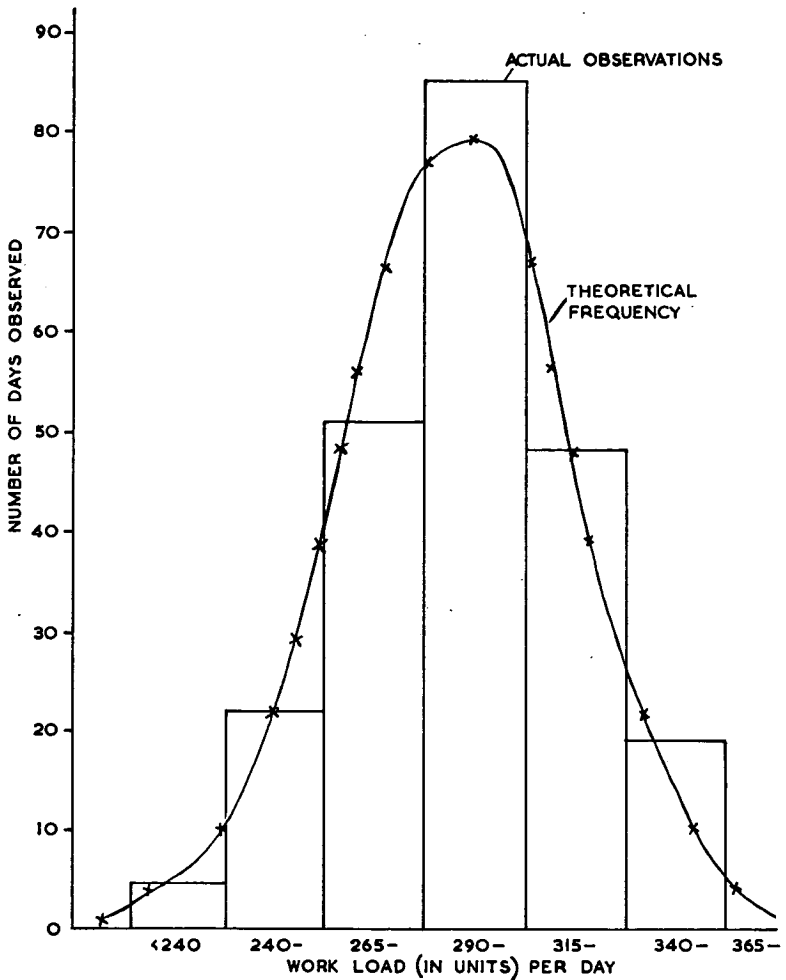


FIG. 4. Distribution of total work load for nine wards for 230 days with theoretical normal frequency distribution.

More specifically we could expect the variation for four wards working jointly to be about half that of any one ward working separately. An illustration of this is given in Fig. 5 where the weekly work load of the two male surgical wards in the hospital study are shown separately and together. It will be seen that an appreciable reduction in variation occurs when the two wards are combined.

Apart from analysis of work load, a study of this kind provides some useful information on the type of nursing care provided. For the

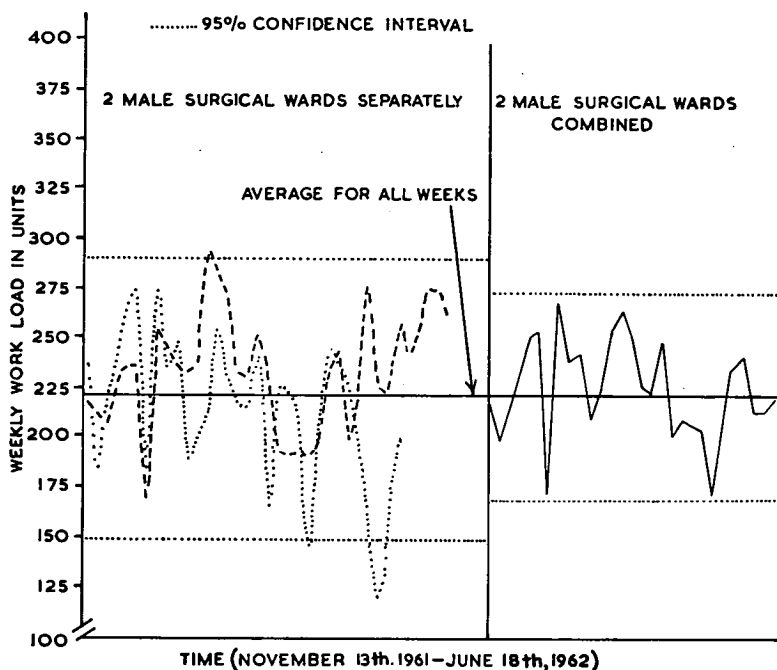


FIG. 5. Total work load per week in the two male surgical wards separately and together, showing the average work load and 95 per cent confidence limits for the period 13th November, 1961 to 18th June, 1962.

single hospital of approximately 190 beds, Table III indicates the average number of patients per day receiving different types of nursing care. Again, it is possible to make estimates of the number of patients requiring, for example, oxygen or special drugs or a special nurse.

At this particular hospital, on average, approximately half of the patients were bedfast while about a sixth were on some form of drainage and a similar proportion were on special drugs. The number of patients requiring oxygen was 4, though this was as high as 9 patients on occasions. Approximately 2 patients per day required a special nurse, but again, this number was as high as 6.

As a final illustration of the kind of analysis to which this survey gives rise, consideration is given to the care groups which a patient occupies during the course of treatment. A common experience will be for the patient to be admitted as Care Group 1, then

**Table III**

**Average number of patients per day receiving various forms of nursing care during 230 days of observation**

<i>Type of nursing care</i>	<i>Average number of patients per day</i>	<i>Range—lowest and highest numbers observed</i>	<i>% Total patients in hospital</i>	
Bedfast . . . . .	52.9	35-72	36.1	
Help with feeding {	Tube . . . . .	2.3	0-7	1.6
	Solids and Liquids . . . . .	8.6	1-17	5.9
	Liquids only . . . . .	7.0	1-15	4.8
Suction {	Gastric . . . . .	4.5	0-12	3.1
	Other . . . . .	1.8	0-7	1.3
Oxygen . . . . .	4.3	0-9	2.9	
Temperature and pulse rate more than twice daily . . . . .	27.8	8-41	20.0	
Intravenous therapy . . . . .	6.2	1-15	4.2	
Drainage . . . . .	15.2	7-23	10.4	
Unconscious . . . . .	5.7	0-14	3.9	
Spécial Drugs . . . . .	16.2	5-30	11.1	
Dressings {	Major . . . . .	9.3	1-17	6.3
	Minor . . . . .	12.9	3-22	9.8
Specialled . . . . .	1.7	0-6	1.2	
Mental State {	Confused . . . . .	2.8	0-9	1.9
	Emotionally disturbed . . . . .	2.6	0-7	1.8

following an operation the Care Group changes to 3 for a day or so, but as the patient improves, the Care Group becomes 2 and finally, after a short time in Care Group 1, the patient is discharged home. This cycle of events has been named a 'dependancy chain' and may be written as 1-3-2-1 which is the order of the care groups through which the patient passes. Some patients may not change their care group throughout their stay in hospital and these can be written conventionally 1, 2 and 3 as appropriate. Others will have a more complicated pattern but there is no difficulty in expressing the events since the nomenclature is infinitely flexible.

The most commonly occurring sequences found in the four medical, four surgical and three gynaecological wards in the four hospitals are set out in Table IV. The table also shows the number of patients remaining in the same care group. It should perhaps be emphasized that the care group relates to that occurring in the ward; a patient may in fact have had an operation and have returned to the ward conscious but the extent of treatment required may not have led to a classification of Care Group 3.

In general medicine, apart from three-fifths of the patients who remained in the same care group, the most commonly occurring

**Table IV**

**Most common dependency chains found in four medical wards, four surgical wards and three gynaecological wards during 150 days observation**

Speciality	Type of chain	Number of patients			Percentage of total cases			
		M	F	Both sexes	M	F	Both sexes	
Medicine	I-2-I . . . . .	5	8	13	2.0	3.2	2.6	
	2-I . . . . .	48	70	118	19.7	27.8	23.8	
	2-1-2-I . . . . .	4	9	13	1.6	3.6	2.6	
	3-2 . . . . .	7	3	10	2.9	1.2	2.0	
	3-2-I . . . . .	2	3	5	0.8	1.2	1.0	
	Total specified chains . . .	66	93	159	27.0	37.0	32.0	
	Remained in same care group.	162	138	300	66.4	54.7	60.5	
	Total cases analysed . . .	244	252	469	100.0	100.0	100.0	
Surgery	I-2 . . . . .	32	50	82	6.8	6.6	6.7	
	I-2-I . . . . .	125	90	215	26.7	11.8	17.5	
	I-3-I . . . . .	1	28	29	0.2	3.7	2.4	
	I-3-2 . . . . .	12	7	19	2.6	0.9	1.5	
	I-3-2-I . . . . .	34	79	113	7.2	10.4	9.2	
	2-I . . . . .	73	96	169	15.6	12.6	13.8	
	2-3-2 . . . . .	12	22	34	2.6	2.9	2.8	
	2-3-2-I . . . . .	11	29	40	2.3	3.8	3.3	
	3-2 . . . . .	13	7	20	2.8	0.9	1.6	
	3-2-I . . . . .	9	17	26	1.9	2.2	2.1	
		Total specified chains . . .	322	425	747	68.7	55.8	60.9
		Remained in same care group.	86	258	344	18.3	33.9	28.0
		Total cases analysed . . .	469	760	1229	100.0	100.0	100.0
Gynaecology	I-2-I . . . . .	-	39	-	-	5.7	-	
	I-3-I . . . . .	-	91	-	-	13.3	-	
	I-3-2 . . . . .	-	22	-	-	3.2	-	
	I-3-2-I . . . . .	-	172	-	-	25.1	-	
	2-I . . . . .	-	26	-	-	3.8	-	
	2-I-3-I . . . . .	-	19	-	-	2.8	-	
	2-I-3-2-I . . . . .	-	13	-	-	1.9	-	
	2-3-I . . . . .	-	32	-	-	4.7	-	
	2-3-2 . . . . .	-	22	-	-	3.2	-	
	2-3-2-I . . . . .	-	35	-	-	5.1	-	
	3-2 . . . . .	-	22	-	-	3.2	-	
	3-2-I . . . . .	-	29	-	-	4.2	-	
		Total specified chains . . .	-	522	-	-	76.2	-
		Remained in same care group.	-	130	-	-	19.0	-
		Total cases analysed . . .	-	685	-	-	100.0	-



dependency chain was 2-1 which accounted for roughly a quarter of the total patients in the medical wards. Little over a quarter of the general surgical patients remained in the same category, while 18 per cent were classified as 1-2-1 and 14 per cent as 2-1. Of the gynaecological patients 19 per cent remained in the same care group throughout treatment, 25 per cent were in the dependency chain 1-3-2-1 and 13 per cent in chain 1-3-1. It is possible to look at the average stay for each dependency chain in total and within the various parts of each chain but this is beyond the scope of the present paper. Enough has been said, however, to show that this forms an alternative way of analysing hospital stay though it remains to be seen how far this method can be exploited as a means of comparing hospital work and in classifying and managing patient care.

# Appendix I

Oxford Regional Hospital Board  
Operational Research Unit

## Stoke Mandeville Hospital.

Nursing  
Dependency  
Study

Name and Address	Hospital Reference Number		Off Use
	Ward		Col. No.
	Sex	Age	Civil Status
Occupation	Date of Admission		1
	Day	Month	Year
	Time of Admission		2
G. P.	Source of Admission		3
	1. Waiting List (direct to this ward)		4
	2. Emergency		5
Consultant	3. Transfer from other ward		6
	4. Transfer from other hospital		7
	Patient Type		8
1. Private or		9	
2. N.H.S. and if		10	
3. Day Case		11	
Principal Condition Treated		12	
19		20	
21		22	
23		24	
25		26	
27		28	
29		30	
31		32	
33		34	
35		36	
37		38	

Patients Name		Off. Use														39						
Office use		1	2	3	4	5	6	7	8	9	10	11	12	13	14	40	41	42	43	44	45	
	Day																					
	Month																					
Mobility	Up walks without help																					
	Up walks with help																					
	Up in chair only																					
	Bedfast except lavatory																					
	Bedfast complete																					
Bathing	Bath	Self																				
		Assistance																				
	Bedside	Partial assistance																				
		Complete Assistance																				
Toilet	Self																					
	Toilet Chair/Commode																					
	Incontinent																					
Feeding	Self																					
	Assistance	Tube																				
		Solids & liquids																				
		Liquids only																				
Treatment	Oxygen																					
	T.P.R. or B.P. more than T.D.S.																					
	Intravenous																					
	Drainage																					
	Suction																					
	Special Diet																					
	Special Drugs																					
	Treatment of pressure areas																					
	Dressings	Major																				
		Minor																				
Mental state	Unconscious																					
	Confused																					
	Emotionally disturbed																					
	Assurance above normal																					
Single room requirement	Noisy																					
	Infectious																					
	Terminal																					
	Social																					
	Other																					
Extra Staff	Specialling																					
	Other																					
No. of Hours up	<3																					
	3-																					
	6-																					
	9+																					
Office Use																						

### 3 *Some Practical Results of Recording Nursing Care in Gynaecological Wards*

#### **Introduction**

In a busy hospital ward it is often difficult to remember the particular items of nursing care each individual patient has had during his or her stay. Major treatment is easily recalled but the total extent of nursing care is often not clear. It will be shown in this report how the systematic recording of nursing care has led to the expedition of treatment in a gynaecological ward.

#### **Previous conditions**

In common with many wards, the gynaecological ward in question has always been very busy. Approximately 900 patients are treated in the 24 beds each year giving a turnover of 38 patients per bed and an average length of stay of 7 days. The full range of gynaecological conditions are admitted and theatre sessions are held weekly. Before the survey commenced the pressure on the beds was such that additional beds had to be erected in the middle of the ward. It was not uncommon for the ward to have three or four extra beds to cope with emergency admissions. Apart from this, special arrangements had to be made for the treatment of day patients. This usually meant getting an inpatient up so that the bed could be used for another patient during the day. The presence of extra beds and the use of beds for inpatients and day cases greatly added to the work of the staff. Indeed, the strain had become so great that the medical and nursing staff realized something had to be done if the ward was to continue functioning efficiently. On the other hand, it was clear that the turnover could only be decreased at the expense of a growing waiting list and increased waiting time for admission. What was required was some method which would shorten the duration of stay without detriment to the patient.

## **The survey**

Experience with chronicling nursing care indicated that this might provide a key to the problem. A simple, self-coding form (see Appendix 2) was designed from which it was possible to classify the patients into care groups speedily and accurately. One form was completed for each patient in the ward during each day of her stay. Most of the information was recorded by a series of ticks so that the total clerical time required rarely amounted to more than ten minutes per day. The advantages gained from the information obtained more than repaid the time and trouble involved.

In the present instance, the main attention was focused on Care Group 1 patients, that is patients who are fully ambulant and not receiving any nursing attention. This seemed to be a group where savings in bed days might be effected. Generally, patients are in this care group at the beginning of treatment and again before discharge. Often, however, for one reason or another they remain in this care group for longer than necessary. At the beginning the reason may be that the patients are admitted sooner than needs be or the results of some test or examination is overlooked. In the convalescent period, preoccupation of the nursing staff with other more serious cases may mean that patients are kept in hospital longer than necessary. By considering the patient's care group each day in relation to the previous days it was possible to see which cases required review. For example, if a convalescent patient was in Care Group 1 for two days, the medical and nursing staff considered whether or not the patient could go home. If there were any obvious medical or social reasons why the patient should stay in hospital she was retained. There was no question of applying a rule of thumb about the discharge date. Indeed, the scheme insured more than ever that each patient's discharge date was related to her particular circumstances.

## **Results for selected diagnoses**

Although the survey was applied to all patients in the ward, it is easier to illustrate the effect for a few selected conditions. The comparison is made between the six months before and six months after the recording of care groups was commenced for patients undergoing hysterectomy, dilatation and curettage or evacuation of the uterus. These conditions were selected because the numbers were reasonably large.

Table I compares the total average stay per patient. As

would be expected the savings in days was greater for the patients with the longer stay, but it will be noted that even where the stay was relatively short (around five days) it was still possible to save upwards of two-fifths of the total time.

**Table I**  
**Comparison of total average length of stay from admission to discharge for selected conditions before and after recording of care group**

Operation	Average stay in days per patient		Effective days saved per patient
	Before	After	
Hysterectomy . . . . .	17.6	14.6	3
Dilatation and Curettage . . .	5.6	4.6	1
Evacuation of Uterus . . . . .	4.6	3.5	1

It is of interest to see at what stage in treatment this saving was effected. Table II shows the average time spent in hospital prior to operation while Table III indicates the total average time spent in hospital after the operation. It will be seen that the greater part of the savings occurred in the pre-operative phase.

**Table II**  
**Comparison of average length of stay per patient from admission to operation before and after recording of care group**

Operation	Average stay in days per patient		Effective days saved per patient
	Before	After	
Hysterectomy . . . . .	14.9	12.6	2
Dilatation and Curettage . . .	1.9	1.2	$\frac{1}{2}$
Evacuation of Uterus . . . . .	1.2	0.5	$\frac{1}{2}$

**Table III**  
**Comparison of average length of stay per patient from operation to discharge before and after recording of care group**

Operation	Average stay in days per patient		Effective days saved per patient
	Before	After	
Hysterectomy . . . . .	11.7	10.9	1
Dilatation and Curettage . . .	2.5	2.2	$\frac{1}{2}$
Evacuation of Uterus . . . . .	2.3	1.9	$\frac{1}{2}$

**ERRATA**

Table II—For “14.9 and 12.6” read “4.9 and 2.6”

The estimated total number of bed days saved during the six months period from all admissions was just over 200; an average of 8 days per available bed. At an average stay of 7 days per patient this means theoretically that in the region of 60 additional patients could be treated in the ward each year. The turnover of the ward is approximately 900 patients per annum so that the potential increase is about 7 per cent.

### **Net effect**

Although the average length of stay in the ward was reduced, there was no increase in the turnover. The days saved were used (1) to eliminate the necessity for additional beds in the ward and (2) to provide day patients with separate beds. Today the additional bed in the middle of the ward is a thing of the past and day patients no longer use beds occupied by inpatients. The relief which this has brought to the nursing staff in particular and to the ward generally has been inestimable. Not only is there space to carry out nursing care, but there appears to be more time in which to do it. Systematic recording of the nursing care groups is a useful discipline.







## 4 *Applied Research for the Nurse-Administrators*

### **Introduction**

Hospital wards are subject to pressure from many sides. Growing and persistent waiting lists necessitate a high turnover per bed while the increased complexity of medicine involves greater responsibility on the part of the trained staff. It is well known that patients can be worried by the fact that nurses work under great pressure and, for this reason, suffer inconvenience and discomfort rather than make a reasonable request for attention. Moreover, if the pressure of work is great, the nursing staff will be tempted to adopt the most convenient rather than the most expedient method in order to save time. Rehabilitation could be delayed as a result and the patient may stay in hospital longer than necessary. Excessive work can also interrupt the proper instruction of students and ward sisters are often under considerable strain to find time to honour their obligations as teachers. Among the young and inexperienced nurses this tense environment is a known cause of wastage during the first half of training.

Relatively little is known about the extent of fluctuations in the work of the ward or how it varies from one ward to another or from one hospital to the next. Only in the last few years has any real attempt been made to examine this problem on a rational and objective basis. It is clear that there is a lot still to be discovered about the management of nursing care but modern operational research techniques and surveys have much to offer in this respect.

### **Exchange of ideas**

Though characterized by enthusiasm on the part of the designers, surveys are often viewed with antipathy, or even resentment, by the people actually involved. It is the careful blending of these moods which brings an enquiry to a successful and fruitful conclusion. When the nursing staff were invited by the Regional Hospital Board

to participate in a study of patients' nursing dependency there was a general air of scepticism as to its value. After the objectives of the study had been fully discussed, and it was realized that a good standard of nursing care would be given due consideration, there was a more ready acceptance of the need for this research.

The results served to prove that the work was well worthwhile. But the outcome might have been quite different had it not been for the fact that all through this venture close co-operation was maintained between the research workers and the ward staff. In this way the ward sister had ample opportunity of discussing any particular ward problem and, at the same time, developing an interest in research methods perhaps for the first time. The success of the survey was due, in a large measure, to the personal contact between those concerned.

### **Initial aims and achievements**

While good communications are an essential part of any survey, it is also important to have clearly defined objectives. The original aim of the study was to see whether the care group concept of nursing could be measured reliably, and if so, whether such a yardstick had any useful part to play in the management of the ward. In Mr Barr's essay consideration is given to the type of measurements devised and how it can be manipulated to represent the work load of a ward.

As a result of the preliminary studies, a much broader outlook on ward management can now be formed and it is the concern of this particular essay to indicate possible future developments as they affect the organization of nursing care within the hospital. Some of these ideas have reached an advanced stage in planning while other are still under discussion.

### **Shorter hospital stay**

The first practical application of nursing care group considered was the possibility of reducing the length of stay in hospital. A gynaecological ward was chosen for this study for several reasons but mainly because it had an unduly high bed occupancy and some concern was felt about the pressure of work on the ward. The results of this study are described in detail by Miss Butler, the ward sister, and need no repetition. There is no reason to believe that this experience is exceptional to this ward or specialty; what has been achieved here could be repeated in other wards in the hospital. The

regular recording of nursing care can act as an aide-mémoire thus ensuring that individual patients have the nursing treatment which has been prescribed for them.

The actual recording of nursing care is not in itself an innovation. Most ward sisters prepare short notes on their patients for the information of the night sister or her deputy. What is new is that this method attempts to develop and crystallize and bring into current use the information which is often hidden away in ledgers and notebooks. A good case can be made out for the review of records kept by nursing staff to see whether information like that obtained for the nursing care group can be collected routinely at no additional trouble to the staff or expense to the hospital. If this could be achieved, then it would be possible to follow the stay of each patient much more closely and critically.

### **Allocation of staff and patients**

Not only would the regular classification of nursing care needs help in expediting treatment, but it might also be of assistance in allocating nursing staff. It is not difficult to envisage a system in which the daily care groups of each patient in the hospital are sent by the ward staff to the matron's office. On the strength of this analysis the matron could deploy the available nursing staff. It is unlikely that all the staff would be completely mobile and could be freely allocated between wards, but this degree of flexibility is unnecessary. All that would be required is to establish a small pool of nurses who could be sent to the wards with the greatest need.

As an alternative, the information might be used as a basis for admitting emergency patients. One arrangement might be to admit an emergency to the ward with the lowest work load index. Another method might be to admit such patients to the ward until the ward reached a work level compatible with the staff and equipment of that ward. Subsequent emergencies would be sent to the ward showing the greatest gap between existing and prescribed work levels. The fact that approximately half of the admissions to hospitals are emergencies makes this a very effective control system.

These two methods—allocating nursing staff according to the current needs of the ward or the distribution of patients between wards according to the existing ward facilities—attempt to bring about a more equitable distribution of work. Very busy and very slack wards would tend to disappear and the work level for each ward would resemble more closely the average for the whole hospital. Either

of the two methods could be readily adopted by any hospital with no increase in capital expenditure, or decrease in turnover of work.

### **Ward size and bed allocation**

That the difficulties of work fluctuation could be reduced by the creation of larger ward units under the supervision of a Departmental Sister, and sub-divided into groups of beds cared for by nursing teams, bears out the observations of many who are responsible for staff allocation. This concept of a larger unit has been proved to work successfully with economies in both staff and equipment. It may well be the pattern for ward units in the future district hospitals, but before such a commitment is made there is a need for a further look at the mechanics of such an arrangement. The method described for measuring care will enable the reduction in variation from the adoption of larger ward units to be estimated with a fair degree of precision. Clearly there is a limit beyond which it is not worthwhile endeavouring to reduce variation further. With some further research it may be possible to determine the optimum number of beds for a ward and perhaps the optimum size of a hospital floor.

The rigid allocation of beds in general wards is another major factor contributing to this constantly changing pattern of work. If beds were allocated on a more flexible basis it would be possible to spread the nursing work load more evenly and may even increase the present turnover. The contribution which this would make to consistently good standards of patient care and nurse training, as well as to the alleviation of strain on hard-pressed ward sisters, would be immense.

### **Predicting work load**

Having established a method of measuring work load, a natural development would be to devise means of predicting the work load for the next day and the day following. Whether or not this can be done is problematical but if it could it would make for much greater efficiency in the use of staff and would lead to more stability in the staffing of wards and departments.

### **Overall aim**

The various lines of research into nursing care have one thing in common, namely, the improvement in the standard of care for the patient and the better use of the personnel and equipment available. Together these conditions will make hospitals of the future even greater social institutions than they have been in the past.

## 5 *Reflections on the Reasons for and the Implications of Nursing Research*

A newcomer to the hospital service, particularly if he had some administrative training, might be forgiven if, in his ignorance, he expressed surprise at the fact that the number of nurses needed to care for a given number of patients was not known. Not known is perhaps expressing it too strongly, but to say that there is a wide variety of opinion is to be no more than accurate.

This problem of the number of nurses to be employed is not new, nor is it a problem which concerns these islands only. In nearly every European country and also on the continent of North America the problem of how many nurses to employ engages the attention of the hospital administrator. Indeed, most of those who have had any contact with hospitals will know that in practice there are three kinds of establishment. The first is the number of nurses now in post; the second is the number of nurses whom it is hoped to recruit within the next year; the third is a mythical number known as an 'ideal' establishment. The first of the figures is never very difficult to calculate; the second depends a good deal on the level of employment of young women and the relative attraction of other employments and will vary from time to time; the third is probably a figment of the imagination since it is likely that the number of young women has not yet been born who will enable this 'ideal' establishment ever to be reached.

Until comparatively recently this lack of real knowledge about nursing establishments has not mattered much. The number of nurses needed was the number one was able to get. With few exceptions the staff for which budget provision was made was never recruited. True, there were periods from time to time when those recruited were surprising in number, often with some financial embarrassment to the administrator. This embarrassment, however,

tended to be shortlived. More recently, with a financial limit to expansion and development, the number of nurses needed has achieved a new significance. This is perhaps what makes the prospect of success for any instrument of measurement of nursing need more likely now than previously. It must be said that much useful work has been done in the study of the work of a nurse which, strangely enough, has made little impact. As long ago as 1953 the Nuffield Provincial Hospitals Trust published a report of a job analysis on the Work of Nurses in Hospital Wards. As one might expect, many of the conclusions to which those undertaking these studies came, hold good now, ten years later. That study has received far less attention than it merited, and one is bound to wonder why an important document of this kind, taken by and large, failed to make any real impact. It maybe that the economic state of the National Health Service was such that the financial pressures then were less and the need to pay close attention to the problems involved in the work of nurses in hospital wards did not obtain. That situation has now changed a good deal.

The number of nurses employed in the National Health Service in 1949 was 125,752 whole-time and 23,060 part-time. The number employed in 1962 was 168,139 whole-time and 57,801 part-time.

Of course, there have been changes in the number of hours which nurses work and the figures used are not strictly comparable on that account, but these are quite remarkable changes. The increase in the number of beds occupied over that time is so small as to be insignificant, although it must be mentioned that the number of patients passing through those beds has increased by half. This is significant.

There is a wider question on whether the best use is being made of the nurses available which might come under the heading of 'nurse management', to which attention might be usefully directed. This is a quite separate problem from another—personnel management. There are many problems in connection with the selection of young women who wish to train as nurses which remain yet to be solved. There are problems in human relations in this field of activity which need to be developed. The rigid hierarchical nursing structure makes for poor communications, and in some ways we are only on the fringe of understanding that communications lie at the root of human relations. There is indeed a need for fundamental research into the care of patients by nurses.

These important and major problems are not the concern of this paper. They are mentioned only because they have an importance which is not yet generally appreciated. The particular facet of the nursing problem to which we in the Oxford Region have given some thought is the possibility of measuring nursing care. It may prove to be the first step in better nurse management. To be of real service the measure must act as a thermometer giving a reading not only of the situation as it is at the moment but also of that when change occurs. This may help to decide whether one method of employing a nurse and the associated hospital facilities is better than another. As Barr has said, to many the idea of measuring nursing care may appear to be impossible and in any case unnecessary. Nursing, it will be said, is quite unlike other occupations involving a very high degree of personal and intimate service, calling for a sense of vocation. Any idea that this can be assessed in monetary or statistical terms will appear ridiculous to some. To others, if we are to make the right choices, we must devise some simple, reliable and useful technique of measuring the volume of work which falls on the nursing staff. The measuring device must not add to the load which nurses already carry, and ideally it might not only measure nursing care but provide information about the patient undergoing treatment.

One of the difficulties in the hospital field is that we assume that what has been planned does actually happen. This may apply to many other fields of work, but nearly every precise investigation of a facet of hospital work reveals that it is operating differently from what is thought to be happening according to the intentions of those who planned the particular activity.

This is perhaps not surprising. Hospitals have been functioning for a very long time. The changes which are occurring in medicine take place relatively quickly and may have overtaken some of our techniques. The precise study of what, in fact, does go on is something relatively new in the hospital world; and whether it takes the form of work study or operational research, it takes a long time, first to undertake the study and secondly to evaluate the enormous amount of material that careful observation provides. Thus it is that any 'built-in' method of evaluation is to be preferred to a specific study. It should not be impossible to plan such 'built-in' devices which do not make undue demands on those who operate them.

Those who are familiar with the workings of a hospital will know of the borrowing of nurses which takes place generally at the



instigation of a Departmental Sister who, on her rounds, observes that one ward is very hard-pressed whilst another, whether of the same discipline or not, is having a relatively slack time. Those who have made any kind of study of the level of nursing care will be aware that the work load appears to be a series of peaks and troughs. Any average that is struck tends to be too little or too much. These peaks are predictable to some extent on surgical wards, for example; there the ward sister, in arranging the off-duty times of the various members of her staff, disposes of her forces so as to be at maximum strength at the time of greatest strain. Thus the load that is likely to occur after the routine operating list is known and, indeed, in the best circles the surgeon will have consulted with his ward sister so that the load and the resources to meet it can be properly balanced.

This, however, does not apply to the emergency or take-in week. Here the load is regarded as unpredictable and arrangements are made beforehand to discharge patients from the ward so that the situation does not get out of hand. Careful recording on the ward of what occurs even in the emergency week is likely to provide useful clues for the future. It has been shown that the provision of two more beds than the average daily demand will ensure a bed immediately available for 95 per cent of emergency cases.

More recently techniques are being developed which have as their aim and object the levelling of the work load on the ward. Some of these arrangements have the effect of steadying the load in the ward by making special provision for the care outside the ward unit of those patients whose nursing needs are heavy or demand constant attention. Whilst, to some extent, the heavy nursing demand, highlighting relative shortages of nurses, has been responsible for these newer ideas, the increased responsibility of the anaesthetist has played its part. With better methods of achieving relaxation it is possible to anaesthetize patients in age groups who might at one time be thought unsuitable for operation. There are nevertheless particular dangers and most anaesthetists prefer to see the patients recover consciousness before leaving their care. This has led to the development of the post-anaesthetic room which relieves the surgical ward of the problems provided by the unconscious patient. Every such patient induces anxieties in the nursing staff, and a large number of relatively simple surgical procedures carried out under anaesthesia may present for that reason a very heavy nursing load, as often happens in a gynaecological ward.

Another idea, not to be confused with the post-anaesthetic

room, is the intensive care unit. The intensive care unit is one of the main zones or phases of care which form part of progressive patient care which is the systematic grouping of patients according to the degree of illness and dependence on the nurse rather than by classification of disease or sex. Progressive patient care has been developed to a considerable extent in America and is the subject of a number of experiments in this country at the moment. It is claimed that nursing skill is applied where it is most needed, that nursing staff resources can be better conserved, especially at night, and that better care adapted more closely to the needs of the patient can be provided. Patients are admitted to such a unit at a critical stage of illness when needing continuous nursing. The criterion for admission is the degree of nursing needed, not necessarily the severity of the illness. The provision of such a unit will take the peak load of nursing care away from the ward and give it a more even pattern. Indeed it has been said that the withdrawal of these patients, the nursing of whom is arduous but also a challenge, is to deprive the nursing staff of the ordinary ward of much of the interest of the work. It is also said that the level of work in such an intensive unit is such that it would induce emotional, if not physical, exhaustion in a relatively short space of time.

It is too early to tell from our own experiences whether these criticisms in advance will be justified. Certainly they have not prevented the establishment of these units elsewhere. There are, however, nurses who possess the emotional qualities and resilience needed for intensive nursing care just as there will be others who have the gift to care for patients who have passed the critical phase. The number of beds likely to be needed for an intensive care unit is many fewer (according to the few studies that have been made in this country) than the Americans have advocated. The traditionally close association between the surgeon and his ward sister in this country, whereby the latter carries out precisely the instructions of the former, would make it difficult for both of them to accept the idea that the patient most severely ill should go into one ward which will serve more than one surgical firm. This breaking down of a traditional nursing pattern and the bringing together of surgeons in the room for critically ill patients may, however, carry other benefits. The desirability of measuring the number of patients who require this kind of care should enable more intelligent planning to be carried out.

The variation in the work load in the individual ward has already been mentioned. The extent of the variation differs with the size of the ward, and indeed it can be shown that where two wards

operate as one the variation tends to diminish considerably. This raises the problem of how many patients can be looked after by one ward sister.

Traditionally the number of patients for whom it is said one sister can accept responsibility is in the region of 28 and this has been the number since Florence Nightingale's time. Nursing has changed considerably over the years. Much depends on what is expected of the ward sister. It may be that the demands which clinicians make of their ward sisters are too great. It may be that there is room for improved techniques by ward sisters in getting to know by means of simple aide-mémoires more about each individual patient. Ward sisters have been heard to say that it is impossible to get 'clued-up' on more than, say, 28 patients for a ward round. The number of questions that are likely to be asked about individual patients can be forecast and it might well be that a suitable pro-forma in which the boxes are ticked could enable a ward sister more confidently to assimilate the facts about individual patients. Better still, it might be that she should delegate the responsibility for accounting for some patients to staff nurses; this as a matter of training and as a matter of job satisfaction. One of the main criticisms of the staff nurse is that her responsibility is ordinarily too limited and only really obtains when the ward sister is off duty. It is recognized that much requires to be done in the way of getting clinicians to see that they have a part to play in accepting the staff nurse in this way, thus adding to her stature.

Much of what is done in wards has been done for a long time and tends to be done by rota. Patients tend to be discharged on a given day, mainly because it has been done this way for a long time. More and more hospitals are dealing with patients of higher intelligence and social status, and many of these invite the clinician to discharge them early so that the healing process can continue at home. Thus early ambulation which was practised generally is being succeeded by early return home with a return to hospital in 10 to 12 days' time for the removal of stitches or a check before final discharge. A surprising number of patients are up for six hours and able to look after themselves from the washing and toilet viewpoint and are perfectly capable and willing to return home. This was revealed by some studies which Barr and Jeffery were undertaking in Oxford while trying to construct a theoretical model to describe the nursing care of a surgical patient. The object of the exercise was to assist in selecting the time for discharge of the patient in normal circumstances. The recording of the nursing care given enabled the relationship

of the time chosen to the patient's degree of independence to be more clearly seen and the choice of time better made.

The discharge of these patients does, of course, raise the tempo of work in the wards, and it may well make increasing demands on nurses and on the clinicians. It does, however, make very good use of the resources available. There is, of course, a limit to what can be done, particularly on the surgical side; a limit set by the number of hours that the surgeons can reasonably be expected to operate, or that theatres can be made available.

Many of these things are much less imprecise than at first sight appears and it might be very interesting and in the end, if successful, useful to try to determine the logistics of ward practice so that we might find out what the optimum arrangements are.

One of the problems which careful recording and measurement is likely to reveal is the rigidity imposed by the fixed allocation of beds to disciplines and to individual clinicians. Here and there one finds an enlightened hospital which has a 'float' of beds, sometimes represented by an unallocated ward. The newer nursing ideas may make this essential.

The pursuit of nursing studies involved in the recording of the variations in load and the devices which we employ to minimize the effect of these variations will eventually all be capable of being set down as a pattern of events. Mathematicians can help us in studying these patterns to determine the frequency with which they are likely to be repeated, and what steps we might usefully take to forecast with confidence what the train of events will be in hospital wards. The ability to treat the inpatient turns to a very considerable extent on what is done in the outpatient department. The likelihood for the future is that more and more will be undertaken in the way of investigation and treatment without admitting the patient to hospital at all.

There is much to be said in making a virtue of necessity, and the Scots have shown that a great deal can be done in the way of surgical treatment in the outpatient department, sending the patient home the same day. Few people want to come into hospital; many must, and for those there is no choice. But for all who can be investigated and for those who can be treated as outpatients, how much better that they should be dealt with outside the hospital. This does, of course, involve much in the way of new outpatients provision, in the way of day beds, outpatients operating theatres, and perhaps additional investigatory facilities. When this has come about,

it will, of course, influence the pattern of inpatient work further. This surely is a time for planned experiment in the provision now of some of the outpatient facilities which are to form part of the outpatient departments in the future. A carefully measured experiment now would do much to clear the ideas for the future. The better we record events as they happen, the more readily can we look back over them and get matters into perspective. Any device for the measuring of nursing care of inpatients must reflect—it may even predict—the change in load which an alteration in surgical practice—like increased outpatient surgery—might produce.

This essay began by saying that little was known about the number of nurses required to care for a given number of patients. Knowledge about the number of patients who should go to make up a ward unit is just as scarce. It is known from theoretical and experimental work that the greater this number, the easier it is to control the variation in the volume of nursing work. Reference has been made to the introduction of post-anaesthetic recovery rooms, intensive care units, of the likelihood of early discharge of patients from hospital, and of the effect which the increasing volume of outpatient surgery might have on the inpatient unit. This will mean that the ward unit is exposed to an increasing burden of major surgery and this alone will have its effect on the nursing work of the ward.

All these newer ideas will change ward design. Here some experimental work has been done. The Nuffield Unit for the study on design and function of wards contributed a great deal in estimating; after studies in numbers of existing wards, what number of single rooms were needed. They took account of the need for privacy, of patients in small groups, and so arranged the facilities that nurses did not undertake unnecessarily long journeys.

But more now needs to be done with the emergence of newer ideas. One of the ways that we have neglected, unlike our American friends, is to ask the consumer. It is known that some patients feel that they do not get enough privacy, but many more experience stress and anxiety about other patients' illnesses. If this is so, can ward design or organization eliminate this anxiety?

We are not notable for the investigations into the field of medical care which preceded the establishment of the National Health Service. Reliance was perhaps necessarily placed on committees of experts rather than on planned research and study. There have been some, all too few, useful studies since the National Health Service began and more will doubtless be undertaken. The number

of issues on which we have no clear experimental results to guide us is great. In this paper we have described one small but important attempt at measuring nursing care. We have set out some of the matters on which we know so little and on which we need to know so much. In 1860 Florence Nightingale said, 'I am fain to sum up with an urgent appeal for adopting this or some uniform system of publishing statistical records of hospitals'. To this appeal we might add the need for a built-in method of evaluating what it is that we do.

### **Acknowledgements**

The authors wish to express their gratitude for the advice and assistance of the many matrons and sisters, too numerous to name individually, without whose co-operation their work could not have been undertaken.



*Towards better general practice: progress and problems*

# **The Family Doctor Diagnostic Centre**

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# The Family Doctor Diagnostic Centre

## I. Introduction

The Family Doctor (Diagnostic) Centre is a joint enterprise undertaken by the Nuffield Provincial Hospitals Trust and the Scottish Home and Health Department. It was opened on 1st June 1959. The basic intention was to see how far it is possible, by providing diagnostic facilities including ready access to nursing, medical-social and secretarial help in a special Centre, to enable the GP to examine and investigate his own difficult cases more effectively than he can at present in his own surgery or by sending his patient to a hospital OP department, and so afford him greater opportunities and satisfaction in his work.

The Committee of Management of the Centre has submitted its report on the work done during the first three years. The report which was carefully drafted by a sub-committee\* is an objective, factual and responsible statement. This communication consists largely of extracts from the report itself. I have, however, been permitted the luxury (which the committee eschewed) of adding some personal comment, question and conjecture as to the meaning of this interesting experience, and its relevance to the future of general practice.

## II. Why a Diagnostic Centre?

An increased interest in the rôle of the GP in the diagnosis of disease in a rapidly changing medical environment is a feature of the post-war era. Problems for the family doctor have arisen acutely because of the speed of recent trends towards specialization in medicine, both in diagnosis and in treatment. Patterns of morbidity are changing as a whole, but there is also a sharper differentiation between the respective clinical patterns of hospital and family practice. The introduction of a National Health Service available to every citizen has involved the GP in a reassessment of his rôle in the community. There has been concern in some quarters lest the established family doctor should fail to keep abreast of the rapid changes which have

\* The committee comprised Drs. W. A. Alexander, E. V. Kuenssberg, Richard Scott and A. B. Walker. Dr. Martin Brodie (now deceased) was actively concerned with the early planning. Mr. J. M. Scoular of the Home and Health Department was secretary to the committee. The committee was greatly assisted throughout by the staff of the Centre in the preparation of its report.

taken place in the field of medicine as a whole. Conversely, the recently trained graduate *au fait* with modern techniques of diagnosis and therapy will quickly degenerate, and his skills atrophy, if he is denied the use of these techniques in his daily work as a GP.

Some of these new problems have been met in part by the granting of greater freedom of access of GPs to the ancillary diagnostic aids normally provided by the hospital, and indeed in Edinburgh GPs do have open access to a wide range of diagnostic services provided by the local hospitals. Those who advocated the establishment of this Centre therefore clearly had in mind that it would provide something which would be unique and additional to routine open access; the main differences in fact being that the GP would personally attend and examine his own patient at the Centre and that a comprehensive range of diagnostic facilities would be available in a single building. This Centre, however, while new to Edinburgh, has some kinship to these experiments at Corby and Peckham.

### III. Setting up the Centre

After preliminary talks between the Nuffield Provincial Hospitals Trust and the then Department of Health for Scotland the preparations for setting up the Centre involved detailed and often lengthy discussion with the many interested parties. The University of Edinburgh, the Local Medical Committee, the Regional Consultants and Specialists Committee, the Regional Hospital Board and the Local Authority were mainly involved in these exchanges which not only helped to clarify the objectives but provided the basis for a combined collaborative exercise in which the individuals and groups concerned have contributed far and beyond their statutory obligations or the dictates of enlightened self interest.

The Trust made a grant of £30,000 representing a contribution of £17,000 towards the capital cost and £13,000 towards the running cost during the first three years. It was estimated that conversion of the premises would cost about £25,000, of which about £8,000 was expected to represent the cost of the X-ray and Laboratory Equipment paid through the Regional Hospital Board vote, and that the annual upkeep, including salaries of staff, would amount to approximately £10,000. During this three-year period any deficit would be borne by the Department of Health for Scotland and, if the experiment succeeded, the intention was that the Department would accept continuing responsibility for the Centre.

## **IV. Premises, Facilities and Staffing**

### **Premises**

Livingstone House, where the Centre is established, was constructed in 1876 by the Edinburgh Medical Missionary Society as a memorial to David Livingstone. The building was acquired by the University in 1951 and is now the headquarters of its General Practice Teaching Unit. It also accommodates a local authority clinic and the Scottish Office of the College of General Practitioners as well as the Family Doctor Centre. The latter occupies half of the first floor and the whole of the second floor of the building and is reached by a separate entrance and staircase which were the only major structural alterations required in the conversion. The accommodation available consists of: an office and reception area, a waiting room, five consulting rooms, a room for the medical social worker, an office for the medical adviser, a complete radiological suite, a records room, and a large and well-equipped laboratory. Three additional consulting rooms can be made available with little further adaptation.

A special effort was made to furnish and decorate the premises as attractively and cheerfully as possible, so as to avoid any suggestion of an institutional atmosphere, and to make a visit to the Centre an occasion to be remembered by both doctor and patient for that reason as well as for the brief or non-existent period of waiting and for the welcome given by the staff.

The whole of Livingstone House is centrally heated by an oil-fired central heating system and additional heating where required is provided by gas and electric fires. The central heating system also serves for heating water of which there is a constant supply to each consulting room.

The main purpose of the Centre is of course to provide consulting rooms, and each is fully equipped with couch, desk and chairs, angle-poise lamp and a full range of diagnostic equipment. Additional equipment is available if required from dressings trolleys, one of which is kept on each floor. The office and reception area is small but, so far at least, adequate, and the waiting room is large and attractively furnished.

### **Facilities and Staffing**

The staff consists of a secretary who is in administrative charge, a secretary receptionist, a nurse receptionist, a laboratory technician, a radiographer and a medical social worker. The services

of an honorary medical adviser are available, as are those of a consultant radiologist, the latter on a notional basis of two sessions per week. Routine X-ray examinations include plain X-rays, barium meals, cholecystograms and intravenous pyelograms. X-rays are reported on by the radiologist who attends daily for this purpose. Electrocardiography is also available, the tracings being reported on daily through the kind co-operation of the Cardiology Department of the Royal Infirmary. Urinalysis, full range hæmatology, limited bacteriology, and some biochemistry are provided by the laboratory technician, more complicated procedures and tests being carried out through the generosity of the Royal Infirmary. Specimens for other than simple bacteriology are sent to the University Department of Bacteriology. Cervical smears for pre-cancer screening are taken on the premises and reported on by the University Department of Obstetrics and Gynaecology. The University and Infirmary Departments thus collaborate in extending the range of services provided.

So far as the administrative staff is concerned, the secretary is in full administrative charge of the day-to-day running of the Centre and the responsibilities of the post cover such matters as dealing with expenditure other than that paid directly by the Scottish Home and Health Department or through the Regional Hospital Board; arranging appointments; dealing with the problems of visitors, whether patients, doctors or others; handling any staffing problems that may arise; and maintaining adequate records. The nurse/receptionist's chief duties lie in the reception of patients and in helping the doctor as required, while the secretary/typist also undertakes reception work and deals with the bulk of the correspondence.

The medical social worker, appointed at the specific request of the Nuffield Trust, is responsible for interviewing those patients passed to her by family doctors as in need of assistance in the solution of psychological and social problems.

## **V. Administration**

### **Committee of management**

The general administration of the Centre and decisions on any points of difficulty which may arise are the responsibility of the Committee of Management which meets quarterly and consists of:

The honorary medical adviser.

The Medical Officer of Health of the City of Edinburgh.

Three general medical practitioners nominated by the Local Medical Committee.

Two general medical practitioners nominated by the medical practitioners using the Centre.

One representative nominated by the University of Edinburgh.

Two representatives nominated by the South-Eastern Regional Hospital Board.

One representative nominated by the South-Eastern Regional Consultants' and Specialists' Committee.

Two representatives nominated by the Nuffield Provincial Hospitals Trust.

Two representatives of the Scottish Home and Health Department.

The period of office is three years; the Committee elect their own chairman, and a quorum is formed by four out of the total membership of fifteen.

The Secretary of the Centre acts as secretary to the committee.

### **The reception of patients and doctors**

The Centre is open from 9.0 a.m. to 5.30 p.m. on a five-day week basis but the office is manned until 7.30 each evening and from 9-12 noon on Saturday to accommodate GPs who find it helpful to be able to make an appointment during their consulting hours and when the patient is in the surgery.

The doctor normally makes the appointment by telephone, giving if possible the name, address and age of the patient when making the appointment. This enables the staff to make out the necessary headings for case notes in advance and minimizes the formalities when the doctor and patient arrive. If, as frequently happens, the patient arrives a few minutes before the doctor, the nurse has time to take the height and weight and to collect a specimen of urine, the aim being to have the least possible waiting time for both doctor and patient. A study made over a period of the actual time the doctor spent in the consulting room found it to be, on average, 43 minutes. Thus the doctor could reckon on spending just under an hour at the centre for the usual type of full clinical investigation carried out at present. The additional time that the patient spends at the Centre depends upon the further investigations decided upon by the doctor, e.g. X-ray, E.C.G., referral to medical social worker, etc. Whether the nurse remains in the consulting room during the con-

sultation depends on the wishes of the individual doctor but she is available to guide the patient to the various departments for any further investigations.

### **Recording clinical data**

As the GP has nowadays a heavy burden of clerical work, it was decided that he should receive all assistance possible in the completion of forms and records. Thus, the personal details of the patient, including occupation, height and weight, are inserted by the staff in the clinical record sheet. A summary of the whole clinical record is finally typed and forwarded to the doctor on completion of the investigation if requested, on a sheet designed for easy insertion into the National Health Service record envelope.

A single request form for all laboratory or special investigations is now in use. This requires a minimum of writing by the practitioner, identification of the patient having already been entered. The value of the form is enhanced by the insertion on its reverse of *normal* values.

The keeping of records and the completion of forms in the Family Doctor Centre therefore fall into two categories:

(1) Those which the staff can handle entirely and which are concerned with administration, identification of patient's doctor, and indexing by disease, to facilitate access to clinical material for further study.

(2) Those which are for the use of the doctors but are so designed that the ancillary staff can complete some of the detail.

(a) The laboratory request form which, by listing all the available investigations, requires the doctor only to indicate by a tick the investigations which he desires.

(b) The case record sheet. Here it was considered to be helpful to indicate on the margin the clinical systems and to draw particular attention to such special points as rectal examination or examination of fundi by having small sub-headings. There is incorporated a diagrammatic sketch of the thorax front and back. The heading 'diagnosis' subdivided into 'principal' and 'secondary', is a continuous challenge to the sharpening of the doctor's decision in a particular case and frequently proves a useful starting point for helpful discussion with colleagues.

## VI. The Use Made of the Centre

Before the Centre opened a questionnaire was sent to the 280 GPs in Edinburgh; 121 replied and of these, 109 expressed interest, 2 were doubtful and 10 stated that they were not interested in the proposal to set up a Centre somewhere within the city. On the opening day 40 doctors (chosen by ballot) who had expressed an interest were invited to use the Centre. After three months the remainder were informed that they could be accommodated, and after six months' experience the committee decided that the doors could be opened to all GPs in the city. By the end of the first year 56 doctors had used the Centre. There was a steady increase both in the number of doctors and in the number of patients. By the end of the third year the number of doctors had risen to 79.

During the three years, 79 doctors brought over 2650 patients to the Centre, and the following investigations were carried out:

Radiological: Plain X-rays . . . . .	2074
Barium meals . . . . .	666
Cholecystograms . . . . .	121
I.V.Ps. . . . .	67
Barium enemas (at Royal Infirmary) . . . . .	88
Electrocardiograms . . . . .	1027
Laboratory: Haematology . . . . .	2180
Bacteriology . . . . .	827
Biochemistry . . . . .	3104
Tests (R.A., Heaf, Allergy, Hogben) . . . . .	53

### Almoner

There were 233 referrals of patients to the medical social worker from 44 doctors. These referrals resulted in 748 interviews with patients at the Centre, 257 home visits and 509 consultations with doctors.

The committee expressed some disappointment that the Centre during this time has operated considerably below its capacity, both in respect of doctor users and of patients. At the same time it has no criteria by which to measure this response of Edinburgh doctors in qualitative terms. This is especially difficult in a situation where open access facilities were already generous and where the Centre was previously intended not to substitute for, but rather to supplement existing services.



This report therefore makes little reference to the quantitative aspects of the problem of providing effective diagnostic services in general practice. Its main contribution lies in the light which it sheds on the qualitative aspect of the doctors' diagnostic dilemmas.

### Clinical data

The characteristics of the patients brought to the Centre have been analysed according to age, sex, social class, and the final diagnosis. It has also been possible to examine the variation in patterns of use of the different doctors by more detailed analysis of the patients brought by the ten partnership practices which were the main users of the Centre.

### Age and sex

Table I presents an analysis of the patients by age and sex over the three-year period. It will be seen that 11.7 per cent of the patients brought to the Centre were under the age of 25, 29.9 per cent were in the age group 25-44, and well over half (58.4 per cent) were over 45 years of age. In all age groups there were more females than males, the ratio being 1.2 to 1. The peak age groups in both sexes were 45-64 (43.7 per cent of all patients), but there were *relatively* more males than females in this group.

**Table I**  
**Analysis by age and sex of patients brought to the Centre in the first three years**

Age groups	Males		Females		Totals	
		per cent		per cent		per cent
0-14	49	5.1	52	3.1	101	3.8
15-24	59	6.2	150	8.9	209	7.9
25-34	124	12.9	270	15.9	394	14.8
35-44	140	14.6	260	15.4	400	15.1
45-54	208	21.7	369	21.8	577	21.8
55-64	241	25.2	339	20.0	580	21.9
65+	137	14.3	252	14.9	389	14.7
Total . .	958	100.0	1692	100.0	2650	100.0
Per cent . .		36.2		63.8		100.0

The doctors using the Centre were self-selected and they clearly varied according to their individual interests in the way they chose patients to be examined at the Centre. Thus, while the overall per-

centage of patients over 45 was 58.4 per cent, five of the practices (C, G, I, J and L), brought appreciably more of their elderly patients, the range being from 67.3 per cent to 75.0 per cent while four practices (B, D, F, H) had fewer patients in this over-45 age group, their percentage ranging from 49.1 down to 37.3. Within these variations, it seems generally clear that the Centre was used to deal largely with older people who would be expected to present more complex clinical problems.

### Social class

It was possible to record the social class (Registrar-General's classification) of 1785 (70 per cent) of the patients attending the Centre (Table II).

**Table II**  
Distribution by sex and social class of 1785 patients who were coded

Class	Males		Females		Males and Females	
		per cent		per cent		per cent
I	70	8.3	61	6.5	131	7.3
II	106	12.6	153	16.2	259	14.5
III	386	45.8	463	49.1	849	47.6
IV	168	20.0	160	17.0	328	18.4
V	112	13.3	106	11.2	218	12.2
Total . . .	842	100.0	943	100.0	1785	100.0

It will be seen that nearly half of the patients (47.6 per cent) were in Social Class III. Other studies have suggested that patients in this category are regular users of all medical services so that in this respect the Centre followed normal experience. Here again there were variations in the social class of the patients brought by individual doctors which may not have been entirely reflected in the composition of their practices, suggesting that this might have been a factor which influenced the doctor's selection of patients whom he brought to the Centre. For example, while 21.8 per cent of all patients were in Social Classes I and II, in three practices (E, J, G) the range was from 28.5 per cent to 51.1 per cent, and in practices A, B, C, D, F and I, the range was from 17.6 per cent to 6.2 per cent.

### The diseases

An analysis is given in Table III of the final diagnosis for each patient. In each case, while the doctors were free to record more

than one diagnosis, the first or major disease was used. The results have been classified according to the International Nomenclature of Disease, and the table made up on this basis shows that the five most common groups were psychoneurotic and anxiety states (20·4 per cent of all diagnoses), digestive disorders (16·9 per cent), diseases of the circulatory system (14·1 per cent), respiratory disease (8·0 per cent), and diseases of the skeleto-muscular system (7·7 per cent). The table also shows that the broad disease patterns were similar in both sexes, although there was relatively and actually more psychoneurosis in females.

**Table III**  
**Distribution of patients by sex and final diagnosis**

<i>Diagnostic Groups</i>	<i>Code Nos.</i>	<i>Males</i>		<i>Females</i>		<i>Males and Females</i>	
			<i>per cent</i>		<i>per cent</i>		<i>per cent</i>
Parasitic and Infectious conditions . . .	1-138	17	1·8	46	2·7	63	2·4
Neoplasms . . .	140-239	27	2·8	34	2·0	61	2·3
Allergies, Endocrine and Nutritional Diseases . . .	240-289	40	4·2	106	6·3	146	5·5
Blood Diseases . . .	290-299	15	1·6	74	4·4	89	3·4
Psychoneurotic and Anxiety states . . .	300-326	161	16·8	381	22·5	542	20·4
Diseases of nervous system and sense organs . . .	330-398	21	2·2	27	1·6	48	1·8
Circulatory conditions . . .	400-468	153	16·0	220	13·0	373	14·1
Respiratory conditions . . .	470-527	103	10·7	109	6·4	212	8·0
Digestive conditions	530-587	207	21·6	241	14·2	448	16·9
Genito-urinary conditions . . .	590-617	21	2·2	42	2·5	63	2·4
Gynaecological and Obstetrical conditions . . .	620-689			106	6·3	106	4·0
Skeleto-muscular conditions . . .	720-749	79	8·2	125	7·4	204	7·7
Ill-defined conditions . . .	780-795	53	5·5	109	6·4	162	6·1
Miscellaneous . . .	Others	59	6·2	66	3·9	125	4·7
	Not stated	2	0·2	6	0·4	8	0·3
	Total . . .	958	100·0	1692	100·0	2650	100·0
	Per cent . . .		100·0		100·0		100·0

Three groups—psychoneuroses, digestive disorders and circulatory disease—together accounted for just over half of the patients brought to the Centre (51·4 per cent). These three groups represent conditions which can be characterized by chronicity, absence from work or diminished working capacity, and by high user indices in respect of hospital and indeed all medical services. They are also illnesses which tend to pose social and relationship problems not only for the patient but for other members of the family. Many of the patients in these categories present problems in diagnosis and assessment which are well within the competence of the GP who is provided with the time, tools and training to deal with them. It is interesting therefore that these were numerically the majority of the conditions selected for more thorough assessment and review by the family doctor.

Respiratory disease (mainly chronic) and skeleto-muscular conditions (including osteo and rheumatoid arthritis) occupied fourth and fifth places in the order of frequency. These two groups also have many of the characteristics of the first three. Further, they have this in common from the family doctor's point of view, that, as the nature of the diagnosis is seldom in doubt, the clinical problem is not so much identifying the disease as evaluating its clinical and social significance in the patients who are frequent attenders at the doctor's surgery.

Again, the frequency with which these diagnoses were made varied considerably in the different practices indicating that doctors use individual criteria for the selection of their patients, e.g. five of the practices (B, E, F, J and K) were above the average (22·6 per cent to 31·0 per cent) in respect of psychoneurotic illnesses and six (H, C, D, I, L and A) were appreciably below the average, ranging from 16·0 per cent down to 3·8 per cent.

## VII. Diagnostic Aids Used

The diagnostic aids used are set out in detail in Table IV. In only 1 per cent of cases was no ancillary aid to diagnosis used. This very small percentage indicates that the vast majority of the doctors using the Centre did in fact feel the need for more advanced diagnostic facilities than those available to them in their own surgeries and were glad of the opportunity provided by the setting up of the Centre.

A summary of the five main diagnostic aids used in relation to the three disease groups is of interest and is shown in Table V.

**Table IV**  
**Diagnostic aids used**

<i>Aids used</i>	<i>No.</i>	<i>Per cent</i>
Straight X-rays . . . .	2074	78·3
Barium Meals . . . . .	666	25·1
Barium Enemas . . . . .	88	3·3
Cholecystograms . . . . .	121	4·6
I.V.P.s . . . . .	67	2·5
Other X-rays . . . . .	10	0·4
E.C.G.s . . . . .	1027	38·8
Haematology . . . . .	2180	82·3
Bacteriology . . . . .	827	31·2
Biochem.—Urine . . . . .	2023	76·3
Biochem.—other . . . . .	1081	40·8
Cervical Smears . . . . .	353	13·3
Other diagnostic aids . . . .	67	2·5
No. of patients . . . . .	2650	

**Table V**  
**Main diagnostic aids used in relation to the three chief disease groups**  
*Percentage of patients on whom the test was performed*

	<i>X-ray</i>	<i>Haema- tology</i>	<i>Urine</i>	<i>E.C.G.</i>	<i>Bacteriology</i>
Psychoneurosis . . . . .	78·8	86·3	77·9	35·4	29·7
Digestive disorders . . . . .	57·8	77·9	72·1	29·2	31·5
Circulatory diseases . . . . .	86·3	79·9	76·9	85·8	27·9
All diagnoses . . . . .	78·3	82·3	76·3	38·8	31·2

The extent of the physical examination which preceded the establishment of a diagnosis of psychoneurosis may suggest that it was often the doctor as well as the patient who was being reassured by a visit to the Family Doctor Centre.

## VIII. Impact on Users

### The patients' reactions

The reactions of patients are, of course, of great importance in assessing whether or not the Centre has been a success from the human standpoint. Accordingly, a survey was made of a random sample of patients by a trained research assistant. The gist of her report indicates that on the whole, the Centre has proved very popular. The chief reasons volunteered by patients were the helpful attitude of the staff, the absence of waiting time and the presence of the patients' own doctors at the examination.

## The doctors' reactions

The uses made by doctors of the Centre varied widely and the problems which they solved by using the available facilities were very diverse. Broadly, what the Centre may mean or offer to the GP can best be summarized by giving the various reasons for its use as stated by the doctors themselves. Briefly, these are:

- (a) To assess and get to know the patient who has newly joined the list without adequate medical records or notes and who appears to require a diagnostic assessment.
- (b) To exclude organic disease where most of the signs and symptoms point to a diagnosis in the psychiatric field.
- (c) To evaluate the significance of symptoms of organic disease in an emotionally disturbed patient.
- (d) To review patients who are chronic attenders at the consulting hour, particularly those who have a degenerative disease label which, being accepted, may mask minor changes caused by some new disease.
- (e) To achieve adequate appraisal of patients with known disability or disease especially with a view to assessing employability or the question of retirement.
- (f) To investigate patients where the medical social worker can assist in the diagnosis or in the unravelling of a medico-social problem.

A specially designed questionnaire was completed in respect of a sample of patients (consecutive series). The doctor was asked certain routine questions as he arrived at the Centre and before examining his patient. Further questions were put after he had completed the diagnostic assessment. On 68 per cent of the occasions so recorded the doctor's intention in bringing the patient was to establish a diagnosis which was still at symptom level only or to confirm a provisional diagnosis. In 30 per cent of cases his final diagnosis differed from his anticipated diagnosis. In respect of three-quarters of the patients the doctor stated that had there been no Centre the patient would have been referred to hospital. After completion of his investigations at the Centre just over a quarter of the patients were in fact referred by their doctor to hospital. These doctors claimed that, in respect of the patients they had brought to the Centre, their rate of referral to hospital had been considerably reduced. They also claimed that on these occasions when after investigation they did refer, the

patient was sent with a more precise diagnostic picture, to a specific department or for specific advice or treatment.

## **IX. Other Activities of the Centre**

Since Livingstone House accommodates, as well as the Family Doctor Centre, the University Department of General Practice, the Scottish Office of the College of General Practitioners and a child welfare clinic, the building serves as a meeting ground for individuals from a variety of backgrounds with an interest in family medicine. Apart from these associated activities in Livingstone House, however, the Centre itself has attracted visitors from far beyond Edinburgh, including colleagues from Canada, South Africa, Trinidad, Australia, Egypt, Singapore, Holland, U.S.A., Poland, Sweden, India, Yugoslavia, Pakistan, Iceland, Japan, Greece, Israel, Chile, Jordan, France and Austria.

In view of the emphasis on professional training for family medicine which was an important factor in the mind of the planners of this venture, it is appropriate to record that, during the period under review, three meetings were held in the Centre to which all local GPs were invited. On two of these occasions, when several of their consultant colleagues also attended, the meeting took the form of case presentations and discussions of clinical material provided by the doctors using the Centre.

The South East Scotland Regional Committee concerned with the trainee assistant scheme now holds its annual meeting of trainee assistants at the Centre, so that the young practitioners can be given first-hand experience of the work being done.

Finally, the Centre is also able to contribute to the training of future family doctors at the undergraduate level and, during the period under review, 110 senior medical students attended with their family doctor tutors and gained practical experience of the evaluation of diagnostic problems at the Centre.

## **X. Comment**

The rigid policy of limiting the service to diagnostic problems has been criticized by a number of doctors using the Centre and has been even more openly criticized by GPs who don't use the Centre and by visitors. There was also some resistance to the idea that the doctor should personally conduct the examination of his own patient at the Centre. These two factors therefore are likely to have exerted a

considerable influence in determining if, when and how a doctor made use of the facilities.

It is a feature of general practice that every consultation, however brief, whether in the doctor's surgery or in the patient's home, has a diagnostic and a therapeutic component. On each occasion the doctor is challenged to take decisions. The busy, frustrated or over-worked doctor of necessity develops a number of protective mechanisms to avoid taking decisions. Among these mechanisms, which can become almost reflex reactions, is the blurring of the difference between diagnosis and treatment. The student is taught that in the classic sense diagnosis must precede treatment. The GP knows only too well that in absolute terms it is comparatively seldom that he has a clear cut diagnosis in respect of each consultation. The treatment which is a feature of each consultation may be specific, supportive, placebo, reassurance or simply continuing personal contact.

The work of the GP has a substantial component which can easily degenerate into a banal reflex routine. The threshold where reflex routine reaction ends and conscious major preoccupation with diagnostic assessment begins varies from doctor to doctor. The nature of the clinical problem, the circumstances of his practice and the professional and technical services available to assist the doctor will also determine how far the diagnostic problem is pursued, and the extent to which he accepts personal responsibility for following it through to a logical conclusion.

The attitude of the patient may be the determining factor in some instances. The high user of medical services suffering from intractable, incurable or progressive organic disease, or the person whose problem lies mainly in the field of faulty adjustment to the human and socio-economic features of his environment, may well drive the doctor to distraction. The avenues of escape from such a problem are, consciously or otherwise persuading the patient to leave his list, or sending the patient to hospital in the hope that a spell of OP or even IP care provided by the hospital will relieve the pressure even temporarily. A more constructive alternative to merely opting out, is the consultation with a specialist colleague.

The doctors having access to this Centre have yet one more alternative, namely that both doctor and patient can voluntarily remove themselves from the familiar habitat and routine, and in a neutral setting the doctor can assume the temporary rôle of being his own consultant.

The Family Doctor Centre has given the GP the opportunity



of being his own consultant physician. It has done this by (i) providing surroundings in which he can see a patient without being hurried, pressed or interrupted; (ii) giving him the tools (syringes and a nurse, request forms and a secretary, an X-ray machine and a technician); (iii) being a setting in which both the doctor and the patient find it natural to accept this changed rôle of the GP. Thus the practitioner *who has an interest* in being his own physician is given the chance. The Centre, merely by existing, is unlikely to affect those practitioners who do not have this interest. Nor does it help the doctor whose problem is not so much lack of interest but the many circumstances over which he has no control which determine the quality of service he provides for his patients.

What effects flow from this temporary change in rôle of the practitioner?

The *patient* is invariably both pleased and impressed. He feels that he is getting skilled attention; and he is getting it from a doctor he already knows, and one whom he will be glad to look upon as being good at his job as well as kind.

The *doctor's hospital colleagues* certainly benefit. They will find that fewer patients come to their clinics merely for examinations or tests that could have been done by the practitioner; increasingly they will be asked to act as true consultants, giving opinions, out of their special experience, on facts and impressions collected by their colleagues in general practice.

The *practitioner* himself certainly gains from this temporary change of rôle. He is likely to have an interest in being his own physician, as has been said; and satisfaction of this interest, without the expenditure of an excessive amount of extra effort, is a great gain in itself. Inability to satisfy such personal interests is one of the outstanding frustrations of general practice in Great Britain. His self-respect grows, for often he can solve a problem himself, and if he cannot, a referral becomes a genuine request for an opinion from one wide-awake doctor to another, not a passing of the buck from a harassed hack to his privileged and superior colleague.

If interested practitioners were to have from time to time this opportunity of becoming their own consultant physician, what pattern is their work likely to follow in the future?

(1) They would diagnose and treat a number of patients whose diseases need more time and facilities than most practitioners can command at present.

(2) Many of the 'high users' amongst the patients would be

seen by their doctor acting as physician on one or more occasions. There can be no doubt about the value of such 'new looks at old faces'.

(3) Far from introducing a hospital or institutional component into the work of the family doctor, such 'consultations' would enhance the *personal* care which it is his duty to provide for his patients.

(4) Some practitioners would at last find themselves able to do real preventive medicine. A doctor could systematically refer to himself *qua* physician selected groups of people known or suspected to be in particular hazard of mental or physical illness—asthmatic children, anxious mothers, alcoholic fathers, middle-aged smokers, the overweight, the under-privileged, the hypertensive and the hypochondriac. There seems no limit to the field from which he could choose.

(5) Many practitioners would find themselves painlessly and quite naturally involved in genuine clinical research, usually, one would imagine, as a member of an academic or hospital research team. They would have a real right to be on the team, and conversely everyone else would think the team incomplete without them.

(6) Finally, such a change in the doctor's work pattern cannot but make a substantial contribution to his continuing postgraduate education. The practitioner, with his new-found self-respect, his satisfied clinical interests, his frequent consultations on an equal level with colleagues in other branches of medicine, and his part in research, could not help educating himself. By the same token, he could not avoid becoming a teacher of medical students and of his partners and colleagues in general practice.

On this theme of in-service training, perhaps a brief passing comment should be made on one unique feature of the Centre, *viz.* the employment of a trained medical social worker. Since the service is limited to diagnosis there is tacit admission of the rôle of the almoner in diagnostic assessment. She is not primarily available for the treatment of patients by the provision of material help or case work. She does not provide the doctor with tangible results as do the radiographer or laboratory technician. Her service comes from a discussion with the doctor of the significance of the socio-economic and particularly the human relationship factors which have emerged from her interview with the patient. It would appear therefore that her chief rôle is an educational one and that some of the doctors are already beginning to use her in this way.

How are such opportunities to be brought within the reach of all interested practitioners?

All practitioners must be given this chance of following through their interests, whether these lie in being their own physician, psychiatrist, pædiatrician or factory doctor. Moreover, the facilities must, where appropriate, be provided at the place where the practitioner does his routine practice work. This would seem to imply (1) the encouragement of true *group* practices (as opposed to mere financial partnerships); (2) the support of adequate buildings, be they group practice centres or health centres; (3) a change in the organization and payment of GPs, which takes into account the valuable work such doctors would be doing in following their special interests; (4) above all, the major revolutionary changes which would be required in the organization of general practice must be accomplished by enhancing rather than detracting from the personal quality of the care which the family doctor must provide for his patient.

Clearly, there are practitioners to whom none of what has been said applies. They find their satisfaction in other ways. But many do not; and for them, the Family Doctor Centre has, we hope, helped to point the way.

*Relieving the general practitioner of some of his problems*

# **The Social Work Content of General Medical Services**

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# The Social Work Content of General Medical Services

## I. Hypotheses and Background

### The family doctor

'It is still true that most people feel the need at times for a personal doctor who is also a friend, to whom they can turn for advice and help when they are in any kind of trouble. . . . The more complicated, scientific and specialized medicine becomes, the greater is the need for such a family doctor to concern himself with patients as people . . . ' <sup>1</sup>

It is not only in times of extreme stress that a patient may need to use his family doctor as a friend and confidant, and to discuss with him some matter that is not entirely medical.

There are a number of quite common situations in which a patient may find that his doctor is the most accessible or most acceptable or even the expected link with some necessary service. It is not only 'through the maze of thirty or more specialities into which medicine is now divided'<sup>2</sup> that the patient needs guiding. The maze of social provisions can be equally perplexing, and the apparently impenetrable hedge of regulation and organization which faces the applicant lost in the maze can add frustration to any inconvenience or anxiety caused by the original problem.

Family doctoring therefore is as much a social service as it is a method of providing medical care and there are four areas in which this can be demonstrated.

1. The family doctor as a link with social facilities for the sick and disabled.
2. The increasing emphasis on medical care outside hospital.
3. The shorter stay in hospital so that the patient is the responsibility of his family doctor for a greater part of his illness.
4. The recognition that preventive work can be part of the function of a family doctor.

## **The link with social services for the sick and disabled**

The family doctor is the expected link not only with the prevention, care and after-care services of the local health authority but also with the special provisions for the elderly and physically handicapped, organized by the local Department of Welfare under the National Assistance Act. It is assumed also that he will direct to the Ministry of Labour Disablement Resettlement Officer any patient who, by reason of ill health, will have difficulty in obtaining or retaining employment. Convalescent treatment for those who require continued medical and/or nursing supervision can be arranged by a Regional Hospital Board on a GP's recommendation, while the Area Officers of the National Assistance Board will always consider a suggestion that a patient has special needs which justify an increased allowance. There are, too, other locally organized services where medical recommendations are accepted as indicating eligibility for priority service. A doctor's note may not ensure that an applicant is rehoused, but it usually ensures that social circumstances are re-considered in the light of medical need, and that the Medical Officer of Health is consulted. Telephone installations can be speeded up, or children admitted to school a little earlier if medical need is involved. Charitable organizations depend often on medical certificates to help them distinguish the 'deserving' from the 'undeserving' among their applicants. This is partly due to the sense of urgency which medical need conveys to the layman, but also due to the doctor's established position as a man of education and integrity whose opinion on any matter is valuable. Lastly, there are the semi-legal documents on which the signature of one of an approved list of persons is required. The doctor is probably the best known and most accessible person on the list, and therefore the most often used.

## **The increasing emphasis on medical care at home**

Treating a patient at home at once involves a GP in the social aspects of disease, since the family's capacity to deal with the situation must affect the method of treatment and the patient's prospects of cure. Physical illness may expose material need, or it may bring to light difficult relationships in the household which were quite unsuspected. There may be unexpected gaps in understanding, demonstrating the need for health education, while isolation from the community may only be discovered through the need for neighbourly

service. Mental illness treated at home with out-patient supervision can strain family resources to the limit. The consultant may feel that the patient is best suited to home care; but it is the family doctor who has to assess whether the home is capable of participating in treatment and which, if any, of the community care services are required.

### **The shorter stay in hospital**

A reduction in the average length of stay in hospital may enable more patients to be treated in fewer beds, but the increased pressure on medical and nursing staff may result in their having less time and opportunity for considering the personal aspects of a patient's illness, so that services which are available to meet his needs may be denied to him. The Aberdeen investigation reported in 'Further Studies in Hospital and Community'<sup>3</sup> showed that 'out of just over 200 patients in whom we encountered a problem at some point in the 12 months of the study, only 30 had been referred to the almoners during that year. . . . There can be little doubt that there is a serious discrepancy between the number of patients who should have been referred, and the number that actually were.' The danger that hospital staff may not become aware of the whole of a patient's problem could be offset if the family doctor shared his knowledge of the family background with the consultant or almoner or suggested to the patient an appointment with the almoner. This may happen in a medical emergency or when in the doctor's view there is extreme social need; but the GP may not even be aware when his patients are admitted from non-urgent waiting lists. Even if social problems connected with medical need are identified and assessed by the hospital staff it is improbable that more than preliminary steps towards solution have been taken before the patient's discharge, so that the need for social consultation and planning is likely to persist beyond the need for hospital medical care. This places on the family doctor the responsibility of co-operation with the various social workers, and of ensuring that plans made are appropriate to the patient's condition. But, the extent of other demands on a doctor's time, and the variety of workers likely to be involved, make it unlikely that the GP will either become fully aware of or be an active participant in the social planning. It may be desirable that the family doctor should assume leadership of the domiciliary care team, but in reality it is very difficult to achieve.



## **The preventive aspect of general practice**

Freedom of access to a family doctor greatly increased the possibilities for preventive work in general practice. There is now no financial barrier to obtaining medical advice at the beginning of an illness. For the doctor, freedom of access to a consultant of his choice, to the various diagnostic aids, and to all forms of treatment means that he can not only do more for each patient but do it more quickly than before 1948. If it is good to try to prevent medical situations from deteriorating, it would seem also to be a good thing to prevent social problems arising from medical need. Most patients today have access to medical information and are interested in medical problems. Although there is a risk of misinterpretation or misunderstanding, the narrower margin between the educational standard of the doctor and that of the majority of his patients means that explanations can take place, if he wishes, or if the patient asks. The rôle of the family doctor in preventing mental or social sickness is less firmly established however, so that the patient who needs the 'friend' may feel obliged to camouflage his need by a demand for medical care. If the underlying need is not recognized and dealt with, much time and energy can be spent to no good purpose, while to the original components of the problems is added a deteriorating relationship between doctor and patient. A GP who has witnessed family crises over a period of years should be able to recognize signs of new stress in that family. Whether or not he goes further depends largely on whether he and the patient see prevention of mental stress or personal problems as any part of his function.

The definition of a GP quoted in the Review of Medical Services (Paras. 171-173) indicates that the medical profession is well aware of the social responsibilities of a family doctor. The report emphasizes, however, that the 'scope of a GP's work is determined by (among other factors) his training, ability, personality and interests'. There is little evidence that his training equips him to discharge the responsibility of giving a social service; even though his ability, personality and interests enable him to recognize its necessity. The calendars of 12 universities with medical schools were consulted. Only one of them had a 'General Practice Teaching Unit'. Four had Departments of Social Medicine, four had Departments of Psychological Medicine, but in only three\* was there any indication

\* Edinburgh General Practice Teaching Unit had an almoner with the status of lecturer. Bristol had an almoner with the status of recognized teacher in social aspects of disease. Newcastle had three PSWs on the staff of the Department of Psychological Medicine.

that trained and experienced social workers were among the recognized teaching staff, although in another\* there was a non-medical lecturer in 'Psychiatric Social Studies'. In one there was a training course for Psychiatric Social Workers (PSWs); the Health Visitors Training was sponsored by another. This does not mean necessarily that the majority of medical undergraduates were allowed to remain in ignorance of the social aspects of disease, but it appeared that the emphasis in formal teaching of social medicine was on problems of community health, rather than on training how to recognize and deal with signs of individual stress and how to make use of social workers and their skills. While he remains in hospital the doctor can depend on somebody else, usually the almoner, to see that the appropriate services are used once the problem is suspected, but arriving in general practice he finds himself surrounded by social agencies and welfare organizations of whose exact terms of reference he is not sure, and whose staff are probably unknown to him, but who expect him to be able to call on their skill at the time most opportune for the patient. The family doctor may wish to be the leader of the domiciliary care team, the para-medical and ancillary workers may wish him to assume leadership, but it is unlikely that he will feel ready for this responsibility. In consequence, the team work is likely to be nominal rather than real. Some improvement might be achieved by better public relations, but this still places on the doctor the task of assessing the problem and deciding which service to use. There would seem therefore to be a case for making available to the family doctor a worker specially skilled in assessing and dealing with social problems associated with illness, and in the co-ordination of services. In the *College of General Practitioners' Journal* for August 1962 a family doctor wrote 'I personally feel the need for a helper who would have the time, where I have not, to research into the background of an individual's or a family's ill health. . . . There really is a mass of work which none of us can cover single-handed and which not done leads to much ill health and petty crime . . . which might never develop if its origins were discovered in embryo.'<sup>4</sup> This personal view is endorsed by experience in projects that have already been widely reported.<sup>5</sup> The, by now almost traditional, layman's opinion that 'general practice surgeries are key points at which a trained social worker can identify problems related to sickness . . . at the point at which they arise . . . is given in the *Younghusband Report*.'<sup>6</sup> A new slant, however, appears in Professor Roger Wilson's *Difficult Housing Estates*.<sup>7</sup> Pro-

\* Liverpool Department of Psychological Medicine.

fessor Wilson feels that not enough use is made of the family doctor as an acceptable link with social services, and that the 'respectability of ill health' is a fact insufficiently appreciated by social workers and doctors alike. Professor Wilson recommends the attachment of trained social workers directly to the family doctors.

There is general reluctance, however, to suggest how a social work service for family doctors could function in the setting of ordinary general practice. There is at present no indication of the demand on a national scale and no readily available information which would enable a calculation of the number of workers of varying degrees of skill likely to be required. Social workers are still a minority profession, and the trained caseworkers only a minority of that minority, so that a sufficiency of workers to meet the demand would be unlikely, unless there were simultaneously a major re-organization of services and a policy directed to greatly increased recruitment. It is possible also that insufficient thought has been given to the problems of relationship, communication, definition of rôles and understanding of basic principles, all of which would need to be met if a general practice tried to incorporate a social worker. The success of the Edinburgh General Practice Teaching Unit is so well known that there is a tendency to forget that it is only one unit, and that the team work which is apparently natural in Edinburgh is not likely to happen anywhere else without a great effort by all concerned.

There appears, then, to be a need for experimental work designed to give the answer to these questions.

## II. The Northtown Experiment

### The project

One such experiment took place in a provincial city between February 1961 and January 1962 when by means of a grant from the Nuffield Provincial Hospitals Trust, the co-operation of the Teaching hospital and the support of the local faculty of the College of General Practitioners, a trained and experienced almoner was seconded to work with an established group practice.

The aims of this project were fourfold.

1. To estimate the extent of the need for skilled social work (social casework)\* in a general practice of approximately 9,000 patients.
2. To survey the kinds of problem such a service might attempt to deal with.
3. To suggest the lines such a service might take.
4. To discover whether the provision of such a service might prevent breakdown in health and thereby prevent referral to hospital; and whether the use of the service as a supplement to existing after-care provisions could ensure the more economic use of hospital staff and facilities.

It was thought that the extent of the demand could be calculated by (a) providing a service for any patient who, in his doctor's opinion, was in need of skilled help with a medico-social problem; and (b) interviewing, with the intention of offering service, patients in categories selected because the known social and medical facts suggested that problems might already be present or might soon arise.

It was hoped that by studying both referred and selected patients it might be possible to assess how much of a personal problem associated with an illness was part of the disease and how much was characteristic of the patient; and also how far the doctor's awareness

\* Definition of 'Casework' from glossary of social welfare terminology prepared by International Conference of Social Work and quoted in Young-husband Report, para. 638, runs: 'Casework is a personal service provided by qualified workers for individuals who require skilled assistance in resolving some material, emotional, or character problem. It is a disciplined activity which requires a full appreciation of the needs of the client in his family and community setting. The caseworker seeks to perform this service on the basis of mutual trust and in such ways as will strengthen the client's own capacities to deal with his problems and to achieve a better adjustment with his environment.'

of social problems and the doctor/patient relationship affected the demand for service. It might also be possible to determine at what point in a medico-social problem skilled help could most usefully be employed, and particularly whether, by having the service available, preventive work could be undertaken.

It was thought that the lines such a service could take might emerge from an objective study of the almoner's work, particularly of the content of the problems brought to her notice, the degree of skill required to deal with them, the use made of other workers and services in carrying out the treatment plan and the end results. From this it might be possible to calculate what part of her service—advice, liaison, or skilled practice—was most used by doctors and patients.

It was felt that no more than a guess could be made as to whether one almoner, in one general practice in a city of 250,000, could effect any saving of the hospital service, but other local surveys<sup>8</sup> had indicated that social problems often prevented patients from making the best use of hospital facilities. It was hoped that when a problem was thought to exist for a patient requiring hospital care, a social report to the consultant or almoner might be of help to both staff and patient.

*The Practice* was a second generation establishment. Originally (1920) a single-handed practice, it had by 1961 developed into a partnership of four men between the ages of 30 and 50 years, which served an area of some 20 square miles in the north-eastern section of the city and in the counties beyond. The base surgery was by then at the town end of the practice, but there was a branch surgery on a municipal housing estate which extended to the county boundary. The practice illustrated in miniature the growth of the city and it was hoped that the range of medico-social problems would give some indication of the needs of a modern community. The partners were all local men, while the non-medical staff had all lived in the practice area for most of their lives. The area felt a proprietary interest in the practice personnel, the practice exercised a paternal government over the area. This relationship made the establishment of the project comparatively easy. There was no room for an almoner's office in the practice premises so the work proceeded on the basis of a weekly visit for consultation and discussion, with interim contact by letter and telephone. The administrative centre of the project was at the teaching hospital but on one half day each week patients in the routine categories were interviewed at the surgery. Referred patients were always interviewed at home. Other social workers were invited

to the surgery on this day for discussions with the almoner or doctors. All the secretarial work and much of the recording was done at the hospital by the almoner's clerk. There was no advance publicity, and although all patients seen were asked if they were willing to co-operate in an experimental project, the research aspect of the scheme was kept in the background until the end of the year's practical work.

### **The selection of patients for study**

There were fifteen categories of patients for study.

- A. Patients considered by the doctors to have problems 'requiring systematic help from a trained social worker', or 'of special difficulty requiring a caseworker's skill in assessment and solution'.
- B. Patients whose names were already on the City or County register of Permanently Handicapped Persons.\*
- C. Patients whose medical condition necessitated restricting their free choice of activity—Cardiacs, Epileptics, Diabetics.
- D. Patients whose medical problem was complicated by advanced age (70+).
- E. Patients awaiting admission to hospital.
- F. Patients awaiting outpatient consultations in the Departments of Medicine, Gynaecology, Dermatology and Psychological Medicine.
- G. Patients discharged from a hospital where there was no almoner.
- H. Patients with a newly established diagnosis of progressive or malignant disease.
- I. Patients whose demand for medical care appeared to be excessive.
- J. Patients who appeared to react with more emotion than sense to a medical situation.
- K. Families where the mother or breadwinner was removed by death or long-term illness.
- L. Patients referred by the hospital almoners because the need for social care persisted after discharge from medical treatment.

\* Category B was dropped because of the difficulty of identifying patients from the practice on registers of some thousands of names.

- M. A new and unrelated problem in a patient already known to the almoner.
- N. Relatives of known patients who had problems of their own.
- O. Miscellaneous problems.

The partners were to be responsible for identifying categories A, D, I, J and K; the almoner for selecting, from correspondence arriving at or leaving surgery, categories C, E, F, G, H. Categories M and N might refer themselves, Category O was included to cover referrals from non-medical sources. Complete coverage was impossible. In the patient's interests correspondence could not always be delayed until the almoner had seen it, while the pressure for medical treatment during the two very busy winters of 1961 and 1962 undoubtedly meant that some patients who ought to have been referred were missed. In all, 319 situations were examined of which 147 had been referred by the doctors and 172 were either selected by the almoner or referred from elsewhere. No patients were considered to be 'reacting with more emotion than sense' and only 4 to be making inordinate demands for treatment. Only 1 was referred from the teaching hospital. 5 of the 7 relatives and all the patients with second problems were referred by the doctors as were 6 patients awaiting admission, 6 waiting for appointments, 3 discharged from a hospital with no almoner and 6 who had malignant disease.

The distribution between the categories may be summarized thus.

**Table I**  
**Distribution of patients between categories**

Category	Referred	Selected	Total	Category	Referred	Selected	Total
A	71	—	71	I	4	—	4
C	9	31	40	K	1	—	1
D	28	—	28	L	—	1	1
E	6	57	63	M	7	—	7
F	6	27	33	N	5	2	7
G	3	43	46	O	—	2	2
H	6	10	16				
Total Referred . 146			Total Selected . 173				

A patient first counted in a selected category was later referred with the same problem and was subsequently counted in the referred columns.

## The patients in the sample

Fifty-one patients whose names were included in the project register did not wish to be interviewed but some information about them was available and was included in the calculation. The figure for 'Don't Know' is therefore variable.

## Age

One hundred and forty-eight of the 287 about whom information was available were in the age group 41-70; 44 were between 71 and 100, two being over 90; 95 were less than 40 years

**Table II**  
Age range of patients

Category	Don't know	0/20	21/30	31/40	41/50	51/60	61/70	71/80	81/90	91/100	Total
A .	7	6	8	7	16	9	13	3	2	0	71
C .	1	3	5	5	5	12	6	3	0	0	40
D .	4	0	0	0	0	0	7*	8	7	2	28
E .	6	10	7	7	17	5	9	2	0	0	63
F .	0	5	6	4	5	6	6	1	0	0	33
G .	13	3	2	8	4	4	7	4	1	0	46
H .	1	0	0	0	1	3	5	5	1	0	16
I .	0	0	0	3	0	0	0	1	0	0	4
K .	0	0	0	1	0	0	0	0	0	0	1
L .	0	0	0	0	0	1	0	0	0	0	1
M .	0	0	0	1	1	1	2	0	2	0	7
N .	0	1	1	0	1	1	1	2	0	0	7
O .	0	0	0	2	0	0	0	0	0	0	2
Total .	32	28	29	38	50	42	56	29	13	2	319

\* Patients thought to be prematurely 'aged'.

of age. Although the biggest concentration (17) of the over-70 age group was in Category D, the majority (27), was drawn from other sections, notably the priority category A (5) and those with malignant conditions (6). Thirty-eight of the 41-70 group were considered to have problems needing skilled help, so that more than half of category A was in this age range. A further 31 patients aged 41-70 were awaiting admission to hospital—again half the category. Nine of the 16 patients with malignant disease and 4 of the 7 with second problems were in this age range. Although there were 28 patients under 20 years of age, there were only 15 children, and only 2 of these were referred in category A. The remainder were awaiting admission or out-patient appointment. One possible reason for the small number of



children referred was the strength of the liaison with the Paediatric Unit at the teaching hospital. Children who did not respond readily were referred for a consultant's opinion and a number of these became known to the hospital almoners.

### Sex and civil state

There were 108 males and 211 females in the project. There was no information about 12 men; of the remaining 96, 62 were married, 10 were widowers and 4 separated or divorced. Of the 20 listed as single, 6 were children under 15 and 3 more were still at

**Table III**  
Sex and civil state of patients

Category	Male							Female					
	Single	M'd	W'd	Div'd	Sep'd	Don't know	Total	Single	M'd	W'd	Div'd	Sep'd	Total
A	1	11	3	-	-	-	15	16	24	13	-	3	56
C	1	12	1	-	-	2	16	3	17	4	-	-	24
D	2	3	2	-	-	-	7	3	5	13	-	-	21
E	7	13	2	1	-	5	28	7	23	4	-	1	35
F	6	5	-	-	3	-	14	4	15	-	-	-	19
G	2	11	-	-	-	4	17	2	23	4	-	-	29
H	-	3	1	-	-	1	5	1	6	4	-	-	11
I	-	1	-	-	-	-	1	2	1	-	-	-	3
K	-	-	-	-	-	-	-	-	-	1	-	-	1
L	-	-	-	-	-	-	-	-	-	1	-	-	1
M	-	2	1	-	-	-	3	1	1	2	-	-	4
N	1	-	-	-	-	-	1	-	3	3	-	-	6
O	-	1	-	-	-	-	1	-	1	-	-	-	1
Totals	20	62	10	1	3	12	108	39	119	49	-	4	211

school. Most men and boys were identified in the routine categories C, E, F, G, where they represented a third to half of the totals. In all other categories they were greatly outnumbered by women. Twenty-one of the 28 'elderly' patients were women, as were 56 of the 71 with problems needing skilled help and 11 of those with malignant disease. Three of the 4 surgery nuisances were women, also 4 of the 7 with second problems, and 6 of the 7 relatives; 119 of the women patients were married and these formed the majority group in each category, but of the 49 widows, 13 were felt to have difficult problems and 13 more were referred by reason of age. Three of the 4 women living apart were referred on account of difficult problems. Among the 39 'single' women there were 3 small girls, 2 of whom were

referred in category A while the third was in category F. The remainder were over school-leaving age; 4 of the single women with difficult problems were illegitimately pregnant, a further 4 were aged.

### Economic and social circumstances

Only 83 of the patients interviewed were in gainful employment at the time; 19 patients about whom there was no information were more likely to have been working than not. Of the 217 patients not employed, 104 were married women dependent on their husbands,

Table IV  
Economic and social circumstances

Category	Gainfully employed							Total	Not gainfully employed						Total
	Social class of work								Chldn. and Studs.	M'd w'n	W'ds (60)	Sick	Ret'd	Other	
	1	2	3c	3m	4	5	No inf.								
A	-	3	4	3	3	-	-	13	2	22	5	15	13	1	58
C	-	1	6	4	2	-	5	18	0	15	-	2	5	-	22
D	-	-	-	-	1	-	-	1	-	7	-	-	20	-	27
E	2	3	10	6	2	-	8	31	8	16	-	1	6	1	32
F	-	4	7	4	1	-	1	17	3	11	-	-	2	-	16
G	1	1	4	3	-	1	4	14	2	21	-	2	7	-	32
H	-	1	-	-	-	-	1	2	-	6	1	2	5	-	14
I	-	-	-	1	-	-	-	1	-	1	-	1	1	-	3
K	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-
L	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-
M	-	-	1	1	-	-	-	2	-	1	-	-	4	-	5
N	-	-	1	-	-	-	-	1	-	3	-	-	3	-	6
O	-	-	-	-	-	-	-	0	-	1	-	1	-	-	2
Total.	3	13	33	23	10	1	19	102	15	104	6	24	66	2	217

66 patients had retired from work at the normal age; a further 24 were sick and receiving benefit. There were 6 widows of less than 60 years old, and 2 unsupported women who drew National Assistance allowances. There were 15 children and students dependent on their parents. Fifteen of the 24 who were sick were referred with difficult problems; 13 of those retired also came in this category. The employment of most of those who were working (56), placed them in the Registrar General's Social Class III, there being 33 non-manual and 23 skilled manual workers. There were 13 patients employed in Social Class II and 3 in Class I; 10 in Social Class IV, 1 in Class V. The 3 Class I subjects were seen in routine categories but 3 of the 13 in Class II

were referred with difficult problems; 7 of the 56 working in Class III were referred in category A as were 3 of the 10 in Class IV, but for the most part those patients who were working were seen in the routine categories.

*The impression of the practice* given by the project sample was of a group of middle-aged to mature citizens employed in 'middle class' jobs, of whom less than a quarter (71) had personal problems affecting their health which in the doctors' opinion needed skilled help towards solution, while just more than a quarter (76) seemed to have problems more directly associated with medical need. Of those with difficult problems the majority (58), were persons of dependant status, half of these being dependant by reason of sickness or age.

A 5 per-cent sample of the total lists examined after the practical work was over did not, however, confirm this impression, since it contained 24 per cent children under 17, a further 38 per cent of respondents under 40, and 40 per cent aged 41-70. Of the 80 per cent over 70 years of age none was more than 90 years old. The sexes were more evenly balanced in the 5 per cent sample (41 per cent men, 59 per cent women) and there was nobody who admitted to divorce or separation. Again, the 5 per cent sample contained 8 per cent of male respondents employed in Social Class I and a further 18 per cent in Social Class II. There was also a total of 16 per cent women gainfully employed in Social Class II. It is true that 39 per cent of the men and 61 per cent of the women who were employed had jobs in Social Class III and that 15 per cent of adults were not employed at all, but the practice was in fact more economically prosperous than the project patients appeared to show. No account was taken of private patients in either the project or the sample, but if these had been considered the proportions of the practice in Social Classes I and II would probably have been even higher.

### **Medical conditions**

A diagnosis was available for every patient in the project whether interviewed or not, and almost all the divisions of the International Classification of Disease were represented in the conditions being treated. The largest number of patients (57), had diseases of the circulatory system; 30 of these were included in the routine category C (choice of activity restricted by medical need) but 7 patients with difficult problems and 1 of the 'surgery nuisances'

had a cardiac disease. Thirty-seven patients had diseases of the central nervous system; 9 of these were known epileptics, but of the 10 patients with neurological disease who were thought also to have difficult social problems, 4 had had strokes while 6 had acute conditions. The 6 over-70s with neurological disease had had strokes, while the 5 waiting for admission had either multiple sclerosis or

**Table V**  
**Classification of medical conditions**

		<i>Main divisions of International Code</i>															
<i>Category of origin</i>		I	II	III	V	VI	VII	VIII	IX	X	XI	XII	XIII	XVI	XVIII		
		<i>Infective and parasitic</i>	<i>Neoplasm</i>	<i>Allergic endocrine nutritional and metabolic</i>	<i>Mental and psychoneurotic</i>	<i>Nervous system</i>	<i>Circulatory system</i>	<i>Respiratory system</i>	<i>Digestive system</i>	<i>Genito-urinary system</i>	<i>Pregnancy</i>	<i>Skins and cellular tissue</i>	<i>Bones, joints and organs of movement</i>	<i>Undiagnosed and ill defined</i>	<i>Accidents</i>	<i>No medical need</i>	<i>Totals</i>
A	.	-	1	5	19	10	7	2	1	-	6	-	4	11	1	4	71
C	.	-	-	1	-	9	30	-	-	-	-	-	-	-	-	-	40
D	.	1	-	3	2	6	5	3	-	2	-	-	5	-	1	-	28
E	.	2	4	2	1	5	8	6	12	15	-	-	1	7	-	-	63
F	.	1	-	5	2	-	3	-	4	4	-	9	5	-	-	-	33
G	.	-	2	-	-	5	1	1	1	14	1	-	8	11	1	1	46
H	.	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	16
I	.	-	-	1	-	1	1	-	1	-	-	-	-	-	-	-	4
K	.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
L	.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
M	.	-	1	-	4	1	1	-	-	-	-	-	-	-	-	-	7
N	.	-	-	-	2	-	1	-	-	-	1	-	-	3	-	-	7
O	.	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
<b>Totals</b>		<b>4</b>	<b>24</b>	<b>17</b>	<b>31</b>	<b>37</b>	<b>57</b>	<b>12</b>	<b>20</b>	<b>35</b>	<b>8</b>	<b>9</b>	<b>18</b>	<b>39</b>	<b>3</b>	<b>5</b>	<b>319</b>

Parkinsonism. Four of the 5 who had left a hospital with no almoner had had strokes. The 5th had an eye disease. Most of the 35 patients with genito-urinary conditions were women waiting for gynæcological investigation or treatment, or just discharged following one of these. The 2 outstanding groups were the 31 patients with mental and psychoneurotic disorders and the 39 with undiagnosed and ill-defined conditions. Nineteen of the mental illness group were thought to have difficult social problems; 8 of these, 3 women and 5 men

were already well known to the Mental Health Service, 4 had a history of disturbed behaviour, but the remaining 7 had no known history of instability and it was the persistence of a social problem rather than a medical condition which brought them to the almoner. Eleven of those with ill-defined conditions were also thought to have difficult problems and here the history indicated that medical excuses were found for bringing a social problem to the doctor's notice. The remainder of the 39 were patients whose medical need had not fully been assessed and who were seen in the routine categories. Almost half the patients with difficult problems, therefore, had either some form of mental illness or an organic condition that was not easily assessed while, of the remainder in category A, the majority had either cardiac or neurological disease. It seems then that there is a relationship between social difficulty and illness that does not easily respond to treatment.

**Table VI**  
**The doctors' classification of their referrals**

Category of origin	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Social assessment for diagnostic purpose	Reinforcement of medical advice	Help to patient in managing illness	Help to relatives in care of patient	Help to patient in rehabilitation	Environmental problem contributing to illness	Environment impeding recovery	Environmental problem resulting from illness	Environmental problem brought to light by illness	Personal problem contributing to illness	Personal problem impeding recovery	Personal problem resulting from illness	Personal problem brought to light by illness	Not referred by doctors
A <sup>1</sup>	1	—	11	16	8	16	3	1	3	7	1	5	2	—
C	—	—	3	3	1	—	1	—	—	1	—	—	—	31
D <sup>2</sup>	—	1	12	6	1	2	2	1	2	2	—	—	2	—
E	—	—	2	3	—	—	—	—	—	—	—	—	1	57
F	—	—	3	—	—	—	—	—	—	2	1	—	—	27
G <sup>3</sup>	—	—	—	1	1	1	—	—	—	—	—	—	—	43
H	—	—	3	4	—	—	—	—	1	—	—	—	—	10
I <sup>4</sup>	—	—	1	2	1	—	—	—	—	1	—	—	—	—
K	—	—	—	—	—	—	—	—	—	1	—	—	—	—
L	—	—	—	—	—	—	—	—	—	—	—	—	—	1
M	—	—	2	2	1	—	—	—	—	1	1	—	—	—
N <sup>5</sup>	—	1	1	—	—	1	1	—	—	—	1	—	—	2
O	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Total . .	1	2	38	37	13	20	7	2	6	15	4	5	5	173

<sup>1</sup> Three patients had 2 problems.

<sup>2</sup> Four patients with 2 problems.

<sup>3</sup> Two patients with 2 problems.

<sup>4</sup> One patient with 2 problems.

<sup>5</sup> One of the 2 selected patients in Category N was later referred by a partner and was transferred to the referred section from then on.

## The problems identified by the doctors

Of the 71 difficult problems referred by the doctors, 16 concerned help for relatives in the care of the patient and a further 16 an environmental problem thought to be contributing to ill health. Eleven patients were thought to need help in the management of their illness and 8 to need help in re-establishment following illness; 7 were considered to have personal problems contributing to illness. Compared with the whole series it seems that the doctors considered that 8 out of 13 rehabilitation problems were difficult; 16 out of 20 environmental problems and all the personal problems resulting from illness were graded as difficult, but of the other possibilities about half were thought to need the almoner's special skill.

**Table VII**  
Assessment of referred problems compared

Category of origin	Full agreement all three	Doctor and patient	Doctor and almoner	No agreement	Total
A . . .	17	11	14	29	71
C . . .	3	—	—	6	9
D . . .	10	3	10	5	28
E . . .	2	1	2	1	6
F . . .	2	—	2	2	6
G . . .	1	1	1	1	3
H . . .	1	—	3	3	6
I . . .	1	1	1	2	4
K . . .	1	—	—	—	1
M . . .	4	—	2	1	7
N . . .	1	1	2	1	5
Totals .	40	18	37	51	146

## Difference of opinion as to content of problem

The patient, the doctor and the almoner did not always agree on the content of the referred problems. This was particularly true of the difficult group when all three parties differed on 29 problems and agreed on only 17 of the 71. In 11 situations the doctor and patient agreed, in a further 14 the doctor and almoner agreed. There was no agreement about 6 of the 9 category C problems but there was less argument about the problems arising in other categories. Sometimes the recorded disagreement was an academic point only, the patient being unfit to express his views, but more usually the dis-

agreement was on the cause of the presenting problem. For example, a woman illegitimately pregnant might be regarded by the doctor as having a series of problems caused by illness, while the almoner felt that the pregnancy was a manifestation of a long standing maladjustment and should be coded as 'Personal problem contributing to illness'.

### Problems found in the routine categories

Not all the problems were identified by the doctors. Among the 172 patients selected for routine interviews there were 73 who felt they had a problem connected with medical need including 6 who had more than one problem. Forty-six patients said they had no problems, but the almoner thought that 6 of these had difficulties but were unwilling to take help; 53 patients in routine categories were not interviewed in person but the mothers of small children were seen.

Forty of the problems presented for the almoner's attention concerned some aspect of the illness itself—for example, 5 patients with cardiac disease who resented their decreasing capacity for effort and 6 women with gynaecological disorders who feared malignancy. Four were anxious about the content of treatment and 3 needed some help in planning admission. Work problems and financial difficulties each absorbed 6 patients, 8 said they had housing difficulties and 8 more had relationship problems which they felt had a direct bearing on their illness; 12 were worried about another member of the family and the effect their own illness would have on that person.

**Table VIII**  
Selected patients who had problems

Category of origin	Illness	Work	Money or other material	Housing	Family	Relationship with others	No problem	Not interviewed
C <sup>1</sup> .	5	3	2	3	3	2	7	8
E .	14	-	2	3	3	2	16	17
F .	9	-	-	-	1	-	10	7
G <sup>1</sup> .	8	2	1	1	4	2	9	18
H .	2	-	-	-	-	1	4	3
L <sup>2</sup> .	-	1	1	-	-	-	-	-
N .	1	-	-	-	-	-	-	-
O <sup>2</sup> .	1	-	-	-	1	1	-	-
Totals	40	6	6	7	12	8	46	53

<sup>1</sup> Two patients had 2 problems

<sup>2</sup> One patient had 2 problems.

For the most part the patient and the almoner agreed about the problem, although it seemed likely that 5 patients who felt that illness was directly responsible for some problem had difficult relationships to contend with, and that 3 of the patients with money worries could help themselves by a change of job, while family difficulties might be at the bottom of 3 housing problems. All the presentations of problems were extremely practical and it was not until the patient had assessed for himself the almoner's willingness and capacity to help that the underlying difficulties were discussed.

### The needs to be met

The needs of patients who had problems seemed to fall into three broad groups: (1) Personal, which included relief of anxiety as well as services like Marriage Guidance or direct help with a financial

**Table IX**  
**Distribution of main needs**

Total patients	Category	Personal		Treatment		Rehabilitation		None
		One need	More	One need	More	One need	More	
71 . . .	A	22	31	38	11	6	6	8
40 . . .	C	10	6	10	4	6	-	21
28 . . .	D	13	6	12	5	2	-	4
63 . . .	E	13	4	18	3	2	-	35
33 . . .	F	8	1	17	-	-	-	16
46 . . .	G	10	3	8	2	4	-	29
16 . . .	H	5	3	3	2	1	-	8
4 . . .	I	1	2	2	-	1	-	1
1 . . .	K	0	1	-	-	1	-	0
1 . . .	L	1	-	-	-	1	-	0
7 . . .	M	4	3	4	2	1	-	0
7 . . .	N	4	2	3	-	1	1	1
2 . . .	O	1	1	2	-	1	-	0
319 . . .		92	63	117	29	27	7	123

problem; (2) Prevention, Treatment, Care and After-care; and (3) Rehabilitation, Education and Employment. Many patients had multiple needs; 63 had more than 1 need in group 1, 28 more than 1 need in group 2, and 8 more than 1 need in group 3. Single needs in the various groups were experienced by

- 92 patients . . . . . 1 personal service
- 117 patients . . . . . 1 treatment service
- 27 patients . . . . . 1 rehabilitation service



123 patients including the 51 never seen were assessed as being without need in any group.

The distribution of needs within the groups was as shown in Table X. All established needs having been recorded.

The greatest needs in the personal group were for relief of anxiety, clarification of the problem and adjustment to its nature. Most patients whose problems had been graded as difficult by the doctor needed all three of these before any attempt at solution could

**Table X**  
**Main needs to be met**

<i>Personal</i>	<i>Prevention, Treatment, etc.</i>
Relief of anxiety . . . . . 56	Facilitate treatment . . . . . 92
Clarification of problem . . . . . 66	Plans for after-care . . . . . 16
Adjustment to problem . . . . . 47	Convalescence or holiday . . . . . 11
Marriage guidance . . . . . 3	Independence gadgets and medical equipment . . . . . 7
Legal aid . . . . . 3	Domestic help . . . . . 21
Material help . . . . . 28	Care of dependants . . . . . 16
Miscellaneous personal service . . . . . 20	Residential care . . . . . 10
Housing . . . . . 23	Health visitor . . . . . 5
More than 1 need . . . . . 63	Community care . . . . . 1
	More than 1 need . . . . . 29
<i>Rehabilitation, Education, Employment</i>	
Diversional activity . . . . . 14	
Work at home . . . . . 1	
Rehabilitation centre . . . . . 3	
Further education . . . . . 2	
Vocational guidance . . . . . 4	
Assessment of I.Q. . . . . 1	
Assessment of skills . . . . . 0	
Adaptation of job . . . . . 3	
New job . . . . . 18	
More than one need . . . . . 7	

be made. 'Facilitate treatment' covered a variety of services from an explanation of the hospital appointments system to a discussion with a doctor as to whether psychiatric consultation would help a patient and then persuading the patient to accept the opportunity. Rehabilitation needs were usually met more directly by enlisting the co-operation of either the Ministry of Labour or the Department of Welfare.

Category A patients (difficult problems) had most needs of any kind but, except among the patients awaiting admission or con-

sultation' who needed help in arranging treatment, most patients were more in need of a personal service than of some facility already provided by the community.

### The degree of skill required to meet the needs

It was soon obvious that the doctor and the almoner differed in their assessment of where skill would be most needed, and that some of the situations which had impressed the doctors as difficult were by the almoner's standards quite straightforward. On the other hand, problems which appeared simple to the doctors might seem to the almoner to contain a number of subsidiary issues which diminished the prospect of complete or speedy solution. The almoner also felt that the doctor's assessment of the patient on a personal basis—particularly whether he would appreciate help—sometimes coloured the picture and that some situations were referred as 'difficult' as a means of enlisting priority of effort. Since the practicability of a social work service for family doctors would depend as much on the intensity of service required as on the numbers referred, an attempt was made to assess the degree of skill used in helping patients who had problems. The Younghusband Committee had suggested that there were three grades of professional activity likely to be required in the health and welfare services.<sup>6</sup>

1. Straightforward help with a practical problem, such as could be given by a worker without special training.
2. Systematic help with more complex problems from a worker with some degree of training.
3. Skilled casework for patients with problems of special difficulty.

On this basis the problems referred and discovered were graded:

1. 'Practical' . . . . .	41
2. 'Complex' . . . . .	77
3. 'Casework' . . . . .	87

This was necessarily a partially subjective assessment but as it was made at the end of the period of practical work it was based on the actual work done. Briefly the assessment was made on the following lines:

1. A problem for which there was a readily available service which the patient was willing and able to use was graded 'Practical'.
2. Problems which seemed at first to be of uncertain content, but which on clarification seemed capable of being met by a provided service or a combination of services and agencies, were graded as 'Complex'.
3. Problems for which there was no readily available solution or which were complicated by the patients attitude to them, or lack of capacity for understanding them, or lack of ability to deal with the sources of help, were graded as requiring 'Casework'.

**Table XI**  
**Classification of problems by skill required**

Category	Practical	Complex	Casework	No problem	*No assessment
71 . A .	6	20	38	—	7
40 . C .	7	8	6	11	8
28 . D .	3	18	5	2	—
63 . E .	15	8	7	21	12
33 . F .	3	9	6	10	5
46 . G .	5	6	6	12	17
16 . H .	2	3	4	4	3
4 . I .			3		1
1 . K .			1		
1 . L .			1		
7 . M .		2	5		
7 . N .		3	3		1
2 . O .			2		
319 . .	41	77	87	60	54

\* These were the patients who refused interview plus 3 who were not seen in person, but helped indirectly.

Among the difficult problems referred in category A the almoner found only 38 which she considered needed a casework service, but among the other categories were 49 casework problems, 28 referred by the doctors and 21 presented by the patients. Five of the 7 second problems, the 2 referred from outside the practice, 3 of the 4 which concerned the 'surgery nuisances', and 4 of these affecting patients with malignant disease, also 3 affecting relatives, all needed casework. The complex problems, however, were more

evenly distributed; 20 of the so-called difficult problems were by the almoner's standard, 'complex'. The patients in category E, however, seemed to have mostly practical problems.

The 38 patients in category A who needed casework were mainly the younger people, 12 being under 30 and 5 in their teens; 19 were not gainfully employed but of those working, 3 were employed in Social Class II and 6 in Social Class III. The breadwinners of 2 female patients were in Social Class I. This suggests that medico-social problems needing the help of a trained caseworker are not necessarily confined to the less educated or less prosperous sections of society.

In the 28 casework problems among the non-priority referrals there seemed to be a stronger medical component. The 3 'surgery nuisances' each had a genuine medical need but they were disabled out of all proportion to that need. Four patients were thought to have stress backgrounds to a medical situation, while the condition of 12 patients was deteriorating rapidly and it seemed that the doctors were personally affected by the deterioration. The remainder of the 28 patients had no resources to meet a medico-social need but found it difficult to accept the necessity for outside help.

The common factor among the casework problems presented by the patients was bewilderment, since some process either medical or social was going on round them which they did not fully comprehend. They had not considered asking the doctor for help, and, until the almoner's interview, had nobody else available. Of this group 16 either worked in or depended on a worker in Social Class III and had quite strong feelings about using public services although they were well aware of their existence. By contrast the category A patients who worked in Social Class II seemed glad to use services once they were aware of them.

### **The services used to help the patients**

Trained caseworkers were in very short supply at the time of the project. There was only one other almoner working outside the teaching hospital group, and in the city area, caseworkers were limited to the Probation Service and the section of the Health Department which dealt with sub-standard families. In the county there were trained child-care officers but no caseworkers in the public health field. The burden of the social services therefore was carried by workers without a recognized professional training in social work, so it was not surprising that the attitudes and techniques of a case-

worker\* were at first unfamiliar to both doctors and patients. All available services were used at some time during the year and the following Table XII summarizes the position. The family doctors were included in 'Central Government' to avoid creating another

**Table XII**  
**Services used**

<i>Central Government</i>		<i>Local Government</i>	
MPNI . . . . .	1	Health Dept. . . . .	28
Ministry of Labour . . . . .	15	Education ,, . . . . .	3
NAB . . . . .	18	Welfare ,, . . . . .	17
NHS (GP) . . . . .	132	Childrens ,, . . . . .	5
NHS Hospital . . . . .	118	Housing ,, . . . . .	11
NHS other . . . . .	3	Probation ,, . . . . .	1
Other ministry . . . . .	2	Other ,, . . . . .	2
No need . . . . .	143	None . . . . .	265
More than 1 . . . . .	86	More than 1 . . . . .	11
<i>Voluntary Organizations</i>		<i>Personal Agencies</i>	
Charity (National) . . . . .	7	Patients' family/friends. . . . .	68
Charity Local. . . . .	2	Doctors influence . . . . .	1
Subsidized Welfare Agency . . . . .	11	Employer . . . . .	5
Religious body . . . . .	15	*Almoner or her personal contacts . . . . .	318
Other . . . . .	6	Organization to which patient belongs . . . . .	2
None . . . . .	285	Other . . . . .	0
More than 1 . . . . .	6	None. . . . .	1
		More than 1 . . . . .	71

\* The Almoner was counted for all patients except one since even the non-co-operators had at least one letter written to them. The exception was a man who died a few hours after being referred, so no action was taken.

section in the recording code, and were only counted as a social service when they performed some function other than a strictly medical one, e.g. completing a form or writing a letter in order to obtain social service or taking part in a case-discussion with the almoner and other workers. It was found that although work with most casework problems involved the use of several services this was not always so,

\* Felix Biestek<sup>9</sup> outlines the following features essential to the practice of casework: The client's need to be treated as an individual, to have the opportunity to express his feeling, and to get sympathetic response to his problems. He also has the need to be recognized as a person of worth, not to be judged, to be allowed to make his own decisions, and the right to complete confidentiality. The caseworker is concerned to be sensitive to and understanding of these needs, and to respond in such a manner that the client is aware of the sensitivity and understanding.

whereas the problems graded as complex were more consistent in their need for the co-operation of several people or organizations. Practical problems were usually solved by one other person or service working in conjunction with the almoner.

### Final result

The project series was 'closed' on February 1st 1962 and an attempt was made to assess results by the state of the problems on that day.

The figures do not at first look at all impressive but most of the 12 problems graded 'I.S.Q. still needs help' had been referred only a few days earlier. The large number of 'Don't know, contact broken' was felt to demonstrate one of the weaknesses of the project—namely that the almoner was not sufficiently well integrated with

**Table XIII**  
**Final result**

No problem identified . . . . .	57
Patient solved for himself . . . . .	13
Improved, still need help . . . . .	52
Improved, case closed . . . . .	39
I.S.Q., still needs help . . . . .	12
I.S.Q., case closed . . . . .	7
Situation worse, case closed . . . . .	0
Situation worse, help possible . . . . .	8
No action possible . . . . .	0
Failed . . . . .	0
Patient died . . . . .	13
Moved away . . . . .	2
*Don't know, contact broken. . . . .	65
Dont know, contact never made . . . . .	51

\* This figure was later found to contain: (a) a number of people who moved house to a new estate; (b) two old people who had moved across the road from their original address.

the practice, that doctors and patients kept her informed automatically, neither was she sufficiently part of an organization that she had access to its 'grape-vine'. An office on the premises or more frequent visits to the practice might have avoided some gaps. More home visiting might have preserved the links with the patients, but it had been decided not to attempt 'routine follow-up visiting' by public transport. If patients were asked to keep in touch and then did not do so the record was graded as 'contact broken'. Attachment to a local authority service had never been considered, but it is possible that, had a request for sponsorship been made to one or more departmental

heads, some of the passive resistance, of which the almoner felt aware, might have been avoided. Most of the 'Contact broken' records referred to problems in the 'Complex' category, and the connection with services seemed to be weakest in relation to the locally organized services, in which the field workers sent and received their correspondence through a central office, but did not have any direct secretarial help or hold administrative responsibility. It was best with the central government services in which the executive officers were each responsible for his own correspondence. The discovery that the communication lines sagged when the almoner was not present, although disappointing, is probably as important for the future as more successfully concluded cases would have been.

### Length of time case active

Another factor which would influence the effectiveness of a social work service for family doctors would be the amount of work needing to be done at any one time.

Only 20 patients had needed continuous work throughout the year but on the closing date there were still 72 patients who still needed help.

**Table XIV**  
Length of time case active

Never . . . . .	59
One interview only . . . . .	91
Less than 1 month . . . . .	27
1-3 months . . . . .	70
4-6 months . . . . .	29
7-9 months . . . . .	23
10-12 months . . . . .	20

'Never' included the non-co-operators and the patients who were helped indirectly—the children and incapable invalids.

The caseload was increasing throughout the practical work and the almoner felt that with the existing working conditions it had almost reached endurance limit. More active liaison with the public services, e.g. by case regular conferences, might have reduced the amount of clerical work but would not have saved any time for the almoner, a car might have made visiting easier but would have added greatly to the expense, although it might have made an increased caseload tolerable.

**Table XV**  
**The caseload in successive months**

<i>Month</i>	<i>New cases</i>		<i>Carried forward cases</i>		<i>Total caseload</i>
	<i>Referred</i>	<i>Selected</i>	<i>Referred</i>	<i>Selected</i>	
February . .	21	9	—	—	30
March . . .	6	10	13	1	30
April . . .	13	18	22	1	54
May . . . .	5	12	29	5	51
June . . . .	12	6	32	8	58
July . . . .	16	20	42	10	88
August . . .	7	15	46	11	79
September . .	13	14	49	12	88
October . . .	15	16	53	12	96
November . .	10	18	58	9	95
December . .	8	15	60	9	92
January (1962) .	21	19	63	8	111



### III. Follow-up and Evaluation

#### The follow-up

The 72 patients whose problems were unsolved on February 1st, 1962, were followed up three months later. Attempts had been made before closing the project to find some source of continued help. Where there appeared to be no reliable source, the almoner had continued working 'unofficially'.

The 52 problems graded 'Improved, still needs help' on February 1st, were on June 1st graded thus.

Improved case closed . . . . .	13
I.S.Q still needs help . . . . .	7
I.S.Q, closed . . . . .	2
Situation worse, closed . . . . .	2
Situation worse, help possible . . . . .	6
Patient died . . . . .	6
Contact broken . . . . .	8

For the 12 with problems 'I.S.Q, still needs help' on February 1st the position was

Improved, closed . . . . .	4
I.S.Q, still needs help . . . . .	3
I.S.Q, closed . . . . .	1
Contact broken . . . . .	5

While for the 8 whose situations though deteriorating on February 1st did not seem irredeemable the position was

Improved, closed . . . . .	2
Worse, help still possible . . . . .	1
Contact broken . . . . .	3
Not assessed . . . . .	2

The 2 problems not assessed were first problems which had given place to other problems recorded in category M and were referred within the last few days of the practical work. These second problems had been graded 'I.S.Q, still needs help' on February 1st.

The cases which on follow-up seemed to have been most successful were those where either another caseworker had taken over without a break or the almoner had kept in touch. The least successful seemed to be those where the action was left to an organized service employing either untrained social workers or none at all.

Such a department, although it might be operating to its own satisfaction did not appear to feel any responsibility towards workers in other fields.

### Evaluation of the project

**The doctors** The four partners were asked to evaluate the work done for the patients they had referred, stating whether the expected service had been given and with what success, or, if it had not been given or was not successful, what in their opinion was the reason.

**Table XVI**  
Partners' evaluation

	<i>No. of Referrals</i>	<i>Service given successfully</i>	<i>Service not given</i>
Dr. A . . .	67	53	14
Dr. B . . .	16	6	10
Dr. C . . .	27	21	6
Dr. D . . .	20	15	5

The reasons most often stated for the service not being given were 'Family obstructive' or 'Patient refused help', although Drs. A and B felt that in a total of 3 cases the almoner's assessment had been at fault. In view of the disagreement about the original problems this final evaluation looks surprising but it seems likely that the doctor and caseworker were looking at different levels of the same problem. The doctor assessed the problem and the patient's need from what he saw. The almoner looked for the background to, and development of, the problem and assessed the possibilities of help from these factors.

**The patients** This evaluation was undertaken during September 1962 by means of a questionnaire and an independent interview. All referred patients and selected patients with problems were included in this sample. Fifty-six referred patients were known to be no longer available due to deteriorating health, removal or death, but from the 137 possible respondents 112 forms were recovered; 9 of the missing 25 were refusals, the rest had moved or were temporarily unavailable.

The questionnaire aimed at discovering what, if anything, the patients knew before February 1961 about the work of an almoner, whether the contact made during the project had been valuable to them and if so for what reasons.

Only 29 respondents (26 per cent) had any previous experience of the work of an almoner, having met one during a previous illness

or in family illness. Of those without practical experience 50 (60 per cent) felt they knew all about almoners, mostly from reports by an acquaintance or from the hospital's explanatory booklet. Only 1 respondent admitted to annoyance at being referred, 69 (62 per cent) were either relieved or pleased, although 35 (31 per cent) were surprised; 54 (48 per cent) thought she could do something to help and 93 (83 per cent) found their first interview helpful. The reason most often given was 'somebody understood the problem' (42 respondents—37 per cent), or 'somebody understood me' (27 respondents—24 per cent), or 'felt less worried after talking things over' (40 respondents—36 per cent), or 'gave me confidence to help myself' (22 respondents—19 per cent). Seven patients who were not helped by the first interview were uncertain of its purpose, 3 doubted the almoner's ability to help, 2 did not want to be interviewed but did not like to refuse and 2 did not agree with the almoner's view of the problem. Fifty-nine patients (53 per cent) felt that the problem discussed had now been solved, 23 (20 per cent) that it had improved, 17 (15 per cent) could see no change but only 3 thought it was worse. Nine patients (11 per cent) of those whose problems were solved or improved thought this was not due to the almoner's work, but 37 more (45 per cent) felt that the almoner had been 'someone to turn to when necessary'; a further 35 (42 per cent) that she had 'organized the help'. Of the 20 whose problems remained unsolved 14 felt that nothing could have been done, 4 felt that more could have been done, 2 admitted giving up. Nobody felt that the advice given was bad or that the almoner was unsympathetic; 25 of the patients made voluntary comments, 21 of which were favourable.

### **Contact with public services**

An attempt was made to discover how many of the project patients became known to a public service for the first time. Fifteen patients were referred to the Ministry of Labour, 11 of whom had no previous contact; 8 of 71 patients drawing National Assistance in 1961-62 were new applicants. Eleven handicapped persons and 1 blind person were previously unknown to the City Welfare Department. Two new applicants for council house tenancies were placed in a priority category and subsequently rehoused; 5 households previously unknown to the Children's Department were given help. It appears therefore that 38 patients were put in touch with a public service that they might not otherwise have used.

## IV. Summary of Practical Experience and Comment

### Numbers seen, requiring and obtaining help

In one year 205 in a sample of 319 patients drawn from a practice of 9,000 required help with problems associated with medical need, 60 had no problems, 53 were not assessed; 87 of the 205 needed a caseworker. Seventy-seven needed trained but less skilled help, while 42 patients were helped by administrative action. Information obtained during the 5 per cent survey indicated, however, that there was a hidden population of patients needing help. Among 209 adults interviewed, 101 had been ill during 1961-62; 60 of these had had problems associated with the illness, 34 felt they had needed help, but only 20 obtained it. From the stories related it seemed likely that 8 of the 14 remaining would have needed casework.

The patient's attitude to the use of social services and the doctor-patient relationship sometimes decided which patients reached the almoner; 2 'relatives' were the only patients to solicit help, although nobody, once interviewed, refused help that was offered. The 51 refusals came at the preliminary stages. It seemed to the almoner that whether patients were referred or put in the priority category A depended not so much on medical need nor on the urgency of the social problem as on a value judgment based on the doctor's experience of them to date. Once the doctors moved out of the field in which they were expert, they acted like 'ordinary people' and referred the patients whom they liked or respected, those about whom they appeared to be upset; and those who seemed to them to be worthwhile. The limit of the doctor's resources might have been reached, but he still wanted to go on giving.

### The origin of the most difficult problems

Most patients with difficult problems were middle aged, and women outnumbered men. Women with homes broken by bereavement or desertion were particularly liable to have 'casework' problems, but there was evidence that any combination of circumstances which produced a state of insecurity or dependency was likely to cause trouble. Difficult problems were not necessarily associated with low income or lack of education, and there was some evidence to suggest that those with the advantages of education had greater expectations of themselves and were less tolerant of their own failures. Medical

conditions which led to a state of dependency or insecurity at a time when a normal person expects to have, and to be capable of holding, responsibility led to difficult problems of relationship. The patients with cardiac, neurological or mental disease were 'problem prone' while those whose social capacity had been diminished by mild, chronic indisposition, tended to take refuge in illness in times of crisis, and were reluctant to leave this haven. The problems which seemed most difficult to the doctors were those where the 'social diagnosis' was in doubt or where there was no recognizable way out. Patients, also, were greatly disabled by uncertainty, particularly medical uncertainty, or the feeling of being cut off from any source of help. The problems most difficult from the almoner's point of view were exacerbations (due to a medical situation) of a long standing maladjustment. The experience of the practical work suggests, therefore, that it is the patient and not the disease which affects the need for skilled help in a medico-social problem. It seemed also that although patients with 'casework' problems might need practical help or use public services at some stages, their greatest need was for a relationship that combined understanding, re-assurance, tolerant support during their indecision, and encouragement to persevere when their first efforts at self-help seemed likely to fail.

### **Could such a service be made to work?**

In a practice of 9,000 patients 87 people were found to need skilled help. If the incidence of need were constant (and this is highly unlikely) throughout a city of 250,000 inhabitants, there would be 2,415 patients needing a caseworker's help in any one year. This would fully occupy a staff of 8-10 caseworkers\* always supposing they were doing nothing else, were well supplied with transport and secretarial help and were supported by an established means of communication with doctors and public services. The biggest difficulty would be in filtering off the problem needing expert attention. The 21 non-referred patients who needed casework would obviously have gone unhelped if the almoner had not undertaken some routine interviewing. At present, social services are only available after breakdown has taken place, and the responsibility for recognizing the first signs of breakdown is too often carried by people other than trained social workers. In the project, the seeking of medical advice was sometimes the first indication of incipient social breakdown. If the

\* This represents two years output of the almoner's training course in the local university college.

help given in such situations is confined to meeting only medical need, the main problem may be left to grow in secret. Social workers are well aware that clients who are worried sometimes ask for a service that is available, even though it is inappropriate, in the hope that the worker will help them to obtain the right kind of service. It would be important therefore for a family doctor to have help in the filtering process. One way of providing this would be to give the doctors access to some kind of 'team service' which combined workers capable of giving simple and practical as well as highly skilled help. By operating on a case conference basis there would be less chance of difficult problems being missed by an unskilled or inexperienced worker.

The 'generic' approach is now accepted in social work training but has not yet reached social work practice. Although the unification of services is increasingly advocated, there is as yet no evidence to show that it would work.

### **Needs to be met**

The provision of an adequate social service for the patients of family doctors would appear to need several readjustments of policy and organization, particularly in relation to training for both medical practice and social work, and to public spending on the social services. There is also need for more experimental work. It seems that there is a place in medical training for a greater appreciation of the special rôle of the family doctor, and preparation to meet the additional responsibility of general practice. Social workers in training, other than those intending to be almoners, are not, for the most part, taught to appreciate medical factors in a social situation nor to look on the doctor as the head of a therapeutic team, and so are not adequately prepared to co-operate with GPs. Again, although intending social caseworkers train together in the university courses in 'Applied Social Studies', and workers from the public health and welfare services may rub shoulders during the National Certificate courses, they do not think of themselves 'generically' but as members of professional groups or departments, each with a limited sphere of action. In these circumstances, responsibility for the difficult, or possibly, unrewarding, patient can be more easily shelved than shared.

The public attitude to social services would also need to change. The services at present employing the most skilled workers are linked with either treatment of ill health or some form of social deviancy or inadequacy. There is as yet little appreciation of the

possibility that respectable citizens, ordinarily in good health, might be in need of skilled help with personal problems, although the growing appreciation of the importance of preventing mental illness may offset this lack in time. The welfare services of the local authorities, until recently, seem to have been based on the assumption that only a minority of the population would wish to use them so that spending has been less than adequate. The authority which can provide a home help *at once*, or has no waiting list for its old people's homes, is exceptional. More services, more workers, more salaries, mean more administration, and thereby more rates or taxation; so that a revision of the methods by which social services are financed might be involved at a comparatively early stage. Finally there is a need to continue with experimental projects until a service which has a chance of working, even in disadvantageous circumstances, has been evolved. One possibility would be to set up, in differing communities, experimental 'service teams' combining a number of health and welfare services and capable of dealing with a wide range of problems in breadth and in depth. If such teams worked in conjunction with a research project into social and economic trends some projection of future need might be made. The techniques of identifying problems and co-ordinating services could also be examined and the implications for training, staffing, and organization be better assessed.

★   ★   ★   ★   ★

'No man is an island' and a patient's problems inevitably react on his family and all who come into his sphere of influence. Social services, however, are still geared to meeting individual need and then only when it has become apparent. If 'prevention is better than cure' we need to know more about the factors which predispose to social breakdown; and to employ, in the public services, workers trained to recognize the need for help in all its manifestations, so that help can be given at the earliest possible stage.

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*Influences on prescribing habits in general practice*

# **The Assessment of Prescribing: A Study in Operational Research**

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# The Assessment of Prescribing : A Study in Operational Research

## I. Introduction and Background

During the past few years there has been a considerable increase in the numbers and quantities of proprietary drugs prescribed in the National Health Service. There has been some discussion about the reasons for this increase, but attention has principally been focused on the associated rise in cost to the National Health Service. Indeed Abel-Smith and Titmuss (1956) have pointed out that questions of cost have, since the establishment of the National Health Service in 1948, given rise to 'more critical discussion and controversy than any other single issue'. However, when discussing the factors which have contributed to this trend of rising costs for prescriptions, the Hinchliffe Committee has commented on the lack of knowledge about them and has suggested that many assertions about these factors are based on 'a superficial examination of the effects' (1959).

The Hinchliffe Committee has referred, in general terms, to a number of these factors.

GPs with large numbers of patients on their lists 'find it difficult to devote time to the examination of the relative costs of alternative prescriptions'; it is suggested that they prescribe a proprietary brand which has been 'impressed' on them by advertisement, rather than 'hunting up notebooks and formularies to pick out a standard preparation or an equivalent' (HMSO 1958). When considering the 'very considerable expense' which is incurred by drug manufacturers in the preparation and circulation of literature to advertise their products, the Committee asserted that 'their methods of salesmanship exert an important influence on many doctors' prescribing'. Practitioners were said to be faced with 'a bewildering variety of new products', which together with the existing brands amounted to some 5,000 or so proprietary preparations—'a proliferation . . . which tends to confuse the GP and to add to the pharmacist's burden' (HMSO 1959). Clearly, cost is not the sole, if indeed it is even the main line of enquiry which arises when the growing proportion of proprietary drugs prescribed by GPs is considered.

It is therefore reasonable to propose that some interpretation of current trends in other than purely pecuniary and economic terms would be of interest and value at the present time. How does a

doctor, for example, decide to prescribe one drug rather than another, in the light of what the Hinchliffe Committee called 'the dearth of impartial information on new drugs and preparations in convenient and readily accessible form which would enable him to assess personally the validity of the manufacturer's claims'? (1959.) How far is it true that the representatives of the drug houses 'are trained to inform doctors about new developments in therapy and to discuss the costs and relative advantages of different methods of treatment', and what is the significance of this training if its main purpose is for 'selling their firm's products'? To what extent is the pharmaceutical industry forced to compromise on its professional and 'ethical' services to doctors because of growing competition within the industry, both at home and abroad. Enquiries such as these are bound to arise as soon as attention is diverted from costs. It is evident from the correspondence columns of the medical journals that their importance has been recognized. However, as yet no serious attempt has been made to provide answers in numerical terms which are capable of being related to each other.

## II. Method of Assessment of the Factors which Influence Prescribing

When attempting to assess the importance of the factors which influence prescribing by doctors it is necessary first to identify and classify the factors and then to investigate how they are inter-related. To do this it is necessary to have some common objective value to which all the other variable factors, most of which are subject to a greater or lesser degree of personal bias, may be related. In the research described here the common objective value which may be affected by all the factors is *the total number of prescriptions issued for a particular item by the individuals in a sample of GPs*. The research problems of how to assign numerical measurements to the various factors which can be logically isolated, and which it is believed will affect the numbers of prescriptions, involves a planned programme of operational research. This operational research must be concerned with sociological, psychological, and statistical research procedures; it will also necessitate detailed pharmacological and therapeutic knowledge, and cognizance of the epidemiology in the area under study.

In purely formal mathematical language it is a matter of simple notation to write the formula:

$$y = f(x_1, x_2, x_3, \dots x_n)$$

where  $y$  = the number of items of a particular product prescribed, and is a function of the following:

$x_1$  = the comparative prices of equivalent alternatives

$x_2$  = the impact of consultants' advice

$x_3$  = the impact of advertising on GPs

$x_4$  = the impact of representatives' calls.

Etc. etc.

In any particular therapeutic class of drugs (e.g. penicillins) there will be as many values of  $y$  as there are separate brands of penicillin. In addition, the value of  $y$  for one preparation will have a different set of values of  $x_1, x_2$ , etc. to those for another brand of penicillin. By using all of the values of  $y, x_1, x_2$ , etc. a master equation can be derived. Supposing now that a new brand of penicillin is put on the market, if measurement is made of its  $x_1, x_2 \dots x_n$ , then it should be possible to predict  $y$ , the amount prescribed of the new product. That is, the problem is to provide an explanation for the number of prescriptions written for each drug in terms of a number of elucidated

variable factors, measured over a period of time. The importance of some of these variable factors was established in a subsidiary study (Wilson, Banks, Mapes and Korte, 1963a and b); their influence on prescribing was also suggested by letters and articles in the medical press. During the course of the research, information has been obtained, by a variety of methods, about those variable factors which induce a doctor to choose one drug rather than its therapeutic alternative. It is the main purpose of this paper to describe the choice and measurement of these variable factors for the analysis of prescribing practice and the assumptions which have been made about them.

### III. The Numbers of Items Prescribed ( $\gamma$ )

1. First of all, the meaning of the phrase 'preparation in a particular therapeutic class' requires amplification. When considering the preparations in particular therapeutic classes, it is widely acknowledged that any decisions regarding their therapeutic substitution, one for another, are often governed by empiricism rather than pharmacological knowledge of their individual modes of action. Also, although some preparations are identical chemically they are advertised for different clinical conditions; for example, although one phenothiazine preparation is stated to be a tranquillizer without any ambiguity, the preparation of another company, identical with the first in every respect except name, is also claimed to have anti-depressant properties. As a result it was most important to use a standard of reference for deciding on therapeutic alternatives. Such a reference was required to be as objective as possible. It was decided that the *Prescribers' Journal* provided this degree of objectivity. In as far as possible it has been used in this investigation as the standard of reference for selecting therapeutic alternatives.

2. Another problem was to decide how the precise value for the left-hand size of the equation could be obtained. Ideally this problem could be solved by asking the doctors in the sample to keep a record of all their prescribing of the drugs in a particular therapeutic class during a given period and at the same time to keep a record of their diagnoses. Similar work has already been carried out in one practice in this country (Eimerl, 1962), but we did not consider it practicable for a large sample of busy practitioners to do this over a prolonged period. It was decided that the most effective way of obtaining the required information would be to obtain permission to use the data from National Health Service prescriptions (EC10's) in the Executive Council area in which we were interested. The information from the prescriptions of a hundred doctors for a month is excessively difficult to handle because of its bulk. As a result it was decided that account would be taken of the numbers of occasions on which a preparation was prescribed, and not of the quantity of the preparation prescribed. This decision was also taken because it was considered that the variable factors would be more directly related to the number of occasions on which the preparation was prescribed, rather than to the quantity prescribed, which it was thought would be mainly determined by the precise nature of the patient's illness. Therefore the value of  $\gamma$  for each preparation in a given therapeutic

class was the sum of the prescriptions written by *all* the doctors in our sample during a given period.

It is emphasized not only in our own work, but also on behalf of any other independent body like ours which may pursue a similar type of research in the future, that EC10 data is treated with the utmost confidence and that the anonymity of the information which is obtained is scrupulously observed. It is stressed in the case of our investigation that this information is used only to obtain common objective values for the left-hand side of a mathematical equation.

3. The third task was to select a sample of doctors whose prescribing was to be analyzed and about whom other details could be obtained.

In general, research of this kind is not merely a matter of the statistical manipulation of EC10 data. The techniques of the social survey are also essential. A sample of doctors was selected by means of random tables and a pilot survey was conducted to test the strength and weaknesses of the questions which had been chosen for the interviews. This was followed by an interview programme covering 117 doctors.

For reasons of economy, of time and labour at the Local Pricing Bureau where the prescription sorting was carried out, an analysis of all the 117 doctors' prescriptions was not possible. Therefore, a random sample of 75 practitioners was selected. The total number of prescriptions written in a month by these doctors for a particular drug provides the value for the left-hand side of the equation.



## IV. The Importance of the Variable Factors

Assigning numbers to variable factors in this kind of research is always difficult especially if it is not clear from earlier investigations which factors are likely to be important. These factors can only be indicated by a suitably designed research project. The fact that compulsory medical education ceases one year after graduation from a medical school means that though post-graduate medical education may be one of the most important factors in determining the degree of success of the National Health Service, doctors may avail themselves of parts, little or none of it, during their post-graduate years. Doctors who graduated before or during the war received no instruction about the use of the major proportion of drugs which are employed today. The problem of identification and definition of the sources of knowledge which influence their prescribing was obviously of importance before the major task of measuring the factors could be commenced.

To learn about the importance of these sources, we carried out a pilot investigation using the services of 39 volunteer GPs (Wilson, Banks, Mapes, and Korte, 1963a and 1963b). Each doctor was provided with a form which he was asked to complete when he saw patients in his surgery. After deciding upon the diagnosis, the doctors were asked to indicate on the forms the sources from which they believed they had drawn their therapeutic knowledge when prescribing drugs. The doctors were asked to make their choices from nine specific sources :

1. Medical training; including medical school, hospital, GP.
2. Consultant advice; letters and domiciliary visits.
3. Textbooks.
4. Periodical medical journals, and articles.
5. British National Formulary: BNF
6. *Prescribers' Journal*.
7. Monthly Index of Medical Specialities: MIMS
8. Pharmaceutical companies; calls by representatives, advertisements, reference cards.
9. Discussion with GP colleagues.

The diagnoses from which the doctors were asked to choose before they decided on the treatment of their patients were selected from the list used by Backett *et al* (1954), and subsequently modified by Eimerl (1962).

Letters from British GPs (Binns, 1961; Hart, 1962; Rankin, 1962), an article which refers to the value of consultant advice in general practice (Bloor, 1963), figures from the managing director of a company which distributes medical mailings (Nicholls, 1962), and the analysis by Coleman, Menzel and Katz (1959) of the social processes which influence the adoption of new drugs by GPs, indicate that the sources which were selected included all the important origins from which British GPs might be expected to draw their knowledge, when writing prescriptions.

**Table I**

**Influence of sources of therapeutic knowledge on treatment of disease diagnosed by GPs**

	<i>Medical training</i>	<i>Drug Firms</i>	<i>BNF</i>	<i>Consultant advice</i>
Number of diagnoses*	19	11	4	2
Percentage of diagnoses* . .	95	55	20	10
Percentage use of source† .	33·6	28·8	27·0	34·3

This data is based on an analysis of 20 diagnoses.

\* Diseases in which more than 20 per cent of the information for treatment is derived from the named therapeutic source.

† Percentage use of source in those diseases shown in top row.

The results obtained from this investigation are summarized in Table I. It can be seen that the doctors derived most of their knowledge for treatment of disease from their medical training even though eleven of them had been admitted into the medical register before 1940, and twelve had been admitted between 1940 and 1950. Information from the pharmaceutical companies provided about 30 per cent of their information for the treatment of 55 per cent of the disease categories. The British National Formulary and Consultant advice were the only other two sources from which the doctors drew more than 20 per cent of their knowledge for the treatment of disease. The two conditions for which GPs looked to consultants for providing them with therapeutic advice were psychoses and non-infective skin conditions. The doctors in all three age groups depended on textbooks, periodical medical journals, *Prescribers' Journal* and MIMS together, for only about 10 per cent of their therapeutic sources.

Information was obtained from this investigation about the

relative influence of the different therapeutic sources on the doctor's prescribing. It showed the importance of the external factors which operate on the doctors, but it also gave some indications of the way in which their personal characteristics influenced their prescribing.

## V. The Diversity of the Variable Factors

A large number of factors can be enumerated which it is believed may affect a doctor's choice of a drug when he is writing a prescription for a particular patient. Many of these factors, such as information from pharmaceutical advertising, from Government-sponsored publications, from medical journals, from discussion with colleagues, or from consultant advice, operate externally on the GP, but the personal characteristics of the practitioners themselves determine to what extent these factors will affect the prescriptions which are written. By the use of various indirect measures and by direct questioning, it is possible to assess the potency of most of these external factors. However, it is more difficult to measure the individual personal characteristics of the practitioners which determine the effectiveness of the external factors in changing the doctors' prescribing habits.

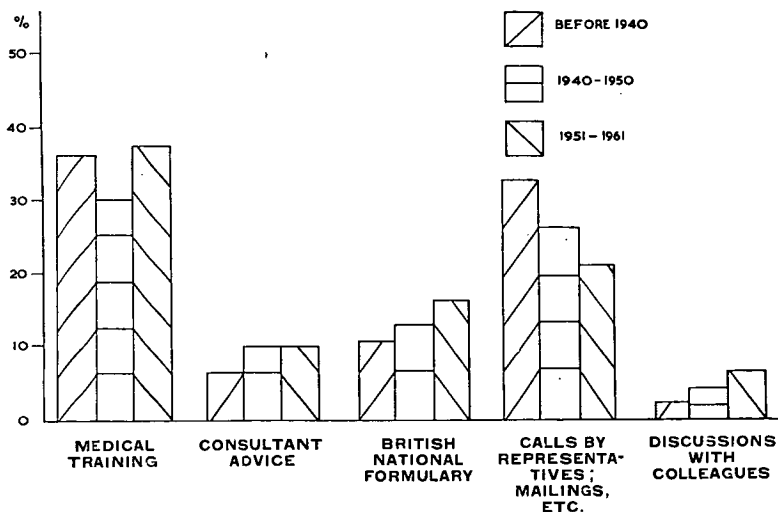


FIG. 1. Use of different sources of therapeutic knowledge according to date of qualification. The percentage use of the sources of knowledge by 39 GPs in Liverpool is indicated in the ordinate. The histograms represent the five principal sources of knowledge used by the practitioners in relation to their dates of qualification (Wilson *et al.*, 1963a).

Age, partnerships and practice size may all have important effects on doctors' prescribing. The pilot investigation indicated that the doctor's age does influence the extent to which he uses different therapeutic sources (Fig. 1). This factor has not been taken into

account for the analysis of the EC10 data in the present investigation, although it will be considered in our subsequent investigations. The pilot investigation also indicated that partnership characteristics influence the use of therapeutic sources by individual doctors and it is clear that practice size will affect the extent and probably also the quality of prescribing. Partnership formation and size of practice are both dependent on the idiosyncracies of individual doctors; such characteristics are of importance when considering the external factors which influence their prescribing and exact information about these characteristics is available. In the present investigation the practice size of individual doctors has been taken into account in measuring the effect of the external variable factors, but the effect of partnership has not been considered.

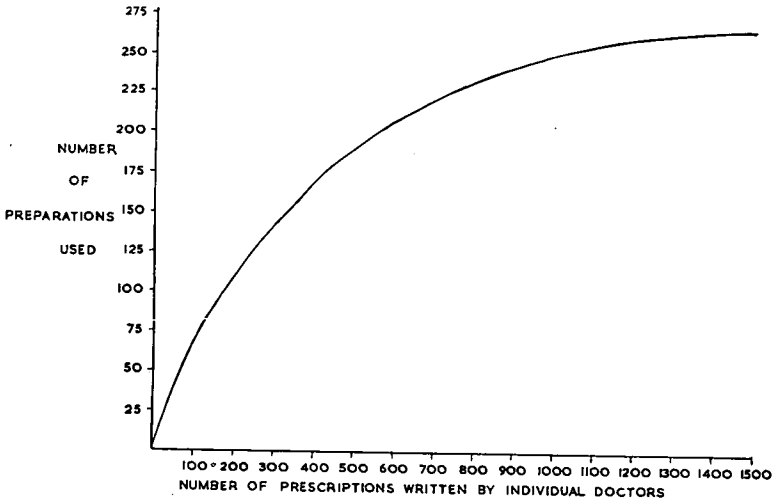


FIG. 2. The relationship between the number of prescriptions written by individual Liverpool GPs and the number of different preparations from which these prescriptions were drawn. Sample size: 95 Liverpool GPs, Sample period: April 1962.

The doctor's desire and ability to extend and use his therapeutic knowledge will clearly affect his prescribing, but these may be limited by the time which is available to him for postgraduate education. A measure of a doctor's therapeutic knowledge and use of new drugs can be obtained by relating the range of preparations which he uses to the number of prescriptions which he writes. Analysis of the EC10 data in the present investigation provided information about the total number of prescriptions issued in the

month of April 1962, by a sample of 95 GPs in Liverpool. The Ministry definition of prescriptions, which refers to individual items prescribed on EC10 forms, has been employed. The number of preparations used by each of the GPs for writing their prescriptions during the month was also ascertained. Figure 2 illustrates the relationship between the number of prescriptions written, and the number of preparations used, by each of the doctors during the month.

It can be seen that when as many as 260 preparations were used, an increase in the number of prescriptions written was no longer associated with an increase in the number of preparations from which they were drawn. This suggests that there is a limit to the number of drugs which doctors use for the treatment of their patients. Presumably, when it is necessary for a practitioner to issue a larger number of prescriptions he will do this without increasing the number of preparations which he uses. The particular drugs which each doctor uses will be characteristic of himself, but considerable overlap will obviously occur between the drugs which individual doctors employ. The doctor's range of drugs is an individual characteristic; it is presumably capable of variation; but the extent of its variation over a period of time will be dependent upon the operation of a large number of factors which will affect the doctors to different degrees.

When a doctor is choosing a drug for the treatment of a particular patient, his decision about which drug to choose will be governed by the influence of all the factors, external and personal, which have been discussed above. Despite the differences in the personal characteristics of individual doctors, the most favourable disposition of the factors will cause a doctor to make up his mind in favour of a particular drug. A change in the value of these factors will not cause an experienced practitioner to diversify his prescribing because he will already have achieved his maximum range of preparations. It is unlikely that he will start to prescribe an additional drug in addition to his original choice, rather he will replace his original choice by a new drug.

In this investigation methods of measuring the potency of some of these factors will be considered, and their inter-relationships will be examined. The methods for measuring the factors used in the present analysis are considered in detail below.

## VI. Measurement of the Variable Factors

The variable factors of which it was considered that special measures could be made include the following:

1. The influence of pharmaceutical mailings.
2. The influence of journal advertising.
3. The numbers and effects of representatives' visits on GPs.
4. The effect of recommendations about the use of drugs by consultants, for the treatment of GPs' patients.
5. The influence of prices of drugs on prescribing by GPs.
6. The influence of the doctor's image of individual pharmaceutical companies on his prescribing.

We are aware that these influences do not by any means exhaust the list of factors. However, difficulty of measurement or lack of precise information caused many factors to be eliminated. For instance, the pilot investigation indicated that medical training and other characteristics are important. Some indication about medical training can be obtained from the Medical Directory, but this can be considerably supplemented by personal interviews in which the doctor's knowledge of drugs can be assessed. His desire to keep up to date by journal reading can also be measured by appropriate questions. In view of the fact that a great deal of money is spent on journal advertising it was considered that a special study should be made of this. It was not possible also to take account of the influence of articles in the journals. The use of the British National Formulary could be measured by the data from the EC10 analysis.

At the beginning of the investigation, in February 1962, only five copies of the *Prescribers Journal* had been produced, and our information showed that its effect was small; it has not, therefore, been taken into account. The use of *MIMS* as a therapeutic source was also small even though this publication is extensively used as a source of reference about drug packaging and prescription. It has not been considered any further, but it may possibly have a greater effect than doctors admitted.

It is known that discussion with GP colleagues is of considerable importance (Coleman, Menzel and Katz, 1959) and our own studies indicate that it accounts for about 5 per cent of a GP's therapeutic knowledge (Wilson *et al*, 1963(b)). Measurements of the influence of this effect on prescribing are difficult to make and they have been ignored in the present study, although it is possible that some measure of this may be made in our later studies.

## The influence of pharmaceutical mailings

It is considered that the extent to which postal advertising of drugs may affect the prescribing by doctors probably depends on the numbers of advertisements which they receive and on the psychological impact of the advertising material.

Measurement of the influence of advertising material on the GPs, therefore, involved a three-fold problem: first it would be necessary to obtain a measure of the quantity of material received by a practitioner, secondly it would be necessary to find out whether he looked at it, and lastly it would be necessary to obtain some measure of its psychological impact on him. Nine doctors were asked to keep every mailing, and piece of literature and sample left with them by representatives, continuously during a 14-month period. This material was collected and recorded every two weeks and note was also made of those items which the doctors wished to have returned to them. The doctors' surgeries were randomly distributed throughout Liverpool and it is reasonable to claim that by this method we have obtained a representative measure of the intensity of advertising in the area.

**Table II**  
**Frequency analysis of pharmaceutical mailings and of journal advertising for tranquillizers during the first four months of 1962**

Tranquillizer	Number of pharmaceutical mailings per doctor during 16-week period (average of 9 doctors' mailings)	Journal advertising during 8-week period
1 . . .	2.33	7
2 . . .	3.00	2
3 . . .	0	9
4 . . .	0	1
5 . . .	0.33	1
6 . . .	1.56	0
7 . . .	2.11	0
8 . . .	2.56	5
9 . . .	0	0
10 . . .	0	0
11 . . .	5.00	1
12 . . .	2.11	4
13 . . .	2.56	3
14 . . .	0.67	0
15 . . .	0	0
16 . . .	0.33	0

Reference to individual tranquillizers is made by code numbers. The *British Medical Journal*, *Lancet* and the *Practitioner* were analysed for the number of advertisements of each individual tranquillizer during the 8-week period.



All the mailings received by nine GPs in Liverpool were collected during the course of 1962. A complete analysis of these mailings was made and the results of this section of our investigation will be reported in due course. For the purpose of the present investigation, an analysis of the mailings received by the GP for a 16-week period during the first quarter of 1962 is shown in Table II. Reference to the individual tranquillizers which have been analysed in the mathematical model is made by code numbers in the left-hand column. The number of times each tranquillizer was advertised during the period of the survey was used as the intensity measure in the investigation. No account was taken of presentation or psychological impact of the advertisements. The survey has shown that most of this mail was at least opened and briefly observed. The assumption has been made that advertisements were looked at long enough to remind each doctor of the existence of the drugs which were being advertised.

### **The influence of journal advertising**

The interviews with the GPs indicated that some of them were more likely to respond to an advertisement in a journal than to one delivered through the post. During the interviews the practitioners were asked which journals they read. In the investigation described in this article no account has been taken of the medical content of these journals with reference to the drugs which are being investigated, although in other analyses this may be considered. For the present, it was possible to abstract the details of journal reading of the fifty practitioners who were included in the study of tranquillizer prescribing. The appropriate journals were examined during the preceding two months for advertisements for those drugs under investigation. The number and frequency of advertisements was recorded, but as in the assessment of postal advertising no allowance was made for sizes (or impact) of the advertisement.

The extent of the journal advertising for the tranquillizers is shown in Table II. It is of interest to compare the extent of the pharmaceutical mailings and journal advertising for these tranquillizers. It can be seen that there appears to be an inverse relationship between these two factors, and certain firms favour one type of advertising in preference to the other for this particular therapeutic class. It will be seen subsequently that the form of advertising does have profound effects on the prescription of these drugs. The other point of interest

is that three of the drugs which were not advertised by either method during the survey were prescribed by the doctors.

### **The influence of representatives' visits to GPs**

The influence of representatives on prescribing by GPs is more difficult to assess than the impact of either postal or journal advertising. It was found that the influence of representatives could not be assessed simply by obtaining the opinions of the doctors about the frequency of their visits.

Doctors vary in this attitude to representatives and in their appreciation of what representatives are trying to do. Representatives, on the other hand, vary amongst themselves. Hence it is necessary to classify drugs, not only according to the firms which put them on the market, but also according to the way in which they are presented to the doctor by the representative who calls on him. Interviews with doctors gave us only a general impression about their attitude towards representatives. Some clear prejudices emerged but they were rarely attached to specific firms or men. They took the form of general preferences for British firms, and in a number of cases hostility towards certain groups of 'foreigners'.

Three different methods have been used in order to obtain a measure of the influence of representatives. The first of these is based on interviews of the representatives themselves by the research team. This gave a measure of the attitude of the representatives to their work which will clearly influence the way in which the doctors react to them. The second method was designed to obtain a measure of what the individual doctors thought about the representatives who visited them. The third method gave us information about the doctors' opinions of the companies which employed the representatives.

1. Representatives from every company which operated in Liverpool at the time of the survey were interviewed. In all, 69 local representatives were seen. From these interviews it has been found possible to assess the men according to their background experience, and their attitude to the work. They were classified in terms of their attitude towards detailing drugs to doctors; they were rated as predominantly professional-minded or predominantly commercial-minded, according to whether they demonstrated a desire to perform a service to the doctor, or appeared to think only of selling as many drugs as they could. Representatives who were mixed in their attitude were classified as 'intermediate'.

2. In consultation with the Association of the British Pharma-

ceutical Industry, nine items were selected which it was thought might easily be employed by the doctor to differentiate one representative from another. The doctor was asked to make an assessment of the representative's manner and general demeanour in the interview in terms of whether he made exaggerated claims, was annoying or persuasive, whether the visit was empty, time-wasting or dull whether the representative was friendly, lively or interesting; the doctor was then asked to record his impression on a card. As these items are not mutually exclusive, doctors were permitted, if they wished, to tick more than one item. Classified according to the representatives seen, the cards then provided a total score of favourable and unfavourable receptions for each representative. Of course, the cards provided a further measure of frequency of calling.

3. When the doctors were interviewed they expressed general prejudices about certain kinds of drug firms in terms of their nation of origin. Individual drugs may be preferred or rejected, not only because of the degree of intensity with which they are advertised, not only because of the effect representatives may make on doctors when they see them, but because doctors have more general feelings about certain firms. It was therefore possible to obtain at least a first approximation to a score for this, by presenting doctors with a list of firms and asking them to rank them, or as many of them as they could, in order of preference. This investigation has been carried out and a score was obtained for 41 of the firms which operate in the Liverpool area. If the general argument about the importance of a company's reputation in determining the extent to which its products are prescribed, is true, then it will be possible to take this into account in the final analysis.

When the results from these three methods of assessment were compared it was found that there were some correlations between them. The results of the comparison between the doctors' assessments of the representatives on the Representative Record Cards, and the classification of the representatives by the research team following the interviews, produced a significant correlation (Table III).

Statistical calculations comparing the rankings obtained by the two latter methods showed that doctors' assessments of representatives were largely independent of their preferences for firms. This indicates that a drug issued by a firm with a high preference score by doctors, and detailed by a representative with a high score of favourable reception by doctors, is likely to be prescribed more widely than one which scores highly on only one, or neither of these rankings.

**Table III**

**Assessments of representatives. The table shows independent assessments by the research team and by the doctors**

<i>Assessment by the research team</i>	<i>Assessment by doctors</i>	
	<i>Favourable</i>	<i>Adverse</i>
Professional . . . .	·53	·07
Intermediate . . . .	·43	·10
Commercial . . . .	·41	·13

*p* lies between 0·01 and 0·02.

### **The influence of consultants' recommendations**

The full-scale survey of the 117 practitioners indicated that these doctors rarely learned of the existence of drugs from consultants; but they admitted to being influenced by consultants' suggestions. During the interviews with GPs it was ascertained to which consultants they referred their patients and these consultants were then interviewed.

The interviews with the consultants indicated that they consider that they play a diagnostic rather than a therapeutic rôle with regard to the patients who are referred to them. In spite of this there is no doubt that they act as fashion leaders in the prescribing of drugs. When they were interviewed they were asked which drugs they recommended to GPs for the treatment of certain conditions. Since the consultants whom each GP used were known, and since the drug which they recommended were known, it was possible to assess the effect of the consultants on the GP's prescribing. In this investigation it has been assumed that the registrars, who often write to the practitioners about patients, used the same preparations as their hospital chiefs. It was also necessary to assume that the consultants did not change the preparations which they used. The greatest assumption which it was necessary to make was that each consultant had the same effect on his particular cohort of GPs as the next. It is possible that particular consultants act as fashion-leaders amongst the total sample of consultants in much the same way as Coleman, Menzel and Katz (1959) have shown that there are fashion-leaders among GPs. Since, however, only 35 consultants were involved in the investigation, and since they form a fairly closely knit community in Liverpool, it is probable that information about new drugs spreads quickly, and that use of the drugs depends on particular characteristics of individual consultants rather than on leadership characteristics amongst them.

### **The effect of cost**

In the interviews by the GPs the term 'cost' was interpreted in two ways; firstly, to mean the cost to the patient of the prescription charge. To a small degree this probably does affect the results of the analysis because it leads to prescriptions of larger quantities of the drugs and consequently fewer prescriptions. This is a consideration of some importance in Liverpool which is a depressed area. In terms of our analysis it means that the numbers of items prescribed are possibly smaller in practices with patients in the lower social classes than in the suburban practices, with a higher social class of patient. It was not possible to make allowance for this.

By far the more important interpretation of the meaning of 'cost' was the prices of the drugs which the doctors prescribed as assessed by the Ministry of Health. In this respect cost reflects directly on the doctor and recalls the Ministry of Health's principle of averaging the prescription cost for a group of doctors and asking those whose costs exceed the average to offer an explanation.

For the purpose of this investigation it was considered that the frequency of prescription writing for a particular drug would depend upon its price. It was argued that in a therapeutic class the drug which was priced lowest would be prescribed most. It was assumed that this tendency would be altered only by the operation of the other variable factors.

## VII. Use of the Mathematical Model for Assessment of the Prescribing of Tranquillizers

The figures for the prescribing of tranquillizers in the Liverpool area have been employed to illustrate the use of the mathematical expression. Due to some deficiencies in the data, only 50 doctors were included in the analysis.

Twenty-eight tranquillizers (as defined by Gibson in the *Prescribers' Journal*, 1963) were commercially available in April 1962. Unfortunately only 16 of them had been prescribed by our sample of doctors. It was, therefore, necessary to exclude the other drugs from the analysis. The total number of prescriptions for each of the tranquillizers was obtained for the whole sample of doctors during the month of April 1962. The total number of prescriptions for the individual drugs varied from 1 to 317 prescriptions per drug. The average number per GP in the sample was 20.7 prescriptions for any of the tranquillizers during the month.

The particular variable factors for which the terms  $x_1, x_2$ , etc. have been used are indicated below.

1. Price:  $x_1$ . Prices were obtained for each of the 16 tranquillizers by calculating the quantity required for a week's treatment at the lowest recommended tablet size and dosage. Prices were expressed as pence, and a range of 11 to 157 pence was obtained.  $x_1$  is a continuous variable and is used unmodified.

2. The Influence of Consultants' Recommendations:  $x_2$ . It was assumed that psychiatrists were the only consultants who recommended the use of named tranquillizers to the GPs. Information about which tranquillizers the consultant psychiatrists recommended had been obtained during the consultant interviewing.  $x_2$  requires that attention paid by both to the number of GPs using each consultant and also the numbers of patients in the different practices. Obviously a consultant's preference for a certain tranquillizer will result in a greater effect if a large number of GPs send their patients to him; the effect would be larger if the practitioners also had large practices. If all 50 doctors had sent their patients to one consultant who had recommended a particular tranquillizer, the 'consultant effect' would have been directly proportional to the sum of all the 50 practices' sizes. This of course did not occur, and so the consultant effect for a particular drug was equal to the sum of the practices affected by those consultants recommending the drug, divided by the sum of the 50 practice populations.

3. The Influence of Advertising:  $x_3$ . It was decided that a simple intensity measure should be adopted. The total number of mailings advertising each of the 16 drugs was obtained for a 16-week period prior to the commencement of the selected period for the investigation.  $x_3$  is a continuous variable and there are no complications in its direct use. All but one of the practitioners received the same intensity of mailing; this doctor had taken steps to curtail the mailings delivered to him.

4. The Influence of Journal Advertising:  $x_4$ . Details of the journal reading of each of the 50 practitioners had been obtained during the interviews. The journals for the first two months of 1962 were examined for advertisements promoting the use of the 16 tranquillizers. A list was prepared to show how many times and in which journals the drugs had been advertised.

$x_4$  cannot be used directly. Attention was paid to the fact that subscriptions to journals were variable throughout the sample of doctors. The potential effect of journal advertising, therefore, had to be weighted throughout the sample in order to take account of this variation. Each advertisement had to be weighted by the number of doctors in the sample who read the journals, and then by the practice sizes of the doctors.

5. The Influence of Representative Visits:  $x_5$ . By the use of record cards filled in by the doctors about representatives' visits, a measure was obtained both of frequency of the visits and of the drugs which were detailed. The influence of the doctors' assessment of the representatives and of the images of the companies in the doctors' minds was also taken into account in the following way:

The calling intensity of the representatives of the firms which market the tranquillizers under consideration, was measured by the frequency of calls per month weighted by the sizes of those practices on which they called. It is assumed that the doctors' response is directly related to intensity of calling, that is, no calling rate had resulted in the production of a zero sales response.

A dummy variable was used to give weight to mention of the firm's tranquillizer during the course of the representatives' visit to the doctor. The method by which this variable was obtained is explained in Table IV.

Finally this rather complicated mention variable is completed by a factor attaching weight to the assessment of the representatives by individual doctors.

No further variables were utilized in this particular analysis because of the limited degrees of freedom still available.

**Table IV**  
**Method employed for derivation of mention variable**

GPs in sample . . . . .	1	2	3	etc.
Individual GP's practice size as percentage of combined practices	5	2	0.5	etc.
If drug mentioned/not mentioned (Dummy variable) . . . . .	1	0	1	etc.
Mention variable . . . . .	0.05	0	0.005	etc.

50 practices were included in the sample.



## VIII. Results

The solution of the equation is made when

$S = \Sigma(y - a_1x_1 \dots - a_5x_5)^2$  is a minimum value.

As this involves the solution of linear equations with five unknowns, the data was punched on Hollerith cards and the computer was used.

The multilinear regression equation found to best fit the data was as follows:

$$y = 0.187X_1 + 0.616X_2 + 0.369X_3 - 0.348X_4 - 0.031X_5$$

the  $x$ 's have been scaled so that all numbers are 3 digit integers. In fact:

$$\begin{aligned}X_1 &= (x_1 - \bar{x}_1) \\X_2 &= 1,000 (x_2 - \bar{x}_2) \\X_3 &= 100 (x_3 - \bar{x}_3) \\X_4 &= 100 (x_4 - \bar{x}_4) \\X_5 &= 100 (x_5 - \bar{x}_5)\end{aligned}$$

The standard deviations were disappointingly large. This suggests that a looseness in measurement may have been present which was most probably due to irrational doctor behaviour or to the presence of variable factors which had not been measured in this analysis. Our other enquiries have indicated that a number of other factors do influence prescribing, and it is intended to take these into account in our final analysis. Despite the inability of the regression equation to explain the volume of prescriptions at the customary probability level ( $p = 0.05$ ) it was found to be of value to abstract the correlations and cross-correlations from the matrix.

## IX. Correlations between Frequency of Tranquillizer Prescribing and Other Variables

Price:	$r_{yx_1}$	: + 0.340
Consultant recommendations:	$r_{yx_2}$	: + 0.425
Postal advertising:	$r_{yx_3}$	: + 0.450
Journal advertising:	$r_{yx_4}$	: + 0.038
Representative visits:	$r_{yx_5}$	: - 0.004

It will be seen that there is only a slight correlation between the amounts of individual tranquillizers prescribed and the prices of these preparations. It is interesting that this is contrary to what would be expected: in effect, it was found that the higher the price of a tranquillizer the more it is prescribed. It is likely that price consciousness does not extend to preparations in classes which are prescribed rarely by the GPs. But it is considered that the real explanation of this anomalous situation is to be found in the high ( $p = 0.1$ ) correlations  $r_{yx_1}$  and  $r_{yx_2}$ .

The high correlation between amounts of individual tranquillizers prescribed and consultants' recommendations ( $r_{yx_2}$ ) was very gratifying. It is obvious that in the prescribing of this class of medicament the consultants' recommendations are important. The cross-correlation ( $r_{x_1 x_2}$ ) between the recommendations by the consultants of particular drugs, and the prices of the drugs, is negligible. This supports information obtained from the interviews of consultants that they rarely consider price as a factor in their own prescribing or in the recommendations they make to GPs.

$r_{yx_3}$  was the most significant ( $p < 0.1$ ,  $> 0.05$ ) of all the direct correlations and shows that GPs react directly to the volume of postal advertising. This effect is not, however, intensified by postal advertising to consultants. The cross-correlation  $r_{x_1 x_3}$  was found to be negligible, and demonstrated that consultants were not swayed by the intensity of postal advertising.

The low values of  $r_{yx_4}$  and  $r_{yx_5}$  show that neither journal advertising nor the visits or representatives, caused GPs to prescribe tranquillizers.

The highest correlation in the whole matrix was obtained with the cross-correlation  $r_{x_2 x_4}$ . The relationship between consultants' recommendations and the intensity of journal advertisements was very close. This highly significant correlation ( $p < 0.05$ ,  $> 0.02$ ) shows that consultants, unlike GPs were influenced by journal adver-

tisements rather than those received through the post. This finding is also supported by information from the interviews with consultants. These indicated that the consultants read the journals widely and extensively in comparison with the GPs.

Finally the cross-correlation  $r_{x_2, x_3}$  was negative and almost insignificant, statistically. If some assumptions are made, this suggests that representatives have an adverse promotional effect on the influence exerted by consultants on prescribing by GPs.

## X. Some Reflections

It was possible for the Hinchliffe Committee to make its report on the cost of prescribing because national records are available about the expenditure on drugs. The task was also relatively easy because cost is a well-defined ultimate measure of the amount of prescribing when this is considered over an empirical period of time. Further, if the period of time chosen is long enough, cost bears no relation to the duration of individual patients' illnesses.

After concluding its analysis the Committee considered those factors which it was thought gave rise to the steady increase in costs. However, in doing this the Committee ran into difficulties; as it pointed out itself, there was insufficient information on the number of factors responsible for the increase, and the relative importance of such factors was unknown. It was possible to speak only generally about the pressure of pharmaceutical advertising and the lack of guidance for doctors about the relative merits of drugs. Largely as a result of the Committee, the *Prescribers' Journal* was produced, but no proposals were made about the way in which the influence of the journal might be assessed. However, the Hinchliffe Committee did sum up its work by drawing attention to the fact that there should be 'an improvement in the statistical information which would enable accurate assessment to be made of the nature and magnitude of the forces which have tended to increase the drug bill'. Only by knowing all of these forces and their relative importance can the problem of improved therapy at minimum cost be solved.

The principal task of a doctor when he is deciding on treatment for a patient lies in his selection, from the large amount of information which is available to him, of the appropriate drugs. Whether he uses *Prescribers' Journal* for the provision of this information, or any of the other sources which are available, depends on the personal characteristics of the doctor. Information about these personal characteristics, about his provision of medical care with reference to the range of drugs which he uses and about the size of his practice, can be obtained. His age, his social contacts with GP and consultant colleagues, and his interest in extending his medical knowledge are assessed by his attendance at post-graduate courses and membership of medical societies. This information may be obtained through the use of operational research methods as suggested by the Hinchliffe Committee (paras. 303, 305, 306). All these factors affect his prescription writing and should be considered in the category of characteristics

personal to the individual doctors. In the present paper it has been taken for granted that these personal characteristics affect the range of drugs which a doctor employs. In future work it may be possible to relate these factors individually to the range of drugs which the doctor uses. Nevertheless the problem of grouping doctors into different categories is a very difficult one.

The external factors such as pharmaceutical mailings, effective representative visits, contact with consultants through hospital letters and domiciliary visits, cost of drugs, and the others which have been discussed, are relatively easy to measure. However, the extent to which they affect the prescriptions which are issued is always tempered by the individual doctor's reactions to them. Several illustrations of this have been obtained in the present study. It has been found that there is often a considerable discrepancy between what doctors believe to occur and what actually takes place. For example, it has been found that doctor's statements about the number of representative visits which they receive is often in excess of the number who actually visit them, and that their general statements about the importance of cost in selecting drugs do not apply in specific drug categories. For this reason it is difficult to obtain adequate statistical information about the factors influencing prescribing. Very careful cross-checks are necessary to confirm all the information which is acquired, in the way which has been indicated by the survey on representatives' influence.

The results obtained from the mathematical model demonstrate that it is possible to carry out an analytical study of the forces which affect the drug bill on a regional basis. During April 1962, the prescribing of tranquillizers by a sample of doctors in the Liverpool area was affected predominantly by postal advertising and consultant recommendations. The consultant recommendations were affected to a large extent by journal advertising. In this field cost did not affect the prescribing significantly and representative visiting appeared to have a negative affect. The last two conclusions are surprising but not entirely unexpected since our other investigations have shown that GPs depend to a large extent on consultant advice for the treatment of psychoses and neuroses, and consultants do not rate cost as an important factor in their prescribing. It must be stressed that the extent to which GPs use different sources of therapeutic knowledge varies with the disease which they are treating (Wilson *et al*, 1963a). It is probable, therefore, that the extent to which certain factors affect their prescribing will also depend upon the particular drugs which they are

using. In the fields of antibiotics and oral diuretics we already have some evidence that this may be so.

In order to obtain more evidence about the importance of the external and personal factors which affect prescribing, it is clear that studies of this kind need to be continued over a prolonged period and must also be concerned with investigation of particular therapeutic classes of drugs. It is also clear that the elements are themselves dynamic and may change in the order of their importance. Many of the variable factors about which we have information have not been included in this first study. In subsequent studies it should be possible to consider these other effects and to measure more precisely those which have been included. As the Hinchliffe report has pointed out 'continuous studies of the economic and social aspects of the National Health Service should be encouraged' on a regional basis. 'It is not a question of statistics or of expert evidence. What is so badly needed is penetrative study and co-ordinated knowledge.'

The Hinchliffe report points out that in 1957 less than 9 per cent of doctors in England and Wales attended refresher courses. Our information indicates that post-graduate courses in the area of our survey provide only a very small percentage of the therapeutic knowledge which is used. Thirty-three per cent of the treatment for the majority of diseases is still based on the doctors' medical training, and much of this is derived from instruction by older GPs. Our information shows that GPs in the Liverpool area derive much of the remainder of their information from the pharmaceutical industry. When using tranquillizers the information comes from mailings; for the treatment of disease, other than psychoses and neuroses, we have not yet differentiated between the relative effects of representatives and mailings. The Hinchliffe report points out that consultants have some influence over GP prescribing. In the case of tranquillizers, this influence is considerable and to a large extent stems from pharmaceutical advertising, although of the journal type.

Although the effect on GPs of the *Prescribers' Journal* seems to be increasing, it is still relatively very small. Despite the fact that it may provide objective information for the doctor, it appears that material which is more easily available is more acceptable. Verbal information obtained through medical training, consultant advice, and discussion with colleagues is assimilated easily and used readily. Information from the pharmaceutical industry in the form of mailings also has an important influence. Although our evidence implies that the suggestions of the Hinchliffe Committee about the value of

improved post-graduate education might be effective if more doctors made use of it, and although the impact of *Prescribers' Journal* may be increasing, our analysis shows that a more powerful effect could be produced on prescribing by controlling more closely the factors which influence it predominantly.

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*Assessing the burden on a well-defined community*

# **The Anglesey Mental Health Survey**

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# The Anglesey Mental Health Survey

## I. Introduction

### The background and area

This is a preliminary report of the main lines of this Survey and of some of the results. At this stage no attempt has been made to relate the findings to other published work, nor to interpret our findings in detail.

The Survey was conceived to provide an 'estimate of the Mental Health needs in a rural area'. Anglesey has features which make it a convenient area for such a study, but it was not picked out deliberately for the purpose—the initiative came from the local health authority.

Anglesey is an island of 290 square miles, linked to the mainland of Caernarvonshire by two bridges, one road, one rail. The population is given in the 1961 Census as 51,705, a slight increase over 1951, in contrast to most Welsh rural counties. About 4 per cent of this population is, however, to be attributed to the Forces establishments on the island. The 1961 Census does not give the number born on the island, but that of 1951 shows that of 50,660, 34,420 had been born on the island, 6,879 elsewhere in Wales, 7,605 in England and 1,756 elsewhere. In 1961, 40,751 had been born in Wales.

The largest town, Holyhead, has a population of 10,000, and other main centres are about 2-3,000. The rural population lives in scattered farms and small compact villages joined by a network of roads. Agriculture is a major element in the economy of the island, though involving mostly self-employed rather than employed labour. The other principal sources of income are the port and railway at Holyhead, a number of small factories which have been established in recent years, a substantial tourist trade in the summer season, and the Forces establishments. Unemployment is persistently high, usually about 8-12 per cent of the insured population, and there is a long tradition of leaving the island in search of work.

There is a strong community spirit. The island is an adminis-

trative county and a parliamentary constituency and a large number of voluntary activities are organized on a county basis. The day-to-day language over most of the island is Welsh. The 1961 Census shows 75 per cent of the population (over age 3) to be Welsh-speaking with the monoglot English-speaking largely localized to certain districts.

### **Terms of reference of the Survey**

We were required to provide a guide to the needs for mental health services in a *largely rural area*. The findings could be a fair guide to similar rural and small town areas, at least in Wales, but clearly they cannot be applied without qualification to an urban population.

### **Definition of the 'case'**

The definition of a psychiatric 'case' varies widely in different surveys. The Scandinavian studies with a genetic interest (Sjögren, 1948), or Lin (1953) planning the first stages of a mental health programme tend to identify the marked psychotic or mentally subnormal. Other studies have searched for psychological traits or symptoms in individuals who would superficially pass for normal, Leighton *et al* (1956) found 37 per cent, Rennie *et al* (1951) 70 per cent of their population with symptoms needing treatment. Clearly these figures are not of immediate application for administrative purposes in mental health. We have tried to give a picture of mental disorder in this population in terms which will have some practical bearing on the provision of services. We have accepted the opinion of general practitioners to a large extent, where they considered the patient's psychiatric state to be outside what they regarded as the 'normal' limits. Most of the calls on the mental health service of both Hospital Service and Local Health Authority originate from, or are channelled through, the general practitioners, and as an operational definition their view has a certain practical validity. The matter is dealt with in more detail in relation to the different groups of patients.

### **Outline of procedure**

We have approached the psychiatric burden of this community from three main directions:

- (i) *a scrutiny of the records* of the local psychiatric hospital over a period of ten years, 1951/60 inclusive, for in-patients and out-patients, *with a follow-up* through the general practitioners of all the cases so identified, and *a scrutiny of the records* of the

local health authority relating to the mentally subnormal currently supervised or in residential accommodation (including hospitals).

- (ii) *Home visits* to the families of all the long-stay Anglesey patients at Denbigh Hospital and to the families of all the mentally subnormal who were under supervision by the local health authority or in residential care.
- (iii) *A prevalence study* through the general practitioners to identify the cases in the community who have not been in contact with the psychiatric services or who were not traced in the Denbigh records.

In this way we tried to assess:

- (a) the patients in current residential care.
- (b) those in the community known at some period to the psychiatric services.
- (c) those in the community known only to the general practitioners.

The patients (other than the mentally subnormal) in hospital and community identified from hospital and local health authority records are discussed together (Section II). The mentally subnormal are discussed separately (Section III). The prevalence study in general practice is described on its own (Section IV) and finally all the parts are drawn together in an estimate of total prevalence (Section V).

## II. Patients Identified from Hospital and Local Health Authority Records (Other than the Mentally Subnormal)

### Anglesey in-patients and out-patients

Very few Anglesey patients receive psychiatric attention at hospitals or clinics other than from the North Wales Hospital, Denbigh. The numbers are small and scattered among various hospitals. We obtained information about these patients from the records of the general practitioners, and also about other minor groups of patients, viz:

Anglesey residents treated as in-patients/out-patients other than by Denbigh.

Anglesey residents treated as in-patients/out-patients by Denbigh before 1.1.51 but not after that.

New residents in Anglesey previously treated elsewhere by Denbigh or other in-patient/out-patient services.

In discussing these cases, they are all grouped as 'other'; 'Denbigh', refers to Anglesey patients identified in the records there, though in fact some of the 'other' were also treated by Denbigh.

In this scrutiny of Denbigh and local health authority records, we counted as 'Anglesey cases' all those who might conceivably make demands on the island's mental health services, but grouped them so that transient visitors (for example) can be distinguished from permanent residents. We took:

'any person who received psychiatric service (including local health authority mental subnormality service) during the ten-year period 1.1.51-31.1.60, provided that person was:

- (a) normally domiciled in Anglesey (whether or not temporarily residing elsewhere) or
- (b) temporarily domiciled in Anglesey (including transients) or
- (c) discharged from such service to an address in Anglesey.'

We did not include individuals who may have lived in Anglesey at one time, but had severed their connection before requiring psychiatric service elsewhere.

We identified at Denbigh a total of 1,291 'Anglesey' patients. Of these, 469 had only been out-patients during the period, and 822

had been in-patients. Through the GPs we later identified 34 others who had been out-patients and 57 who had been in-patients. These are added to the Denbigh cases in Table I below:

**Table I**  
**Hospital in-patients and out-patients**

<i>Out-patients</i>			
Denbigh records . . . .	<i>Male</i>	<i>Female</i>	<i>Total</i>
Other . . . . .	204	265	469
	17	17	34
<b>Total . . . . .</b>	<b>221</b>	<b>282</b>	<b>503</b>
<i>In-patients</i>			
Denbigh records . . . .	<i>Male</i>	<i>Female</i>	<i>Total</i>
Other . . . . .	394	428	822
	30	27	57
<b>Total . . . . .</b>	<b>424</b>	<b>455</b>	<b>879</b>
<i>In-patients and Out-patients</i>			
Denbigh records . . . .	<i>Male</i>	<i>Female</i>	<i>Total</i>
Other . . . . .	598	693	1,291
	47	44	91
<b>Total . . . . .</b>	<b>645</b>	<b>737</b>	<b>1,382</b>

**Note**

Denbigh records refers to cases identified in the scrutiny at Denbigh. 'Others' refers to cases identified as hospital patients through the GPs. Where trends at Denbigh are studied, the 'Denbigh' cases only are taken; where the level in the community is considered the 'other' are included.

**Trends in the hospital population: Anglesey patients at Denbigh**

In this report we will discuss only a few points relating to these patients.

Figure 1 shows the number actually 'on the books', male, female and total, at Denbigh as in-patients on the 1st January of each year from 1951 to 1961. The graph has been extended by a further scrutiny up to 1.1.63 to see the long-term trends in this hospital population. The total resident population has been dropping slowly over the whole period of 12 years, slightly faster during the latter half. If this trend continues over the next 12 years it would appear that Anglesey patients would require about 115 beds in 1975 (2.3 per 1,000). Simple extrapolation as shown in the Figure is not, however, statistically sound. A better forecast will be possible after a closer scrutiny of various trends in different groups, e.g. Table III shows a marked

difference between the trends for younger and older age groups. 'The Hospital Plan for England and Wales' would allow 1.8 beds per 1,000 population or about 90 for Anglesey.

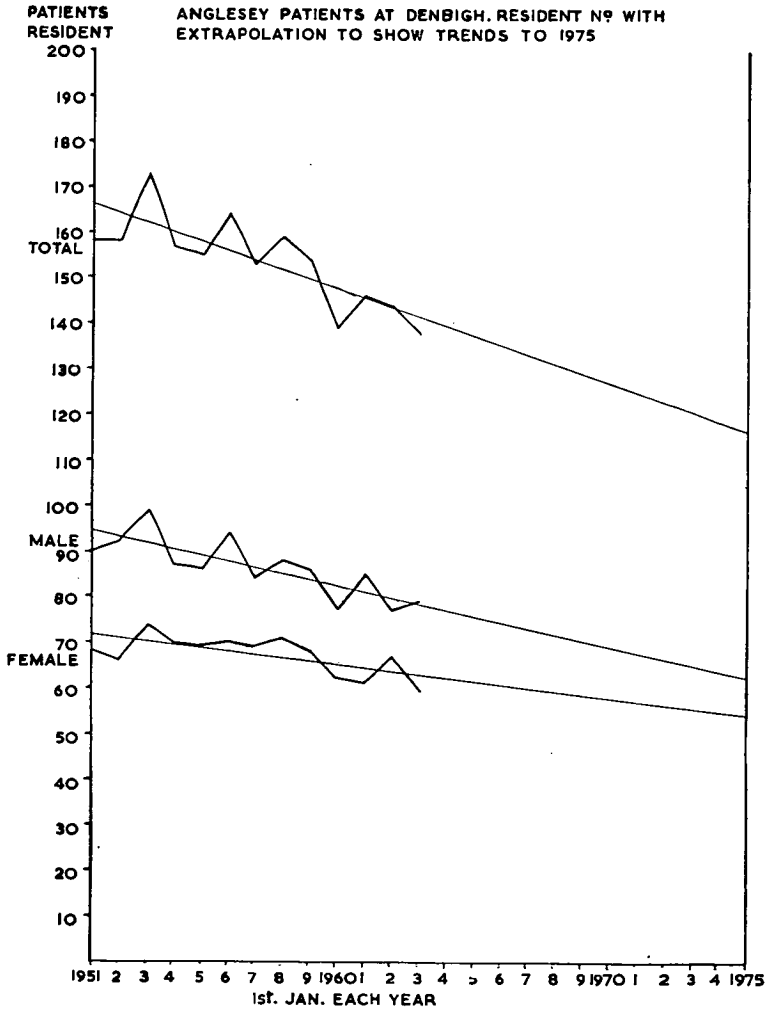


FIG. 1.

A closer examination of the composition of the resident population and its rate of decline for a given year is revealing.

Table II and Figs. 2, 3 show the resident population for each year on 1st January and then the number of those who were at Denbigh on 1st January of each subsequent year until 1.1.63.





ANGLESEY PATIENTS (MALE) AT DENBIGH HOSPITAL ON 1st. JAN. EACH YEAR. SHOWING NUMBER REMAINING EACH SUBSEQUENT 1st. JAN. (BROKEN LINE: EXTRAPOLATION OF 1951 CASES TO 1975)

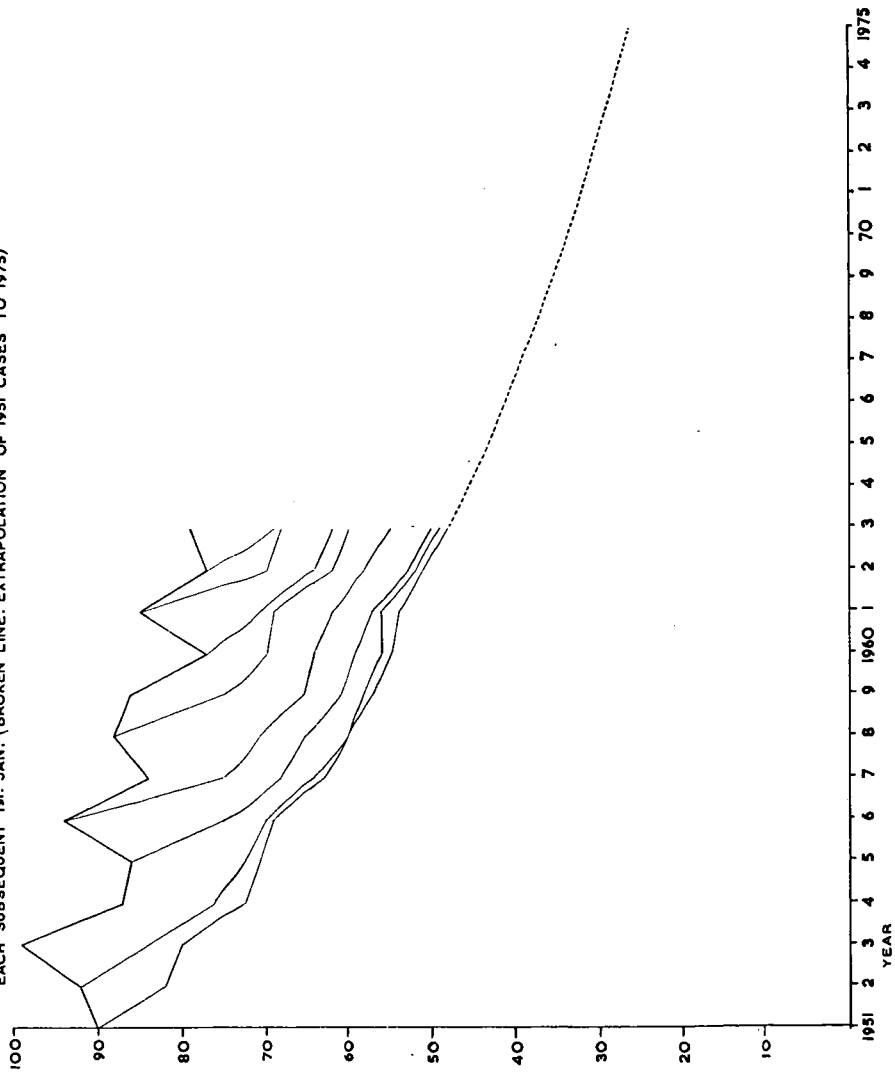


FIG. 2.

ANGLESEY PATIENTS (FEMALE) AT DENBIGH HOSPITAL ON 1ST. JAN. EACH YEAR, SHOWING NUMBER REMAINING EACH FOLLOWING 1ST. JAN.

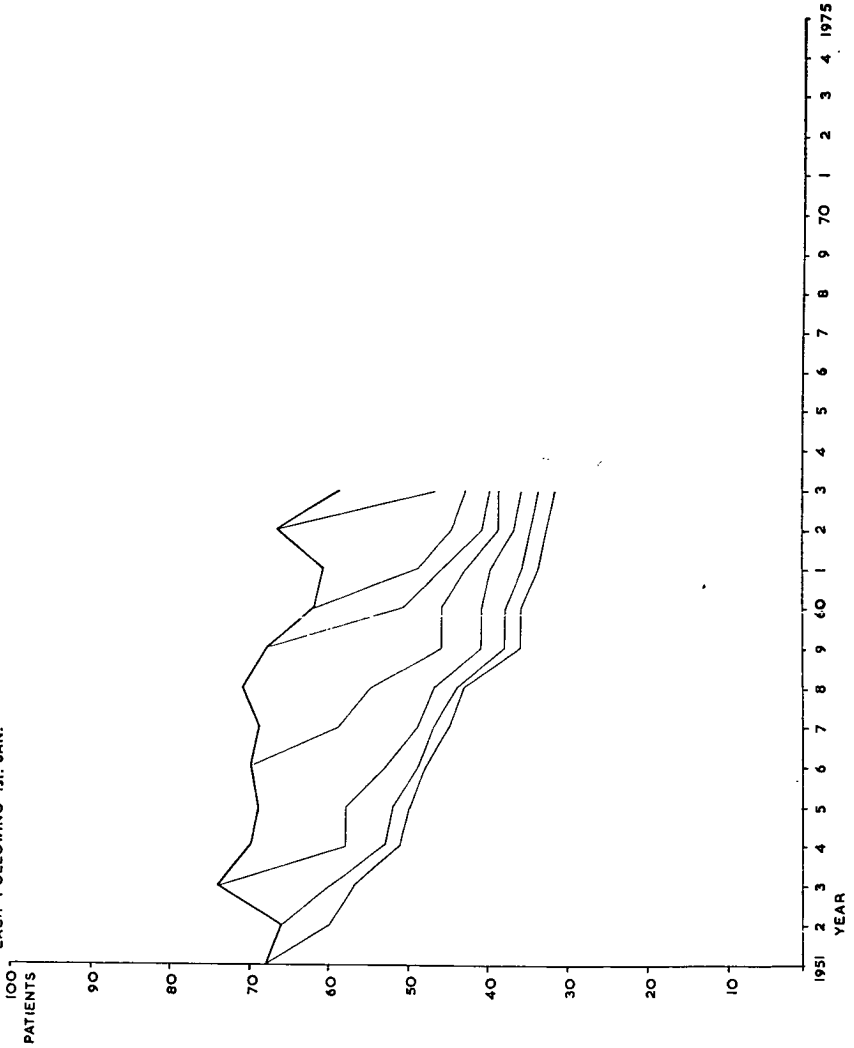


FIG. 3.

After a fairly sharp fall in the first year or two the resident population of each year settles to a slowly diminishing wastage rate of about 5 per year for the next few years. The resident population in the later years does not appear to be collecting long-stay cases at a sufficient rate quite to replace them—hence the gradual decline in total population. It is again hazardous to make extrapolation over a long period, but taking, for instance, the population at 1.1.51, one finds that it has dropped fairly smoothly for each sex, from 90 males and 68 females to 48 and 32 respectively at 1.1.63 and it looks as if there may be about 27 and 17 respectively in 1975 at the present rate of decline; i.e. of the total of 158 on 1.1.51, 80 (or just over half) remain after 12 years, and on present trends there may well be about a quarter of them left in 1975, after 24 years. Again, a better forecast should be possible from a closer examination of the factors contributing to the present trends.

The age/sex composition of the resident population has changed markedly during the period. To illustrate this some comparisons are made here between 1.1.51 and 1.1.61.

**Table III**  
**Age/sex composition of patients at Denbigh, 1.1.51 and 1.1.61**

	<i>Under 65</i>	<i>65 or over</i>	<i>Total</i>
<b>1.1.51</b>			
Male . . . .	76	14	90
Female . . . .	55	13	68
Both . . . .	131	27 (17.1 %)	158
<b>1.1.61</b>			
Male . . . .	58	27	85
Female . . . .	42	19	61
Both . . . .	100	46 (31.5 %)	146

There has been a drop of 23.9 per cent in the resident population under 65, an almost equal proportion in each sex. The over 65 population has doubled for males, however, and increased by a half for females, nullifying to a large extent the drop in the younger group and giving an overall drop in residents of only 7.6 per cent. As a fraction of total residents the over 65 have increased from one-sixth to one-third.

At first sight it might seem reasonable to suppose that this increase in patients over 65 was due to increasing admission in this age group, reflecting an ageing community outside the hospital and

insufficient geriatric provisions. A closer examination, however, suggests that the position is not as simple as this. Consider those over 65 resident on these two dates. How many were actually over 65 at the time of admission, and how many were admitted below this age but reached it at Denbigh?

**Table IV**  
Age on first admission of patients aged 65 or over on 1.1.51 and 1.1.61 respectively

	Age on first admission		Total
	Under 65	65 or over	
<b>1.1.51</b>			
Male . . . . .	9	5	14
Female. . . . .	10	3	13
Both . . . . .	19	8	27
<b>1.1.61</b>			
Male . . . . .	19	8	27
Female. . . . .	13	6	19
Both . . . . .	32	14	46

From Tables III and IV, on 1.1.51 'admitted over 65' formed 5.2 per cent of the total residents and over 65s as a whole formed 17.1 per cent, whereas on 1.1.61 the corresponding figures were 9.5 per cent and 31.5 per cent. The actual numerical increase in each group are 6 and 13, out of the total increase of 19. This means that the 'younger' patients have in fact contributed two-thirds of the increase over 65 and 'geriatric' admissions only one-third.

**Table V**  
Resident population 1.1.61

'Old': also at Denbigh on 1.1.51  
'New': not at Denbigh on 1.1.51

	Age Groups					
	-24	25-44	45-64	Total -64	65+	Total
<b>Male</b>						
'New' . . . . .	2	10	9	21	10	31
'Old' . . . . .	—	7	30	37	17	54
Total . . . . .	2	17	39	58	27	85
<b>Female</b>						
'New' . . . . .	2	7	11	20	7	27
'Old' . . . . .	—	3	19	22	12	34
Total . . . . .	2	10	30	42	19	61

Further light is thrown on this, and the wasting of the population as a whole, when the residents on 1.1.61 are divided into those who were also at Denbigh on 1.1.51 and those who have accumulated since then. These will be referred to as 'new' and 'old' respectively (Table V).

As an index of long-stay, compare the above table with the corresponding number still at Denbigh *one year later* (1.1.62).

**Table VI**  
As Table V but in each instance replacing the number by those remaining one year later (1.1.62)

	Age Groups					Total
	-24	25-44	45-64	Total -64	65+	
<i>Male</i>						
'New' . . .	2	7	4	13	7	20
'Old' . . .	—	6	28	34	16	50
Total . . .	2	13	32	47	23	70
<i>Female</i>						
'New' . . .	—	2	7	9	5	14
'Old' . . .	—	3	19	22	10	32
Total . . .	—	5	26	31	15	46

Of the 116 who might be regarded as 'long-stay' patients, only 34 had accumulated over the previous 10 years, while 82 had been there 10 years earlier. Whereas of the total population of 146 on 1.1.61, 58 were 'new' and 88 'old'. During the next year the 'new' have dropped by 24, or nearly a half, while the 'old' have dropped only 6 out of 88.

The difference between age groups is also marked:

**Table VII**

	1.1.61	One year later
<i>Under 65</i>		
'New' . . . .	41	22
'Old' . . . .	59	56
<i>Over 65</i>		
'New' . . . .	17	12
'Old' . . . .	29	26

The 'wastage' rate of the 'old' patients under 65 is very small indeed while they are under this age, when they get over 65, the rate, from these small figures, is faster, but still very slow.

It might be added here that, of the 29 'old' who were over 65 on 1.1.61, there were 5 remaining of the 27 who were already over 65 ten years before. The remainder had all been under 65 on that date—some of the 83 remaining of the 131 who had been under 65 on 1.1.51; 59 of these are still under 65 on 1.1.61.

In fact the problem of the over 65s at the hospital may be regarded as due not so much to excessive admission of 'geriatric' cases as to the natural ageing of the hospital's own chronic population. If these, when they reached 65, became subject to a geriatric or psychogeriatric service, leaving the psychiatric hospital for under 65s and possibly acute psychogeriatric admissions, then the future hospital pattern could be very different.

### **The present resident population**

There were 146 patients (male 85, female 61) at Denbigh Mental Hospital on 1.1.61. Of these there remained 116 a year later. This was the group on whom we carried out the home visits to the families—where they had a relative in Anglesey or anywhere else in North Wales. We tried to assess the hospital's view of their potentiality for discharge, or their future need for care, and the extent to which the families could be expected to help.

In the case of 15, there were no known relatives, or at least none in North Wales. One female patient was discharged early in 1962 before we carried out the interviews, so that we actually carried out 100 interviews; 41 females and 59 males.

The psychiatrist in charge of the patient at Denbigh was asked in each case to state whether in his opinion the patient was a candidate for:

- (1) Continued accommodation in a psychiatric hospital.
- (2) Long-stay hospital bed, i.e. other than psychiatric.
- (3) Part III accommodation.
- (4) Hostel.
- (5) Home or equivalent—lodgings, friends.

All the 41 females were regarded as requiring continuing residential psychiatric care. All these were graded by the same consultant who was responsible for the entire female side of the chronic wards. Whether his view veered to the side of caution or not, it would inevitably be an important factor in the discharge policy on the female side.

The males were more varied. One consultant and three other

doctors were involved here. The consultant dealt with the majority. The variation was not confined to particular doctors.

**Table VIII**

Long-stay cases Males	Hospital assessment		
	-64	65+	Total
Psychiatric bed . . .	27	18	45
Other hospital . . .	1	—	1
Part III . . . . .	12	4	16
Hostel . . . . .	4	1	5
Home or equivalent . .	3	—	3
Total . . . . .	47	23	70

Long-stay cases Females	Hospital assessment		
	-64	65+	Total
Psychiatric bed . . .	30	15	45

<i>Total psychiatric beds</i>			
Male . . . . .	27	18	45
Female . . . . .	30	15	45
Both . . . . .	57	33	90
<i>Total for other provisions (male only) . . . . .</i>	20	5	25

Although these assessments were made quite independently the total of each sex requiring continued psychiatric care is the same. The excess males are regarded as suitable for discharge to other accommodation—practically all to provisions which would be functions of the local health authority.

Psychogeriatric care could be applicable for 33 more of the total patients, reducing the long-stay cases to only 57 patients under 65 requiring long-term psychiatric care, out of the actual long-stay total of 115 patients.

Obviously one cannot accept this uncritically, but even as a superficial discussion it gives food for thought that *only half* the long-stay Anglesey patients might need to stay there if sufficient local health authority and psychogeriatric provisions existed.

### **Interviews with the families of the long-stay cases**

Where there were relatives living in Anglesey or any other place in North Wales, we succeeded in obtaining an interview in every case. These were undertaken early in 1962.

This part of the survey left a mixed impression on us. We did not usually feel that the informant had a real warmth and deep concern for the patient—though it must be admitted that there were instances where the patient's condition did cause continual pain to the informant. We collected much information; only a little of which is quoted here.

When questioned about difficulties of leave or discharge, the informants did mention such things as sleeping space and money, but the most general objections were emotional, particularly with regard to the male patients. They ranged from actual fear because the patient had previously been violent—'he used to beat us'—to an acceptance that the patient was permanently at Denbigh and would be an embarrassment at home. There was a tendency to wish the patient anywhere rather than Denbigh, but also anywhere but in the home district.

All the informants were asked where the patient would live if fit for discharge from Denbigh. Out of the 100 interviews, there were 12 responses of 'with me', and a further 19 'with me' but with various reservations—which in most instances nullified the response.

The informants would accept 12 patients without reservations (male 7, female 5), the hospital had said 6 required psychiatric care, but 5 could go to local health authority accommodation and 1 go home. In fact, 1 of the 5 went home in 1962, the others were still at Denbigh 1.1.63. The 6 where the hospital said 'psychiatric care' included 1 male, and all 5 females. In fact, the husband of one insisted on having her out in 1962, but the others remained on 1.1.63.

Where the informant would have the patient without reservation, only 1 (the husband above) out of 12 considered that the patient was in fact fit for immediate discharge.

Table IX summarizes the response of the informants to the question of discharge, and links this with the hospital opinion.

There was little actual demand from the informant for the discharge of a patient. The majority even of those who would accept the patient without reservations if fit for discharge, did not think that this was then so, nor indeed likely to be so in the future. With regard to the females, this was of course also the view at Denbigh. Never-



theless some intensive work on the part of the hospital and local health authority might enable a few patients to be discharged, particularly in the case of the males. Rawnsley, Loudon & Miles (1962) make similar comments on their findings.

**Table IX**  
**Attitude of relatives to discharge of patients**

*Females : Denbigh opinion : All need long-term psychiatric accommodation*  
45 cases: 41 interviews

<i>Response of informants to: Where would patients live on discharge ?</i>	<i>? Fit for discharge</i>			
		Yes	No	Not known
With me . . . . .	5	1	2	2
With me—with reservations . . . . .	6	1	5	
Other relatives would have patient	2			
Old people's Home, Local Health Authority . . . . .	2			
Not known, 'anywhere but here', 'nowhere to live', etc. . . . .	23			
Owens a house/has own home . . . . .	2			
Will never be fit for discharge . . . . .	1			
No interview . . . . .	4			

*Males*  
70 cases: 59 interviews

<i>Response of informants to: Where would patient live on discharge ?</i>		<i>Fit for discharge ?</i>			<i>Denbigh opinion</i>	
		Yes	No	Not known	Psych. bed	Other
With me . . . . .	7	—	5	2	1	6
With me—with reservations . . . . .	13	—	12	1	9	4
Other relatives . . . . .	2					
Local Health Authority . . . . .	5					
Not known . . . . .	32					
No interview . . . . .	11					

Apart from this marginal group with willing relatives, there is little hope of substantial family help for many of these long-stay patients. If they are ever to leave Denbigh, it will have to be to accommodation other than with their relatives.

### **The patients now in the community with psychiatric history**

In Table X there are shown the 1,382 patients identified at Denbigh or through the general practitioners as having had psychiatric attention as out-patients or in-patients during the 10 years 1951-60 inclusive.

Table X shows a summary of the follow-up.

		Summary of follow-up														
		In Anglesey now:				Whether Working if applicable			Died	IP	Res. Care	Not Ang.	Not known	Total		
		Well	Mild	Ill	Total	Yes	No	Notknown								
<i>Male OPs</i>																
Denbigh . . .	82	33	16	131	95	20	8	—	—	1	42	6	204			
Other . . .	6	9	2	17	13	1	1	—	—	—	—	—	17			
<b>Total . . .</b>	<b>88</b>	<b>42</b>	<b>18</b>	<b>148</b>	<b>108</b>	<b>21</b>	<b>9</b>				<b>42</b>	<b>6</b>	<b>221</b>			
<i>Male IPs</i>																
Denbigh . . .	68	51	55	174	102	43	4	72	77	10	59	2	394			
Other . . .	12	5	13	30	12	9	3	—	—	—	—	—	30			
<b>Total . . .</b>	<b>80</b>	<b>56</b>	<b>68</b>	<b>204</b>	<b>114</b>	<b>52</b>	<b>7</b>	<b>72</b>	<b>77</b>	<b>10</b>	<b>59</b>	<b>2</b>	<b>424</b>			
<i>Female OPs</i>																
Denbigh . . .	86	60	36	182	19	12	3	24	—	2	55	2	265			
Other . . .	2	8	7	17	1	—	—	—	—	—	—	—	17			
<b>Total . . .</b>	<b>88</b>	<b>68</b>	<b>43</b>	<b>199</b>	<b>20</b>	<b>12</b>	<b>3</b>	<b>25</b>	<b>—</b>	<b>2</b>	<b>55</b>	<b>2</b>	<b>282</b>			
<i>Female IPs</i>																
Denbigh . . .	78	73	58	209	8	24	6	89	47	8	71	4	428			
Other . . .	6	9	12	27	2	3	—	—	—	—	—	—	27			
<b>Total . . .</b>	<b>84</b>	<b>82</b>	<b>70</b>	<b>236</b>	<b>10</b>	<b>27</b>	<b>6</b>	<b>89</b>	<b>47</b>	<b>8</b>	<b>71</b>	<b>4</b>	<b>455</b>			
<b>Total All Patients</b>																
Denbigh . . .	314	217	165	696	224	79	21	210	124	21	327	14	1,291			
Other . . .	26	31	34	91	28	13	4	—	—	—	—	—	91			
<b>Total . . .</b>	<b>340</b>	<b>248</b>	<b>199</b>	<b>787</b>	<b>252</b>	<b>92</b>	<b>25</b>	<b>209</b>	<b>124</b>	<b>21</b>	<b>327</b>	<b>14</b>	<b>1,382</b>			

The general practitioners were able to give the present situation of all but 14 of them. The average date of follow-up was mid-1961.

The intention was to find the number of people 'now' impaired *in this community*. If a patient had permanently 'left Anglesey'—this was taken as 'outcome' for this purpose, but conversely we have included those extra patients *who have come into Anglesey*. We must state quite clearly that the object was a community follow-up, not a hospital one. There may be selective factors in migration which make the remaining patients in Anglesey unrepresentative for a follow-up of the total hospital turnover or of particular diagnostic groups within it. Moreover, the group no longer in Anglesey will include most of the transients and temporary residents.

The general practitioner was asked to describe the patient's present condition, and these were later graded in three categories:

*Well*: where the patient was well, the general practitioner usually said it directly—'perfectly well now, rarely consults for anything', or frequently in Welsh 'ardderchog' (very well indeed). Patients were graded here if symptom free.

*Mild, moderately ill or impaired*: if the patient still had residual symptoms or was still being seen by the general practitioner by reason of the psychiatric condition, but the symptoms were not causing him or anyone else excessive distress, nor interfering to any marked degree with his social functioning. Beyond that, all conditions were rated as *severely or substantially ill or impaired*.

The terms 'ill' or 'impaired' were used here and in the general practice prevalence study for two reasons. Firstly, some, though impaired, do not consider themselves ill but are so described by the general practitioner. Many of these indeed do not consult for anything. The second reason is that many of the mentally subnormal are not 'ill' in any sense of the word. Barton Hall (1949) expresses this: 'The patient may not be in any way "ill"—indeed he may be enjoying the best of health and have a brain which is functioning up to the limits of his restricted intellectual capacity'.

These terms were applied to those patients who were at the time of follow-up living in the community in Anglesey. The other categories which were applied were:

*Residential Care: Part III, including Old People's Home, Epileptic Colony, etc.*

*Remaining in-patients at Denbigh.*

*Died (At Denbigh/in Anglesey/suicide).*

*Not in Anglesey:* where there was definite information that the patient concerned had permanently left this community. (We did in fact get quite a lot of information about these, but it was not exhaustive, nor could it be regarded as contemporaneous and reliable. For our present purpose, they are all included in this category.)

There remained the small group we failed to trace and who remain '*not known*'. It is almost certain that they too have left the island, but we do not have positive proof of it.

One of the items of information collected in the follow-up was whether or not the patient was working. Some males would be over 65 or would have physical reasons for not working; these were counted as '*not applicable*' but the remainder were grouped as either working or not working. It was not so easy to do this for the females. We decided to exclude all married women, and widows or single women over 60, or with children, or living at home caring for other relatives. This leaves only a small proportion, with the further difficulty of finding what proportion of women of this type is gainfully employed in Anglesey anyway. The comments on the working performance of the ex-patients are therefore largely confined to the males.

### **The out-patients**

These are cases who had only out-patient attention during the period 1951-60 inclusive. They total 503, of whom 347 were living in Anglesey in mid-1961 and 3 were in residential care. Of these now living in Anglesey, 176 (51 per cent) are '*well*'; 110 (31 per cent) '*mild*'; 61 (18 per cent) '*severely ill or impaired*'. That is, of the total ex-out-patients now living in Anglesey, 82 per cent are '*well*' or '*mild*', and 18 per cent '*ill or impaired*'. There are thus in the community 18 males and 43 females who have only been out-patients and have not been admitted as in-patients during the period despite severe illness or impairment. Considering that the total '*severely ill or impaired*' is the accumulated total of 10 years' out-patient treatment, 61 in a population of 50,000 is really surprisingly low. The disparity between the sexes is discussed later.

The working rate of the male out-patients is reasonable considering the unemployment rate in Anglesey—of the potential 138, only 21 were definitely not at work, and 108 were known to be working, in the remaining 9 cases the general practitioner was not certain whether the patient was actually working or unemployed at the time.

### The in-patients

These total 879. At the time of the follow-up there were 124 at Denbigh. This is slightly different from the resident population figures previously given for the 1st January, 1961. The reason is that this follow-up was done during the course of 1961 and does not apply at the same date precisely.

There were 440 of these patients living in the community, and 18 in some other form of residential care. Of those living in the community, 164 (38 per cent) are 'well', 138 (31 per cent) 'mild', 138 (31 per cent) 'ill'.

Of the 440 there are 204 males, and on the criteria previously discussed, of these 173 should be working—in fact 114 are working, 52 are not, with 7 not known. Considering that these 173 represent all the potential working ex-in-patients in Anglesey, a working rate of  $\frac{2}{3}$  is at least as good as one might have expected. It would be illuminating if it could be compared with the working performance in Anglesey of the ex-in-patients of other specialities such as chest, cardiac, orthopaedic, or gastrointestinal cases.

### The ill or impaired

These comprised 61 past or current out-patients, 138 ex-in-patients. In addition, there were the 124 at Denbigh.

The distribution of these by sex is very interesting:

**Table XI**

	<i>In Anglesey</i>		<i>In-patients at Denbigh</i>	<i>Total</i>
	<i>Ex-OPs</i>	<i>Ex-IPs</i>		
Males . . .	18	68	77	163
Females . . .	43	70	47	160
				323

There would appear on the face of it to be a considerably greater toleration in this community of severely ill or impaired

females than males. The combined total of community and hospital is practically identical for both sexes, but consistently the resident males at Denbigh who came from Anglesey exceed the females by about a third.

Further light is thrown on this in the general practice prevalence study, where the prevalence of untreated severe cases in the community is greater for females than males.

On the issue of providing care for the severe 'declared' psychiatric cases, it appears that the hospital is at present providing for half the males, though for little more than a quarter the females. Is the hospital carrying an excessive proportion of the males—or too small a proportion of the females?

The total 'severe' cases—including current in-patients—among the out-patients/in-patients is 323, or about 6 per 1,000 of the Anglesey population. This group is likelier to make demands on the services—particularly of the local health authority—than the 'mild' group. For the present, we will take this number as the principal component from the hospital data and follow-up study to the load of hospital and community care. It will be taken up later when the other groups have been defined.

### Deaths and suicide

These figures relate to the patients derived from Denbigh records only, who died at Denbigh or in Anglesey.

**Table XII**  
Denbigh patients who had died in Anglesey or at Denbigh  
(by mid-1961)

	<i>Denbigh</i>	<i>Anglesey</i>	<i>Suicide</i>	<i>Total</i>
Male OPs . . . .	—	22	2	24
IPs . . . .	36	31	5	72
Female OPs . . . .	—	22	2	24
IPs . . . .	44	43	2	89
Total . . . .	80	118	11	209

Of the 48 OPs who have died in Anglesey, 4 committed suicide; as a cause of death it accounts for 8 per cent.

Of the total IPs who have died, 7 of 161 committed suicide, but in fact all these did so after leaving hospital, so that of the 81 ex-IPs who had died in Anglesey, suicide was the cause of death in approximately 9 per cent.

ANGLESEY PATIENTS (MALE) AT DENBIGH ON 1st. JAN. EACH YEAR SHOWING OUTCOME ON 1.1.63 FOR PATIENTS ON 1st. JAN. OF EACH YEAR.

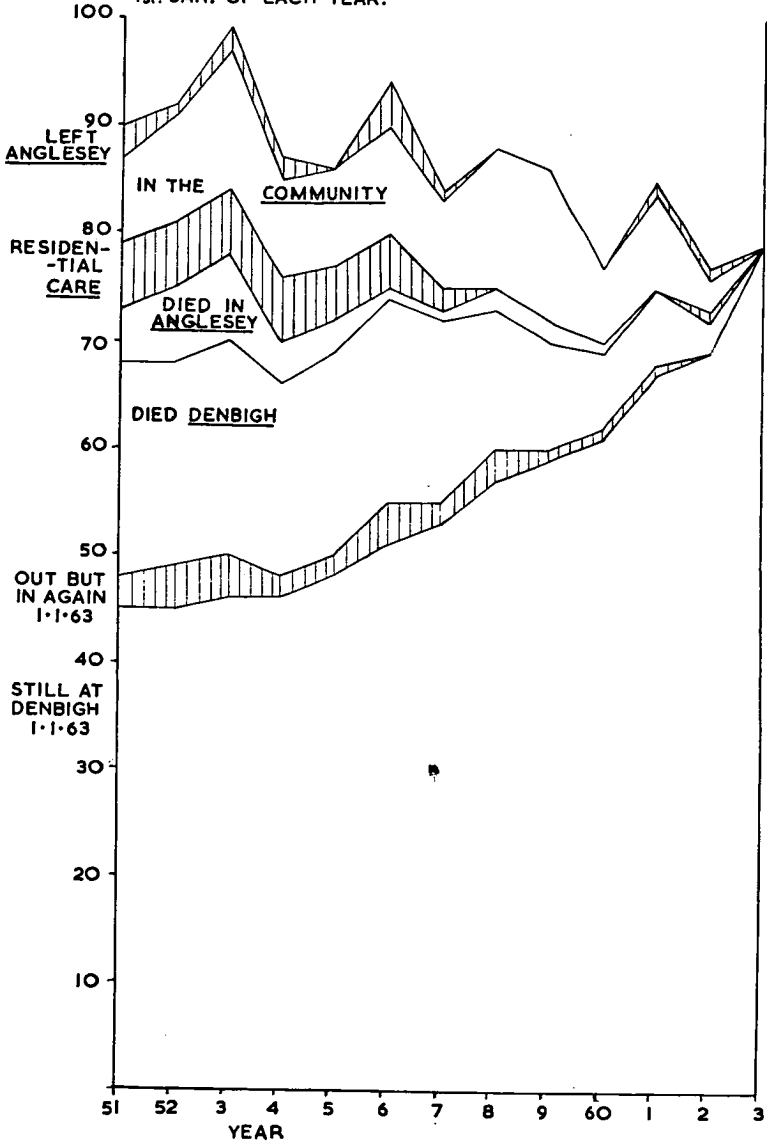


FIG. 4.

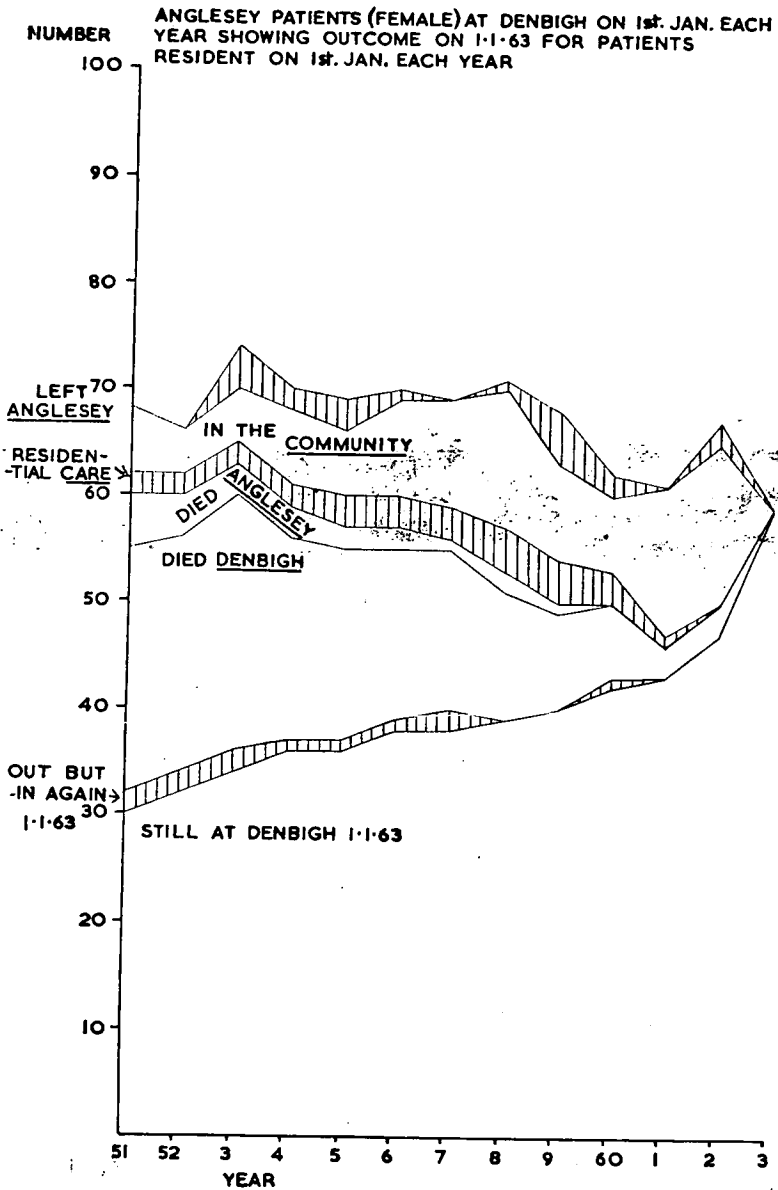


FIG. 5.



Taking all the deaths in Denbigh and Anglesey together, suicide accounts for 5 per cent. We have not yet calculated the expected rate for the patients who died, but there would appear to be at least a tenfold increase in suicide as a cause of death, in relation to the general population.

### **The outcome for the resident population at Denbigh on the 1st January of a given year**

Figure 1 showed the Anglesey patients resident at Denbigh on the 1st January each year. Figs. 2, 3 show for the resident population on each 1st January how many of those were at Denbigh on each succeeding 1st January to 1.1.63.

What became of these resident populations of a given date? Figs. 4, 5 attempt to show this. For instance, of the population at Denbigh on 1.1.51 (90 males, 68 females). The diagram shows where all these were on 1.1.63. Only 8 males and 6 females were actually living in the community, 3 males had left Anglesey, 6 males and 2 females had left Denbigh but were in other forms of residential care, 48 males and 32 females were still at Denbigh after the lapse of 12 years. Of those no longer at Denbigh the great majority had died—25 males, 28 females, all but 5 of each in fact dying at Denbigh.

Taking those still at Denbigh on 1.1.63 and those who had died together, they account for 73 (81 per cent) of the males, and 60 (88 per cent) of the females who were at Denbigh on 1.1.51.

The earlier resident population is of course common to some extent to all the subsequent years, and each year there are some new cases who contribute to the residents of subsequent years. It is some guide to this overlap to see the total number of individuals involved in the resident population on 1st January from 1.1.51 to 1.1.63, and the total outcome (Table XIII (b)). For comparison we have included in the last column the corresponding figures for the total Denbigh IP cases from 1.1.51 to 31.12.60, at the follow-up in mid-'61. The figures are not strictly comparable for the data at the hospital have been extended to 1.1.63 to provide a longer basis for extrapolation. Re-admissions are accounted for, but not death or emigration of those in the community in mid-'61, and in the extra time of approximately 18 months, more cases would be added to the total turnover. However, the distribution between categories of the total patients involved in each case is very interesting.

These 400 patients have between them kept up at Denbigh an average population of about 150 for 12 years. This 'chronic pool'

**Table XIII (a)**  
**Outcome on 1.1.63 for Anglesey patients at Denbigh Hospital on the 1st**  
**January of each year from 1.1.51**  
 (Basis of Figs. 4 and 5)

Year	51	52	53	54	55	56	57	58	59	60	61	62	63
<i>Males</i>													
Not in Anglesey . . . . .	3	1	2	2	-	4	1	-	-	-	1	1	
In the community . . . . .	8	10	13	9	9	10	8	13	14	7	9	3	
Other Resident care . . . . .	6	6	6	6	5	5	2	-	-	-	-	1	
Died in Anglesey . . . . .	5	7	8	4	3	1	1	2	2	1	-	-	
Died at Denbigh . . . . .	20	19	20	18	19	19	17	13	10	7	7	3	
I.P. again 1963 . . . . .	3	4	4	2	2	4	2	3	1	1	1	-	
I.P. throughout . . . . .	45	45	46	46	48	51	53	57	59	61	67	69	
<i>Total . . . . .</i>	<i>90</i>	<i>94</i>	<i>99</i>	<i>87</i>	<i>86</i>	<i>94</i>	<i>84</i>	<i>88</i>	<i>86</i>	<i>77</i>	<i>85</i>	<i>77</i>	<i>79</i>
<i>Females</i>													
Not in Anglesey . . . . .	-	-	4	2	3	1	-	1	5	2	-	2	
In the community . . . . .	6	4	5	7	6	9	10	13	9	7	14	9	
Other Resident care . . . . .	2	2	2	2	2	3	3	4	4	3	1	-	
Died in Anglesey . . . . .	5	4	3	3	2	2	1	2	1	-	-	-	
Died at Denbigh . . . . .	23	22	24	19	18	16	15	12	9	7	3	3	
I.P. again 1963 . . . . .	2	2	2	1	1	1	2	-	-	1	-	-	
I.P. throughout . . . . .	30	32	34	36	36	38	38	39	40	42	43	47	
<i>Total . . . . .</i>	<i>68</i>	<i>66</i>	<i>74</i>	<i>70</i>	<i>69</i>	<i>70</i>	<i>69</i>	<i>71</i>	<i>68</i>	<i>62</i>	<i>61</i>	<i>67</i>	<i>59</i>

**Table XIII (b)**  
**Outcome for the patients at Denbigh on 1st January of any year**  
**from 1.1.51 to 1.1.63**

	On 1.1.63			Follow-up mid-61
	Male	Female	Both	Both
At Denbigh . . . . .	79	59	138	124
Not in Anglesey . . . . .	12	18	30	130
Other Residential care . . . . .	8	5	13	18
In the Community . . . . .	55	67	122	383
Died at Denbigh . . . . .	37	39	76	72
Died in Anglesey . . . . .	14	10	24	89
<i>Total died . . . . .</i>	<i>51</i>	<i>49</i>	<i>100</i>	<i>161</i>
<i>Total patients involved</i>	<i>205</i>	<i>198</i>	<i>403</i>	<i>816</i>

of about 400 contributed the bulk of those who died at Denbigh or were still there at the end of the period, and of those finally in other residential care, but only a small proportion of those in the community. It is noteworthy how small are these figures of 'other residential care', and this included a number of miscellaneous agencies as well as the Local Health Authority (LHA).

The overall impression from this brief examination is again of a slow stream of patients who largely stay at Denbigh or who die there, and a faster stream, using proportionately far fewer beds, who largely pass through Denbigh and are found in the community. It certainly seems rational to try to channel these streams separately and provide for their distinctive needs.

### III. The Mentally Subnormal Identified from All Sources

From the scrutiny of various LHA and hospital records we found the following cases:

(i) In hospital . . . . .	46
(ii) Supervised by the LHA in the community. . . . .	81
(iii) In Part III accommodation . . . . .	13

From the GPs we found:

(iv) Cases identified by the GPs as subnormal or severely subnormal, but not known to the LHA . . . . .	83
(v) Cases identified by the GPs as 'dull and backward' 'below the limits of normal'. Not known to LHA . . . . .	159

The Anglesey education authority had a list of Educationally Sub-Normal (ESN) pupils. IQ ratings were available for these.

(vi) ESN pupils with IQ below 70 . . . . .	(*47): 46
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\* One of these is included with the mentally subnormal identified by the GPs.

Taking only the incontrovertible groups (i), (ii), (iii), (iv), we find 223 cases, or a crude rate for the county of 4.4 per 1,000, or in the community 3.2 per 1,000, of which *only half* were known to the LHA.

Adding the other two categories would give 428, a rate of 8.4 per 1,000—or excluding the ESN (IQ under 70) 383, a rate of 7.5 per 1,000.

We think we uncovered as many cases as was possible by the methods we used, particularly among adults, where it would be very difficult to improve on the case-finding. Nevertheless we do not think our totals—even for the definitely subnormal, are the true totals in the community. We were impressed by the number of severe cases who were hardly ever seen by anyone, hardly ever out of the house, and of whom even the GPs were barely aware. The total in the community in our figures is 164, not counting those in Part III accommodation. The total the GPs identified was 128. Judging by the cases the GPs missed from the LHA list (36 missed from 81), their accuracy as casefinders of mental subnormality is only 45/81 and, if the same degree of casefinding applied when they identified 128 from the community as a whole, they might have missed about another 65 in

addition to the 36 they missed on the LHA list. The validity of this part of the study is also discussed with the validity of the GP survey.

Strictly speaking, the cases in groups (i), (ii), (iii), (iv), are our definitely mentally subnormal or severe subnormal cases. We think that a fair number of group (v), the patients charitably described by their GPs as 'dull and backward' outside the limits of normal are in fact mentally subnormal.

A study which used some form of IQ screening for children of school age would undoubtedly also 'identify' the ESN cases with IQ under 70 as mentally subnormal. So far, however, these 47 cases (with only one exception) have only been recognized as *educationally* subnormal. We return to this group when we discuss the age distribution.

All the patients in groups (i) and (ii) were visited (i.e. the mentally subnormal in hospital or supervised by the LHA), and their nearest relative interviewed. We have therefore obtained detailed information in order to estimate provisions for these cases. In addition we have enough information from the GPs about the cases identified by them to suggest how such provisions should be extended to cover these also. Beyond this we discuss the possible margin of error in our finding of community cases. In this paper we are confining ourselves principally to the discussion of prevalence and to the present position with regard to services.

**Table XIV**  
**Distribution of subnormality and severe subnormality between agencies, and between hospital and community**

	Residential care		Community		Total
	Hospital	Part III	LHA supervn.	GP only	
<i>Subnormal</i>					
Males . . .	11	6	25	27	69
Females . . .	12	3	15	36	66
Both . . .					135
<i>Severe subnormal</i>					
Males . . .	14	4	22	9	49
Females . . .	9	—	19	11	39
Both . . .					88

It is remarkable that there were in the community, not known to the LHA, identified only by the GPs, almost as many

severely subnormal as there were altogether in hospital, or half as many as the LHA were currently supervising.

There is discernible here again the lesser tolerance of males by this community. With the interesting exception of the female subnormal in hospital there is a greater tendency for the male to be in residential care, and for the males in the community to be known to the LHA. Summarizing all the cases for contact with the various services or not:

**Table XV**  
**Distribution of mentally subnormal between those receiving some attention other than GP, and those known only to GP**

	<i>Hospital + Part III + LHA supervision</i>	<i>GP only</i>	<i>Total</i>
Males . . .	82	36	118
Females . . .	58	47	105
Both . . .	140	83	223
$X^2 = 4.93 \text{ } p > 0.05$			

A significantly higher proportion of the identified male than female cases are receiving some kind of attention from hospital or LHA.

**The ratio of mental subnormality to severe abnormality**

The ratio for our definite cases 135/88 (1.5 : 1) will probably be regarded as low. We think, as discussed above, that a fair number of the 159 'dull and backward' would be regarded by many as subnormal mentally, and included in this group. Likewise a study based on IQ measurement would have included the 47 with IQ < 70 in the ESN lists, which would again raise the ratio. On the other hand, the tendency of the GPs was to grade the cases generously, and it is likely that a few of the subnormal could well be down with the severely subnormal.

**The age distribution of the mentally subnormal**

The mentally subnormal and severely subnormal, and 'dull and backward' distributed by sex and age, and contact with various services.

Table XVI

Distribution of mentally subnormal, dull and backward and ESN by age group and by contact with various services

Males Age	Hospital	Part III	LHA	GP	Total	D. & B	Grand total	ESN IQ < 70
0-14	4	—	8	11	23 (3.82)	15	38	21 (3.34)
15-24	2	—	17	5	24 (7.80)	11	35	
25-34	3	—	13	3	19 (6.64)	8	27	
35-44	5	—	4	10	19 (6.06)	9	28	
45-54	2	—	3	3	8 (2.49)	16	24	
55-64	6	5	2	3	16 (5.73)	9	25	
65+	3	5	—	1	9 (3.24)	6	15	
Total	25	10	47	36	118 (4.90)	74	192	21 : 312
<i>Females</i>								
0-14	1	—	3	10	14 (2.38)	14	28	26 (4.41)
15-24	4	—	10	4	18 (6.13)	10	28	
25-34	1	—	15	5	21 (6.87)	15	36	
35-44	2	—	4	10	16 (4.69)	19	35	
45-54	5	—	—	9	14 (4.13)	12	26	
55-64	8	1	2	5	16 (4.83)	12	28	
65+	—	2	—	4	6 (1.44)	6	12	
Total	21	3	34	47	105 (4.01)	88	193	26 : 219
<i>Both</i>								
0-14	5	— (0.41)	11 (0.90)	21 (1.72)	37	29 (2.38)	66	47 (3.86)
15-24	6	— (1.01)	27 (4.53)	9 (1.51)	42	21 (3.52)	63	
25-34	4	— (0.68)	28 (4.73)	8 (1.35)	40	23 (3.89)	63	
35-44	7	— (1.07)	8 (1.22)	20 (3.06)	35	28 (4.28)	63	
45-54	7	— (1.06)	3 (0.45)	12 (1.82)	22	28 (4.24)	50	
55-64	14	6 (3.29)	4 (0.66)	8 (1.32)	32	21 (3.46)	53	
65+	3	7 (1.44)	—	5 (0.72)	15	12 (1.73)	27	
Total	46	13 (1.17)	81 (1.61)	83 (1.65)	223 (4.44)	162 (3.22)	385 (7.66)	47 : 432 (8.59)

Figures in parentheses indicate rate per 1,000. Hospital and Part III accommodation are given as a joint rate.

It is noteworthy how large a contribution the GPs make to the number identified in the age-group 0-14 (mostly of children under school age) and again in the age groups from 35 onwards. In fact most of the cases which the LHA is supervising are under the age of 35, either *now* of school age or of the two post-school decades, in those age ranges the GPs had few more to add. Perhaps the administrative practices which have caused these to be known to the LHA will mean that with the passage of years progressively more decades will have been thus more fully screened and the number of unknown older cases be progressively less. If that is so, our total figures *now* may be a fair guide to the likely state of the LHA lists then.

It is informative to divide the cases into those under and over age 35.

**Table XVII**  
**Mentally subnormal divided at age 35**

Age	In the Community		Residential care	Total
	Known to LHA	Known only to GPs	Hospital and Part III	
0-34	66	38	15	119
35+	15	45	44	104
Total	81	83	59	223

We are not discussing needs and provision of services here, but we would mention that many of these community cases known only to the GPs are just as dependent on relatives as any known to the LHA. Present support, and future provisions if the supporting relatives die are obviously a matter of concern to the LHA.

It is abundantly clear from the above facts that for the study of the prevalence of mental subnormality, even of severe degree, the records of the social services are not a sufficient source, particularly in the case of adults, and that an approach must be made at the community level, whether through the GPs or through other informants in close contact with the community. We have already explained our view that even this is not exhaustive.

Figures 6, 7 and 8 show the distribution by age as rate and total number of the cases considered here, and their contact with various services as shown in Table XVI.

Most studies have found a markedly higher rate in children. For our strictly determined subnormal and mentally subnormal the



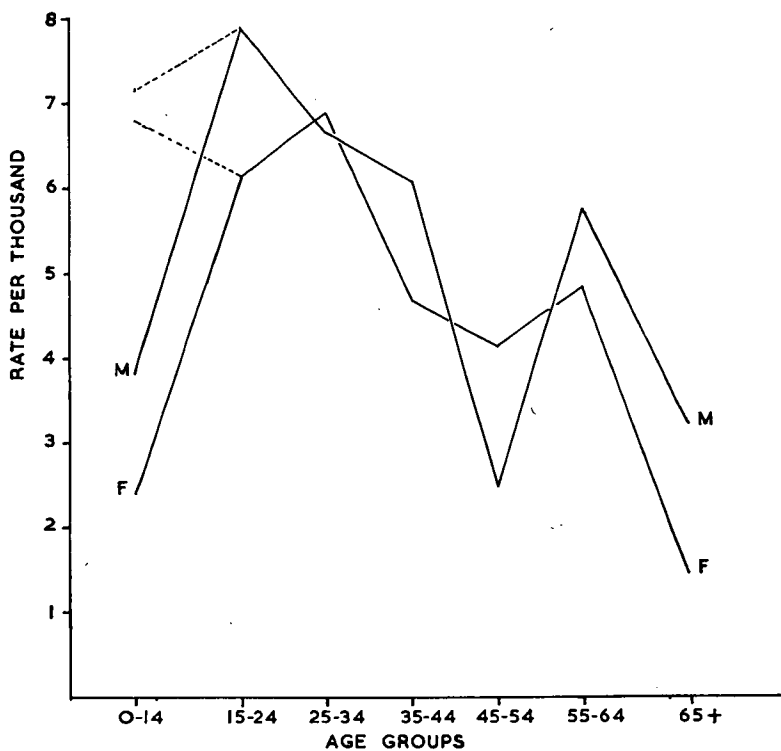


FIG. 6. Mentally Subnormal and Severely Subnormal. Rate per 1,000 by age groups. Sexes separately.

Interrupted line shows effect of adding ESN with IQ < 70.

rate we found under 15 is in fact lower than in the succeeding years. The ESN with IQ < 70 would make up this deficit to a large extent, and had the survey been based on IQ ratings they would undoubtedly have been 'identified'. Their contribution is shown by the interrupted lines in both figures. The bias in our study has been towards social malfunction as recognized by the GP. A child markedly subnormal would be recognized from a very early age by the GP—as indeed their contribution to the early age groups show—but a child might be very dull and yet pass in the community, showing little social defect, yet recognized by the schools as intellectually backward, or even graded as ESN. The community—and the GP—may become more aware of the defect after the child leaves school and has more socially revealing demands made on him or her in other epochs.

The maxima in our study are in the age groups 15-24 for

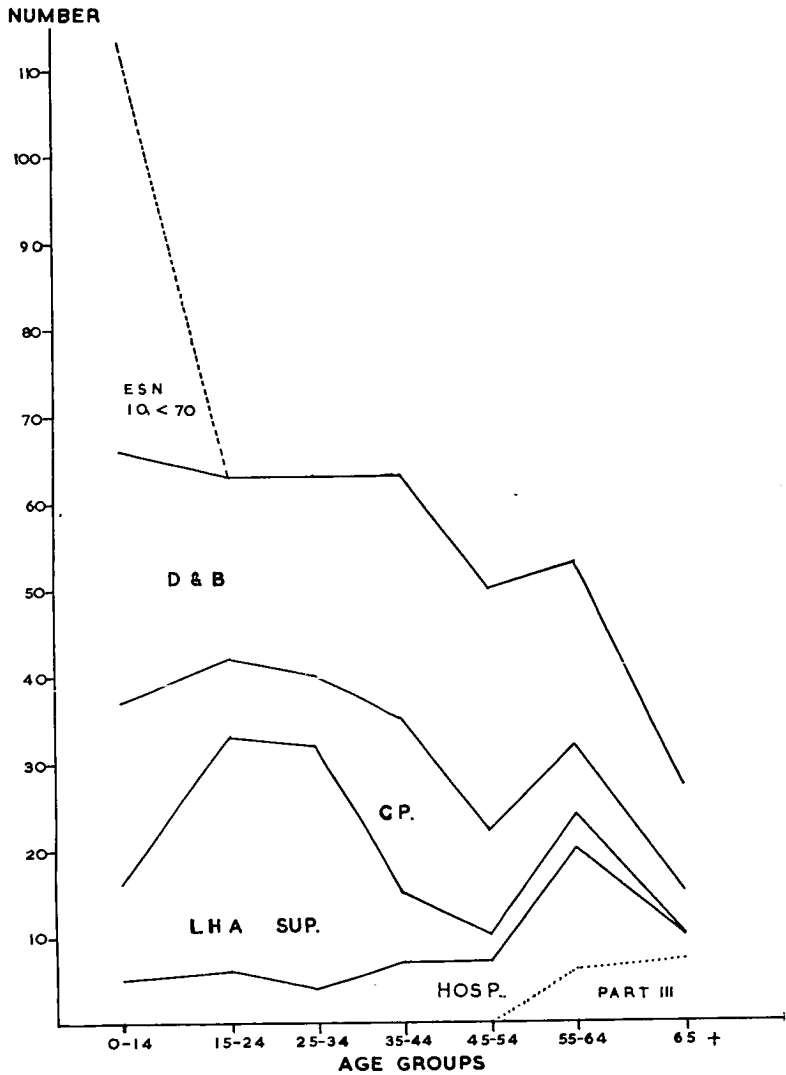


FIG. 7. Mentally Subnormal and Severely Subnormal, 'Dull and Backward' and ESN with IQ < 70. Actual numbers involved (sexes together) showing age distribution and contact with services.

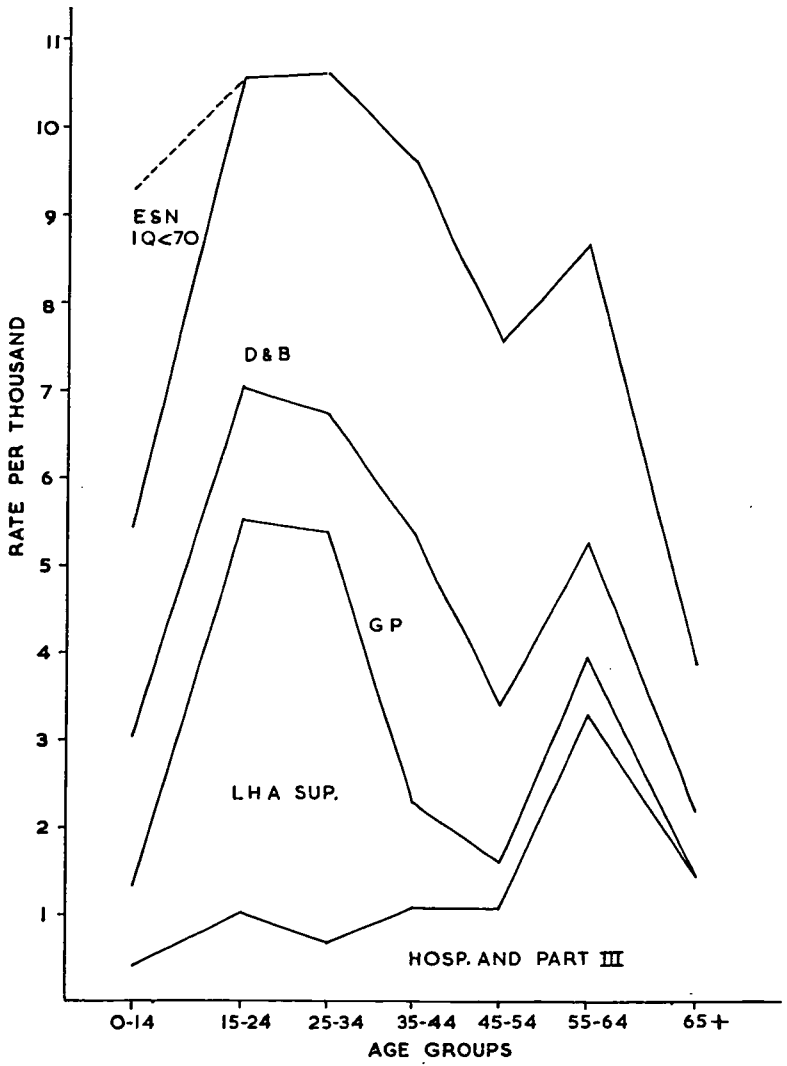


FIG. 8. As Fig. 7 but shown as rates per 1,000 for each age group in the civilian population.

males, and 25-34 for females, but with the peculiarity of second peaks for each in the range 55-64.

Part III cases, who have been there a long time, account for about a third of the second male peak, but there is a sharp increase in this 55-64 age group even without these. Both for males and females, it is largely due to greater numbers in hospital. It is significant that the numbers identified by the GPs are dropping in this age group, and the numbers supervised by the LHA are very small.

There could be several reasons for this. These are the age groups where the patient would have lost parents and possibly siblings. Supporting relatives growing older and less able to cope, or a deterioration in the physical or mental condition of the patient himself would exacerbate the position. Cases who were previously making no demands, or were not even known, may therefore emerge and require services at this age. It may well be that what our graphs show should be regarded not as two peaks, but as a hollow. The dip between the two peaks is more marked for the hospital and LHA cases on their own, it fills out somewhat when the GP cases are added—perhaps a better case-finding method would fill more of it.

The figures show very clearly the sharply increased demand for residential care in the older age groups, and the almost exclusive concern of the LHA supervisory service with the younger age groups.

## IV. The Prevalence Study in General Practice

### The background and definition

We have outlined the information obtained from hospital and LHA records, and shown how these were complemented by extracts from the GP prevalence study. We now outline this study, and its bearing on the total psychiatric morbidity in this community.

All the GPs on the island, and those on the mainland who had patients in Anglesey cooperated in this work. Altogether 42 doctors took part at some stage or other, in the original scrutiny or in the subsequent validation. No GP declined to help in any respect, and some gave a great deal of their time—several gave 10–15 sessions of  $1\frac{1}{2}$ –2 hours.

We had thought initially in terms of a 'forward study' with the GPs recording consultations, but a sustained effort for a full year would be very onerous for them. We wanted if possible to cover the entire population, and made the demand on the doctors as modest as possible. In fact a 'prospective' study in general practice is not as ideal as it would appear to be for ascertaining the prevalence of mental disorder. Of the cases identified by the GPs as suffering from mental disorder in the year 1960, *one in seven* did not consult the GP. The mentally subnormal in particular seldom consult, and very rarely indeed do so as a consequence of their mental state. This is evidenced in the General Register Office and College of General Practitioners study where the rate for mental subnormality is very low (Logan *et. al.*, 1958).

Only about two-thirds of the total patients on a GPs list consult during any given year. A forward study for a full year would therefore still say nothing about the actual state of the one-third who did not consult.

The other two methods we considered were that a member of the team should examine the GP's record cards and extract the likely psychiatric cases, or that the GP should be asked to go through the record cards, putting a 'face to a name' and indicating those cases he considered 'psychiatric'.

We did in fact try out all three methods in a practice outside Anglesey. The doctors involved found the 'forward study' very trying indeed, particularly with regard to home visits, and telephone or casual consultations, and were greatly relieved when it stopped.

A trial retrospective study of record cards by a member of

the team soon showed that even with good records this was inadequate, and the GP's habits with regard to records vary so widely that this could never be applied to the full population. The last method, however, worked well, in fact the doctor quite enjoyed it and found it stimulating to review his practice from a psychiatric point of view in this systematic manner. This was the procedure we adopted.

We had the advantage that on average the GPs had lists of about 2,000 per practitioner, and knew their patients well. They lived in the district of their practice, they were well-placed to know what went on in the community, and they knew a great deal about patients who were nominally on their lists even if these were not consulting. Where there were partnerships, one partner was often based on a different surgery, effectively a different practice. They were also asked about any cases known to them who were not on their NHS lists, but there are in fact very few people indeed in Anglesey who are not registered with a GP, and there is very little private practice.

With the generous assistance of the staff of the Anglesey Executive Council we obtained the age/sex composition of every practice in Anglesey. Combining these gave an estimate of the age/sex composition of the civilian population as a whole which was registered with a GP. When the age/sex composition for Anglesey from the 1961 Census became available, we subtracted the Forces personnel, and found that the Executive Council figures were remarkably accurate. Even more striking is the comparison with the corresponding figures from 1951 Census. The Executive Council figures follow closely the changes in the different age groups, showing that they actively represent the current situation and are not masking an inflation by a true deficit.

As this point is vital to the claim that the GP study covers the whole population, and can give a valid estimate of prevalence, the figures are given here. They apply to the *civilian population only*. The Service personnel do not use any of the local mental health services nor enter into the local mental health statistics, their dependants however do so, and are included in the civilian population. The Services were able to give us the age/sex composition of their personnel in Anglesey on the appropriate dates.

The census applies to 23/24 April 1961. The Executive Council staff extracted their information during the summer of that year.

On this basis we can reasonably claim that the population

which we screened with the GPs as case-finders was, as closely as it can be defined, the entire civilian population of Anglesey.

**Table XVIII**  
**Age distribution calculated by the Anglesey Executive Council**  
**compared with Census data**

	0-14		15-24		25-44		45-64		65+	
	M	F	M	F	M	F	M	F	M	F
Executive 1961 .	6,287	5,892	3,043	2,937	5,997	6,468	5,994	6,705	2,778	4,169
Census 1961 .	6,303	6,064	2,869	2,974	6,051	6,257	6,013	6,759	2,844	4,313
1951 .	5,536	5,654	2,617	3,136	6,583	6,891	5,516	6,618	3,007	3,856

**Total civilian population**

	Male	Female	Total
Executive 1961 .	24,099	26,171	50,270
Census 1961 .	24,080	26,349	50,429
Census 1951 .	23,258	26,155	49,413

**The procedure with the GPs**

The GP was asked to go systematically through the cards of his patients individually, and to indicate those *he* regarded as 'psychiatric', or where he had so regarded them in the past, or where he knew of previous psychiatric illness.

The GP would then very likely ask 'What do you mean by psychiatric?' It was explained that we were of course interested in the obvious cases of mental subnormality or of severe disturbance, but that we were also interested in milder conditions when the GP regarded them as outside the limits of normal.

It was not the intention to present the GP with a list of diagnoses and conditions, but to give a broad outline of what we wanted, and then when a possible case was picked out, to elicit sufficient additional information to enable us later to place the patients in broad diagnostic groups. Crombie (1957) said, '... the psychogenic element in illness at the level of general practice, although difficult to define, is something which can be recognized if only subjectively'. Our aim with the GPs was to tap this recognition, without constraining them initially to express it in formal terms.

It was made clear to the GPs that they could use any words they liked to describe the cases. The interviewer would then ask

further questions to make sure he understood what they meant, and that what he recorded was a fair impression of their view of the patient. The description would frequently include colloquial terms, some were graphic and forceful. Much of the work done with the GPs was in fact done in Welsh.

In practice, the procedure proved quite pleasant and easy. As the GP scrutinized the first drawerful of cards (100-150) things would rapidly settle down and the procedure become quite straightforward. He would pick out the first few cases hesitantly, the interviewer would then satisfy himself about the broad picture of the patient's state, and then if there was any doubt whether the patient should be included, would ask the GP 'Do you consider this patient to be outside the limits of normal?'

Mild anxiety states and periods of depression are so common that the GPs regard them as about as 'normal' as head colds. Once past they are rapidly forgotten and even when a GP remembered such an episode in a person who had only been moderately troubled at the time, and had since been quite well, he would generally only mention it in passing and would not regard the patient as 'psychiatric'. The effect of this was to exclude minor or transient conditions which would have counted as 'consultations' in a study more closely tied to past or forward records, and to focus attention on those who had been notable by reason of duration or severity of disorder.

Having identified a 'case' the GP was asked whether the patient was in that condition 'now', whether in 1960, or whether it was a matter of always being like that. In this way patients could be selected later who had been 'active' during 1960, the period during which we were estimating prevalence. Certain basic information was collected about all the patients identified, in addition to clinical and social description. Any contacts with the psychiatric services were noted.

Where the GP had indicated mental subnormality or had mentioned a lesser degree of intellectual defect, the cases were collected together, and a further visit made with regard to them to the GP. Standard descriptions were made of 'Mental Subnormality' and 'Severe Mental Subnormality' and were shown to the GP. The list of patients he had identified who might qualify here was then read back to him, and one by one they were discussed in the light of the standard 'definitions', the GP then being asked into which category the patient should go. It will be seen that we did here try to work to a defined standard. On the whole, however, we feel the GPs probably



gave the patients the 'benefit of the doubt' and that the tendency was to grade higher rather than lower. This has been discussed already in the section on mental subnormality.

All the 50,000 cards of the NHS patients in Anglesey were screened in this way, and we have shown good grounds for the assertion that they do in fact represent virtually the entire civilian population. We did pick up occasional cases who were not on the GP's list, the odd private patient, vagrant, or regular visitor. The numbers were small, and while they do not affect the findings to any great extent, their handling will be explained in the final report.

Absolute confidence was observed. No one but the member of the team who carried out the work handled the basic material. The GPs were assured also that no approach would be made to any patient identified by them other than with their consent. The work began in February 1961, and most of it was finished by August-September, but part did drag on till nearly the end of the year.

### **The validity of the GP prevalence study**

A novel feature of this survey was a check on the accuracy of the case-finding method. The only other study of which we know, where there was a deliberate attempt at an 'index of case-finding' was that of Lemkau, Tietze, and Cooper (1941-3).

Essentially the idea in this validation procedure was to distribute the Anglesey patients identified in Denbigh records, according to their GPs, and after the GP had gone (unprompted) through his cards, to check whether this index group of known cases had been picked up.

Where the ex-patient was not picked up by the GP, we made a further visit to him and enquired about the present condition. In this way we could exclude those no longer in the practice, and transfer as appropriate those who had changed doctors, finally rating each GP and the GPs as a whole, on the accuracy with which they had picked up this group whom we then knew to be still on the lists.

It may be argued that the thing which stuck in the doctor's mind was not the illness but the hospital contact, or that he would remember a patient who had been underlined in this way more readily than another who had been equally ill but who had not been in hospital. In practice, however, the GP often picked up a card, and described the condition of the patient without mentioning the hospital treatment, which was only found on a routine check of the case envelope for psychiatric letters! Or he might say while describing

the patient 'I think you've seen this one' (i.e. 'we' the hospital or clinic). They were admittedly less prone to forget IP than OP treatment, but one did not get the impression that the hospital was in the forefront of the GP's mind when he picked out the case. Attending the patient over a period of time and noting the course of his illness involves the GP more immediately than the relatively transient episode of a hospital admission or a discharge or clinic letter.

The descriptions given on the first scrutiny, and on the later check visit, were in fact the basic material of the *follow-up study* which has already been described. All the ex-patients still in Anglesey were covered in this way, and in the case of those who were not, the GP was able to say almost always if they had died or had left Anglesey, or were for instance in Part III (usually OPH).

On the basis of these descriptions the patients still in Anglesey were graded 'w'—'well', 'm'—'mild or moderate', or 'i'—'severely ill or impaired'. This was discussed in the section on follow-up. The grading was done *without* checking to see if the patient had been identified in the original survey, so that there was no bias.

We could then see how the proportion identified by the GP in the survey was influenced by the current state of the patient.

**Table XIX**  
The rate at which each practice identified the cases in the index group, according to whether the patients were 'well', 'mild' or 'ill'

Practice	Patients who were					
	'well' identified out of		'mild' identified out of		'ill or impaired' identified out of	
A .	9	18	16	21	16	17
B .	8	15	6	7	1	2
C .	6	18	10	20	7	8
D .	8	21	14	21	13	14
E .	2	12	4	7	3	3
F .	24	41	19	25	30	34
G .	10	21	6	9	10	11
H .	13	43	24	34	17	21
I .	4	13	7	10	13	14
J .	3	10	6	11	7	7
K .	1	10	11	17	9	13
L .	3	16	1	4	4	7
M .	4	9	2	2	7	8
N .	0	5	3	3	1	1
O .	10	12	2	4	2	3
P .	6	10	5	12	6	7
Q-U .	—	—	3	4	1	1
V .	—	—	1	1	—	—

Table XIX shows the rate at which each practice identified its index group according to current condition, taking all OPs, IPs, of both sexes together for the present.

Table XX shows the rate for the whole population, and shows sex and IPs, OPs, separately. The practice figures do not quite add up to this. The GPs were scored on what they should reasonably have done in their practice.

**Table XX**  
Rate at which index group cases were identified for the whole population, shown for each sex separately, and for OPs and IPs

	Patients who were					
	'well' identified out of		'mild' identified out of		'ill or impaired' identified out of	
Male OPs	19	82	21	33	12	16
Male IPs	37	68	40	51	50	55
Female OPs	18	86	28	60	28	36
Female IPs	39	78	51	73	49	58
Total	113	314	140	217	139	165

The total identified in each category here does not always correspond exactly with the total of those identified in that category by the individual GPs. As explained in the text the criteria were slightly different.

The view taken was, that for the individual practices, the most useful figure would be how many they picked up out of a total number that could reasonably have been expected, excluding occasional instances where there was a particular reason for the GP to miss the case. This was thought to be the best guide in comparing practices with each other, or accounting for odd discrepancies in rates or sex differences. For estimating *prevalence*, however, it is the rate of identification in the population as a whole which counts. Any person subsequently found in Anglesey, not identified by the 'survey instrument', whatever the reason may have been is counted against the instrument. If the person's NHS card was not in the doctor's files—for instance, at a time of transfer between doctors, it absolves the individual doctor for the 'name' was not presented to him for scrutiny, but *our system failed on that case* so it counts against our accuracy with regard to the population as a whole. The other reason for the anomaly is that the same case was picked up by more than one doctor—e.g. a case picked up with one in February who had come on the list of another in August. Or sometimes the case-envelope was still in one practice awaiting recall and the next GP had loose continuation cards for the patient. These

were credited to both in reckoning individual accuracy, but of course only once for the 'instrument' as a whole. (In the figures given later for total survey cases in each practice, these few over-lapping cases are attributed to the most recent practice, and of course only counted once.)

When we first planned to use this index group method as a check on the accuracy of case-finding we intended merely to find what proportion of the group as a whole was picked up. We had not anticipated the way it actually worked out. There were 696 ex-Denbigh patients in Anglesey at the time of the follow-up, both sexes, OP and IP. Of this total 'index group' the GPs identified 392, or 56.3 per cent. But grouped for grading at follow-up:

Of 314 'well' they identified 113 or 36 per cent  
 217 'mild' they identified 140 or 64 per cent  
 165 'ill' they identified 139 or 85 per cent.

The 'ill' group include some whose contact with Denbigh was right at the beginning of our period, but these were picked up just as accurately as recent discharges if they were currently ill.

Of the entire index group, they identified only 56 per cent, but this rises to 85 per cent for those 'ill or impaired' at the time of the survey, and falls to 36 per cent for those who are well. The whole group had been in contact with the psychiatric services, the only difference between those identified and those not was that the former were *ill at the time of survey* and the latter were not.

Even more striking is the rate at which patients were identified who were on the list of a different doctor at the time of survey than the one who originally referred them to the psychiatric services.

**Table XXI**  
**Ex-patients who had moved and how accurately they were identified by grade of illness**

Yes = identified in survey.  
 No = not identified in survey.

	'Well'		'Mild'		'Ill or impaired'	
	Yes	No	Yes	No	Yes	No
Male OPs	1	5	—	6	2	1
IPs	4	2	3	1	5	—
Female OPs	2	10	1	5	5	—
IPs	3	4	5	3	5	1
Totals	10	21	9	15	17	2
Total OPs	3	15	1	11	7	1

For this special group, the overall rate for patients ill at the time of survey was 17 out of 19, or 89 per cent, but for those who were well, or had only mild symptoms the rate was only 38 per cent and 32 per cent respectively. Again this supports the argument that the GPs were identifying cases, not principally because they remembered a contact with hospital or clinic, but because the patient was at the time of survey showing psychiatric symptoms.

The index group in fact functions as a source for us of patients 'ill' at the time of survey, so that we can see how these particular patients were identified by the method of the survey. Those who are not currently ill are much less likely to be picked up by the GP, and in fact after 2-3 years the doctor was quite likely to forget that the patient had ever been to Denbigh or to the clinic if since then the patient has been completely well. This does not detract *at all* from the argument that the GPs do pick up very accurately those cases who are currently ill.

The most rigorous check theoretically would be to take a sample of the ordinary population, visit these and assess their psychiatric state and history, and use these as a check group on the survey method, a method fraught with its own difficulties and calling for far more time and resources than we had. The next would have been a similar random sample of total population or of one practice population, but assessed on the basis of information from the GP, after the survey, and without bias to psychiatric cases in their selection, here again one could then check back as in the first method to see how many of the psychiatric cases were picked up. Both methods based on random samples would need *several hundred population* to give a small group of real psychiatric cases. What we did in fact, in retrospect, was to use our Denbigh records to provide the 'index group' as a whole, from which in turn the 'ill' were defined as the critical index group.

It could then be argued that if the GPs on the island as a whole pick up 85 per cent of a group known to us to be psychiatrically ill at the time of survey, then they are likely to pick up a similar proportion of ill or impaired patients on their lists who are not known to us. If this argument is accepted, then our findings from this survey include about 85 per cent of the cases in the community in Anglesey who would come into our category of 'ill or impaired'.

Our category of 'mild to moderate' included all the patients whom the GPs could not say were symptom free or well. It probably merges into 'normal' psychiatric symptoms. Taking the whole group however, the GPs identified 64 per cent, in fact 71 per cent of the

males, though only 59 per cent of the females. Could it perhaps be argued that in the survey as a whole they have picked up similarly about two-thirds of those in the general population with such moderate symptoms? Or considering the patients picked up with a past history of psychiatric illness, treated or otherwise, but not known to us from Denbigh, could they too have been identified only to the extent of about a third if they were well at the time of survey?

### Validity in 1960

In order to be able to relate the prevalence rate to a full year we arranged the survey so that we could extract the patients who had been 'active' during 1960, and particularly stressed to the GPs at the time of survey that we wanted these cases even if they were no longer active in 1961 at the time of survey. Can we claim the same accuracy after an average lapse of about a year as we could for the current cases in 1961?

At the beginning of the survey we were only two months from the end of 1960, but by the end of the survey the gap was nearly a year, and more from the beginning of 1960. The question is really about the cases who had recovered by 1961, the chronic cases would be common to both. (Deaths or emigration since 1960 would inevitably be a source of error to some extent also.)

We tried to assess the accuracy of this more strictly retrospective part of the survey by the index group. How many of those who were 'ill' in 1960 and 'well' at follow-up in 1961 would be identified? We took two groups (with some common to both). These

**Table XXII**  
Outcome, and the rate of identification of index group patients admitted, or discharged during 1960

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#### *Admitted 1960*

There were identified in the survey 42 of a total of 51, or 82 per cent.

The GPs identified (mid 1961):

'Well'	. . . . .	13 of 15 = 87 per cent
'Mild'	. . . . .	11 of 15 = 73 per cent
'Ill'	. . . . .	18 of 21 = 86 per cent

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#### *Discharges 1960*

Total 73, GPs identified 61.

The GPs identified:

'Well'	. . . . .	19 of 23 = 83 per cent
'Mild'	. . . . .	15 of 19 = 79 per cent
'Ill'	. . . . .	27 of 31 = 87 per cent

---

were patients admitted to Denbigh in 1960, and patients discharged from Denbigh in 1960. These were part of the follow-up study because of their contact with Denbigh during our defined period, and those who were in Anglesey were part of the index group.

In these two groups, the patients who were 'ill' in 1960, and 'well' in 1961 were identified at a rate of 83 per cent and 87 per cent. One admits that the contact with hospital was recent and that it could be argued the GPs were remembering the patients because of this. But, on the other hand, it could be argued that if they do forget a patient's illness in half the cases after 2-3 years (which they do) it could be argued from here that they will remember the illness of over 80 per cent for a year. It will be seen later that the cases 'active' in 1960 who had recovered by 1961 in fact only account for about 10 per cent of the total 'active' in 1960, so that error in this group is minimized in the total. Furthermore, in the survey we are most concerned with severe and long-term conditions, which would likely be much the same for the lapse of a matter of months.

### **The ex-OPs in the community, and the index group**

The OPs are not picked up as well as the ex-IPs, particularly the mild and well. Does this mean that the fact that the patient has been in a psychiatric hospital makes him likelier to be remembered than someone who went only to OP clinic?—which would tend to weaken the case put forward that the main cause for identification in the survey was the current mental state. Some comments on the OPs will put this in perspective.

From 1951-60, there were 469 OPs from Anglesey who were not admitted during the period. Of this total 426 had only *one* referral. During this period there was a total of 1,497 OP referrals involving both the IPs and the OPs (including this 469). Of these 986 were for *one consultation* only, and including these, 1,158 of the referrals led to attendance at the clinic for *less than one month*. The GPs regard the clinic more as a 'screen' than a place for treatment, and its principle function is to decide whether a patient needs to be admitted or not to Denbigh. By and large, to have been an OP betokens a lesser severity of illness than to have been an IP, and the residual symptoms are likely to be less conspicuous.

One should add too that some patients are sent to the clinic for psychiatric opinion by various sources such as the courts, the wards of the general hospitals, and, in the past, by the Ministry of Labour in

the case of National Service conscripts, and that there might be no psychiatric disorder found. These patients nevertheless have had the services of a psychiatrist (and must properly count towards estimates of clinic provision and sessions), they have a folder and a reference number as cases on the Denbigh files. The 'well' in Anglesey in fact included 25 such cases. All this means that the OPs who were currently ill were the only category which we could put much weight on.

We have discussed at some length the procedure and the validity of this part of the survey, as the cases identified through it are very important to our figures for mental disorder in this community.

### Findings of the prevalence study in general practice

The following tables are included in this preliminary report:

Table XXIII: Total patients identified, by practice.

Table XXIV: Male and female rate by practice, standardized for age.

Table XXV: Time when the patients were in the condition described, and also whether consulting.

**Table XXIII**  
Total patients identified by practice

<i>Practice</i>	<i>Patients</i>	<i>Population</i>	<i>Crude rate</i>	<i>Active '60</i>	<i>Crude rate</i>
A . .	208	4,862	4.44	196	4.04
B . .	45	1,940	2.32	40	2.06
C . .	128	4,318	2.96	116	2.69
D . .	91	2,805	3.23	72	2.57
E . .	24	1,436	1.67	20	1.39
F . .	271	7,934	3.41	233	2.94
G . .	185	2,906	6.37	168	5.78
H . .	138	5,576	2.42	116	2.08
I . .	82	3,399	2.41	68	2.00
J . .	74	3,435	2.15	65	1.89
K . .	219	2,136	10.25	211	9.87
L . .	38	1,705	2.23	34	1.99
M . .	69	1,002	6.89	60	5.99
N . .	68	1,409	4.83	65	4.61
O . .	54	2,589	2.09	45	1.74
P . .	65	1,842	3.53	57	3.09
Q-U .	51	585	8.72	34	5.81
V . .	15	391	3.84	9	2.30
Total .	1,825	50,270	3.63	1,609	3.20

Practices QRSTUV are small untypical groups—patients on the lists of Caernarvonshire practices and the small civilian list at one of the Forces establishments.



**Table XXIV**  
**Male and female rates. Standardized for age**

<i>Practice</i>	<i>Male crude %</i>	<i>Found/expected %</i>	<i>Female crude %</i>	<i>Found/expected %</i>	<i>Ratio crude female/male</i>
A . . .	3·83	117	4·65	116	1·21
B . . .	2·01	63	2·61	67	1·30
C . . .	3·18	104	2·77	69	0·87
D . . .	3·12	102	3·37	89	1·08
E . . .	0·85	24	2·46	59	2·89
F . . .	3·19	98	3·62	89	1·13
G . . .	5·15	156	7·47	182	1·45
H . . .	2·48	75	2·47	62	1·00
I . . .	2·14	65	2·66	67	1·24
J . . .	1·50	47	2·73	71	1·82
K . . .	8·98	275	11·8	292	1·28
L . . .	2·00	64	2·48	61	1·24
M . . .	7·01	209	6·78	165	0·97
N . . .	3·71	107	5·85	138	1·58
O . . .	1·37	44	2·90	70	2·12
P . . .	2·31	68	4·62	108	2·00
Q-U . .	10·2	305	7·57	195	0·74
V . . .	4·35	252	3·56	114	0·82
<i>Mean .</i>	<i>3·22</i>		<i>4·00</i>		<i>1·24</i>

**Table XXV**  
**Prevalence study: Time when the patients were in the condition described and whether consulting**

	<i>Male</i>	<i>Female</i>
<i>1961 only (+ 1961 relapses not active in 1960):</i>		
Consulting . . . . .	31	38
Not consulting . . . . .	1	1
<i>Active 1960 and at time of survey</i>		
Consulting both times . . . .	476	765
Consulting 1961 only . . . .	5	5
Consulting 1960 only . . . .	9	6
Not consulting at all . . . . .	125	100
<i>Active 1960 but not 1961</i>		
Consulting . . . . .	50	65
Not consulting . . . . .	3	—
<i>Active previous to 1960</i>		
Had consulted . . . . .	76	68
Had not consulted . . . . .	1	—
<hr/>		
Total . . . . .	777	1,048
Never consulting . . . . .	130	101

The GPs identified, without prompting, a total of 1,825 patients. The foregoing discussion on the index group suggests that this total may contain about 85 per cent of the severe cases in the community; 1,609 of these were 'active' during 1960, the period of our prevalence estimate. A crude rate of 3.33 per cent.

Only about 10 per cent of these are no longer active in 1961, as we pointed out when discussing the validity. Even if we did have a moderate error in these, the effect on the whole would be small, and would likely affect only milder cases. We were therefore able without much loss of accuracy to take 1960 for our period prevalence, which fits conveniently with the final year of our material collected at Denbigh, for this too ends 31. 12. 60.

### **Patients identified, but not consulting (Table XXV)**

This is a particularly interesting group which would not be identified in a 'forward' study. Of the 1,825 cases identified, 231 *had not consulted*.

Of the 1,609 active in 1960, 238 did not consult during 1960, though 10 had done so by the time of survey in 1961. This group included a number of obviously psychotic and mentally subnormal patients.

### **Individual practice variations**

It is not proposed to discuss these in detail here. The index group shows that some practices were picking up cases with very high accuracy. In some instances a sex ratio widely different from the average was reflected in a much lower accuracy in identifying patients of one sex than the other.

Practice K is strikingly higher than the others. We have done some analysis of this and are able to show fairly conclusively that the high rate is at least partly due to the transfer of psychiatric patients from the surrounding practices: A, B, H, I, J, the last four of which are below the average rate.

**Overall sex-ratio** (Table XXIV). The mean ratio is Female/Male 1.24/1. The female cases in the index group are, however, consistently identified with less accuracy than the male. The accuracy for the total ill or impaired in the index group was 89 per cent for males, but 82 per cent for females, which suggests that the Female/Male ratio may be about 10 per cent too low.

**Working rate** Of the 777 male patients, applying the same criteria as in the follow-up study (with which there is an overlap of about a fifth), there were 598 male patients who should be working, and in fact 426 (or 71 per cent of them) are; 134 (or 22·5 per cent) are not working, 18 (or 3 per cent) had physical cause for not working. The GP was not certain whether the patient was actually working or on the dole at the time in 28 cases, 4·7 per cent. These men are the psychiatrically impaired patients in Anglesey as recognized by their GPs, and constitute most of the substantial psychiatric morbidity in the male population. For such a group a working rate of 71 per cent, considering the unemployment rate in Anglesey, is not unreasonably low. This is for the males as a whole. Within this number there are some extremely active and valuable people, irrespective of their psychiatric symptoms.

## V. Total Prevalence

The various categories previously discussed will now be drawn together and related to the figures for the community as a whole, incorporating the findings of the GPs survey.

### **Diagnostic categories (other than mental subnormality)**

We had found a total of about 700 different diagnostic terms and descriptions in the material from Denbigh records. We worked this down to about 100 groups into which the diagnoses fitted without too much distortion. We could handle these on two columns of a Hollerith card. We did this, rather than apportion them initially into a fixed system of diagnoses, so that we could later sort them appropriately to match any particular system of diagnoses. Another advantage is that where two conditions are described in a patient, we can, if necessary, select differently for different purposes. We preferred also to alter as little as possible the basic material of the study at the collecting stage.

This coding system was therefore available when we came to process the general practice material. It required only minor additions to fit this. We then had the advantage of handling both on the same flexible system.

The nature of the coding system is such that the conditions can be sorted into broad diagnostic groups on the first Hollerith column, using the second only to break down for detail, or to pick out particular groups for transferring elsewhere. In practice, we found it convenient to let them fall into six broad categories. The first was largely mental subnormality, and a few miscellaneous items which did not mix with diagnoses and were excluded when we needed the subnormals. The guide will be printed in our final report. For the present purpose, we shall say we used:

Depressions,  
Schizophrenia,  
Organic mental states,  
Anxiety states, other neuroses,  
Psychopathy, Alcoholism, Epilepsy,

and that we regarded these diagnostic titles as a label on groups of conditions which, for convenience of handling, we were putting in the same bracket together. In this paper we are using them only to see

how the patients in each broad group are distributed between hospital and community. We are loath to use the diagnoses in too precise a fashion. There is hardly a hospital patient with more than two admissions who has not moved from one to another of even these broad categories, and we strongly suspect that in general practice 'anxiety states and neuroses' differ more from 'depression' in degree than in nature. The mild depressions almost certainly get called by a presenting anxiety or other neurotic symptom, and hardly any come to psychiatric treatment; when a patient is sufficiently depressed for it to be called depression by the GP., the patient is bad enough to need treatment, and the proportion coming to psychiatric treatment is very high.

We combined the cases from the Denbigh records, and the general practice survey cases. Within the broad diagnostic groups we established the total number of individual cases and then worked out how many of these were resident at Denbigh, how many had been treated either as IPs or OPs but were in the community, and how many were in the community and had never had contact with the psychiatric service. Table XXVI summarizes this information, and Fig. 9 shows this as a histogram.

It would probably be more correct to combine the cases of 'depression' and 'other neuroses' for we frequently felt that apart from the matter of severity, there was a great deal in common between them.

In the discussion of the combined cases from the Denbigh records and the general practice survey, there are some approximations.

**Table XXVI**  
**Total prevalence by broad diagnostic groups. Treatment position**

	<i>Depressions</i>		<i>Neuroses</i>		<i>Schizo- phrenia</i>		<i>Org. mental state</i>		<i>Psycho. ep. etc.</i>	
	M	F	M	F	M	F	M	F	M	F
Ex-OPs .	49	103	43	56	4	4	6	6	20	8
Ex-IPs .	116	168	14	16	41	39	5	5	21	6
GP only .	78	157	265	425	15	30	16	32	49	37
Denbigh Hospital .	6	12	—	—	51	28	9	3	5	1
Res. care .	2	4	—	—	2	2	—	2	4	1
Total .	251	444	322	497	113	103	36	48	99	53

In this table, our usual first group is omitted—mental subnormality and a few miscellaneous conditions. The mentally subnormal have already been discussed. (This then omits 156 males, 126 females.)

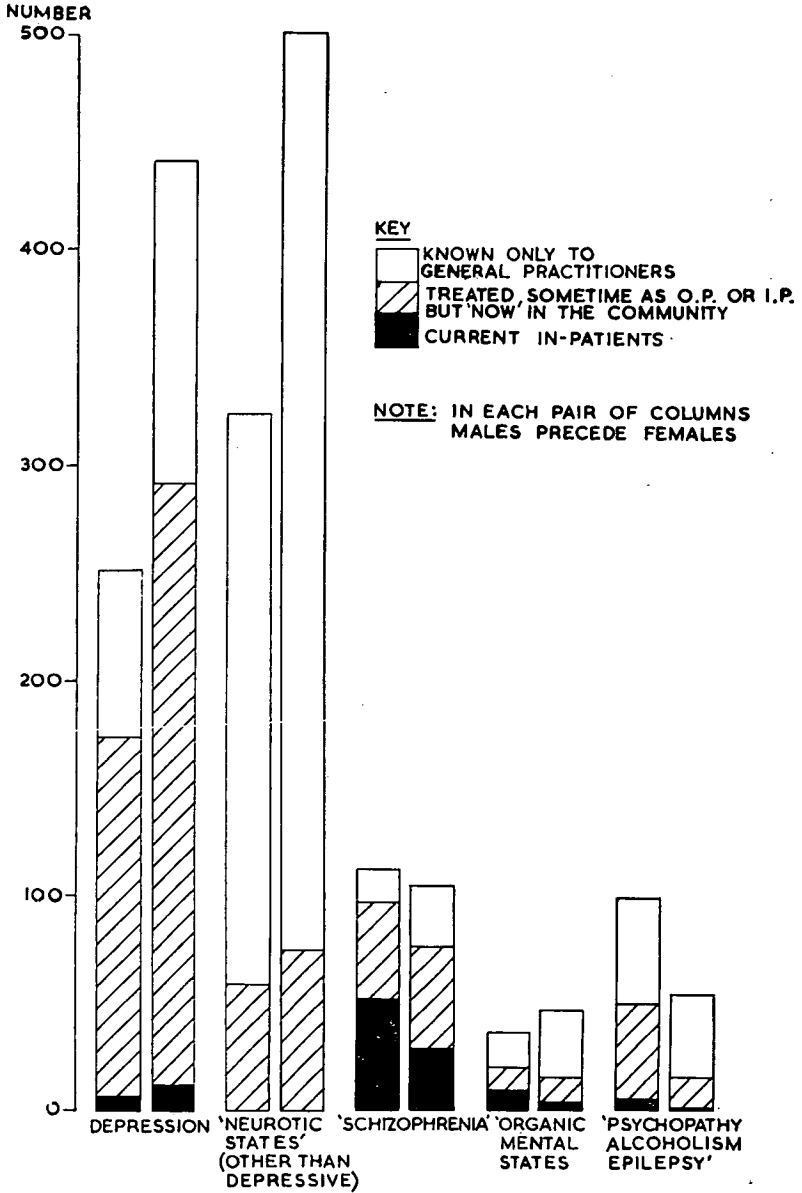


FIG. 9. Total prevalence, showing treatment position in broad diagnostic groups.

We took 1960 as the full year for a prevalence rate, but our follow-up study, and our figures for outcome of Denbigh cases, and of other treated cases traced through the GPs relate to the time when that work was done, namely an average date of mid-1961. The interval from the end of 1960 to mid-1961 at the end of a ten-year period will make only trifling differences, and we felt that adjusting the material back a few months to 31.12.60/1.1.61 would complicate the figures very much with very small changes.

Table XXVI summarizes the position of patients between the community, clinic, and hospital for five broad groups. Our usual first group is principally the mentally subnormal, but these have already been discussed, and the involvement with LHA would bring more complications into this table. The histogram (Fig. 9) shows the same facts.

The difference in 'treated' prevalence between 'depressions' and 'neuroses' is very marked. The bulk of the 'other neuroses' indicated by the GPs have never had any contact with the psychiatric services—690 untreated cases—picked out by the GPs as outside the limits of normal, only 30 in the same group have had IP treatment, and 99 OP treatment.

Taking the group of 'depressions' on its own, it is surprising to find that two-thirds of the total cases defined have had or are having psychiatric treatment.

The distribution of schizophrenia is very interesting. Reference has already been made to the tendency for males to be in Denbigh and females in Anglesey. Table XXVII shows this clearly.

**Table XXVII**  
**Distribution between Anglesey and Denbigh of schizophrenia**

	<i>Known only to GPs</i>	<i>Ex-OPs</i>	<i>Ex-IPs</i>	<i>Ex-IPs in res. care</i>	<i>Long-stay Denbigh</i>	<i>Total</i>
Male .	15	4	41	2	51	113
Female .	30	4	39	2	28	103
Total	45	8	80	4	79	216

There is an excess of females in the community known only to the GPs which almost balances the excess of males in the hospital. In our final report we will include a closer study of these cases and their age distributions.

There is a distinct trend in all the categories except 'depressions' and 'neuroses' for more males to appear for treatment, and for more males to be at Denbigh. The same thing was observed with the mentally subnormal, and in the 'follow-up' study of the hospital data; this community seems clearly less tolerant of troublesome males than females.

In Table XXVII there were shown the number of cases in each category, known only to the GPs. It seems reasonable to argue that the demands of the 'depressions' and 'other neuroses' will be principally for clinic and hospital services, and that the calls on the LHA are likely to come from the mentally subnormal, the schizophrenics, the organic mental conditions, and the category of severe personality trouble. The patients in these categories, at present known only to the GPs, number 262.

### **Mental subnormality**

This has already been discussed at length. There were 81 supervised in the community by the LHA, of whom the GPs identified 45. In addition, the GPs identified another 83 as unequivocal mentally subnormal or severely subnormal, making a total of 128.

The GPs miss 36 out of 81 known LHA cases.

Case-finding with an intensity of this order, the GPs found 128 in the community as a whole. Did they miss proportionately another 65, making the total community cases not 164, but 229?

It must be stated clearly that the GPs frequently said that the mentally subnormal hardly ever come to them for anything, and we were asking the GPs about a condition which they did not *treat* at all. They are not involved with mental subnormality in anything like the same way as they are with mental illness, or even with personality disorders. They were acting here more in the capacity of informants with an intimate knowledge of the population. We think it would be difficult to improve on the accuracy of our findings among adults in Anglesey without much greater effort.

\*   \*   \*   \*   \*

We are now in a position to draw together the various parts of the study and give an estimate of the total prevalence of mental disorder in this community. Table XXVIII shows this, and shows also the categories which we have defined in the various parts of the study as likely to be the principal source of demands on the LHA.

As before, there is the small approximation of using the 'follow-up' at a date six months earlier, but in practice this involves



**Table XXVIII**  
**Total prevalence of mental disorder during 1960, as estimated by this study**

Showing also the proportion most likely to be involved with LHA services

	<i>All</i>	<i>Groups of likely concern to the LHA</i>
Residential care: ex-OPs, ex-IPs	21	21
Current IPs at Denbigh . . .	124	(incl. 9 overlap with M.S. in hospitals below) . . . 124
Cases missed from index group 'mild', and 'ill' (not 201 'well')	103	'ill' ex-OPs. . . . . 61
General practice survey:		
'Active 1960' . . . . .	1,609	'ill' ex-IPs . . . . . 138
Schizophrenia . . . . .		known only to GPs . . . . . 45
Organic mental states . . . . .		known only to GPs . . . . . 48
Psychopaths, ep. alcoholics; severe personality trouble . . . . .		known only to GPs . . . . . 86
Mental subnormality . . . . .		known only to GPs . . . . . 83
Mental subnormality in hospital	37*	(overlap 9 with Denbigh) (Total 46) 37*
Mental subnormality in Part III	13	. . . . . 13
Mental subnormality LHA supern	81	. . . . . 81
<b>Total . . . . .</b>	<b>1,988</b>	<b>. . . . . 737</b>
<b>Rate (per cent) . . . . .</b>	<b>3.96</b>	<b>. . . . . 1.46</b>
(Census 1961, civilian population, 50,429)		

\*Nine of the mentally subnormal in hospital are at Denbigh, and are left here with the Denbigh cases.

more a nicety of definition than any substantial error. The rate of 3.96 per cent which we have obtained for all conditions combines the undoubted cases with heavy impairment, and the individuals who were identified by their own GPs as having psychiatric symptoms outside the limits of normal during 1960. It represents those who will without doubt eventually make contact with the hospital services, and it has the hard core which we have tried to define of those who will also—or only—be the concern of the LHA.

We have narrowed the field down to 737. Our next stage will be to describe these more fully, and to estimate the form and extent of their demand on the mental health services.

## VI. Summary

A preliminary report is given of a Survey in Anglesey to estimate the needs for Mental Health Services. The survey covers four categories of patients:

1. Patients in hospital (other than mentally subnormal).
2. Patients in the community who have had contact some time with the psychiatric services (other than mentally subnormal).
3. The mentally subnormal in hospital and community.
4. Cases in the community known only to the GPs.

The first were investigated by home visits; the second by a study of hospital records and a follow-up study through the GPs; the third from LHA and hospital records and by home visits and the fourth by a prevalence study through the GPs.

The period studied in detail was 1.1.51 to 31.12.60 with an extension in less detail to 1.1.63.

### **Patients in hospital (other than the mentally subnormal)**

The resident population shows a slow drop over the period 1951 to 1963. If the same trend continued until 1975 a simple extrapolation would suggest a figure of about 2.3 per 1,000 for bed requirement (against a 'Hospital Plan' estimate of 1.8 per 1,000) but little weight can be attached to a simple extrapolation over so long a period. We have available sufficient information to examine the contributing factors more closely and to make a better forecast in our final report.

The wastage rate for the resident population of a given date is studied in detail. For example, of those resident on 1.1.51 at Denbigh Hospital, about half remain in 1963—after 12 years, and extrapolation suggests that a quarter will remain in 1975—after 24 years. They will not all have gone until the 1990's, according to present trends, but again we think that a better estimate will be possible after a closer examination of the factors contributing to the present trends.

The proportion over 65 has increased from a sixth to a third of the resident population between 1951 and 1961, but two-thirds of this increase is due to ageing of the chronic patients who were under 65 on admission. 'Geriatric' admissions contribute relatively little to the number over 65 *resident* at any one time.

We found a 50 per cent excess of males in the resident population, but hospital rating suggested that many of these did not need to stay in a psychiatric hospital. We found little hope of family support for the chronic IPs, and little readiness to accept the patient at home.

Our findings suggest that LHA residential provisions and psychogeriatric accommodation might reduce the chronic population at Denbigh by one-half. Screening of chronic patients at age 65 for transfer to psychogeriatric care would radically change the position at Denbigh and make the Ministry figure for future beds a more realistic one.

### **Ex-hospital patients (other than mentally subnormal)**

The outcome for discharged patients is encouraging. The number severely impaired is quite modest. The number at work is high and the burden on the community may not be as great as is generally thought. On the other hand suicide rates for discharged patients are much higher than for the population as a whole.

The outcome on 1.1.63 for the resident population on a given date is shown for each year from 1.1.51 to 1.1.63. Most of the population is static. Only a small number of beds are occupied by short-term patients under active treatment at any one time.

### **The mentally subnormal**

Our findings reflect the great difficulty of determining the prevalence of Mental Subnormality. The LHA records and the general practice prevalence study complement each other to some extent and show the limitations of each. We found a peak in early adult life and a second peak in the 55-64 age range. Between these two we suspect that our methods did not detect all the patients supported by relatives in the community who will emerge in the later age groups and require support. The later age groups make particular heavy demands for residential accommodation.

Other than in school age and the two succeeding decades, the LHA were supervising hardly any of the cases we found in the community. All the mentally subnormal in hospital or supervised by the LHA were seen and their families interviewed. This work will be published in our full report.

## Cases known only to the GPs

A test of validity is applied to the general practice prevalence study which suggests that the method identified 85-90 per cent of severe mental illness. We did not find a great number of new severe cases. There appears to be much less tolerance of aberrant behaviour in males than in females. The proportion treated by the psychiatric services is greater for males with schizophrenia, organic mental states and major personality disorder, though higher for females with depression and neurotic states. It does not appear that improved clinic or hospital facilities are likely to be swamped by new severe cases.

## Prevalence

We identified a total of 1,988 'cases' who were 'active' during 1960 (approximately 4 per cent of the population). Of these, 1,793 were in the community and 195 in hospital or some form of residential care.

We shall discuss in a later publication the groups likely to make demands on the mental health services.

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*Current policy, practice and effect in two areas*

# **Mental Illness in Hospital and Community: Developments and Outcome**

*Littlemore Hospital, Oxford*

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# Mental Illness in Hospital and Community: Developments and Outcome

## Introduction

Over the last ten years vast changes in hospital policies have taken place in British mental hospitals, resulting in the introduction of a much more liberal atmosphere for patients. An increasing number of problems, including psychotic problems, have been treated without hospital admission and a large number of patients have been discharged from certain mental hospitals into the community. Although this policy has been approved as the trend which psychiatric services should follow, as evidenced by the new Mental Health Act, there is still a great deal of anxiety about the consequence it may have for the community. One of the major anxieties has been the effect that it may have in increasing the burden on the family and community, where chronic illness has been inadequately alleviated. This would adversely effect community attitudes towards mental illness. There has also been much concern about the effect of this change on the outcome of psychiatric illness, and whether in fact there is good evidence for indicating that early discharge from hospital and treatment in the community is to the advantage of the patient.

This essay spans a period of seven years experience in hospital reorganization and research, which started in Gloucester in 1956 and has continued at Littlemore Hospital in Oxford since the end of 1959. It aims to describe:

- (a) The changes introduced.
- (b) The extent to which hospital morbidity was altered.
- (c) The evaluation of the effects of early discharge and treating a larger number of patients in the community, especially in terms of the burden this placed on the community.
- (d) Assessing the outcome of treatment of schizophrenia and depression in this setting.

Some of the changes in Gloucestershire preceded and anticipated changes introduced by the Mental Health Act of 1959 and proved a testing ground for new legislation. Many policies such as the development of the rapid conversion of a Closed Hospital into an

Open Hospital proved repeatable when the same general principles used in Gloucestershire were introduced in Oxfordshire.

### **Reorganization**

The hospitals in which this reorganization occurred reflect very well the liberal changes which have been mentioned previously. Both sets of hospitals suffered from gross overcrowding of patients, deficiency of skilled staff, poor morale and hierarchical management which tended to increase the degree of dependency of the patients on the hospital and hence contributed to the overcrowding and institutional attitudes. The criteria associated with the reorganization have been fully described elsewhere.<sup>1,2</sup> A summary of the main changes include:

(a) *Reclassification.* A classification was devised, dependent on the extent of behaviour disturbance and personality integration and interests. In each unit emphasis was placed on some special facet of management in order to combat the poor morale in many wards in mental hospitals which are regarded as wards for chronic patients of poor prognosis.

(b) *Communication.* A large variety of group meetings and activities were organized to provide platforms for communication throughout the hospital to cover the entire patient population and staff. This later led to the development of a greater degree of self-government within ward units increasing patient responsibility. Inevitably it involved adjustments to a changing rôle for both the staff and the patient. Its object was to help the nurse to play a more catalytic rôle, facilitating rehabilitation by rediscovery of patients' assets and persuading them to greater responsibilities.

(c) *Altered community setting* with the development of a richer community culture and employment programme. In essence the aim here was to devise a setting which was considered to be more therapeutic than the previous one. With the change of rôle and setting it was hoped that the patients would have a better testing ground for functioning in the community at large. Instead of rigid separation of the sexes, ward units became mixed units in which both male and female staff participated. Emphasis was placed on aesthetic improvements of the environment in which the patients lived with better facilities for personal belongings and expression.



At Littlemore Hospital a series of shopping days have been arranged whereby a display is presented by several of the leading stores, and facilities made available for patients in exactly the same way as if they were shopping at the parent store. This has been arranged predominantly for patients who are too frail or unfit to do their shopping outside of hospital.

(d) *Changing the attitude of the public* towards the hospital is an essential preliminary to facilitate early referral and discharge. This has involved many talks to different community groups who are encouraged to visit the hospital and become aware of hospital developments. The co-operation of the Press and the police is invaluable and can do much to improve public relations.

(e) *The development of a community psychiatric service.* One of the major problems with mental hospitals has been their isolation from the community. The hypothesis was that continuity of care was perhaps the most important way of managing certain types of illness. Community psychiatric services were so designed that patients could be seen readily in Out-patient Clinics or by home visits, by the same Consultant team which would continue the patient's treatment in the hospital and subsequently play a part in the follow-up care of the patient.

Part of the reorganization involved development of a system of screening when patients were seen for assessment prior to admission to hospital. This in turn required improved communication with the General Practitioners and the Local Health Authority services. Out-patient Clinics were increased with daily clinics providing for psychiatric emergencies. Day hospital facilities developed and extensive follow-up services were planned with the co-operation of Mental Welfare Officers and Social Workers who had the benefit of hospital instruction and training.

(f) Development of certain skills, both cultural and occupational, was enhanced by programmes which involved members of the community more in participation in hospital activities, with a corresponding increasing interest in the welfare of patients. Voluntary bodies such as the Hospital League of Friends have been invaluable in contributing such skills and

reducing the barriers between the hospital and community. Women's Institutes and Old People's clubs have also played their part in helping patients to participate in community activities, and the increasing development of cultural and social activities within the hospital have supplemented many of the activities of Old People's clubs in the area close to the hospital.

In this setting locked doors and physical barriers against escape were no longer necessary and the doctors and nurses could devote their energies to the task of treating patients and developing a testing ground which would prepare patients for functioning in the community at large.

Certain extensions of this programme have been developed at Littlemore Hospital, Oxford, in an attempt to devise a setting which may affect the problem of the schizophrenic who stayed longer in hospital and whose prognosis tended to be poorer on the basis of our previous findings.

It was becoming increasingly apparent that a hard-core of chronic illness occurred in people who had long standing psychosocial and personality problems and that a traditional institutional setting further mitigated against their prospect of functioning adequately in the community. In July 1961 it was decided to group together four wards (two small units of 10-15 patients; and two larger units of 30-35 patients) and mould them into a community organization of greater therapeutic potential. These four wards contained all the disturbed recent admissions and a large number of longer-stay schizophrenic patients who might benefit from a more active rehabilitation programme.

Efforts were made to develop a milieu which would be complementary to specific treatments, providing facilities for an experiment in life and community situations and leading to modifications of maladaptive behavioural responses. In this setting it was hoped that the patient would learn to generalize the experience gained in individual and group programmes. Emphasis was placed on maximal interaction between staff and patients. Staff of varying skills and experience were included—nursing staff, occupational therapists, psychiatric social workers, and other staff who may make a useful contribution such as the psychologist, the sociologist and the rehabilitation officer (concerned with assessing skills pertinent to employment and rehabilitation). Relatives' groups were established and as a further

extension to the community, relatives were encouraged to attend and participate in social activities. Individuals sympathetic to patients with psychological problems contributed added skills to the culture of the community, thus enriching life in hospital.

A great deal of flexibility seemed necessary to determine the extent to which patients were involved in the total plan or organization. The problem of meeting dependency needs and at the same time enabling the patient to become independent of the need for a maximum hospital setting constantly presented a challenge. In this unit patients may spend varying periods of time, from a few hours a week, when they are able to manage satisfactorily for themselves in their home and work setting, to day hospital attendance, night hostel attendance, absence at weekends and full hospitalization.

Patients are formed into small groups each working with skilled members of the team. These groups are organized in such a way as to meet the occupational, social and recreational needs of the patient over the day. Their planning takes into account the individual interests and needs of the patient and the various ways by which better communication and interpersonal relationships can be facilitated. With regard to occupation, assessments are made as to their functioning efficiency and thought given to aspects of the programme considered rehabilitative. This study in group living is complemented by a series of ward meetings in which the patients play the major rôle and the staff direct only when they can complement the information that is available to the group. The social activities committee provides them with a group experience of ward government and responsibility. Ways of enriching community life include such facilities as reading libraries, record libraries, and a patients' magazine which encourages people to use their talents and serves as a source of communication. The use of patients' skills, and skills from outside the hospital, provide an additional outlet for trying out new attitudes and patterns of behaviour. These are further expressed in music evenings, language classes, dancing classes and other educational and practical classes. Each morning there is a group discussion including all members of the unit. A patient acts as the secretary and reads out the news bulletin to the ward. Discussions that take place are very much linked with communicating anomalies of behaviour and introducing group pressures which facilitates better understanding of individual and community needs. Whilst the setting caters for a state of dependency, it gradually weans the patient away from this towards a greater responsibility and the use of personal assets.

## Effects of reorganization

It is more and more evident that this type of psychiatric technique has value in complementing the many other techniques which we may use with our patients in an individual or small group setting. Interpersonal, family and community problems are acted out in this setting. There is great scope for an awareness of other people's attitudes and motives which in turn bring awareness to the patient and modifications in maladaptive patterns of behaviour.

Some of the effects of these changes in reorganization are illustrated in Tables I to V.

**Table I**  
**Drugs**  
*Coney Hill Hospital (750 beds)*

	<i>3-month period before opening doors (April-June 1956)</i>	<i>3-month period after opening doors (April-June 1957)</i>
Paraldehyde . . .	40 litres	7½ litres
Chloral hydrate . . .	8 kilograms	2 kilograms
Barbiturates . . .	1520 gms	400 gms
Largactil . . .	2755 gms	3165 gms
Pacatal . . .	—	450 gms

Average nightly sedation (random evening): 14 patients on night sedation; 6 drachms of Paraldehyde; 30 grs of Barbiturate.

*At Littlemore Hospital* Paraldehyde is no longer used. (Random evening): 9 patients on night sedation; Mist. Chloral gr xxx; Doriden tabs. ii; Welldorm gr. x; Barbiturates 24 grs.

From the tables it is apparent that with this reorganization there is a marked reduction in the drugs used for sedation and a moderate increase of the use of phenothiazine drugs, used more specifically for their value in treatment of chronic schizophrenia. On a few occasions, in this setting the number of patients requiring sedation have amounted to less than 1 per cent of the hospital population.

Other changes which were manifest (see Table II) included a marked reduction in incontinence, and destructive and impulsive behaviour without any remarkable increase in the tendency for the patients to abscond. After this reorganization period had been functioning well for a 12-month period, patients began to accept a great degree of responsibility for their actions and absconding patients were only a very minimal difficulty. The vast majority who left hospital returned home and in most instances were persuaded back to hospital by concerned or irate relatives.

**Table II**  
**Behaviour disturbance**  
*Coney Hill Hospital (750 beds)*

	Opening doors					
	6 mths prior to	6 mths after	12 mths after	18 mths after	24 mths after	30 mths after
Absconders . . .	28	29	57	33	48	24
Destructive and impulsive patients	123	30	30	23	5	4
Seclusion incidents	236	40	10	16	3	—
Bed patients (daily average) .	100	20	20	20	19	8
Incontinent patients (daily average) .	120	45	31	28	22	16
Fractures . . .	13	8	6	10	9	16

**Table III**  
**Hospital population**  
*Horton Road and Coney Hill Hospital (Gloucester)—Number of patients on register*

Type of patient	1955	1956	1957	1958
Voluntary . . .	488	684	1082	1162
Temporary . . .	4	2	—	—
Certified . . .	944	681	210	19
Total . . . .	1436	1367	1292	1181

Source: Hospital Report, 1959. Drop in total hospital population of 17·7 per cent. National statistics drop, 5 per cent.

*Littlemore Hospital, Oxford—Number of patients on hospital register.*

Type of patient	Aug. 1959	1959	1960	1961	1962
Voluntary/informal (and Sect. 25, 29)	422	816	715	672	628
Detained (Sects. 26, 60, 65)	459	9	9	21	31
Total . . . .	881	825	724	693	659

Drop in total hospital population of 25 per cent.

One of the measures used to protect the patient and the public has been the use of 'closed groups'—described elsewhere.<sup>3</sup> The 'closed groups' has, in fact, more nursing supervision and a very detailed planned programme which focuses attention on the group

of patients who are the most difficult and the most reluctant to fit into the hospital plan.

Very similar findings were noted at Littlemore in relation to the problem of absconding in the earlier stages of reorganization.

As can be seen from the tables there was a marked drop in the total hospital population at Horton Road and Coney Hill despite the fact that the number of admissions to hospital increased. This has also been the pattern at Littlemore: the number of admissions has fluctuated but the total work carried out by the Littlemore Psychiatric Service has increased very markedly (see Table V).

**Table IV**  
**Number of patients admitted to hospital**  
*Coney Hill and Horton Road Hospitals, Gloucester*  
 (Source: Hospital Report, 1959)

<i>Type of patient .</i>	1954	1955	1956	1957	1958
Voluntary (and Sects. 20, 21) .	499	539	614	771	741
Temporary . . .	26	18	21	2	2
Certified . . .	127	100	66	22	13
Total . . . . .	652	657	701	795	756

*Littlemore Hospital, Oxford*

<i>Type of patient</i>	1959	1960	1961	1962
Voluntary/informal (and Sect. 25, 29)	781	668	802	954
Certified (Sect. 26)	28	8	4	8
Court Orders (Sects. 60, 65)	4	2	7	5
Total . . . . .	813	678	813	967

**Table V**  
**Patients seen in out-patient clinics and homes**  
*Littlemore Hospital, Oxford*

	1959	1960	1961	1962
New referrals . . .	465	787	899	967
Domiciliary and pastoral visits . . .	305	495	505	615
Old referrals . . .	1730	3414	4650	7132
Total . . . . .	2500	4696	6054	8714

## Outcome of schizophrenia in this setting

Schizophrenia contributes very substantially to the long-stay population of all mental hospitals in Britain. At Littlemore (December 1961) the hospital population consisted of 693 patients and of these 414 (60 per cent) were schizophrenics. A very large percentage of these patients had been in hospital for many years and it is not surprising to find that 60 per cent were over 55 years of age. As 60 per cent of schizophrenics, during the period 1930 to 1950, spent the greater part of their lives in mental hospitals it is equally not surprising to find that they contribute to a large segment of the elderly patients in mental hospitals. These facts have led to a great deal of pessimism in relation to the outcome of schizophrenia.

In view of the marked reduction in population achieved by the programme of reorganization we were interested to assess what the effect was on the mental hospital outcome of schizophrenia. This question prompted some of the initial research carried out in Gloucestershire; 288 schizophrenic patients admitted there between 1956 and 1958 were followed up for a 4-year period. These patients were either new admissions or patients who had previous hospital admissions and were readmitted during this period. Assessments were made of:

- (a) The outcome of the illness in relation to stay in hospital.
- (b) The level of function in the community.
- (c) Assessment of the additional burden that these schizophrenics living in the community produced for their families and the community as a whole.

Details of these studies have been described elsewhere.<sup>4 5 6</sup>

The findings show that our changed policy resulted in substantially less time in hospital for schizophrenics compared with those admitted in the previous decade (see Table VI).

In the Gloucestershire study 6.6–14.9 per cent (average 12) of schizophrenic patients remained in hospital for more than a consecutive 12-month period. Vera Norris's<sup>7</sup> figures for 1949 show that 56–62 per cent of schizophrenics remained in hospital continuously for this period.

The other interesting finding was that schizophrenics who were discharged within 4 months of admission tended to be much better than the schizophrenics who remained in for up to 7 months. These in turn had a better prognosis than those remaining in

**Table VI**  
**Oxford regional mental hospitals**

Percentage of admissions and readmissions of patients with schizophrenia who stayed 12 months or more in hospital, by sex and year.

Area	Year	First admission		Readmission	
		Male	Female	Male	Female
Bucks. . .	1931-33	68.4	58.5	75.0	83.3
	1945-47	55.6	61.3	58.8	48.3
Oxford . . . Region	1954	16.7	16.05	28.9	29.5
	1956	13.9	9.85	15.2	20.8
	1958	13.2	8.1	23.8	16.2
Gloucester . . . Region	1956-58	10.9	6.6	14.8	14.9

hospital for the greater part of 12 months. In fact, the prognosis of patients who remained in hospital for more than 7 months was very poor if one was assessing the extent to which they were able to function in the community without readmission.

Yet another interesting feature was that with the extensive programme which had been developed towards the end of the second year of investigation the number of first admissions for schizophrenics had begun to fall. Shephard<sup>8</sup> also noted this finding when comparing referrals to St. John's Hospital during the periods 1931-33, and 1945-47. These findings of a fall in the number of referred schizophrenics prompted a prevalence study which was carried out in Oxfordshire in order to determine, amongst other things, whether schizophrenia was an illness which escaped the notice of doctors and was not referred to the psychiatric service. This study shows that the vast number of schizophrenics were referred and that the prevalence and referred incidence differed very little for schizophrenia. There was a dramatic fall in the number of first admission schizophrenics who stayed for 12 full months in hospital. Only one such case was present in the last 6 months under survey.

These were the findings in the Gloucestershire study. At Oxford the further scheme of reorganization described may reflect a slightly better outcome of schizophrenic patients in the long-stay category although the prognosis for medium would still be much poorer than in the schizophrenics who were discharged in under 7 months. With this change in pattern of outcome it is interesting to enquire how many difficulties associated with social recovery are



linked with the illness itself, and how much this problem is linked with other factors which are not specifically clinical in relation to the illness. Shephard<sup>9</sup> in a 5-year follow-up period concluded that the only clinical factor related to relapse is the damage to the affect of patients.

A variety of demographic factors were assessed with a view to determining how much they affected outcome in schizophrenics.<sup>10</sup> These indicated that with schizophrenics one did not necessarily find the same predominance of factors in different communities, e.g. in some areas there were more male admissions and the greater majority of patients were single, whereas in other areas the greater proportion was of married admissions and there were more women. There was also a significant difference in referral incidence. The lowest referral rate was 0.42 per 1,000 in Gloucester Rural District whereas in the village of Stonehouse the highest figure was more than 20 times as great (10 per 1,000). It is difficult to account readily for such a marked difference especially as the referral incidence and prevalence of schizophrenia in different parts of the world seem to reflect figures which approximate quite closely. As the number of patients in Stonehouse were small my only comments would be that this finding would warrant more detailed sociological investigation of this particular area with special attention also to genetic factors. Outcome tended to be better in married patients than in single or divorced. First admissions did better than readmissions and the outlook for patients in social classes 1, 2, 3 and 4, was better than in social class 5 (although these findings were not statistically significant at the 5 per cent level). A recent readmission study<sup>11</sup> strongly supports the contention that schizophrenics do not function as well in the parental home as in the conjugal home or away from their family setting. A large number of men amongst the schizophrenics who were readmitted were not employable during their stay in the community.

In an attempt to answer a question about the value of early discharge versus the problems the discharged patients presents to the community we made certain assessments of this group of schizophrenics who were followed up for a varying period of 1 to 4 years. These findings indicated that a number of schizophrenics living in the community would be considered in need of additional help, but it was surprising to find that only a small number of families considered that the patient constituted a severe burden for them.

**Table VII**  
**Adjustment problems of schizophrenics in the community**

<i>Type of problem</i>	<i>Number of patients</i>		<i>Total</i>
	<i>Male</i>	<i>Female</i>	
<i>Severity of illness</i>			
Appears well . . . .	31	65	96
Slight . . . . .	19	17	36
Moderate . . . . .	10	26	36
Severe . . . . .	0	3	3
<i>Family attitude</i>			
Welcoming . . . . .	44	78	122
Accepting . . . . .	5	19	24
Accepting but doubtful . . . . .	4	6	10
Hostile . . . . .	0	1	1
Divided . . . . .	1	1	2
Not known; not applicable	6	6	12
<i>Stress to family</i>			
Severe . . . . .	1	3	4
To some extent . . . . .	22	39	61
Not at all . . . . .	34	59	93
Not known; not applicable	3	10	13
<i>Patient's family rôle</i>			
Key rôle . . . . .	22	12	34
Active supportive . . . . .	14	65	79
Passive, no liability . . . . .	7	13	20
Some liability . . . . .	10	16	26
Heavy burden . . . . .	3	1	4
Not known; not applicable	4	4	8
<i>Current employment</i>			
Full-time . . . . .	35	12	47
Part-time . . . . .	1	6	7
Not at all . . . . .	24	93	117
<i>Amount of work in previous year</i>			
None . . . . .	20	76	96
Up to 3 months . . . . .	4	7	11
Up to 6 months . . . . .	2	4	6
Up to 9 months . . . . .	3	1	4
Up to 12 months . . . . .	15	11	26
Not known . . . . .	16	12	28
<i>Financial difficulties</i>			
None . . . . .	36	79	115
Some . . . . .	19	26	45
Serious . . . . .	1	1	2
Not known . . . . .	4	5	9

What was very evident was the need to improve the facilities for helping families and patients in the community. Assessment of this need is tabulated:

**Table VIII**  
Social and health services used by and needed by 171 schizophrenics living in the community

	Number of patients			
	Receiving		Needing	
	No.	per cent	No.	per cent
<i>Medical psychiatric</i>				
Hospital; day hospital; OPs; clinics GP . . . . .	83	48.5	51	20.8
<i>Work</i>				
Labour exchange; protected employment; DRO . . . . .	10	5.9	24	14.0
<i>Finance</i>				
National Assistance Board . . . . .	53	30.9	7	4.1
<i>Housing</i>				
Rehousing; repairs; redecoration; health department . . . . .	9	5.3	20	11.7
<i>Social</i>				
Social clubs, etc. . . . .	10	5.9	30	17.5

These findings tend to suggest that present day management of schizophrenics can be better considered in the light of a programme of continuity of care. Whilst many will require readmission to hospital

**Table IX**  
First admissions  
Length of time from discharge to readmission within 12 months of discharge.

Length of stay in hospital	Under 1 wk	Up to 3 mths	Up to 6 mths	Up to 9 mths	Up to 12 mths	Total readmitted	Not readmitted	Total discharged
Under 1 week .	1	1	—	—	—	2	5	7
Up to 3 months	1	17	12	2	3	35	80	115
Up to 6 months	2	—	2	2	2	8	32	40
Up to 9 months	—	2	1	1	—	4	11	15
Up to 12 months	—	—	—	—	—	—	3	3
Total . . . . .	4	20	15	5	5	49	131	180

Of first admissions, 76 per cent of those readmitted were readmitted in under 3 months and 92 per cent in under 6 months.

**Table X**  
**Readmissions**

Length of time from discharge to readmission within 12 months of discharge.

<i>Length of stay in hospital</i>	<i>Under 1 wk</i>	<i>Up to 3 mths</i>	<i>Up to 6 mths</i>	<i>Up to 9 mths</i>	<i>Up to 12 mths</i>	<i>Total read- mitted</i>	<i>Not read- mitted</i>	<i>Total dis- charged</i>
Under 1 week	—	1	—	—	—	1	0	1
Up to 3 months	4	10	10	9	3	36	37	73
Up to 6 months	1	2	3	—	2	8	10	18
Up to 9 months	—	2	1	—	3	6	0	6
Up to 12 months	1	—	1	—	1	3	2	5
Total . . .	6	15	15	9	9	54	49	103

Sixty-nine per cent were readmitted in under 3 months; 83 per cent in under 6 months; 9 patients out of 11 who stayed in hospital for 9 months or more were readmitted within the next 12 months.

(see Tables IX and X) and considerable support, once a good relationship has been established and supervision has carried them over the first six months of discharge (which seems to be the most hazardous period of readjustment) there is a fair prospect that they will be able to live comparatively useful lives in the community.

Phenothiazine medication frequently controls the more florid aspects of the illness when delusional and hallucinatory experiences are present and may in many cases need to be continued for a very long period of time. The involvement of responsible people to ensure the taking of medication is a most important part of follow-up and may be a factor in influencing hostel placement and management. A very much longer study is necessary before we can be sure that insidious damage to personality has not occurred and that subsequent deterioration may not take place. Certainly over a period of 4 to 5 years it has not seemed to be the case nearly as much as in the previous decades. Insidious damage to personality is a very difficult assessment especially because it has been taking place long before the delusional and hallucinatory aspects of the illness became apparent (Kay and Roth;<sup>12</sup> Post<sup>13</sup>). Some of the further damage which occurs may be dependent on a number of reversible factors. Social withdrawal and poverty of speech are common findings in schizophrenic illness and the tendency to greater withdrawal and reluctance to speak may be enhanced by an unfavourable institutional setting. Evidence of deterioration such as incontinence and destructive aggressive behaviour are also very much dependent on the setting and way the patient is managed.

## **Institutionalization v. illness**

The problem of measuring the activity of illness presents many difficulties. Brown and Wing<sup>14</sup> devised a series of criteria for measuring features of schizophrenic illness in order to compare the degree of disability presenting in schizophrenics in mental hospitals with different social settings and programmes of management. Their findings indicated that social difficulties engendered by traditional institutions are responsible for part of the clinical state of long-stay patients.

In an attempt to measure activity of illness all long-stay schizophrenics under the management of two consultants were studied at Littlemore Hospital.<sup>15</sup> This hospital sample represented exactly half of the schizophrenic patients in the hospital and were carefully matched for age, length of stay, and chronicity. The study was limited to patients who were under 59 years of age (in an attempt to exclude secondary organic changes). All the patients studied had been in the hospital for more than two years.

Out of a hospital population of 315 patients more than 50 per cent were over 60 and approximately two thirds had been in hospital for more than 2 years; 66 patients fulfilled the criteria required. Fifty-nine of these were schizophrenics and the remainder consisted of 5 sub-normal patients who had had psychosis or personality problems; 1 personality disorder; 1 chronic depression. Criteria for activity of schizophrenia was defined in terms of thought disorder, presence of delusions or hallucinations and volitional disturbances associated with posturing, grimacing, and mutism. Based on these criteria 24 schizophrenic patients (41 per cent) were non-active and 35 had active symptoms (mild 2; moderate 23; severe and incapacitating 10).

It was found impossible to make an assessment of affective damage. Where there was clear evidence of affective impairment the patient usually exhibited other signs of activity. In many patients with minimal or no evidence of active illness, as defined by the above criteria, there was a negative attitude towards discharge emphasizing how social isolation and dependence on a hospital setting mitigate against discharge and complicate the clinical picture. Whilst it is difficult to devise ways of measuring affective and personality change to separate the effects of institutionalism and illness, this attempt at measurement does suggest that factors other than illness have a great deal of bearing on social functioning and attitudes towards discharge from hospital.

Duborg and Mandelbrote<sup>16</sup> attempted to make some assessment of premorbid personality on the basis of weighting traits which were described as 'of positive or negative value'. The findings indicate that there is a statistically valid relationship between social functioning and favourable in premorbid personality, and that schizophrenics who showed poor social recovery were also rated high for unfavourable traits. This suggests that premorbid personality may be one of the most important factors in determining the outcome of the schizophrenic illness. Macrae<sup>17</sup> has also emphasized the large contribution poor premorbid personality makes to readmission in all diagnostic groups admitted to a psychiatric hospital. That factors other than tranquillizing drugs are important in relation to discharge from hospital and readmission is also mentioned by Robin.<sup>18</sup> His findings do not show that patients on tranquillizers were more readily discharged or demonstrated a greater capacity for staying out of hospital once they were discharged.

More recently, in an attempt to reduce the problem of institutionalization and stress in unsatisfactory parental or family settings, certain schizophrenics discharged from Littlemore have been managed in a hostel. The figures so far suggest that with this degree of supervision a greater percentage are able to retain their position in the community. Early assessment of the programme of small community reorganization described also shows that quite a number of long-stay schizophrenics could function in this setting.<sup>19</sup>

### **Problems of depression**

As a psychiatric community service is developed more extensively, so a larger proportion of the patients referred to the service are suffering from depression, neurotic illnesses, or personality disorders. Our experience has been that the increase in admissions is very much related to the increased number of depressive patients admitted to hospital, whilst the number of schizophrenics admitted to hospital has not increased very markedly.

A retrospective study dealing with depressive illness demonstrated a few interesting findings.<sup>20</sup> It was difficult to differentiate illness diagnosed as reactive depression from illness diagnosed as endogenous depression if the criteria for differentiation was assessed in relation to genetic background, chronic and acute predisposing life situations. The assessment was made retrospectively on diagnoses by Consultants unaware of future investigations. The findings make

one question the value of division into these two categories if the criteria tested are used to distinguish them. It may be more correct to label them all as depressive illness or devise other criteria for differentiation. Many papers have been written criticizing or justifying the use of these concepts. In the neurotic personality depressive problems tend to respond less well to physical treatment. This is a point of clinical differentiation which has been made by Hobson<sup>21</sup> and Kiloh *et al*<sup>22</sup> who justify the retention of two depressive entities.

Little is known about the outcome of depressive illness. Even before special treatments were available depression recovered spontaneously. Psychotherapy has succeeded in modifying depressive illnesses. With the advent of Electro Convulsive Therapy (ECT) many severe depressive illnesses responded to treatment with marked reduction of the duration of illness and with good recovery. However, ECT had little effect on the tendency of these patients to relapse. More recently antidepressive drugs (especially Tofranil and the MAO inhibitors) have been sufficiently therapeutic to reduce the need for ECT treatment in many instances, so that ECT has tended to be used less in depression. However, the same problem of relapse arises and the length of treatment of the depressive illness is an arbitrary one and may continue for several weeks, months, or even years, with little influence on relapse when the drugs have been stopped. Examinations of re-admissions indicates that relapse is common in the depressive illness.

**Table XI**  
**Littlemore Hospital, 1960—Admissions**

Diagnosis	First admission	Readmission		Total admissions
		Under 1 yr	Over 1 yr	per cent
Affective illness . . .	129	76	46	40
Schizophrenia . . .	40	77	36	23
Organic disorders . . . (predominantly senile)	74	30	17	18
Personality disorders . .	22	29	13	10
Psychoneurosis . . .	44	10	6	9
Miscellaneous . . .	—	4	—	—
Total . . . . .	309	226	118	100

A similar attempt was made to assess factors pertinent to social recovery of the patients suffering from depression. Findings once again suggest that social recovery is linked with favourable premorbid

personality traits. In our study this does not seem to have any bearing on the question of readmission but is equally relevant if one considers the degree of social recovery of the readmitted patient.

A striking finding emerged when widows were studied.<sup>23</sup> When widows, who were living alone before and after admission, were compared with those who had lived with relatives, social recovery was closely related to self sufficiency. It was found that the dependent personality did not function satisfactorily in the community and tended to be readmitted, whilst the more self sufficient personality tended to remain out of hospital, functioning satisfactorily.

Although elderly depressed patients frequently show evidence of pathology in various bodily systems and are considered to have a poorer prognosis (Roth and Kay<sup>24</sup>; Post<sup>25</sup>) than in the younger age group, our findings showed that there were deficiencies in the social recovery in quite a number of younger patients especially in a group of younger women.

### **Prevalence study—morbidity rates**

So far the information on which conclusions have been based has depended on an assessment of outcome of problems referred to hospital. In order to get a clear idea of the range of morbidity in the community and the extent to which a psychiatric service might need to develop, one requires the prevalence rates of psychiatric morbidity. The problems admitted to hospital have been in almost inverse proportion to their prevalence in the community. In the psychiatric hospital by far the predominant problems are problems of schizophrenia, organic brain damage with dementia, manic depressive illnesses, subnormality and epileptic patients with psychosis or social problems; whereas in the community the psychiatric morbidity is predominantly related to psycho-neurosis, psychosomatic illness, and personality disorder.

Monro<sup>26</sup> carried out a survey in two areas in Oxfordshire—Kidlington and Littlemore—which were chosen because at the commencement of the survey they showed quite a striking difference in referred incidence. The study consisted of a random survey of approximately one in ten houses of these communities of 10,000 population. It was limited to morbidity in people between the ages of 16 and 65, and therefore, does not reflect the problem of the aged. This was done very well by Kay and Roth<sup>12</sup> in Newcastle. Neurosis was clearly defined and only positive psychiatric diagnosis was included. It is interesting that their figures of neurosis are very similar



to the figures found by Monro in the other age groups in the community. Monro's findings are in keeping with many other prevalence studies, except for recent American studies which tend to find evidence of psychiatric morbidity in an even larger percentage of the ordinary community (Rennie;<sup>27</sup> Srole *et al*;<sup>28</sup> Leighton *et al*<sup>29</sup>). The following table reflects prevalence findings.

**Table XII**  
**One year prevalence rate**

Diagnosis	Kidlington		Littlemore		Total	
		per cent		per cent		per cent
Neurotic . . .	91	17.3	130	22.7	221	20.1
Psychotic . . .	2	0.4	3	0.5	5	0.4
Psychopathic . . .	3	0.6	8	1.4	11	1.0
Subnormal . . .	2	0.4	2	0.4	4	0.4
Total . . .	98	18.7	143	25.0	241	21.9

There were 175 people with illnesses described as psychosomatic illness. These were equally distributed between the Kidlington and Littlemore areas and represented 14.3 per cent of the population interviewed. These figures are additional to those in Table XII.

With the extension of a psychiatric service there is a tendency for more and more of these problems to be referred to psychiatric Out-patient services, and as the General Practitioner becomes more sophisticated in psychiatric diagnosis this will increase further until the General Practitioner is himself trained to manage many of these problems himself.

At Gloucester, in a paper presented to the BMA in 1957, Mandelbrote<sup>30</sup> compared the referrals to Out-patient and domiciliary visits with figures quoted by Watts<sup>31</sup> in general practice. There was an increasing tendency for patients to resemble a cross-section of the general practice referrals as one moved from In-patient admission to Out-patient population.

## Discussion

The 1959 Mental Health Act places great emphasis on treatment of psychiatric illness in the community. New building programmes aim to increase the places for psychiatric treatment in general hospitals and expectations are that mental hospitals will be closed down or reduced in population. Much of the philosophy

underlying the Mental Health Act is concerned with the reduction of the stigma attached to psychiatric illness by treatment in general hospitals and providing aesthetically more satisfactory facilities for treatment. The need for proximity of hospital to the catchment area is recognized and the hospitals to be closed down are mainly large and isolated from their catchment area.

The description in this essay of the reorganization of two mental hospitals stigmatized by many of the criticisms levelled at the mental hospital, reflect to some extent how population can be reduced and what is involved in a comprehensive psychiatric service. In these areas the prestige which has accrued to these hospitals since the change, especially in terms of what patients say about treatment, has done much to reduce the prejudice against mental illness and has resulted in earlier diagnosis and treatment. Prejudice and stigma have, however, much deeper roots and cannot readily be eradicated either by admitting psychiatric cases to general hospitals or improving mental hospitals aesthetically. It is bound up with other prejudices against minority groups and fears of the unknown which even in the most civilized settings affect human attitudes and relationships.

In many respects it is more important that the setting for treatment is dependent on organization of the therapeutic milieu and the skills of the staff, than on the particular label the hospital carries. Until it is possible to reorganize staff, and administer units in general hospitals utilizing concepts developed in the most progressive mental hospitals, the change will not necessarily be a forward thinking one.

What has been happening in mental hospitals such as those described? The increasing tide of admissions at present is related to depressive illness and senile problems. Readmissions for schizophrenia outweigh new admissions for schizophrenia which are not much increased. With the developing community psychiatric service which needs to be closely coordinated with the hospital service, depressive illness may well be managed less and less by admitting IPs to hospital but treating more people as Day-patients, Night patients, and Out-patients. Schizophrenics too will not stay for long continuous periods in hospital. For such a service to be effective a great deal of effort and energy will need to be involved in continuity of care associated with follow-up services, supervision of medication, rehabilitation associated with sheltered workshops, sheltered hostels and effective training for employment.

Although senile problems are increasing and becoming a

large burden on many mental hospital services, in many instances the problem is more in the sphere of nursing the sick than the psychiatrically disturbed. Properly developed geriatric services, in liaison with psychiatric services and adequately trained staff nursing psycho-geriatric problems, would enable better treatment in a geriatric sick hospital setting so that only those who can benefit from the therapeutic community setting of a psychiatric hospital would require to use its amenities.

Neuroses are best treated as Out-patients if services are properly developed. Neurotic problems need to be understood within the setting of the family and frequently may require treatment of other members of the family. Unless neurotic encroachment on the functioning of the individual is crippling, the problem tends to be self-limiting (though no less distressing) as people learn to live with their neuroses. Many neurotics in Britain go untreated because of the deficiency in skills and facilities for psychotherapy. Prevalence studies indicate how extensive the problem is. Psychiatric skills and facilities would need to be vastly increased if this area of morbidity is to be tackled properly.

The core of difficult treatment problems which will remain for treatment in psychiatric hospitals will include chronic personality and psychosocial difficulties in people who suffer from psychosis, psychosomatic illness and personality disorder. If more success can be achieved with personality disorder this could rapidly increase the demand for places in hospital. In hospitals where the initial overburdened position cannot adequately be overcome, schizophrenia will remain a long-term hospital problem and the reduction of numbers will be unlikely.

What of the prognosis and outcome of schizophrenia? How much has this changed? In any condition of unknown etiology predictions about prognosis are difficult and may be completely wrong. It does seem, however, that many symptoms associated with chronic schizophrenia are secondary to situations which may be avoidable or reducible. For example, the state of degradation presented by many schizophrenics in large, overcrowded, mental hospitals with a high incidence of incontinence, destructiveness, aggressiveness, impulsiveness, apathy and withdrawal. The changed setting described confirms the impression that these features of schizophrenia are reversible and might not occur with different management. Our follow-up findings show that in this type of psychiatric community service very few people remain in the community as chronic burdens,

despite their lesser periods of stay in hospital. It is necessary to emphasize the degree of vigilance necessary and the sheltered employment and hostel accommodation through which many schizophrenics will need to pass before they are fit for life in the community or in which they need to stay permanently. It should be possible to avoid the social isolation reflected by absence of visitors and contact with the outside world which was so prevalent with schizophrenic patients admitted previously.

There are many facets of schizophrenia which mitigate against successful functioning in the community and produce difficulties in their employment. Evidence is presented that the personalities with positive assets pre-illness carry a better prognosis for social recovery than those with unfavourable personality traits. This is an interesting thesis which requires further testing and investigation. One of the problems of the schizophrenic is that the combination of genetic factors and the parental setting in which he lives may precipitate schizophrenic ways of thinking and behaving at an early age, and this permanently affects the mould in which the personality develops. With this degree of change the problem for successful independent functioning in the community becomes limited.

The tendency for schizophrenics and, to a lesser extent, depressives to relapse is a challenge to investigators. With our present knowledge, long continuous supervision and assistance seems essential in the majority of patients. This would apply equally to personality disorders who present an even greater difficulty when it comes to continuity of care because of their attitude and lack of awareness of their difficulties.

### **Summary**

An account is given of the reorganization of two overcrowded psychiatric hospitals. In these hospitals the populations were reduced by 17.7 per cent and 25 per cent in the course of 3 years. The effects of the changed setting are measured and comments are made about the alteration of morbidity and outcome especially of patients suffering from schizophrenia. The effect of their discharge into the community is discussed and mention is made of a prevalence study in Oxfordshire assessing psychiatric morbidity. In the discussion comments are made about the trend of events in psychiatric hospitals and the services required to complement their development as comprehensive services.

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*A study of the hard core of patients in a mental hospital*

# **The Chronic Mentally Ill—Movements in a Rural Area: 1900—1961**

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# The Chronic Mentally Ill—Movements in a Rural Area: 1900–1961

## I. Hypothesis and Background

### Introduction

The belief that once a person was admitted to a Mental Hospital he remained there for life used to be widely held by the general public in this country. More recently this belief became attached to those transferred from the admission wards to the 'back wards', usually because no improvement had followed the first few months of attempted treatment. There may be some basis for this view in that various statistical studies (Kramer,<sup>11</sup> Brown<sup>5</sup>) showed that once a patient had spent two years in a Mental Hospital his chance of being discharged was slight and altered little over the ensuing years of stay. In addition to the nature of the illness itself, this poor prognosis was attributed by some to the patient's loss of contact with the outside world (Sommer,<sup>16</sup> Freudenberg<sup>9</sup>) or to the process of their institutionalization (Martin,<sup>13</sup> Barton<sup>2</sup>). There was a general tendency to accept that time spent on the long-stay patient was largely wasted in so far as recovery, cure or discharge was concerned and could only be justified in terms of humanity.

Over the last decade, these beliefs have been challenged. An active effort has been made to prevent patients becoming long-stay and to rehabilitate the chronic patient. The expansion of the Out-Patient Department and its extensions—the domiciliary consultant service and Day Hospital described by Carse<sup>1</sup> is a good example—tends to limit the number of people admitted to hospital, thereby affecting the numbers becoming long-stay. In the hospitals, a considerable degree of success has been reported from various rehabilitation programmes, many hospitals have discharged long-stay patients to such an extent that it was felt that the problem of long-term care would vanish when the present occupants of beds in the long-stay wards died off (Tooth and Brooke<sup>17</sup>). The prospect appeared to be that with new drugs and different attitudes in the community alongside an increased amount of social work, patients would need only short spells in hospital when they were suffering from the acute phase of their illness. The Minister of Health<sup>1</sup> began to plan with this in mind, insisting that the provision of alternative forms of care—wards in general hospitals, Day Hospitals,

increased out-patient services and community care programmes—would largely obviate the need for long-term mental hospital care. As the opinions expressed above are already affecting the planning of services, it seemed important to study the 'chronic' mental patient to see whether in this area there will be patients in continuing need of long-term care.

### **Aim**

The aim of this study is to survey the numbers of patients becoming chronic in a County mental hospital since the beginning of this century and to examine any changes in recent years and consider the usefulness of such data in planning. A 'chronic' patient is defined as one who has spent at least two years continuously in hospital, and throughout this paper where patients are referred to this will mean chronic patients unless otherwise stated. Similarly, in the text where rates are referred to these are rates for chronic patients.

### **The hospital and catchment area**

Fulbourn Hospital was built in 1858 to serve the Borough and County of Cambridge and the Isle of Ely and continued to serve only this area until in 1939 Huntingdonshire and in 1948 parts of Essex, Hertfordshire and Suffolk were added to the catchment area. The hospital, which has at present 850 residents, provides the only public in-patient facilities for a population in 1962 of approximately 380,000. Apart from the five small towns the catchment area is predominantly rural and consists of fertile agricultural land with its population living in small villages and hamlets or isolated single farms. The people of the Isle of Ely have a cultural pattern different from that of the rest of the area, possibly related to the close family ties and mutual aid which are necessary on the small holdings where whole families work very long hours but are quite prosperous. Cambridge is the largest town, with a population of 95,000 in 1962, and has a certain amount of light industry. The hospital is four miles from the city centre.

The population served aged 15 years and over is beginning to approach three times its size in 1900 (Table I). This is due partly to the natural population increase and partly to additions to the catchment area. The population of the Isle of Ely has not increased at quite the same rate as Cambridgeshire.

**Table I**  
**Catchment area**  
 (Aged 15 years and over)

	<i>Men</i>	<i>Women</i>	<i>Total</i>
1901 . . . . .	59,596	65,577	125,173
1911 . . . . .	67,620	72,355	139,975
1921 . . . . .	71,687	78,738	150,425
1931 . . . . .	84,611	86,748	171,359
1941 . . . . .	114,530	118,239	232,769
1951 . . . . .	145,485	150,496	295,981
1959 . . . . .	174,728	176,310	351,038

Throughout its history Fulbourn Hospital has provided a good standard of psychiatric care very little different from that of similar County Mental Hospitals. Electro-convulsive therapy was increasingly used from the early 1940's but did not become a common treatment for long-stay patients until 1954. An Out-Patient Department in the general hospital has been developed from 1948 (16,259 visits were paid in 1962). In 1954 the therapeutic community approach was adopted in the hospital; locked ward doors were gradually opened, a work programme was started, the Social Work and Occupational Therapy departments were extended; attention was focussed on the possible discharge of long-stay patients and from 1956 the newer drugs were widely used. In fact, at the centenary, the full circle had been reached, to judge from a report by the Medical Superintendent in 1864 who said that at Fulbourn Hospital 'there is no restraint, no windows are barred, no doors have bolts. . . . No external distinction is observed between this and any other large hospital for the treatment of disease.' An innovation in 1958 was a half-way hostel in Cambridge for long-stay patients who needed a stepping-stone back into the community.

### **Method**

To assess the number of chronic patients recruited (that is passing their second anniversary in hospital) during a 60-year period from 1900 the hospital administrative record books were examined for certain years—1900 and 1901, 1905 and 1906, 1910 and 1911, 1915 and 1916, 1920 and 1921, and 1929–59 inclusive. The name, sex, age and disposal of every patient admitted in these years who stayed 'on the books' for more than 2 years was noted. Transfers in were excluded except where they applied to Fulbourn Hospital catchment area residents falling ill elsewhere, who were included in

the study. The hospital books were reliable as a record of admission but for the detailed information required they were not completely satisfactory. The main purpose of hospital records is administrative and the hospital authorities were very much concerned, especially in the earlier part of the century, to show the correct legal picture. The patient's address was sometimes given as that of a relative living in the catchment area rather than the patient's home address. Patients transferred to another mental hospital or to the general hospital for treatment for a physical disorder were occasionally shown as 'discharged', although they continued to remain in or returned to long-term care. A patient who absconded might be shown as discharged and readmitted on the same day, in order that he could be placed under a different form of detention. In all of these cases the numbers involved were small but there was one area where numbers were larger—that of 'trial leave'. The hospital policy with regard to trial leave had changed considerably during the period and some patients had left the hospital before their second year (i.e. before they satisfied our definition of a chronic patient) and may have stayed on leave for some considerable time before either returning or being discharged. (There were 21 such patients from 1900-49 and 40 from 1950-59.) For all these reasons a case-note study was considered likely to yield more reliable information.

The data derived from the case-notes included personal details (age, sex and civil state) and address, admission year, last clearly stated diagnosis, number of admission, length of stay and disposal. A note was also made of any treatment given and of trial leave with the point of hospital stay at which it occurred, its length and outcome. The information obtained was recorded on a data sheet from which a punch card was prepared for each patient in the study.

As the catchment area population had not been static throughout the period, any variation in the numbers of patients becoming chronic might simply have been a reflection of the changes in the size of the population served by the hospital. To allow for the effect of this factor, the number of patients from each admission year who stayed more than two years in hospital was expressed as a rate per 10,000 of the relevant population at risk.

We knew the part of the area from which each patient came and, from the Registrar General's Census Reports,<sup>14</sup> the populations of Cambridgeshire, the Isle of Ely, Huntingdonshire, and parts of Essex, Hertfordshire and Suffolk. The Registrar General's figures provided a break-down by sex, age and civil state. The population

figures for those aged 15 and over were used throughout unless otherwise stated, as this is the population at risk of admission. The only exceptions here were some subnormal children under the age of 10 who were occasionally admitted in the earlier years (4 children before 1930 and 12 children during the war years); they were excluded from the study. Where no census was available (1941) the intermediate yearly populations were estimated from the 1931 and 1951 censuses; no age or civil state break-down was yet available for 1961 and the distributions were calculated from the 1951 census distribution.

## II. Findings

### Actual numbers

The numbers of chronic patients recruited from the catchment area are shown by year of admission in Fig. 1. (The year of recruitment as chronic patient is two years later.) The recruitment for the first 40 years covered (1900-39) has a yearly average of 42.8 patients. In the next decade (1940-49) the yearly average is 51.2 and in the last decade (1950-59) it is 56.8. There have been wide yearly fluctuations in numbers. Apart from four exceptional years (1905, 1935, 1945, 1953) slightly more women than men are recruited. After 1955 there is a fall in the recruitment of male chronic patients, although that of female chronic patients continues at the same level. No explanation can be offered for the exceptional year 1910; the high recruitment came mainly from women aged 40-60 and the much smaller increase in men also came from this age group. They were all County patients admitted from their homes.

**Comparisons of recruits in each decade** In Tables II(a)-IV(b) the distribution of male and female patients by age, civil state and diagnosis is shown for each decade from 1900. The figures for the first two decades are based on four admission years each, and the third on three.

**Sex** There is a wide yearly variation in the ratio of men to women (0.26-1.24) but little change in the ratio for each decade:

	<i>Men</i>	<i>Women</i>
1900-09 . . .	0.7	: 1
1910-19 . . .	0.5	: 1
1920-29 . . .	0.5	: 1
1930-39 . . .	0.7	: 1
1940-49 . . .	0.7	: 1
1950-59 . . .	0.5	: 1

**Age** There is little difference in the percentage distribution by age for men in each cohort from 1910 (Table II(a)). Women, however, show a striking increase in the over 60 group who represent almost half of the 1950-59 cohort. Although this proportion is very little different from the first decade it must be remembered that figures for the first decade were derived from a smaller sample. These figures are also expressed as the mean number of patients recruited

PATIENTS STAYING OVER 2 YEARS.

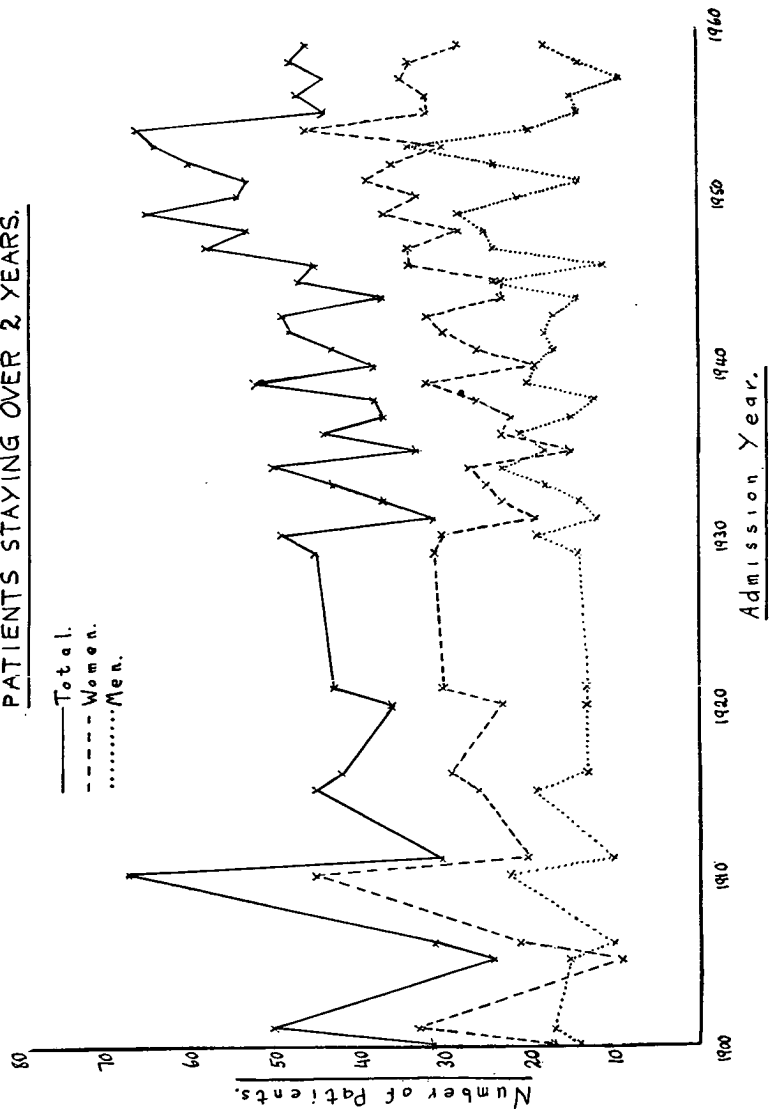


FIG. 1

**Table II(a)**  
**Admission year by age**  
 (Percentage in parentheses)

*Men*

	<i>Under 20</i>	20-29	30-39	40-49	50-59	60+	<i>Total</i>
1900-01 . . . } 1905-06 . . . }	7 (11)	15 (23)	16 (25)	13 (20)	8 (12)	5 (8)	64
1910-11 . . . } 1915-16 . . . }	1 (2)	9 (14)	18 (27)	14 (21)	12 (18)	12 (18)	66
1920-21 . . . } 1929 . . . }	3 (7)	6 (14)	8 (19)	12 (29)	6 (14)	7 (17)	42
1930-39 . . .	3 (2)	31 (17)	46 (26)	36 (20)	26 (14)	37 (21)	179
1940-49 . . .	14 (6)	31 (14)	36 (18)	40 (20)	36 (18)	50 (24)	207
1950-59 . . .	3 (2)	28 (14)	34 (17)	46 (23)	35 (18)	52 (26)	198
<b>Total . . .</b>	<b>31</b>	<b>120</b>	<b>158</b>	<b>161</b>	<b>123</b>	<b>163</b>	<b>756</b>

**Table II(b)**  
**Admission year by age**  
 (Percentage in parentheses)

*Women*

	<i>Under 20</i>	20-29	30-39	40-49	50-59	60+	<i>Total</i>
1900-01 . . . } 1905-06 . . . }	4 (4)	12 (14)	11 (12)	12 (14)	15 (17)	34 (39)	88
1910-11 . . . } 1915-16 . . . }	6 (5)	24 (20)	23 (19)	31 (25)	21 (17)	17 (14)	122
1920-21 . . . } 1929 . . . }	4 (5)	7 (8)	21 (24)	17 (20)	17 (20)	21 (24)	87
1930-39 . . .	9 (4)	26 (10)	53 (21)	52 (21)	52 (21)	59 (23)	251
1940-49 . . .	5 (2)	31 (10)	54 (18)	68 (23)	50 (17)	92 (31)	300
1950-59 . . .	3 (1)	35 (9)	47 (13)	49 (13)	60 (16)	176 (48)	370
<b>Total . . .</b>	<b>31</b>	<b>135</b>	<b>209</b>	<b>229</b>	<b>215</b>	<b>399</b>	<b>1218</b>



**Table III(a)**  
**Admission year by civil state**  
 (Percentage in parentheses)  
*Men*

	<i>Single</i>	<i>Married</i>	<i>Widowed</i>	<i>Divorced</i>	<i>Not known</i>	<i>Total</i>
1900-01 . . } 1905-06 . . }	38 (59)	22 (34)	3 (5)	-	1 (2)	64
1910-11 . . } 1915-16 . . }	38 (58)	23 (35)	4 (6)	-	1 (1.5)	66
1920-21 . . } 1929 . . }	22 (52)	17 (41)	3 (7)	-	-	42
1930-39 . .	87 (49)	83 (46)	9 (5)	-	-	179
1940-49 . .	115 (57)	75 (36)	15 (7)	-	2 (1)	207
1950-59 . .	121 (61)	50 (25)	22 (11)	3 (1.5)	2 (1)	198
<b>Total . .</b>	<b>421</b>	<b>270</b>	<b>56</b>	<b>3</b>	<b>6</b>	<b>756</b>

**Table III(b)**  
**Admission year by civil state**  
 (Percentage in parentheses)  
*Women*

	<i>Single</i>	<i>Married</i>	<i>Widowed</i>	<i>Divorced</i>	<i>Not known</i>	<i>Total</i>
1900-01 . . } 1905-06 . . }	35 (40)	26 (30)	27 (30)	-	-	88
1910-11 . . } 1915-16 . . }	69 (57)	40 (33)	13 (10)	-	-	122
1920-21 . . } 1929 . . }	37 (43)	39 (45)	10 (11)	-	1 (1)	87
1930-39 . .	113 (46)	106 (42)	29 (12)	-	-	248
1940-49 . .	142 (47)	120 (40)	40 (13)	1 (-)	-	303
1950-59 . .	154 (42)	97 (26)	116 (31)	3 (1)	-	370
<b>Total . .</b>	<b>550</b>	<b>428</b>	<b>235</b>	<b>4</b>	<b>1</b>	<b>1218</b>

**Table IV(a)**  
**Admission year by diagnosis**  
 (Percentage in parentheses)

*Men*

	<i>MD</i>	<i>Epil- eppsy</i>	<i>GPI</i>	<i>Senile</i>	<i>Affec- tive</i>	<i>Schiz.</i>	<i>Other</i>	<i>Not known</i>	<i>Total</i>
1900-01 } 1905-06 }	14 (23)	1 (1.5)	1 (1.5)	1 (1.5)	41 (63)	—	5 (8)	1 (1.5)	64
1910-11 } 1915-16 }	8 (12)	9 (14)	1 (1.5)	6 (9)	29 (44)	7 (11)	6 (9)	—	66
1920-21 } 1929 }	3 (7)	3 (7)	1 (2)	3 (7)	14 (33)	8 (19)	10 (24)	—	42
1930-39	20 (11)	9 (5)	7 (4)	17 (10)	53 (30)	48 (27)	25 (14)	—	179
1940-49	25 (12)	11 (5)	5 (2)	22 (11)	62 (30)	60 (29)	22 (11)	—	207
1950-59	14 (7)	9 (4)	4 (2)	29 (15)	41 (21)	84 (42)	17 (9)	—	198
Total	84	42	19	78	240	207	85	1	756

**Table IV(b)**  
**Admission year by diagnosis**  
 (Percentage in parentheses)

*Women*

	<i>MD</i>	<i>Epil- eppsy</i>	<i>GPI</i>	<i>Senile</i>	<i>Affec- tive</i>	<i>Schiz.</i>	<i>Other</i>	<i>Not known</i>	<i>Total</i>
1900-01 } 1905-06 }	3 (3)	1 (1)	—	14 (16)	66 (75)	—	4 (5)	—	88
1910-11 } 1915-16 }	11 (9)	7 (6)	—	7 (6)	73 (59)	16 (13)	8 (7)	—	122
1920-21 } 1929 }	4 (5)	3 (3)	1 (1)	11 (13)	27 (31)	11 (13)	30 (34)	—	87
1930-39	18 (7)	6 (2)	4 (2)	23 (9)	104 (42)	55 (22)	38 (15)	—	248
1940-49	20 (7)	13 (4)	3 (1)	42 (14)	124 (41)	73 (24)	28 (9)	—	303
1950-59	16 (4)	3 (1)	—	106 (29)	102 (28)	114 (31)	27 (7)	2 (0.5)	370
Total	72	33	8	203	496	269	135	2	1218

each year in each decade (Table V). The mean yearly number of patients has increased over the whole period and well over half of this increase is due to the over 60 age group, particularly women. For those below 60, there is no consistent change.

**Civil state** The percentage of single people has changed little. There has been a reduction in married people and an increase in the proportion of widowed, particularly women. Although this is to no higher a level than was seen in the first decade (Tables III(a) and (b)) it is a striking change over the last 50 years.

**Table V**  
Mean yearly number of patients for each decade

	Men			Women		
	All ages	60+	Under 60	All ages	60+	Under 60
1900-09 . . .	16.0	1.3	14.8	22.0	8.5	13.5
1910-19 . . .	16.5	3.0	13.5	31.0	4.3	26.3
1920-29 . . .	14.0	2.3	11.7	29.0	7.0	22.0
1930-39 . . .	17.9	3.7	14.2	25.1	5.9	19.2
1940-49 . . .	20.7	5.0	15.7	30.0	9.2	20.8
1950-59 . . .	19.8	5.2	14.6	37.0	17.6	19.4

**Diagnosis** It is likely that Mental Deficiency, Epilepsy, GPI and Senility were fairly consistently diagnosed throughout the period. Schizophrenia and Affective illnesses cannot be differentiated in the earlier part of the century but the distinction is probably more meaningful from 1930 onwards. The category 'Other' includes a number of Schizophrenics whose admission diagnosis was never revised.

There has not been much change in the proportions of patients diagnosed Mental Defective, Epileptic or GPI, although there are variations in some decades. The most striking percentage increase has been for Senile diagnoses in women, which now represent almost one-third of the 1950-59 group. The proportion of patients in the Affective group of diagnoses has fallen in the last decade, whilst the proportion for Schizophrenia has increased (Tables IV(a) and (b)).

### Rates per 10,000 of the population at risk

There is a significant ( $p < .001$ ) and linear decline in the number of both male and female chronic recruits when expressed as a rate per 10,000 of the population at risk (Figs. 2-4). An analysis of the

CHRONIC PATIENTS.

RATES PER 10,000 POPULATION AND TREND LINE

CATCHMENT AREA BOTH SEXES

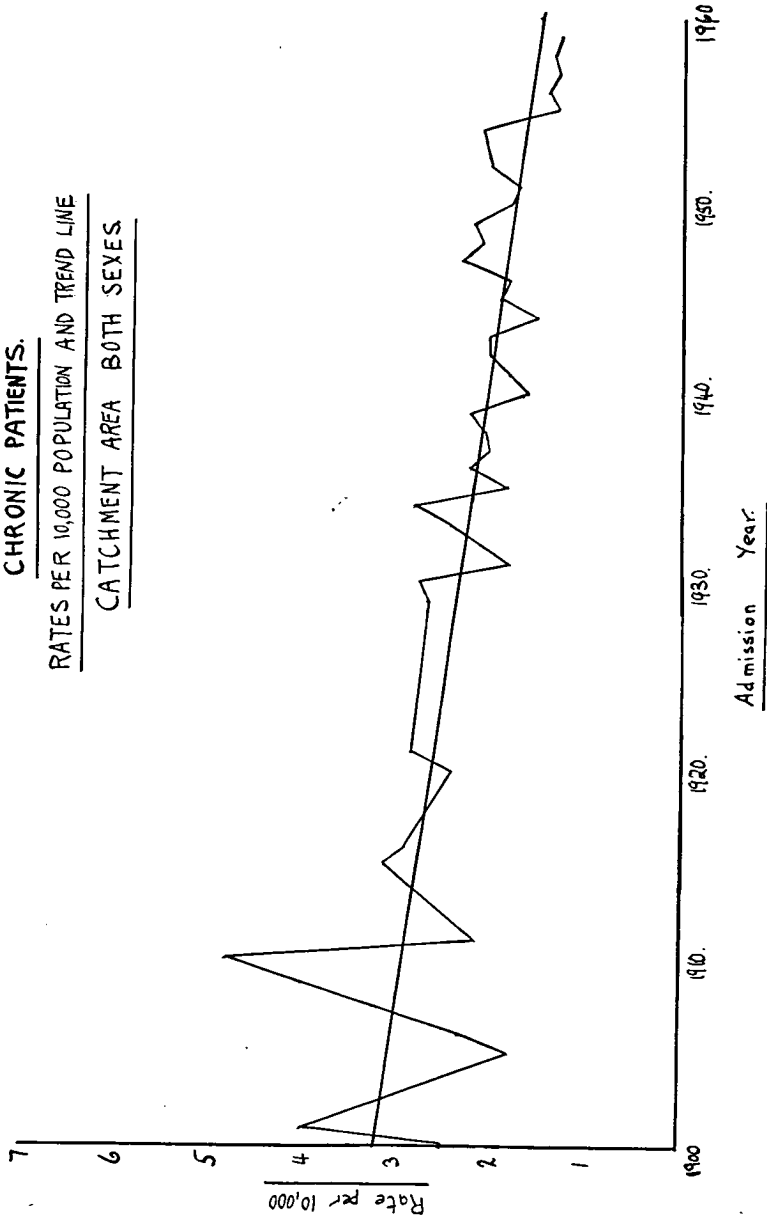


FIG. 2

CHRONIC PATIENTS.  
RATES PER 10,000 POPULATION AND TREND LINE.  
CATCHMENT AREA MALE PATIENTS.

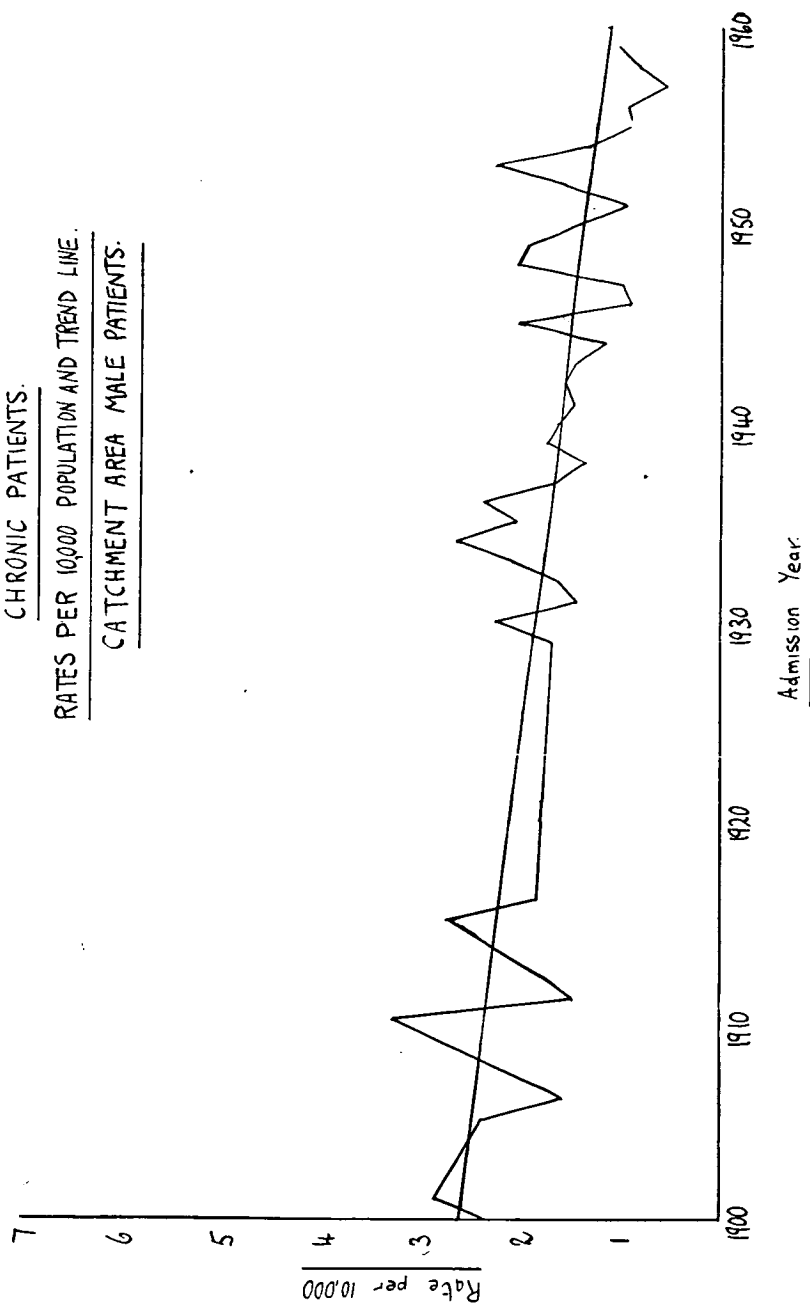


FIG. 3

CHRONIC PATIENTS.

RATES PER 10,000 POPULATION AND TREND LINE.

CATCHMENT AREA FEMALE PATIENTS.

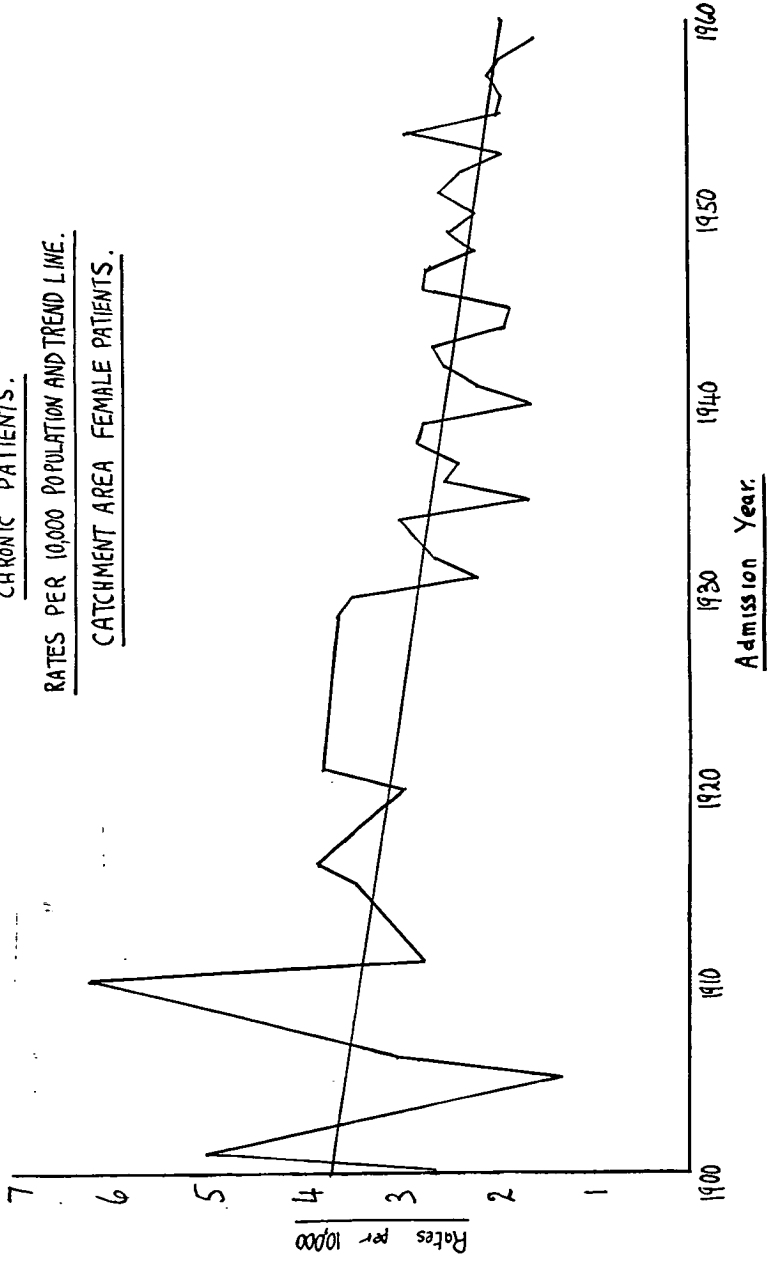


FIG. 4

rates for the two largest divisions of the catchment area—Cambridgeshire and the Isle of Ely—indicated that recruitment from Cambridgeshire declined to a greater extent than from the Isle of Ely and that this decline is limited to those below 60. In neither area were there significant changes for patients over 60 although trends for women over 60 showed a tendency to increase which did not reach significance at the .05 level.

The probable explanation of the decline in rates is the increase in the population at risk, combined with a fairly static number of hospital beds available. Even so, variations in the trend to decline may suggest a shift in the priorities determining who is accepted to long-term care.

The changes reported above in the numbers of widowed patients recruited are confirmed by the rates per 10,000 (Tables VI(a) and VI(b)) which show a marked increase especially in women. This is matched by a decrease in the rates for married people.

**Table VI(a)**  
Civil state  
(Rates per 10,000)

*Men*

	1930-39	1940-49	1950-59
Single . . . .	2.6	3.6	2.6
Married . . . .	1.7	1.0	0.5
Widowed . . . .	2.0	2.7	2.9
Divorced . . . .	—	—	4.6

**Table VI(b)**

*Women*

	1930-39	1940-49	1950-59
Single . . . .	3.8	4.8	3.8
Married . . . .	2.1	1.6	0.9
Widowed . . . .	3.0	2.8	5.9
Divorced . . . .	—	—	2.7

The rates for diagnosis (Tables VII(a) and VII(b)) are reduced apart from Senile Psychoses (expressed as a rate of the population aged 60 and over). The rates for men and women fluctuate from decade to decade and it is difficult to draw conclusions but certainly for Senile Psychoses they have not been reduced.

**Table VII(a)**  
**Diagnosis**  
 (Rates per 10,000)  
 Men

	<i>MD Epilepsy GPI</i>	<i>Senile</i>	<i>Functional Psychosis and Other</i>
1900-09 . . . .	0.8	0.26	2.2
1910-19 . . . .	0.8	1.4	1.8
1920-29 . . . .	0.5	0.8	1.7
1930-39 . . . .	0.5	0.9	1.9
1940-49 . . . .	0.5	1.0	1.5
1950-59 . . . .	0.2	1.0	1.1

**Table VII(b)**  
 Women

	<i>MD Epilepsy GPI</i>	<i>Senile</i>	<i>Functional Psychosis and Other</i>
1900-09 . . . .	0.2	3.1	3.0
1910-19 . . . .	0.8	1.3	3.9
1920-29 . . . .	0.4	2.5	3.4
1930-39 . . . .	0.4	1.1	2.8
1940-49 . . . .	0.4	1.5	2.4
1950-59 . . . .	0.2	2.7	1.9

**Table VIII**  
**Schizophrenia and affective disorders**  
 (Rates per 10,000)

	<i>Schizophrenia</i>		<i>Affective</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
1930-39 . . . .	0.72	0.79	0.79	1.49
1940-49 . . . .	0.63	0.79	0.65	1.34
1950-59 . . . .	0.64	0.90	0.31	0.81

In Table VIII the rates for Schizophrenic and Affective Psychoses are shown for the decades from 1930. The only changes of note are the reduction in rates for Affective Psychoses.



### III. Discussion

The discussion which follows deals with the material presented above under three headings: (1) the use of rates per 10,000 of the population; (2) the actual numbers of patients recruited and accommodation available for chronic patients; (3) the characteristics of those recruited. This will be followed by a general discussion of the implications of the findings.

#### **Use of rates per 10,000**

Without (1) stable policy criteria for determining admission and length of stay, and (2) an 'elastic' hospital, the rate of recruitment of chronic patients per 10,000 of the population at risk tells nothing about the need for long-term hospital care. This situation can be likened to that of admission to the universities of Oxford and Cambridge; with an increasing population, a falling rate per 10,000 in the absence of additional places would not be seen as indicating a lessening need for a university education. In other words, it is only possible to interpret the movement of the rates per 10,000 to the extent that they are uninfluenced by administrative decisions.

However, the reasons for retaining patients for two or more years in a mental hospital have differed much from year to year and from hospital to hospital. Not only the general public but the medical men in charge of mental hospitals in the past felt that people suffering from a mental illness needed asylum in their own and other people's interests and tended to keep them even during periods of remission, reiterating in the case-notes the disturbed behaviour of the past and pointing to the likelihood of its recurring. The tendency in later years has been directed towards keeping patients in the community and returning them to the community whenever possible. They are now almost always discharged when their illness is in remission and often to circumstances which would previously have been considered unsuitable. Further, circumstances in the community have been propitious for discharge in recent years; there has been no lack of jobs and a certain number of facilities have been available outside the hospital which, together with drugs, allows chronic illness to be dealt with without a long, continuous stay in hospital. All these factors are relevant in assessing usefulness of rates.

#### **An 'elastic' hospital**

Fulbourn, like most other mental hospitals, was built to

cater for a fraction of its present residents. Table IX shows the position at the end of each decade from 1900.

**Table IX**

	<i>Actual Number</i>	<i>Intended Number</i>
In 1900 . . .	572 patients	400 patients
1910 . . .	607 "	488 "
1920 . . .	558 "	488 "
1930 . . .	708 "	538 "
1940 . . .	837 "	538 "
1950 . . .	929 "	538 "
1960 . . .	838 "	613 "

the record number being 972 patients in 1954.

Given these conditions, it is clear that the rate of recruitment to long-stay care must decline, for the catchment area population at risk is increasing faster than the provision of beds and no more patients could possibly be added to the overflowing wards without increasing danger to health. This type of situation has been commented on by Watt<sup>18</sup> and by Shepherd<sup>15</sup> who also quotes a statement by the Board of Control expressing the same views.

### **Numbers of patients becoming chronic**

Although the rates have declined, the actual numbers have risen slightly (Fig. 1). The mean number of patients recruited in each decade has also increased (Table V). There is clearly a limit to the numbers with which the hospital can deal by providing long-term care. For those with whom it cannot deal in this way new measures are adopted; for example, the Out-Patient Department attempts to reduce admissions or, more important, in the hospital itself a policy of early discharge or rehabilitation measures attempt to reduce the length of stay. In this situation only the most severe cases, judged by both clinical and social factors, can be permitted a long stay and the work of the hospital is more difficult in consequence as these patients will be less susceptible to treatment including 'social therapy'. If this effort on the part of the hospital were relaxed it might lead to a greater build-up of chronic patients.

Despite continued recruitment the number of patients resident was reduced in the later 1950's and we may speculate why. The 1960 hospital population is round about that of the 1940's and the rather abrupt increase in recruitment which began in 1949, seen in Fig. 1,

suggests that the early 1950's is not a suitable point to use in measuring reduction and if any year before 1948 is taken as a baseline an increase is seen. The increase in 1949 could not have been due solely to the additions to the catchment area in 1948 as they were small (40,000) and no similar increase was seen after the addition of Huntingdonshire (45,000) in 1939. A more probable explanation is that in 1948 following the introduction of the National Health Service, patients and their families became more willing to accept hospital treatment, in addition to which, as more money became available, physical conditions within the hospital improved. All admissions in the 1940's had increased from just over 200 per year to around 270 in 1947; in 1948 there were 340; in 1949, 440; and in 1950, 550. The proportion of readmissions in this group was much lower than that of recent years. This large influx of patients flooded the admission wards where a small medical staff attempted to deal with a greatly increased volume of work. Anyone who did not respond to treatment fairly quickly would be transferred to the long-stay wards from which most medical attention had now been withdrawn to cope with the admission ward situation. Many of these patients then stayed until after two years they became 'chronic patients'. It was to some extent this group of patients who responded well to rehabilitation programmes and provided some of the successful initial discharge group to those enthusiastic enough to take a little trouble. For instance as part of a follow-up study, we analysed the admission years of patients discharged from this hospital between 1948 and 1960. There were 242 discharges of long-stay patients; 19 of these were admitted prior to 1940 and have been excluded from this present analysis. Almost one half (105) of the people discharged were admitted in the six years 1949-54 compared with 118 in the remaining 13 years. How far this can be extended to other hospitals it is not possible to say, but it may be reasonable to pose the question whether the national figures given by Brooke<sup>4</sup> would have led to different conclusions if years other than the 1950's had been used as a point of comparison.

If the population of the catchment area continues to increase and no additional long-stay beds are provided it seems likely that the demand for the available beds will grow. Where there is competition for beds it becomes necessary to identify the groups of patients given preference. Our data shows that these are: (1) elderly women; (2) the widowed, especially women; and (3) those diagnosed Senile State and Schizophrenia. The increase in elderly women has been found in other hospitals. However, as rates per 10,000 of the population have

not altered significantly it is surely due more to the higher proportion of elderly women in the community than to any increasing disinclination on the part of their families to care for them.

The widowed group are drawn almost entirely from the over-60 age group (only 14 out of 138 widowed persons recruited in the last decade are under 60) and this is the only sub-group where rates per 10,000 have risen. It is probable that these are the patients who are not easily able to care for themselves in the community and who frequently have no family willing to care for them. Residence in a mental hospital is therefore essential unless other facilities are available. The proper placing of these elderly, widowed patients is very important as has been shown by Kidd.<sup>10</sup>

It is evident that the increase in Senile diagnoses is a direct consequence of the number of elderly patients. Those with a Schizophrenic diagnosis are the patients who by their behaviour may have alienated their families and whose illness is less susceptible to treatment and longer lasting than that of patients suffering from Affective Psychoses.

The groups not selected for continuous long-stay are (1) younger patients; (2) married patients; and (3) those suffering from an Affective Psychosis. These are the groups for which there is other accommodation available—the younger probably have parents and the married and those diagnosed Affective Psychosis a spouse. In addition they are likely to be able to find employment and support themselves. The services provided in the community are reasonably successful in supporting these patients and their families. The Affective disorders are also those which respond most readily to short-term in-patient and out-patient treatment.

The part of the area from which the patient is admitted is of some importance as Cambridgeshire has seen a greater reduction in the number recruited than the Isle of Ely. There are two possible explanations which present themselves: first, since the Isle of Ely is more remote and isolated there has not been the same opportunity for Isle of Ely patients to keep in touch with their families and so their rehabilitation before two years in hospital have elapsed may have been more difficult. The observation of Brown<sup>6</sup> for example, that absence of visiting in the first two months of hospital stay was positively related to long stay, seems important in this context. Secondly, since the rates per 10,000 of Isle of Ely patients becoming chronic have never been as high as in Cambridgeshire this may possibly mean that they were initially more severely ill or more difficult social problems and therefore the rate has been less susceptible to reduction.

## IV. Implications.

If patients do not complete two years' continuous stay they are not included in our figures and yet they may nevertheless spend the larger part of any given period in hospital. If the method adopted by Shepherd<sup>15</sup> of showing the length of time spent in hospital out of a defined period had been used, our figures would be greater; the extent of the increase depending on the percentage of time spent in hospital used to define long stay.

In this paper we have outlined a considerable problem, in the face of which it is evident that the hospital has done an excellent job. The number of people it is expected to serve increased dramatically, and yet they were admitted and treated somehow with very little increase in the amount of available room. However, more work had to be done to maintain a good turn-over and in all of this constant vigilance and combing through of long-stay patients was required.

That there is still a need for the hospital is shown in the recruitment figures themselves. No fewer patients are being recruited and, in addition, if we are correct in believing that at present chronic patients tend to be more difficult problems than they were at an earlier point in the hospital's history, as the severest cases will be given preference for continuous long-term care, then discharges of chronic patients will not continue at the recent level. In addition, a direct consequence of shortened length of stay is that more patients are now in the community and not all of them have necessarily fully recovered from their illness. The work of the hospital has not been merely within its walls; Mental Welfare Officers and Social Workers have been active in working with patients and their families to maintain the stability of the patient in the community. Unfortunately the provision of services in the community to cope with the extent of the problem has remained far behind the need, and in the absence of adequate facilities the present system could break down. As part of future development of psychiatric services, it is visualized that there will be more units in general hospitals. Length of stay in these units will, of necessity, be limited and many of those patients who do not respond to treatment in a reasonable time will be sent to the local Mental Hospital. The general hospital setting will be attractive to many psychiatrists, and there may be a withdrawal from the Mental Hospital; which would lead to an increase in the number of chronic patients recruited and a return to the problems of earlier periods when repressive measures became necessary as a small staff attempted to cope with an ever-increasing

volume of work. This can be compared with the admission ward situation described on page 311. It is important also to consider whether early discharge and readmission is the best means of helping potentially long-stay patients and their families. Most chronic patients suffering from Affective Psychosis can lead a normal life in the community during periods of remission but the outlook for the Schizophrenic patient is different. Current methods of social therapy in the hospital, discharge to a half-way hostel and ultimate resettlement at an independent level in the community may be a better therapeutic measure than returning the patient to his family. The social measures necessary in the hospital are often lengthy before the patient makes sufficient improvement to achieve even relative independence. It is possible that for these patients a long stay in the hospital is desirable and will be a better treatment measure in the long run. It has been shown by Carstairs<sup>8</sup> that those Schizophrenic patients who return to their parents rather than to other kin or lodgings, although they may frequently stay out of hospital for over a year, tend to have a poor social adjustment and to be unemployed. Although there have been studies of the effect of discharge of long-stay patients on their families, there have been fewer showing the effect of the intermediate-stay (or 'revolving door') patient on the family. Further studies are certainly necessary to show the total cost to the community of the policy of early discharge.

## V. Summary

The numbers of patients who passed their second anniversary in a County Mental Hospital is surveyed from the beginning of the century. It was found that as the number of beds available in the hospital had not increased commensurately with its catchment area population, the rates of patients becoming long-stay (per 10,000 of the population at risk) were not an appropriate measure of change.

The actual numbers of patients becoming chronic has not changed greatly and the hospital has dealt effectively with an increasing volume of work. A continuing need is seen for the Mental Hospital in this area at least.

An increased number of patients are being returned to the community before completing two years in hospital, and they seem to be those who have a family to care for them. A greatly increased number of elderly women, many of them widowed, require long-term care.

Some of the implications of the findings are discussed, with particular reference to the planning of services and the possible burden which may be being placed on the community.

### **Acknowledgement**

We would like to thank Mr. R. G. Carpenter of the Department of Human Ecology, Cambridge University, and his assistant Mrs. A. Petrie for their help with the statistical material.

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*Community care: the ideal and the reality*

**Mental Health Social Work in  
Hospitals and Local Authorities:  
A Comparison of Two Work  
Situations**

*Political and Economic Planning*

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# Mental Health Social Work in Hospitals and Local Authorities : a Comparison of Two Work Situations

## I. Introduction

This paper arises out of a study<sup>1</sup> of community mental health services in four areas of England. Our concern has been with the ways in which these services operate; our focus has been administrative rather than clinical. We have aimed at describing and measuring the quantity of services, their administrative nature and functional organization, as well as at estimating their impact upon patients. We have undertaken several surveys one of which, a survey of social work, provides the data on which this paper is based.

### Social work and community care

The broad context within which the material presented here should be viewed is that of 'community care' in the field of adult psychiatry. We use the term 'community care' to denote a re-orientation of psychiatric services; we do not use it to mean any specific type of care, service or therapy. Nor do we regard 'community care' as synonymous with local health authority services, although the re-orientation of psychiatric services has involved the local authority in new and enlarged responsibilities.<sup>2</sup> Following on the Report of the Royal Commission on Mental Illness, there has been a continuing tendency, in some ways an unfortunate one, to think in terms of hospital *or* community in planning health and welfare services, a tendency epitomized by the two separate and largely self-contained

1. The research project, the Community Mental Health Services Study, is being carried out at PEP with the support of the Nuffield Provincial Hospitals Trust. Earlier publications which give some of the background of the study are: Martin, F. M. (1960) *Community Mental Health Services*, P E P 'Planning' broadsheet, No. 447. Martin, F. M. (1961) *Mental Subnormality and Community Care*, P E P 'Planning' broadsheet, No. 457. Rehin, G. F. and Martin, F. M. (1963a), *Psychiatric Services in 1975*, P E P 'Planning' broadsheet, No. 468. Rehin, G. F. and Martin, F. M. (1963b) 'Some problems for Research in Community Care', chapter on *Trends in the Mental Health Services* (H. Freeman and W. A. J. Farnsdale, editors), Pergamon Press, Oxford. A full P E P report will be published.

2. Perhaps it would be better to speak of rediscovered responsibilities. In this connection Chapter 10 of the *Report of the Royal Commission on the Law relating to illness and Mental Deficiency (1957)* H.M.S.O. Cmd. 169 (cited hereafter as *Royal Commission*) paras. 595-724 is most relevant.

'plans' published by the Ministry of Health.<sup>3</sup> We would prefer to think that 'community care' involves all the resources, both clinical and social, of hospital and local authority. The problem for the planner is to direct the development and the deployment of resources in order to achieve the optimum services, having regard to volume and quality. To do this effectively requires an empirical foundation in which operational knowledge is no less important than clinical and epidemiological knowledge.

Among the community mental health services, perhaps none has received more emphasis than social work. In pointing the way towards the reorientation of psychiatric services, the Royal Commission recommended the expansion of local authority services including, among others, 'general social work to help all types of mentally disordered patients and their relatives, including certain services while patients are also receiving hospital treatment and all forms of community care after patients leave hospital'.<sup>4</sup> More recently statements of national policy, embodied in the Hospital Plan and the Local Authority Plan, have reasserted the responsibilities of local authority social work services. In the former, speaking of community services, it is stated that '... there should be a notable increase in the amount of home care, as more trained social workers are recruited for work with the mentally ill...'<sup>5</sup> The authors of the Local Authority Plan have described the purpose of mental health social work services in community care with an unusual degree of clarity:

'A normal person relies on those [with] whom he lives and works for understanding, sympathy and co-operation. Where there is mental disorder these supports may be seriously undermined or even destroyed. The mental health services therefore aim at strengthening them or constructing others in their place. *Here the main need is for an effective body of social workers, including mental welfare officers, working closely with General Practitioners and hospital staff. By providing a personal service of advice and support for the mentally disordered and for their families, the social worker can do much to prevent a breakdown either of the mentally disordered person or of*

3. Ministry of Health (1962) *A Hospital Plan for England and Wales*, H.M.S.O., Cmnd. 1604 and Ministry of Health (1963) *Health and Welfare, The Development of Community Care*, H.M.S.O., Cmnd. 1973. The former will be cited hereafter as *Hospital Plan*, the latter as *L.A. Plan*.

4. *Royal Commission, Recommendations in Part V*, following para. 724.

5. *Hospital Plan*, para. 41.

*his social relationships, to obviate the need for admission or re-admission to hospital, or to aid rehabilitation.* Through personal contact the social worker can also establish what other services are appropriate and try to ensure that the mentally disordered and their relatives take proper advantage of them.<sup>6</sup> (*Italics added.*)

It is clear that the 'burden on the community' about which so much is heard in mental health circles today involves social workers in immense responsibilities.

The most striking fact about mental health social work, considering the hopes which appear to rest upon it, is how very little is known about it except at the level of casework theory. Even the most basic data which are necessary are not available; the Local Authority Plan, for example, gives only the total number of social workers employed by each local authority without revealing their distribution among the various departments. It is difficult to obtain precise information on the current allocation of psychiatric social workers (PSWs) among the various services. Nor are there data on age, marital status, and labour turnover, etc., which could make possible more precise forward planning by taking account of future rate of retirement, movements into employment as children grow up, shifts in the geographical distribution of workers, and so on. Apart from the *Younghusband Report*,<sup>7</sup> which is by now out of date statistically, nothing seems to be known about the demographic, social and educational characteristics of mental welfare officers (MWOs), beyond the passing references in the Local Authority Plan.<sup>8</sup>

Perhaps even less is known at the operational level (the level of the employing authority) about the nature of social work. Effective administration is hampered by lack of working standards for case loads, methods of case intake and allocation among several workers of differing qualifications, the allocation of time among various tasks, and so on. The literature on social work in Britain is not systematic; there have been no objective studies which attempt to formulate criteria determining the numbers of social workers appropriate to the needs of communities of different size and structure. Nor have there been investigations into the advantages and disadvantages

6. *L.A. Plan*, para. 83.

7. *Report of the Working Party on Social Workers in the Local Authority Health and Welfare Services (1959)* H.M.S.O. Cited hereafter as the *Younghusband Report*.

8. *L.A. Plan*, para. 84.

of different patterns of organization. Systematic analysis of the content of social work activity and the social and clinical characteristics of its clientele is rare.

### **Scarce social work resources and their allocation**

The history of the development of mental health social work services is one of estimated requirements which always fell far short of contemporary supplies. The number and qualifications of social workers today, in so far as we can estimate these, do not approximate the standards at which the Mackintosh Committee aimed. In 1951, that committee said: 'Our services need psychiatric social workers in much greater numbers—our examination . . . suggests more than 1500 compared with the present 331 in active practice. We also need a still larger number of trained and experienced mental welfare workers.'<sup>9</sup> If the true need for social workers today bears any resemblance to the demand forecast in 1951, then resources are at present extremely low.

The Royal Commission recognized a need for local authorities to employ more social workers, both PSWs and mental welfare officers. With regard to the former they found 30 employed by local authorities and 170 employed by hospitals, and they called attention not so much to absolute numbers required as to the possibilities of redeployment, remarking that, 'It will hardly be possible for the local authorities effectively to undertake the responsibilities we have recommended if the large majority of the available body of trained Psychiatric Social Workers continue to be employed in the hospitals.'<sup>10</sup> With regard to mental welfare officers they referred to the Younghusband Committee, which would take account of their recommendations. That Committee estimated that there were then (1956) about 1000 'whole-time equivalent' mental welfare officers in England and Wales and found 31 PSWs (5 of whom were part-time) employed by local health authorities in 'community care'.<sup>11</sup> They estimated the requirements to be 2000 mental welfare officers, having in mind 'that some visiting of mental defectives could be undertaken by welfare assistants', and in addition 260 whole-time PSWs.<sup>12</sup> They were not sanguine

9. *Report of the Committee on Social Workers in the Mental Health Services* (1951) H.M.S.O. Cmd. 8260, para. 195. Cited hereafter as *Mackintosh Committee*.

10. *Royal Commission*, para. 723.

11. *Younghusband Report*, paras. 784, 804.

12. *Ibid.*, paras. 785, 805, 806. It should be noted that these estimates were based on the conclusions of the Mackintosh Committee, 1951, by then given additional urgency by the Report of the Royal Commission.

about the possibilities of accomplishing these aims, finding it 'difficult to see how a rapid and substantial expansion of staff, suitably equipped to meet the demands of the service, can be achieved in present circumstances'.<sup>13</sup>

The doubts of the Younghusband Committee appear to have been well-founded. According to the Report of the Ministry of Health for 1962, the total number (whole-time equivalent) of social workers of all kinds employed by local authorities in their mental health services was 1247, which included '91 Psychiatric Social Workers or other persons with advanced training'.<sup>14</sup> Assuming similar bases for estimating equivalents, there has been an increase of about 220 in six years, about 3.5 per cent per annum. However, more than half of this increase (119) came in 1962 alone; it appears that the tempo of recruitment has picked up. While the number of PSWs has more than doubled since 1950,<sup>15</sup> the number of other social workers (mental welfare officers) has grown much more slowly, about 17 per cent since the Younghusband Committee attempted to discover the position. These figures are not encouraging, especially as the main impact of imminent retirement among mental welfare officers—a problem noted by that Committee—has probably not yet made itself felt, and it remains to be seen whether the higher rate of recruitment in 1961-2 can be maintained.

If total resources are scarce, resources of professionally qualified social work in local authority mental health services appear to be scarcer still. There are 57 per cent of the number of mental welfare officers said to be required, but only just over a third the number of PSWs, if 'other persons with advanced training' are included among the latter. The Local Authority Plan comments that the 'amount of formal training which present [mental welfare] staffs have had varies considerably and is often slight'.<sup>16</sup> It is too early yet to look for the consequences of the new training courses for general purpose social workers; the impact of these will probably raise the skill level without having much effect upon the rate of recruitment. With regard to psychiatric social workers the Royal Commission suggested

13. *Ibid.*, para. 230.

14. (1963) H.M.S.O. Cmnd. 2062, p. 70, and Appendix VIII, Table A, Part 4.

15. We estimate that there were 72 whole-time equivalent PSWs (members of the Association of Psychiatric Social Workers) employed in local authority mental health services at the end of 1962. This estimate is based on a count of Associates of the A.P.S.W. who were stated to be so employed in the membership list published by the Association in January, 1963.

16. *L.A. Plan*, para. 84.

a redeployment from hospitals to local authorities (as we noted above). Little if any re-allocation appears to have taken place; we estimate that in 1962 there were about 220 PSWs employed in psychiatric hospital services and about 157 employed in child guidance services.<sup>17</sup> The total number employed in hospital psychiatric, local authority mental health, and child guidance services does not appear to have increased greatly since 1956. All told, there are at least 450 PSWs employed in posts in the three major mental health services compared to 407 found in these posts by the Younghusband Committee. It appears that the increased numbers have mostly been recruited by the local authority service. The large majority of PSWs continue to be employed by hospitals, although only about half of these are employed by mental hospitals or specialized psychiatric clinics, the other half being in general hospital psychiatric departments and departments of child psychiatry. It is likely that a demand for social workers in these latter services will grow considerably as the new general hospitals with psychiatric units come to be built under the impetus of the Hospital Plan. In addition, there are growing demands for professionally qualified social workers outside the mental health sphere, and PSWs will be attracted increasingly to these.

The Ministry of Health has adopted the standard of .05 local authority social workers in mental health per 1000 of the population, recommended by the Younghusband Committee.<sup>18</sup> If this is accepted as a reasonable target, then there is a genuine need to increase the output of trained social workers and to facilitate recruitment by raising salary scales and improving career opportunities. However, this standard, based on the estimates of committees, appears to be utopian in the sense of being incapable of being realized. Unrealistic standards do not necessarily produce effective plans, and there is as yet very little empirically derived knowledge upon which to make realistic ones. Nevertheless, resources appear to be scarce at every level of skill, and in such a situation it becomes of the utmost impor-

17. Based on the list published by the A.P.S.W. Hospital services here include those of child psychiatry (about 34 full-time, 8 part-time and 26 holding joint appointments usually in adult psychiatric hospital services); the Younghusband Committee (para. 803) found 211 PSWs employed in hospitals and 165 in child guidance clinics. The Royal Commission figures for hospitals (170 PSWs) were obtained from the A.P.S.W. but these possibly exclude those in departments of child psychiatry, for the discrepancy between their and the Younghusband figures are too great to be accounted for by new recruitment. There are some PSWs who are not associates of the A.P.S.W. but it is unlikely that they account for the discrepancy.

18. *L.A. Plan*, para. 84.



tance to seek the most efficient allocation of those that are available. There are several parts to the problem of the best allocation of social workers and social work in mental health. One is how to establish the proper balance between the competing demands of the several services; another is how to organize the services so that the available supply moves in the direction required. Another aspect is how to discover what is the most efficient use of social work within each service; this too has its complementary side—how to administer and manage the service so as to realize the maximum potential of the social workers.

### **The community mental health services study**

The development of community care in mental illness has progressed a short distance along the way; it has been an uneven advance, largely due to a few farsighted authorities, both hospitals and local health departments. Areas where the re-orientation had begun to take place appeared to us to offer opportunities for an attempt at an objective study of the operation of community mental health services. To study every aspect in the complex of such services would have been beyond the scope of our resources. We settled upon three research tasks to be carried out in several areas so that comparisons could be made. One task was the collection and analysis of data relating to patient movement or turnover among the services, Inpatient (IP), Outpatient (OP) and local authority mental health services. The focus here was the patient's referral to a psychiatric service and his subsequent contact with the various services: how many patients were referred, by what routes did they reach a psychiatrist, how many were admitted, how often did they attend OP clinics, how often were mental welfare officers in contact? Another task was to survey a sample of patients living at home in each community to learn from them about their contact with the services, about their current social and economic circumstances, and so forth. The aim here was to estimate the impact of the services on the consumers. Yet another task was to study the operation of social work services in the areas. We decided to do this for reasons which are implicit in the preceding discussion of social work.

Apart from our original purpose we felt it would be useful to compare social work in two separate settings—the local authority and the psychiatric hospital—which would enable us to shed some light on the operational consequences of different working situations and conditions. In addition, the workers in the two settings represent

the available pool of trained or experienced mental health social workers whose allocation has been a matter for concern. We have been aware of a continuing debate, centring around the partite organization of health services, over which authority—hospital or local health department—should take the lead in community care. A comparison of social work for the mentally ill in the two settings should help to provide a better foundation for debate as well as for more effective co-ordination.

In organizing our data, we have found it useful to think of the system of community mental health services in terms of the patient, who is involved in a process of illness and treatment. We conceive the illness-treatment process as one in which the patient breaks down, is recognized to be ill, seeks treatment (or has it sought for him), is referred to a psychiatrist, is treated, and then is discharged. Today, of course, the process is recurrent or cyclical, as the growing rate of readmission testifies. At every stage, different personnel—GPs, mental welfare officers, psychiatrists, nurses, hospital social workers—may be engaged in caring for, or acting with the patient. These personnel have their respective rôles and functions *vis-à-vis* the patient and, indeed, *vis-à-vis* each other. To conceive this process in terms of a theoretical model of community care (as envisaged by the Royal Commission and the Local Authority Plan) we might add two elements—preventive social care and after-care—largely to be undertaken by social workers; these would in theory alter the process by reducing the need for clinical treatment or arrest its cyclical nature by decreasing the recurrent aspect in mental illness. We shall be attempting to see, in terms of the model, at what stages the practice of social work is important, and what is the rôle and what are the functions of the social workers.

## II. Method of the Survey and Composition of the Sample

Before turning to the analysis of the survey data we wish briefly to consider the method and some of its limitations, the composition of the sample and how far it may be regarded as typical or representative of the national scene (see Table I).

In four areas<sup>19</sup> local authority social workers in mental health, social workers in mental hospitals and psychiatric units of general hospitals serving these areas provided details of work with clients by filling in a printed, largely 'pre-coded' schedule for each *interview*<sup>20</sup> with or on behalf of a client during sample weeks (the 'Record Weeks'). The first Record Week was during the autumn, 1961; a second Record Week in three of the areas took place in the spring, 1962.<sup>21</sup> The printed schedule, the 'Special Case Record', was in two parts: the first concerned the interview situation, the second concerned the case history of the client. When the social worker interviewed the same client twice during the sample week *two* first parts of the Special Case Record and *one* second part were returned; therefore, the data relate to the clientele or cases, or to the interviews with or on behalf of the clients, the number of the latter being greater than that of the former.

19. The local authority areas were two county boroughs, Salford and Oldham, and two administrative counties, West Sussex and Devon, and one division (for mental health services) of Middlesex, the East, which comprises the boroughs of Tottenham, Edmonton and Enfield. The hospitals involved were the Exe Vale group and Moorhaven (Devon); Graylingwell (West Sussex); Springfield, Hope and Salford Royal (Salford); Claybury, Chase Farm and the North Middlesex (East Middlesex). The survey was carried out in Oldham but the data obtained there have not been included in this analysis because there were no hospital based social workers in mental health in the area.

20. For the purposes of the survey 'interview' was defined as a direct 'face-to-face' conversation (which might include a phone call) with a client or with a relative, or with someone personally connected, such as the employer of a client in a residential post or a landlady. Other conversations (or letters), concerning clients, with doctors, other social workers, solicitors, etc. were termed 'contacts'. *No occasion arose for recording on a Special Case Record unless an interview took place.* Any work in connection with clients interviewed in some other week, but not themselves (or relatives, etc.) interviewed during the Record Week were not recorded. Some encounters between 'patients' and social workers, such as may take place in the out-patient clinic where a social worker acts as receptionist, may not have been recorded as interviews, nor would casual encounters in hospitals necessarily count as such. The rule adopted was that whatever encounter the social worker herself regarded as an interview should be recorded; one criterion which she could use was whether she would make a note in the client's case file on the encounter—if so, this would be regarded as an interview.

21. Workers in Devon, which is not one of the main study areas, participated only in the first Record Week.

The returned Special Case Records were edited, applying uniform interpretations as far as possible, and coded. No further enquiries were made where details given were insufficient for coding. The stress was laid on the details in so far as they were known to the social worker in the ordinary course of her work; we expected a relatively high proportion of unknowns in the case history data, and we did not wish the social worker to make special enquiries of the client to obtain information which otherwise would not be relevant to the social work situation. Thus the details of the interviews and case histories were 'filtered' through the social worker, and then fitted into the categories provided by the Special Case Record.

In the research process it is inevitable that judgments have to be made; bias and error cannot wholly be avoided; and no method can be so rigorously applied that so relatively hard pressed social workers will behave in so uniform and standardized a way as to give the research worker 100 per cent confidence in his material. Although the data were obtained by means of a standard schedule which was explained to participating social workers beforehand, and was accompanied by a set of instructions, it was found that a variety of meanings could be applied to particular terms used and questions asked. Systems of referral, methods of reporting, and working situations differ and these differences will affect the meaning of terms such as 'interview', 'source of referral', 'colleagues', even though efforts were made to standardize definitions.

We do not know how far social workers may have reduced their interviewing efforts in anticipation of the additional work of recording for us, nor can we estimate the counter-balancing effect of increased interviewing due to the wish to appear to be doing more work than others might expect, though we have reason to believe that both reactions to the survey were present.<sup>22</sup> Memory errors and accidental omissions of cases may have occurred. The social workers were asked to record details of the interview as soon after the occasion as possible, but filling in particulars of the case history inevitably took time and two or more weeks after the Record Week were allowed before the records were collected. Most of the participants found the research recording an onerous task and spent quite a lot of time on it. Notwithstanding these several difficulties, we are confident that the information supplied reflects as accurately as can be expected in the circumstances—which were those of an active working week—the

22. It was noticeable that nearly all workers recorded fewer interviews during the second of the two Record Weeks.

interviews with and the case histories of the clients as known to the social workers.

### Composition of the sample

The coverage of social workers in the areas included here was of all those in hospitals and local authority mental health services actually at work during the Record Week or one as near in time as possible.<sup>23</sup> Changes in establishment and employment are frequent in this field and secondment for university courses is now part of the regular pattern, so that the sample week coverage does not necessarily represent the establishment of workers or the average weekly employment for the area or hospital. Some workers had left the agencies by the time of the second Record Week; others replaced them or came into new posts and were included in the second round of recording.

**Table I**  
**Composition of the sample and indices of social work activity**

<i>Area:</i>	<i>East Middlesex</i>	<i>Salford</i>	<i>West Sussex</i>	<i>Devon</i>	<i>4 Areas</i>
1961 Population ('000's) . . . . .	315	155	411	538	1419
No. of Record Weeks . . . . .	2	2	2	1	—
No. of worker-weeks in survey sample:					
Local Authority . . . . .	14.5	13.0	8.0	14.5	50.0
Mental Hospital . . . . .	6.0	3.0	6.0	5.0	20.0
No. of Local Authority S.W.s per 1000 population . . . . .	.023	.042	.010	.027	.023
No. of interviews recorded—Mentally ill clients:					
Local Authority . . . . .	188	129	51	236	604
Mental Hospital . . . . .	84	48	86	72	290
	272	177	137	308	894
Interviews (in 1 week) per 100,000 population mentally ill clients:					
Local Authority . . . . .	30	42	6	44	30
Mental Hospital . . . . .	13	15	11	13	12
	43	57	17	57	42
No. of interviews per worker-week:					
Local Authority—mentally ill clients —subnormal clients	13.0	9.9	6.4	16.3	12.1
Mental Hospital . . . . .	2.0	4.2	15.5	5.1	5.6
	14.0	16.0	14.3	14.4	14.5

23. Three workers who were off sick or on holiday in the chosen Record Week recorded during a later week; workers on long-term sick leave or seconded for training were not approached.

The data analysed in this paper do not represent the whole of the interviewing activity of the workers concerned. Local authority clients who were classified by mental welfare officers as subnormal or severely subnormal are not included in this analysis. In mental health sections of public health departments it is usual to group the clientele into the two categories—mentally ill and mentally subnormal—and it was usually clear to which of these a client belonged. Where a client was said to be both mentally ill and subnormal we counted the return with the mentally ill if the situation indicated that psychiatric services (as distinct from mental deficiency services) were involved. The number of cases in which such decisions had to be made was small. The proportion of mental welfare officer cases which fell into the mental illness category varied considerably from worker to worker and there were area differences as well. It should be borne in mind that the local authority workers spend a considerable amount of time on subnormal cases and that the data presented here reflect only the work with mentally ill clientele. Similarly, the data from the hospital workers reflect work with clients resident in the study areas, a varying proportion of the true case load of the hospital social service.<sup>24</sup> Some of these social workers were part-time and they only returned schedules for the part of the Record Week during which they were working. The sample of work may be said to reflect 1/52nd of a year's mental health social work activity (excluding child guidance clinic services) in Devon for the mentally ill residents of the area, and 2/52nds of a year's activity in Salford, West Sussex and East Middlesex.<sup>25</sup>

24. As the study was concerned with area services, interviews with and case histories of those clients of the hospital based workers who resided outside the study areas were not included. This applied to the hospital workers in East Middlesex, Salford and Devon. In editing we excluded any cases where it was clear the client referred to lived outside the study area. However, editorial errors were made; a check of Devon hospital cases reveals about six cases from Exeter County Borough. In comparing the pattern of work of the two types of worker the inclusion of cases which fall outside the study areas does not prejudice the findings. However, the amount of area social work services performed by the hospital workers will be slightly overstated, by about 10 per cent for Devon and probably by a lesser degree for the other areas.

25. From Middlesex, Salford and West Sussex there are 25 cases (clients) who were interviewed in both Record Weeks; of 747 cases analysed herein, 3.4 per cent are duplicates. The distribution of these is proportionately the same for local authority and hospital, IP and client-at-home. These do not significantly affect the data relating to case histories and the tables include these duplicates. In dealing with interviews we have been concerned to describe and measure events rather than persons and we have not distinguished between first and subsequent interviews with the same client in either Record Week.

The choice of areas was not a random one, so the sample cannot be viewed as representative of the national scene; but these areas taken together do not appear to us to be atypical. One indication is the ratio of local authority mental health social workers to the population. The Ministry of Health reports that 'at the end of 1961 the total number (whole-time equivalent) of social workers of all kinds employed by local authorities in their mental health services was 1128 or about 0.024 per 1000 population, though some employed 0.05 per 1000 and even more'.<sup>26</sup> Taking the four local authority areas involved in the present analysis we obtain the following ratios of social workers employed in the mental health services per 1000 of the area populations: (a) .010, (b) .023, (c) .027, (d) .042. Taking the four areas together the ratio is .023. This is a mean and range remarkably similar to that found in the country at large; none of our local authorities employed .05 workers per 1000 population, the number recommended by the Younghusband Committee and now accepted as a reasonable standard by the Ministry of Health. However, our figures probably represent a lower ratio of social workers than would be calculated by the Ministry for these areas, as our calculations are based on the number of personnel actually working during our Record Weeks rather than the establishment figures. Also we have regarded those who were not mainly engaged in interviewing clients as being part-time social workers, and purely administrative personnel have been excluded.

Among the local authority workers participating in the Special Case Recording we had two mental welfare officers who were qualified PSWs, and two further PSWs who were providing casework services complementary to, and in co-operation with, the mental welfare officers. Only two of these participated in both Record Weeks; of the others, one was in a senior post and contributed only one interview during the Record Week, the second was employed part-time and dealt mainly with families of subnormals. Taking both Record Weeks and counting each part-time worker as doing half a Record Week, we have in the local authority sample 50 worker-weeks; of these 5 worker-weeks (10 per cent) were contributed by qualified PSWs, and approximately the same proportion of mentally-ill cases were contributed by them. The Younghusband Committee considered that 260 PSWs would be needed, and 2000 mental welfare officers in local authority mental health departments; at this level, PSWs would be 11.5 per cent of all local authority mental health social workers.

26. *L.A. Plan*, para. 84.

Figures submitted to the Minister of Health by the local authorities, in 1960 (to which we had access and which we analysed) provide some data relating to the staffing of the mental health services. Returns from 112 authorities show 746 workers (counting two part-time workers as one full-time) of whom 52.5 (7.0 per cent) were PSWs.<sup>27</sup> Our sample shows a higher proportion (10 per cent as against 7 per cent) of more qualified workers than are found in the nation as a whole.

The local authorities involved are all looking to the future: mental welfare officers are being seconded for advanced training; many of them now have some qualifications in social studies; and others are undertaking concurrent training at universities on a part-time basis. Our impression is that there is a fair admixture of the alert, younger, ambitious mental welfare officers in this group, with a few who represent the other extreme. It is a group perhaps more characteristic of the future than of the past.

How far are the hospital based social workers in the sample representative of the national scene? There are no recent figures available which enable us to arrive at a conclusion. Twenty-one social workers in hospital services participated, representing about 20 worker-weeks. Of the workers, 12 were qualified PSWs and two were qualified almoners, representing about 15 worker-weeks. Three-fourths of our sample of hospital social work activity is thus professionally qualified work. Three of the social workers, contributing 2.5 worker-weeks, were attached to general hospital psychiatric units; all of these were professionally qualified. The remaining 18 workers (two of whom were employed part-time and most of whom had clientele from other areas besides the study areas) worked for mental hospitals, in which there were over 7000 beds, a ratio of about 2.5 workers per 1000 beds. The range was considerable—one worker attached to a hospital of 190 beds at one extreme and only one worker attached to a hospital of 1600 beds at the other (both these hospitals are now part of one H.M.C. group). Considerable area differences are apparent among our hospital based social workers: some are often in the community, others seldom out of the hospital setting. Our impression is that as a group they are representative of mental hospital social workers. The hospitals involved may not be so typical: Claybury has an advanced 'therapeutic community' programme, in which social workers have

27. Our count of PSWs revealed 72 full-time equivalent PSWs in 'community care'. This would be about 5.8 per cent of all social workers in local authority mental health services (1247) at the end of 1962. Taking the 91 social workers with advanced qualifications (see page 6 of the ms. *infra*) in 1962 as a proportion of the total would give us about 7.3 per cent.



new rôles; Moorhaven has a high ratio of workers and is progressive and experimental; Graylingwell is in the forefront of extramural psychiatry, emphasizing the day hospital; the others are perhaps more traditional. The general hospital workers represent a new sphere in psychiatric social work. All in all, the pattern may represent the hospital settings which are going to be found more frequently in the next 10 years rather than those which have been the rule in the past.

### III. The Survey Findings

Our analysis of the data from the survey of social work centres on the practice of mental health social work in two settings—the hospital social service and the local authority mental health service. Some of the questions to which we shall turn our attention are: what kinds of clients receive social work services; over what period and how frequently do the workers interview; who refers the clients to the workers and for what reasons? Questions such as these lie in the background; in the foreground, we focus on the interview as the unit of social work activity. Finally, we look at the aims of the social workers, for the intentions of the worker may reveal something of the nature or quality of the work.

At the time of the survey, although there were no formal joint-user arrangements, there were a variety of relationships between hospitals and mental health departments in our areas, ranging from relatively formal liaison to virtually none. We wished to throw some light on how far MWOs<sup>28</sup> had access to and performed services for patients in hospital as well as out and to see what share of 'community' social work was undertaken by the hospital social workers (HSWs). We made a basic distinction, in our coding of the case records, between clients<sup>29</sup> who were IPs and those who were 'at home', in the community, at the time of the key (recorded) interview; we term this the *client's status*, and some of our tabulations here are broken down into two groups—IPs and home clients. When in the discussion a reference is made to one or the other of the two groups it is solely to status and does not indicate who was interviewed nor where the interview took place. In this sample the number of IP cases and interviews of MWOs is relatively small—too small to draw firm conclusions about MWO social work on behalf of clients in hospital.

#### The clientele

The clients of both services were largely recurrent psychiatric patients; all told, three-quarters of the hospital service clientele and

28. To avoid repetition we refer to mental welfare officers as MWOs, local authority workers, or the local authority service, and we include here those PSWs in the local authority mental health departments who were not officially MWOs. We refer to mental hospital social workers as HSWs, hospital workers, or the hospital social service, and we include here those social workers attached to psychiatric units or clinics in general hospitals.

29. The 'client' is the 'primary' recipient of social work service, the person whose name would be on the worker's case file. The person interviewed is not always the client, nor necessarily a direct recipient of service, but see Footnote 20, p. 327, on the definition of the 'interview'.

almost that proportion of the local authority clientele had been admitted to a mental hospital (or a general hospital psychiatric unit) at some time. At the time of the interview, 46 per cent of HSW clients but only 10 per cent of MWO clients were in hospital; the majority of these had had previous admissions. Among the clients-at-home, 70 per cent of those of the MWOs and 56 per cent of those of the HSWs had been admitted in the past. These findings point to the continuing importance of clinical IP services in psychiatry in relation to community social work services; in fact, the MWOs had been involved, at one time or another, in the admission of over half of their clients.

The social workers were asked to indicate the diagnostic category into which the client fell. Here a difference was found; the HSWs placed proportionately more clients into the neurotic category than did MWOs. This difference is very largely concentrated among the home clients of the HSWs, only a quarter of whom were categorized as psychotic and 46 per cent as neurotic. Choice of categories here may well have been influenced by differential knowledge or use of diagnostic terminology, but other differences to be noted between the home and the IP clients of the HSWs suggest that there may have been true diagnostic differences.

Turning very briefly to social characteristics (Table II), it appears that, by and large, the two main groups of clientele were similar. There was a larger proportion of MWO clients in the age group 65 and over (21 per cent as against 16 per cent of HSW clients), which reminds us that psychogeriatric problems do not only weigh heavily upon institutional resources. Home clients of the HSWs differed from the IP clientele and from the home clients of the MWOs in several respects; they tended to be more often women, younger, and more often married and, as noted above, much more often categorized as neurotic by the HSWs. More of the IP clients of the HSWs were without the usual family to whom they might return.

As might be expected, the local authority clientele were more often at home than in hospital when the MWO interviewed; on the other hand, the clientele of the hospital social service were about evenly split between IPs and home clients, an amount of 'community' work worth noting. However, many of the home clients were extramural psychiatric patients at the time of the interview; *over three-fifths* of the home clients of the hospital service and about one-fifth of those of the local authority were recorded as being under care as OPs, day patients, or domiciliary patients of psychi-

arists. Overall, taking together IP and extramural treatment, 80 per cent of HSW clients but only 27 per cent of MWO clients were receiving clinical psychiatric care at the time of the key interview. This was the most striking difference between the two services.

**Table II**  
**Some characteristics of the clientele**

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
<b>A. Social Characteristics</b>	per cent	per cent	per cent	per cent
Female . . . . .	62.5	66.2	67.5	69.6
Median age . . . . .	44.5 yrs.	47.3 yrs.	47.0 yrs.	41.7 yrs.
	per cent	per cent	per cent	per cent
Married . . . . .	37.5	48.1	33.3	60.8
Single . . . . .	43.7	31.1	40.2	27.5
Usually living with family . . . . .	77.1	79.6	59.8	81.5
Usually living in lodgings or alone . . . . .	16.7	14.6	35.0	17.1
Having been previously admitted . . . . .	76.6	70.4	66.7	56.4
<b>B. Medical care status at key interview</b>	<i>All clients</i>		<i>All clients</i>	
	per cent		per cent	
Psychiatric in-patients . . . . .	9.7		46.4	
Extramural psychiatric care . . . . .	17.6		33.3	
Treated by G.P. . . . .	31.1		4.4	
Not being treated . . . . .	37.8		14.3	
Not known or not stated . . . . .	3.8		1.6	
	100.0		100.0	
<b>C. Diagnostic category</b>				
Psychotic . . . . .	53.3		37.6	
Neurotic . . . . .	21.5		35.7	
Personality or behaviour disorder . . . . .	19.4		17.9	
No mental disorder . . . . .	2.8		2.8	
Not classified . . . . .	3.0		6.0	
	100.0		100.0	

The clients of the social workers were, as we have seen, recurrent psychiatric patients, mostly psychotics. The great majority of HSW clients were receiving concurrent clinical services. On the other hand, the great majority of MWO clients were not under psychiatric care at the time of the interview. In terms of the model of the illness-treatment process it appears that the HSWs were very largely engaged with their clients during the psychiatric treatment phase. In contrast, a third of the MWO clients were recorded as being under the care of their GPs,<sup>30</sup> compared with about 8 per cent of

30. Extramural psychiatric patients may also have been under a GP's care but our coding gave priority to psychiatric treatment where indicated by the social worker.

home clients of the hospital social service. The rôle of the GP in the social and clinical care of the mentally ill is a matter for conjecture, but there is no doubt that in relation to our MWOs the GP was a key person in the working situation.

### **The social work history**

How did these clients come to be receiving social work services? The data obtained on the source of referral of the client are set out in Table III. The clients of the MWOs were referred largely by 'community' sources, the GP being the most important single source, but psychiatrists and other mental hospital staff were also important sources. A quite different pattern was found among the sources of referral to the hospital social service; not surprisingly, psychiatrists and other personnel in the psychiatric hospital accounted for over 70 per cent. The client, too, was a relatively frequent source. Referrals to the HSW came almost entirely from within the clinical setting. There appear to be two different referral systems in mental health social work; one is a community system, the other a system internal to the clinical services. There was a certain amount of cross-referral; but the psychiatrist was more important in this regard than were the social workers themselves—about 4 per cent of hospital clients had been referred by MWOs and 3 per cent of local authority clients by HSWs.

These clients had been referred for a variety of reasons which we have classified into some broad categories. The first category included reasons such as assessing the need for or arranging for psychiatric treatment. The second included statements of diagnosis or symptoms of disease, e.g. 'attempted suicide' or 'psychotic behaviour', the implication being that the client was referred because he was ill and that the job of the social worker was to secure treatment, or care and control. Together these two categories accounted for 64 per cent of all referrals to MWOs but less than 15 per cent of referrals to hospital workers. A third category involved referrals for reasons of practical difficulties such as employment, accommodation, financial and insurance problems, or to make arrangements for discharge. This was the largest single category among HSWs, accounting for 30 per cent of all referrals, but was a relatively unimportant set of reasons for referral to MWOs (5 per cent). The next most important reasons among HSWs were those of obtaining social histories, or assessing home situations prior to diagnosis or to discharge (in all accounting for 24 per cent of HSW cases and only 2 per cent of MWO cases).

A further substantial category might be termed social care or social work supervision, and under this heading we have grouped reasons such as 'after-care', 'community care' or 'casework'. This accounted for 17 per cent of MWO referrals and 13 per cent of HSW referrals. A large number of other reasons were found: a miscellany which included interpersonal problems, the maintenance of contact with relatives of IPs, and vague social diagnoses like 'loneliness', as well as a few such as 'on admission to hospital'.

**Table III**  
**Source of referral to social worker**  
 Per cent of clients

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
<i>Source of referral:</i>				
General Practitioner . . . . .	41·7	39·7	1·7	7·5
Psychiatrist . . . . .	12·5	20·8	45·4	66·6
Other psychiatric hospital staff . . . . .	12·5	13·7	21·4	9·6
Client himself . . . . .	—	1·3	9·4	5·2
Relative or friend of the client . . . . .	8·3	4·5	0·8	—
Other sources . . . . .	18·8	14·0	13·6	3·6
Not known . . . . .	6·2	6·0	7·7	7·5
	100·0	100·0	100·0	100·0

The reasons for referral may be an indication of what was expected of the worker and of social work by the sources. It is noticeable that there were relatively few referrals for reasons of social care; it seems the workers were regarded rather as ancillary to the medical, clinical services—the MWOs as assessors of the need for, and arrangers of psychiatric treatment; the HSWs as social history takers and investigators of home and family situations. In addition, the HSW clients were often referred when social welfare problems needed sorting out. Considering these reasons for referral it is not surprising that there was a large element of short-term service in the social work in our sample, particularly in the hospital setting. Over half the clients of the local authority service were known for at least nine months or more compared to 36 per cent of HSW clients. Just under a third of MWO clients were newly or recently referred (within a month of key interview) but over half the IP clients and 45 per cent of home clients of the hospital service were new or recent cases (see Table IV). These variations partly account for the differences

in the number of interviews carried out by the social worker in connection with these cases during the preceding year, but there was still a decided tendency for HSWs to have seen their clients less frequently over the period since referral.

**Table IV**  
**History of client's contact with the social work service**  
 Per cent of clients

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
<i>Length of Contact:</i>				
Seen for the first time during Record Week . . . . .	16·7	25·4	36·8	36·2
Known to social worker for less than one month . . . . .	16·7	6·4	17·0	9·3
Known to social worker 1-12 months . . . . .	23·8	26·3	20·7	20·2
Known to social worker 12 months or more . . . . .	42·8	41·9	25·5	34·3
	100·0	100·0	100·0	100·0
Total No. of cases in which length of contact was recorded: . . . . .	42	379	106	108
<i>Number of Contacts:</i>				
1-2 . . . . .	21·3	25·8	44·7	44·8
3-4 . . . . .	17·0	15·3	17·6	14·4
5-10 . . . . .	31·9	29·9	15·8	20·8
11-20 . . . . .	23·4	16·4	15·8	12·0
21 or more . . . . .	6·4	12·6	6·1	8·0
	100·0	100·0	100·0	100·0
Total No. of cases in which number of contacts was recorded: . . . . .	47	437	114	125

### The interview

We asked the social workers to record the time, the place and the duration of the interview as well as to indicate who had initiated it, who was interviewed, and what was its function. Further, we asked for a description of 'what took place at the interview'. The analysis of these factors is focussed on an event, the interview, and not on the case history.

Once a client is referred to a social worker there is a new relationship which may be carried on independently of the referral system. Since a larger proportion of HSW clients were new the initiator of the interview was more often the source of referral than was the case among MWO interviews. All in all, however, the

MWO appeared more often to have made the decision to see his client, independently of referral, initiating over half his interviews himself (see Table V). The HSW appeared to be more often subject to initiative of the client (particularly among IPs) and of the psychiatrist (among home clients). She is relatively accessible to IPs and to home clients when they come for OP treatment. In our survey, the HSW saw three out of ten of her home clients and 86 per cent of IP clients (accounting for about three-fifths of all interviews) in her office or elsewhere within the hospital clinical setting (see Table VIA). The local authority worker was more often in the field, four-fifths of his interviews with or on behalf of home clients taking place on a home visit.

**Table V**  
**Initiator of interview**  
 Per cent of all initiators

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
<i>Initiator:</i>				
Social worker herself . . . . .	50.0	52.4	36.1	35.3
Client . . . . .	3.0	8.8	31.6	14.7
Relative of client . . . . .	15.2	7.3	5.1	4.0
G.P. . . . .	3.0	11.0	—	3.3
Psychiatrist . . . . .	16.7	8.8	17.1	32.7
Other . . . . .	10.6	7.4	7.6	2.7
By appointment or in routine . . . . .	1.5	4.3	2.5	7.3
	100.0	100.0	100.0	100.0
Total No. of initiators: . . . . .	66	537	158	150
Total No. of interviews: . . . . .	65	539	146	144

From Table VIB it can be seen that MWOs were more often in interview situations involving members of the client's family than were the HSWs, although they both interviewed the actual client on about four-fifths of all occasions. The MWO interviewed two or more family members more often than did the hospital worker. In the hospital setting it might be expected that all services will be patient-centred, tending to exclude the family. There have been criticisms of this; much current thinking tends to emphasize the family as a psychodynamic whole necessitating treatment as a unit even if only one of its members has a definite pathology. Sometimes it is said that the function of the social worker is to deal with family



problems or to undertake family therapy. In our sample this appeared infrequently to be the case; our data underline the extent to which adult mental health services in general tend to be patient-centred. The MWO appeared to be more favourably situated in so far as a familial, home focus for social work may be considered desirable.

**Table VI**  
**Place of interview and person interviewed**  
 Per cent of interviews

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
<i>A. Place of interview:</i>				
Home visit . . . . .	47·7	81·3	9·6	66·0
Social worker's office . . . . .	3·1	10·5	34·2	19·4
In hospital other than SW's office . . . . .	40·0	3·2	52·7	10·4
Other place . . . . .	9·2	5·0	3·5	4·2
	100·0	100·0	100·0	100·0
<i>B. Person interviewed :</i>				
Client . . . . .	52·3	86·8	84·9	78·5
Spouse of client . . . . .	24·6	21·3	4·1	14·6
Parent of client . . . . .	15·4	13·4	6·2	9·7
Other person . . . . .	12·3	13·2	12·3	7·6
No. of persons interviewed per occasion: . . . . .	1·05	1·35	1·08	1·10

Turning our attention to the nature of the interview, we found that both MWOs and HSWs tended on the whole to have brief interviews, the majority taking less than 30 minutes, excluding travelling and administrative time. For both services, short interviews were more frequent with IPs than with home clients. For both clients' statuses the local authority workers recorded longer interviews more often than the hospital workers. Although there are no standards which we might apply to relate the quality or content of social work to the duration of the interview, we have data<sup>31</sup> which indicate that social workers in child guidance clinics tend to spend about 45 minutes on average with their clients. Neither hospital nor local authority mental health social work provided many opportunities for extensive casework interviews.

31. The Survey of Social Work included child guidance workers in the study areas; the data obtained will be subject to a separate analysis.

## The function of the interview

The social workers were asked to indicate the function of the interview by choosing from among ten statements, drawn from general discussions of social work activity in mental health, those which best described the function and to mark one of these as predominant. These 'functions' represent a miscellaneous set of possible activities ranging from those stated in rather vague general terms to those which are more specific (see Table VII). They are not discrete functions; they overlap considerably in their connotations. Taking the predominant function only, it appears that MWOs were undertaking pre-treatment assessments and arrangements for treatment in about 45 per cent of their interviews with clients-at-home. Another fifth were put down to follow-up, or after-care duties. In contrast the HSWs were following-up fewer cases, although assessments were being made in a fair proportion of interviews. One point to note is that HSWs were making arrangements for discharge in 45 per cent of IP interviews, yet they appear to have been doing much less after-care. There were marked differences between the IP clients and the clients-at-home of the HSWs which suggest that these were not all of the same kind. This lends some support to the conclusion that after-care did not always follow from pre-discharge social work. However, a large proportion of all interviews were put down to the vague functions of 'social support' or 'friendly visit', which might include after-care. That these choices reflect a realistic appraisal of function on the part of the social worker is shown by a closer examination of the two social support categories; one indicated support for the client, the other for the *family* of the client. MWOs, who saw more of the families of IPs, indicated twice as much social support for families as for clients, while HSWs, who were much more patient-centred, indicated four times as much social support for IP clients as for their families.

The data relating to the function of the interview were obtained from the social worker's own assessment of what she was doing in terms of categories provided by the Special Case Record; we regard this self assessment as a fair indication of the nature of the work, although the quality of the work is a matter of conjecture. While all skilled social work requires insight and a good relationship with the client, and in some measure provides support, it is not every occasion which would be considered as 'casework' (or professionally qualified social work, in the terms of the Younghusband Report). In both services, in the sample of social work activity under

discussion here, there was a high proportion of interviews with a practical content: MWOs were arranging treatment, which was usually a matter of admission, either statutory or voluntary, but to a lesser extent arranging for OP or domiciliary psychiatric consultation; HSWs were making arrangements for discharge in a high proportion of IP interviews. In either case, the social worker might be viewed in part as a functionary of the health services operating on a lower skill level than is implied by the term 'professional casework'; although making arrangements on behalf of patients and prospective patients often requires a great deal of skill and knowledge as well as a capacity for interpreting behaviour to patients, relatives, and psychiatrists.

**Table VII**  
**The function of the interview**

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>In-patient</i>	<i>At Home</i>	<i>In-patient</i>	<i>At Home</i>
<i>Clients' status:</i>				
	per cent of N*			
<i>Predominant function chosen by social worker</i>				
Urgent action to handle person needing care and/or control . . . . .	13·2	24·1	2·3	3·1
Statutory duty relating to compulsory admission . . . . .				
Arranging other form of treatment	1·6	19·7	7·0	18·7
Assessment or investigation relating to care or treatment . . . . .	6·6	1·6	3·1	7·8
To obtain full social history . . . . .	21·3	0·5	44·9	0·8
Making arrangements relating to discharge from hospital . . . . .	1·6	19·3	—	12·5
Follow up, after-care of discharged patient . . . . .	11·5	6·6	3·9	8·6
Friendly visit or routine check on circumstances . . . . .	9·8	16·4	20·2	28·9
Social support for client . . . . .	18·0	4·8	5·4	6·3
Social support for family of client . . . . .	16·4	7·0	13·2	13·3
Other function (specified by worker) . . . . .	100·0	100·0	100·0	100·0
*N = total interviews in which a predominant function was indicated: . . . . .	61	440	129	128
<i>Per cent of interviews** in which a practical problem mentioned: . . . . .</i>	14·8	16·7	55·3	27·0
<i>Per cent of interviews** in which arrangements for (medical) treatment mentioned: . . . . .</i>	—	30·9	—	9·5
**Cases from 3 areas only analysed. N =	27	341	92	126

Further data relating to its nature were obtained from our own assessments of the interview as described by the social workers. These descriptions (with the exception of those from Devon which were excluded from this part of the analysis) were assessed on the presence of two factors: practical problems mentioned,<sup>32</sup> and indication of treatment arranged or medical advice given. We assume that in so far as these factors emerged from the descriptions provided they were discussed at the interview, but we have not attempted to assess the descriptions beyond this. We have no doubt that these two factors would have emerged more frequently had some social workers been less laconic, but often the description of the interview was too brief for any assessment of its content. The results confirm the impressions we obtained from the data on functions of the interview. Overall, the HSWs described about two and a half times the number of interviews involving practical social problems as did the MWO, but the MWO much more often arranged treatment or advised on a medical problem (as, for example, 'seeing if the patient was taking his tablets').

We may conclude our description of the interviews by summarizing briefly. The MWOs were home visitors, largely client-centred, but they interviewed relatives of the client in a small proportion of cases. Often (in over half their interviews) they appear to have been in situations which called for their own initiative in going to see the client. About half of their interviews were concerned with assessments of the need for treatment or with arranging for treatment. In many instances the MWOs appeared to be a link in the system of psychiatric services between the pre-treatment sources of referral and the treatment facilities. The HSWs were more often interviewing within the hospital setting than visiting clients' homes. Their work with IPs involved making arrangements in relation to discharge and other practical matters in a large proportion of cases. Their work with home clients was less practical but making assessments and taking social histories were important specific functions.

32. As 'practical problems mentioned' we counted all references to housing, employment, financial difficulties, pensions and allowances, home helps and meals service, etc. These matters of social welfare often appeared to involve the kind of work described in the Younghusband Report, para. 569 (under the heading 'Straightforward and Obvious Needs') as suitable for a welfare assistant. We are aware that the context in which such practical problems arose in the social worker's interview with her client may have been such that all her case-work skills were required in dealing with them. However, our attempts to assess the method of handling these practical matters were found to be without a sufficient degree of inter-assessor reliability.

## **Social workers' aims**

We can turn to a consideration of several factors in relation to the case history or social situation of the client which may help to bring out the ways in which social workers perceive their clients and themselves. Among social and behavioural problems recognized by the social workers were many practical ones (employment, financial, and housing difficulties); hospital workers indicated these more often than MWOs both in relation to IPs and home clients. On the other hand, MWOs recognized far more problems associated with family and domestic circumstances as affected by mental illness. More of the local authority clients were said to have had difficulties in coping with housework, travel and everyday activities; to have interfered with or restricted the social life or employment of others in the household; and more often family members of the local authority clients were said to be anxious, tense, or unhappy; to have a mental disorder; and to lack acceptance of the client's illness. We asked whether the client had ever manifested behaviour which was disturbing to his family or others such as neighbours. MWOs recorded more, both among IPs and home clients, as having manifested such behaviour, and recorded a higher number of types of disturbing behaviour per case presenting such problems. In only two instances did HSWs record a higher proportion of clients as presenting a problem: proportionately more hospital social service IP clients were said to be or to have been unable to look after themselves and to be a danger to themselves.

The differential between the two services in the recognition of problems should be regarded as a reflection of a real difference among the clientele as they present to the social worker. In view of the higher number of professionally qualified workers among HSWs we had expected that they would recognize a higher proportion of clients as adversely affecting their families, who would more often exhibit such difficulties as lack of acceptance of the client's disorder. That in fact MWOs more often recognized such problems can perhaps be attributed to their working situation, which was such that the clients were more often referred in a pre-treatment phase, probably at an acute stage of illness, presenting disturbed behaviour, which was more often seen in the context of the family. The working situation of the HSW was less central to the illness-treatment process; her clients were far less often at home, more often at the point of discharge, or at the point of beginning treatment but having already seen a psychiatrist. It was at these points that practical problems

intruded and where the medical personnel, psychiatrists and nurses, turned to the social worker for practical services.

Social workers were asked what additional services or facilities they thought might be of benefit to their clients. MWOs thought further services would be beneficial in 59 per cent of home cases, and HSWs in 50 per cent. Among various facilities, listed on the Special Case Record, social clubs and intensive social casework received the greatest stress, but the proportion of cases thought to need these services was higher among MWOs. Further or alternative psychiatric care, or treatment in a geriatric unit, was thought to be desirable in about the same proportion of MWO and HSW cases. Hostel accommodation or foster home care or a household other than the present one was felt to be desirable in a higher proportion of cases of the local authority service, as were sheltered workshops and industrial rehabilitation units, but none of these services was chosen in more than a fraction of cases. MWOs put a relatively greater emphasis upon services such as hostels and sheltered employment which might help in the solution of practical problems, even though they were less often called upon to deal with such problems. Tentatively, we suggest that MWOs saw the possibilities of social care and extramural community services more often than did HSWs, who may have been more concerned with immediate practical problems, which called for relatively speedy arrangements in solution. This interpretation would be consistent with the findings from the other data which suggested that the work of the HSW was of a short-service nature at transitional points—beginning of treatment and at discharge—in the illness-treatment process (where a need for further or alternative treatment would not be manifest). This close connection with the clinical milieu may have made HSWs less aware of any need for, or potential in, community support services.

Finally, we asked the social workers to describe their 'work and aims in dealing with' the client by providing 16 possible categories to be ticked and a space to write in any other aim. The worker could choose one or more of these aims, and we asked that the one which they regarded as most important (the predominant aim) be underlined. These are set out in Table VIII. No single aim stood out, as might be expected, and further analysis was attempted to see how far choice of aims fell into one or the other of three groups. These groups are those headed A, B, and C in Table VIII. In Group A are those we regard as related to the rôle of ancillary to the medical services in the treatment process; Group B we regard as related to an instrumental rôle in social

**Table VIII**

**Social workers' aims**

Per cent of clients

<i>Social work service:</i>	<i>Local Authority</i>		<i>Mental Hospital</i>	
	<i>Chosen as predominant</i>	<i>Chosen as predominant or subsidiary</i>	<i>Chosen as predominant</i>	<i>Chosen as predominant or subsidiary</i>
<i>A. Ancillary to medical treatment:</i>				
Meeting difficulties which hinder client's receiving treatment or re-summing normal life . . . . .	4.2	20.9	6.6	15.6
Assessing the social situation of the client to assist doctor(s) in treatment	2.7	29.9	11.8	32.0
Carrying out statutory duties . . . . .	5.9	18.0	—	—
Providing a social service for doctors . . . . .	1.5	21.4	2.0	5.3
Arranging for psychiatric treatment or consultation . . . . .	12.8	39.5	2.0	6.2
	27.1		22.4	
<i>B. Instrumental in social care:</i>				
Establishing or maintaining a special relationship with client for his/her therapeutic benefit . . . . .	14.4	40.0	10.7	24.2
Allaying anxieties concerning mental disorder . . . . .	1.5	28.7	1.6	13.5
Leading the client and/or the family to an understanding of his/their own problems . . . . .	8.8	39.3	4.9	25.0
Modifying the attitudes of the client and/or the family in order to bring about a change in behaviour . . . . .	3.6	27.6	4.5	16.4
Providing psychotherapy for the client . . . . .	0.4	6.9	—	0.8
	28.7		21.7	
<i>C. Residual category:</i>				
Providing temporary support, maintaining contact with social worker who has primary responsibility . . . . .	0.4	4.4	2.5	11.5
Giving information about or arranging for client to obtain other social services . . . . .	2.7	18.4	6.6	24.6
Helping client or family by advice and guidance . . . . .	6.5	55.0	8.6	32.4
Supervising to detect and prevent deterioration or the emergence of new problems . . . . .	10.5	38.1	4.5	17.6
Providing information and/or educating the client or the family to promote good mental health. . . . .	1.0	14.5	0.4	3.7
Providing sympathetic interest in client or family . . . . .	6.9	45.8	8.6	36.5
	28.0		31.2	
Other aims . . . . .	4.0	9.0	7.0	16.0
No aim recorded. . . . .	2.5		2.5	
No predominant aim . . . . .	9.7		15.2	

care or casework with a more directly therapeutic intention. Group C is a residual category, which includes an element of practical social work as well as sympathetic support. When the *predominant* aims are grouped, MWOs are seen to have chosen the three groups in equal measure; HSWs had a higher proportion of aims in the residual category. Overall, including both predominant and subsidiary aims, one (or more) in Group C was ticked in about 70 per cent of both local authority and hospital service cases. Ancillary aims featured in three-fifths of all MWO and two-fifths of all HSW cases, while instrumental aims appeared in three-fifths of MWO cases and a little more than a third of hospital cases. Ancillary aims *only* were chosen in 17 per cent of MWO cases and 18 per cent of HSW cases; instrumental aims *only* in 6 per cent of MWO and 4 per cent of HSW cases; and 'residual' aims *only* were marked in 31 per cent of hospital and 14 per cent of local authority cases.

The MWOs in our sample saw themselves much more frequently as ancillaries and as instrumental caseworkers than did the HSWs, who, on the other hand, saw themselves more frequently in the 'residual' rôles. It is not surprising that social workers had no clear cut aims, nor that their aims largely reflected what they were called upon to do by the others in the system of psychiatric services.



## IV. Summary and Conclusions

The preceding analysis has compared the practice of Mental Health Social Work in two settings within the system of psychiatric services. In the hospital setting, the social worker was an auxiliary to the psychiatrist, called upon to make investigations and social assessments and to sort out practical difficulties. In contrast to the clients of the local authority service, the HSW clients were mainly under a psychiatrist's care, as IPs or extramural patients, when interviewed by the social worker. The clinical focus in hospital social work was brought out in relation to several factors, particularly source of referral and place of interview. In local authority social work, the focus was the client's home, although the content of the work was frequently concerned with the need for psychiatric treatment or the making of arrangements for admission or consultation. In both services there was work which could be described as social care; while the evidence is not overwhelming, it appears that the MWO was undertaking more long-term supportive work, in a situation which offered more opportunities for community care.

We noted in the introduction to this paper the burden of responsibility placed upon social work services (particularly those provided by local authorities) in the theory of community care. As we conceive it, this theory calls for social care, in addition to clinical psychiatric care, to reduce the need for admission and to lessen the frequency of recurrent breakdown. Our data from this survey can tell us nothing about the potential need for social work services or about their impact upon clients. Our research aimed at describing and measuring social work in action, and the problem has been to define social care in operational terms so as to provide criteria against which to measure current practice. We have analysed several factors in social work activity which we consider to be related to a social care rôle. In terms of the variables discussed in the preceding pages social care would be indicated by frequent interviewing, over a long term, of clients who were not concurrently under psychiatric care, and who had been referred for social casework. In addition, the worker would have a degree of autonomy, and her own assessment of function and aims would be consistent with a social therapeutic intention. Short-term service in making practical arrangements at transitional stages of the illness-treatment process would indicate a different kind of rôle, which we have termed auxiliary. The practice of social work approaches the ideal of social care in so far as there is a maximum of skilled, intensive social casework given the available resources. In both

services whose activity we have described there appears to be scope for the further development of social care.

There is likely to be a continuing shortage of all types of qualified mental health social workers in the face of a growing demand. Therefore, in planning for the future, it would appear to be more rational and economic to build up one single social care service rather than to continue with two separate services. It is difficult to see how this might come about in the hospital setting; in spite of the fact that the majority of hospital social workers are professionally qualified, the clinical focus involves them in the auxiliary rôle. Our survey data suggest that *under present circumstances* the local authority setting appears to offer more opportunities for the development of social care, opportunities which might perhaps be more readily recognized and acted upon by professionally trained workers. But no matter what the workers' qualifications may be, further movement in the direction of social care would appear to require changes in the expectations of GPs and psychiatrists, not to mention patients' relatives, neighbours and the police. If doctors recognized the potential of social casework, and if the system were such that GPs did not require the MWO as an intermediary to assess the need for treatment in difficult cases and to arrange such treatment, it might be possible to deploy the social workers in the local authority more effectively.

We would also suggest a shift of PSWs from the mental hospitals into the local authority service, where they might find more opportunities to develop their casework skills and to make their contribution to effective community care. Attention would have to be given to the respective rôles of PSWs and MWOs within a single service, and there would have to be a parallel reorganization of the system of services so as to reduce the auxiliary and intermediary functions now expected of social workers and to provide them with clearly defined social care rôles. The expansion of the number of social workers, however desirable an end, will of itself do nothing to increase the efficient utilization of resources; to do this and to obtain a better set of rôle expectations which might facilitate recruitment we suggest two more realistic, perhaps more important goals—concentration of social work resources within a single service and the reorganization of the system of psychiatric services *vis-à-vis* social care.

## V. Acknowledgments

We would like to take this opportunity gratefully to acknowledge the help we received from the participating social workers. Needless to say, the survey would not have been possible without their willingness to undertake the work of recording their activities in addition to their social work responsibilities. The medical officers of health, physician superintendents and consultant psychiatrists in the survey areas gave us permission to approach their social work staffs and our debt to them for their continuing co-operation throughout the whole study is great. We are also grateful for the co-operation of the Devon Community Mental Health Research Committee and we are indebted to Miss C. Dawson, Research Officer to the Committee, who administered the survey in Devon.

*A window on a semi-private world*

# **The Population of Epileptic Colonies**

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# The Population of Epileptic Colonies

**Note:** *The survey was mounted at the request of the British Epilepsy Association, Lord Cohen of Birkenhead acting as Chairman of the Steering Committee. The colonies, statutory and voluntary, co-operated throughout. The authors would like to thank all those involved for their interest, advice and support. The views expressed in this paper are personal ones, and should not necessarily be taken as representing the views of other individuals or organisations concerned.*

The development of the community care services over the past ten years, and the plans for their further growth over the next ten years (Ministry of Health, 1963) have led to a focussing of public interest on residents in institutions of various kinds. Inevitably, the need for institutional care has been questioned, and two main points of view have emerged. The first sees the institution as a relic of Victorian custodialism, necessary enough when other services were not available, but now outmoded. Exponents of this point of view stress the dangers of 'institutional neurosis' (Barton, 1956) and consider that the adverse effects of institutional living are such that almost any alternative is preferable. The second view is that, although the institution is now only one among a number of means of social care, it still possesses a useful function for people whose disabilities are so great that they are happier in a sheltered environment.

The argument is very largely one of degree, for very few people are prepared to push either view to its logical extremes by contending that all institutions should be abolished, or that all patients now in institutions should stay there. The question is how many can be rehabilitated by modern methods of care, and in what circumstances. A preliminary and necessary step is to ascertain what kinds of patients are at present in the institutions under review, and to assess how far they would be capable of rehabilitation under existing conditions of community care. The position in old people's homes and mental hospitals has recently been debated (Townsend, 1962; Mills, 1962; Jones and Sidebotham, 1962 *et al*). The present report concerns the eleven epileptic colonies, homes and hospitals in Great Britain. The Cohen Committee (1956) stated that there was 'ample

evidence that many colonies have . . . to care for many unsuitable cases . . . the evidence received leads us to believe that there are a considerable number of patients now in the colonies who could profit from a properly directed rehabilitation'.

It should perhaps be stressed that this was a medical assessment of the situation, whereas the present survey is primarily concerned with social factors in the situation.

### **The size of the problem**

It is first necessary to set the population of the eleven colonies against the general background of the total population of epileptics in Great Britain. Though statistics are scattered and somewhat unsatisfactory it seems clear that only a small proportion of epileptics are in institutions. The vast majority live normal, useful and active lives, their condition being known perhaps only to their GP and the immediate family circle.

The prevalence of epilepsy has been variously estimated. The Cohen Committee noted the inadequacy of information available on the subject, and quoted estimates varying from two to four per thousand population. In general, they supported the higher estimate, but they regarded this as 'only a rough approximation'. Pond, Bidwell and Stein (1960), in a survey of epilepsy in fourteen general practices, arrived at an estimate of 5.6 per thousand population.

We may therefore conclude that the number of people suffering from epilepsy in Great Britain is probably somewhere between 200,000 and 300,000, and a rough estimate of a quarter of a million is often quoted. There are no clear and up-to-date statistics on how many of these people receive special care by reason of epilepsy. They tend to be scattered among the medical and social services, and records which treat them as a special group are rarely available outside the colonies and the few epilepsy clinics. Tylor Fox (1949) estimated that there were about 10,000 epileptics in mental hospitals, and about half that number in hospitals for subnormals. More recently, Pond, Bidwell and Stein (1960) have estimated, on the basis of figures published in 1953 and 1956, that the total in mental hospitals is about 6500-7000, and the number in hospitals for subnormals about 15,000. The Annual Report of the Ministry of Health (1961) gives no separate figures for epileptics in hospitals, but lists 1493 as being in Part III Accommodation under the National Assistance Act. Assuming that the number quoted by Pond, Bidwell and Stein have decreased as a result of community care policies and the development of anti-

convulsant drugs, we might assume that somewhere between 12,000 and 20,000 would now be in institutions of these three types. It is difficult to be more precise, not only because of the inadequacy of the data, but because of the problems, discussed in the Cohen Report, of formulating a generally acceptable clinical definition of epilepsy.

In addition to these epileptics in institutions, there are the patients in epileptic colonies—that is, in accommodation specifically and exclusively designed for epileptics. These are, as will be seen, a very small proportion of all epileptics—probably less than 1 per cent. At the date of the survey (June 13th, 1962) their population consisted of 2345 adults plus about 630 children under 15 years of age. (This excludes the two special schools for epileptic children, Sedgwick House and Soss Moss.) The organization and care of patients of school age is somewhat different from that for adults, and the present survey is concerned purely with the adult population. There would be scope for a further survey in studying the child population.

### **The epileptic colonies**

The word 'colony' will be used here to cover institutions variously known as 'colonies', 'homes', and 'hospitals'. Most of these institutions were founded between 1888 and 1906, when the term 'colony' was perhaps more acceptable than it is today. Some now prefer another designation; but as 'colony' is the term still in general use in the community, it will be used as the most clear-cut of the three.

The colonies are of three distinct types. Two, St. David's Hospital, Edmonton, and St. Faith's Hospital, Brentwood, operate within the National Health Service, and offer special treatment to in-patients. Two more, Langho Colony, near Blackburn, and Cookridge Hall, near Leeds, are operated by local authorities under joint user agreements.

The remaining seven colonies are the Meath Home, Godalming, Surrey; The National Society for Epileptics, Chalfont Colony, Bucks; the David Lewis Colony, Alderley Edge, Cheshire; the Maghull Homes for Epileptics, near Liverpool; Lingfield Hospital School, Surrey; St. Elizabeth's School and Home for Epileptics, Much Hadham, Herts; and the Colony, Bridge of Weir, Renfrewshire. All seven are administered by voluntary committees.

### **The adult population of the colonies**

The survey was carried out primarily from colony records, supplemented by information from senior staff. Patients were not



approached directly, at the wish of the colonies. Information was sought on the age, sex and marital status of patients; the date of first admission to any kind of residential care; the date of the present admission and the duration of stay; the length of working life in the community; the frequency of epileptic attacks; the physical and mental state of the patient; the nature of the home background, and the difficulties, if any, encountered by the patient in the community; and the financial arrangements for the patient's care—i.e. whether the main financial responsibility was borne by the family, the local authority, or the Regional Hospital Board.

Some of this material proved very difficult to assess. For instance, it had been hoped that the number of patients suffering from a degree of mental subnormality could be accurately ascertained, but it would have been impossible to do this without a concurrent and individual assessment by an educational psychologist. This would in any case be a difficult undertaking. Test results might be misleading because of the effects of mental confusion and drugs on performance. The figures given represent a minimum assessment. No patient was classified as mentally subnormal unless (a) the records showed that he had been so classified under the Mental Deficiency Acts 1913-27 or the Mental Health Act 1959; or (b) the records showed that he had been classified as educationally subnormal; or (c) a member of staff made a definite statement—e.g. 'This patient can neither read nor write'—and this was cross-checked elsewhere.

Other judgments made here, such as those of 'domestic and social difficulties' or 'no home' rest on similarly rigorous criteria which cannot be explained in full for lack of space. The figures given in the following sections are likely to under-estimate rather than to over-estimate the extent of social and personal difficulties.

**Table 1**  
**Age and sex of patients in epileptic colonies**

<i>Age</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
	per cent	per cent	per cent
16-24	15.5	10.5	13.0
25-34	15.5	11.6	13.6
35-44	23.1	16.8	19.9
45-54	20.6	23.4	22.0
55-64	17.8	20.5	19.1
65 and over	7.5	17.2	12.4
<b>Total . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

The population of the colonies was divided almost equally between men and women (male 49·7 per cent, female 50·3 per cent). In view of the excess of women in the adult population at large, this represents a slight preponderance of male patients—perhaps because men find it more difficult to maintain themselves in the community, or because behaviour disorders in men are more likely to be of a violent nature. The age-range was very wide, the female population being somewhat slanted to the upper age groups, as shown in Table I.

Investigation of marital status was undertaken with the expectation that most patients would prove to be unmarried. Abel-Smith and Titmuss (1956) found that single people formed a very high proportion of those in hospital accommodation, and this seems attributable to two factors: the lack of a marriage partner to care for the patient, and the fact that marriage is to some degree a selective process. Both these factors could be expected to operate for patients severely disabled by epilepsy. In addition, it was known that many of the colony patients had entered institution early in life, and had thus had no opportunity to marry; and that the fear (not always justified) of transmitting epilepsy to any children of a marriage also acted as a bar. Even so, the figures for unmarried patients were surprisingly high; 92·5 per cent of all patients were single (93·7 per cent of men and 91·4 per cent of women). Of those who had married, the majority were separated, widowed or divorced. Only 1·6 per cent of men and 1·4 per cent of women were still married at the time of the survey. This indicates at least one difficulty in rehabilitation—the lack of a husband or wife to help in present care, and the lack of children to provide support (whether emotional, financial or in the offer of a home) in the later years of life.

Duration of stay in the case of most patients was lengthy; 79·9 per cent had been in a colony continuously for more than 2½ years, and 38·6 per cent had been in a colony continuously since 1950. Nearly half (49·1 per cent) of the total group first entered residential care of some kind before their 25th birthday; 69·5 per cent were admitted direct to a colony. Some of these patients had been in one colony for several distinct periods, and others had moved or been transferred from one colony to another. 10·4 per cent were first admitted to a mental hospital, and the remaining 20·1 per cent to institutions of various kinds—hospitals, special schools, Poor Law or Public Assistance institutions, and so on. It must be assumed that in the case of these last two groups (30·5 per cent of the total) the patient

was moved to a colony because it provided, at the time at least, a more satisfactory form of care.

Adequate records on the length of working life were not available for 18·2 per cent of male patients, and this is commonly difficult to establish for women, since they may give up work more readily than men, and be cared for as dependents without the fact occasioning public comment. Of those men whose employment (or unemployment) records could be established, 44·3 per cent had never worked; 20·5 per cent had worked for periods varying from a few weeks to 4 years 11 months; and 35·2 per cent had worked for 5 years or more.

Reasons for the present admission to a colony showed multiple factors. Epilepsy was, of course, the one common factor, and symptoms recorded were generally of the 'Grand Mal' or 'Petit Mal' type, or a combination of the two; but epilepsy was hardly ever cited as the only reason for admission. In 10 per cent of cases, there was a physical disability of a disabling degree; in just under 9 per cent, the existence of mental subnormality could be established; in 20 per cent, 'difficult behaviour' was cited; and in 70 per cent, there were substantial domestic and social difficulties. These categories overlap, two or more additional reasons being cited in some cases.

Physical disabilities included hemiplegia, the severe after-effects of burns (usually resulting from accidents during epileptic attacks), severe orthopaedic disabilities such as deformed hands or feet or arthritis, defective vision and many others. While some of these patients might have been able to live in the community quite successfully if they had only the physical disability to cope with, the combination of epilepsy with the physical illness or handicap made their situation much more difficult.

Subnormality was usually of a fairly mild degree; but again it must be remembered that these patients were not merely suffering from low intelligence. They were suffering from low intelligence and epilepsy at the same time—and it takes a fair degree of intelligence for an epileptic to be able to live a normal life.

'Difficult behaviour' can mean many things. It can cover behaviour which is a direct symptom of epilepsy—e.g. aggressive outbursts which sometimes precede or follow, or can take the place of, an observable seizure. In other cases, the difficult behaviour seems to be the reaction of the individual epileptic to the social situation in which he finds himself. Sometimes it is a behaviour pattern built up over years as a result of frustration and social isolation, reinforced by

the attitudes of relatives, friends and workmates. These attitudes may range from an overwhelming concern for the sufferer which undermines his self-respect, to a frank rejection because he is 'different'. The concept of an 'epileptic personality' has been debated for many years, though the evidence is inconclusive (Tizard, 1962). It has been stated that about 15 per cent of all epileptics have personality disorders, and that these are mainly to be found among those with temporal lobe epilepsy (Hill, 1958).

Whatever the reasons, it appears that some epileptics do behave in a way that is insupportable in a small, confined family group, even though their behaviour may not amount to clear-cut mental illness. One would expect to find a high proportion of these people on the admission lists of colonies, and the 20 per cent of cases which mentioned 'difficult behaviour' may represent less than the total.

'Domestic and social difficulties' were often due to the death of a supporting parent, and the inability to live alone. (For any epileptic who experiences frequent and severe attacks, there are obvious dangers, such as falling on the fire, drowning in the bath, or coming into contact with electrical equipment, which make living alone impossible.) Where a parent died, it was often not possible for a patient to find a home with other relatives. Sometimes they had no room, sometimes they were afraid that the presence of an epileptic might frighten young children. Nor was it easy to find other accommodation. Landladies, with notable exceptions, do not like epileptic lodgers, because they 'worry the other lodgers'. Some epileptics have nocturnal fits during which they are incontinent, and many landladies or wardens of working men's hostels simply cannot cope with laundry.

Many had been unable to find employment, or to keep it. This is probably the area in which epileptics encounter the greatest difficulty. Some epileptics should not work near moving machinery unless it is adequately guarded, or in work involving climbing ladders, or in any other situation where a sudden, brief lack of consciousness might put them in danger. In law, an epileptic who suffers industrial injury as a result of an attack may in certain circumstances be held contributorily negligent (Beaumont, 1958) and may suffer a considerable reduction of damages. Employers have been known to say frankly that they would employ any other kind of disabled worker in preference to an epileptic, because a fit during working hours means a general stoppage of work—the other workers crowding round to see what is happening.

All these factors tend to confirm a judgment of 'epilepsy plus'—that people come into epileptic colonies not simply because they suffer from epilepsy, but because of an accompanying variety of physical, mental, social and economic factors which may or may not be directly associated with the epileptic condition. However, there are two further questions; first, if the epilepsy is brought under control as a result of treatment, does discharge then become possible? and second, are there significant differences between the populations of colonies of various types—Health Service, Local Authority and Voluntary? These questions will be considered in the remainder of this report.

### **The possibility of discharge**

The Cohen Report distinguishes four categories of epileptics: (i) those whose epileptic attacks, with or without treatment, recurred infrequently, and who suffered from no other demonstrable disease, intellectual defect, or abnormality of behaviour; (ii) those who in addition to epilepsy, suffered from significant intellectual defect and/or physical disability; (iii) those who, in addition to epilepsy, had serious behaviour disorders which rendered normal life in society difficult or impossible; (iv) those who suffered from very frequent epileptic attacks, difficult or impossible to control by treatment.

It seems clear that patients in the first category ought not to be in institutional accommodation, since they can live in the community with only a minor degree of support; that patients in the fourth category ought to be in residential care unless the family background is an extremely good and supportive one, and sufficient medical care is available on an out-patient basis; and that for patients in categories (ii) and (iii), much will depend on the severity of epilepsy and the existence of other accompanying conditions.

An outstanding feature of the data collected for the survey was the high proportion of patients suffering from severe physical disabilities of a nature likely to prevent their discharge. Table II refers to 743 patients (31.6 per cent of the total) who in our judgment came into this category.

The large miscellaneous group contained patients suffering from inoperable carcinoma, patients who were deaf and dumb, patients suffering from organic senile conditions, and others.

An attempt was made to establish the present frequency of epileptic attacks. Over a quarter of all colony patients (26.6 per cent, i.e. 22.8 per cent of women and 30.5 per cent of men) suffered from

**Table II**  
**Patients suffering from severe physical disabilities**  
**at the time of the survey**

	<i>Physically disabled group</i>
	per cent
Hemiplegia . . . . .	22·6
Severe after-effects of burns . . . . .	5·9
Severe orthopaedic disabilities . . . . .	29·5
One limb amputated . . . . .	1·6
Defective or partial vision . . . . .	8·2
Blind . . . . .	1·0
Chronic asthma or bronchitis . . . . .	5·8
Diabetes . . . . .	2·4
Others . . . . .	23·0
	100·0

Grand Mal attacks (the classic 'epileptic seizure') at least once a month, with or without Petit Mal attacks in addition. Over half of all patients suffered from less frequent attacks of Grand Mal, with or without Petit Mal in addition, or from Petit Mal alone. The remaining 16·5 per cent of patients (18·7 per cent of women and 14·3 per cent of men) had had no recorded attacks of either type for a year or more. It would seem that, if discharge is practicable for any group of patients in the colonies, it would be demonstrably so for this group.

Table III refers to this 'attack-free' group, comprising 387 patients:

**Table III**  
**'Attack-free' group: reasons for continued residence in colony**

	<i>Number</i>
Severe physical disabilities . . . . .	48
Severe mental disabilities:	
'difficult behaviour' . . . . .	54
subnormality . . . . .	80
Old age (65 and over) . . . . .	67
Social difficulties:	
awaiting Part III Accom. . . . .	4
awaiting employment . . . . .	9
no home, home unsuitable . . . . .	30
unclassifiable (all over 55 yrs. of age) . . . . .	77
Long residence (over 20 years in colony and also over 45 years of age) . . . . .	18
	387

In each case only the primary reason has been given, though in many there was a combination of reasons, each new factor making the chances of rehabilitation less. Statements such as 'no near relatives, partially sighted, burn scars on face, very eccentric, E.S.N.' or 'aged 80, admitted 1910, chronic asthma, no relatives, demented, deluded and hallucinated' indicate the type of multiple disabilities to be found in these patients.

Among this 'attack-free' group, there were 122 persons who had been free from attacks for two years or more, and who were less than 45 years old at the time of the survey. In this, the most favoured group which suffered neither from epileptic attacks nor from the effects of old age, 56.1 per cent were found to be mentally subnormal; 24.5 per cent were suffering from personality disorders; 16.5 per cent had a severe physical disability; 47.3 per cent had no home, and no relatives likely to provide one; 15.7 per cent had unsuitable homes (often of the 'problem family' variety, or where the fit members of the family were already caring for another disabled relative) and 14.0 per cent were awaiting employment.

There is a further factor which may militate against an easy discharge policy. Colony staff state that a patient who has been free from attacks for a considerable period may experience a relapse after discharge. It is suggested that the comparatively sheltered and trouble-free atmosphere of the colony is conducive to freedom from attacks. The stress and worry of competitive living can often produce a recurrence. Thus even if some patients could be discharged, the chances of a permanent settlement in the community would be dependent on a very high level of community support—and this is rarely available. This view is, however, disputed by some leading medical authorities.

### **Comparison of types of care**

If many of these patients must remain in residential accommodation, we may go on to consider what type of care is best for them. The two colonies within the Health Service, St. David's and St. Faith's, are already providing a special hospital service. The colonies administered by local authorities, Langho and Cookridge Hall, are providing a special form of Part III Accommodation. Presumably these colonies are already providing the best type of care which the statutory services can at present offer. If any criticism can now be directed at the Voluntary colonies on the grounds of failure to rehabilitate their patients, it should be possible to demonstrate either (a) that their discharge rates are lower than those of the statutory colonies,

**Table IV****Voluntary, Local Authority and N.H.S. colonies:  
Discharge rates, 1961**

Total discharges given as per cent of resident population

	<i>Voluntary colonies</i>	<i>Local Authority colonies</i>	<i>N.H.S. colonies</i>
Short-term cases . . . . .	5.2	5.7	3.6
Transfers . . . . .	5.8	5.6	16.1
Normal discharges	5.5	4.4	3.9
	16.5	15.7	23.6

*Notes:*

- (1) 'Short-term cases' includes patients admitted for holiday periods only; patients who left after a short stay against medical advice, or without notice; and patients discharged as unsuitable for residence in the colony.
- (2) 'Transfers' includes all patients transferred to other colonies, to hospitals, or to Part III Accommodation.
- (3) 'Normal discharges' means those discharged to home and/or employment after treatment.
- (4) Calculations for local authority colonies exclude figures for Cookridge Hall, which was opened in 1958.
- (5) Calculations for Voluntary colonies exclude Lingfield, which is primarily a training school taking short-term patients.

or (b) that they are dealing with less severely disabled people. Tables IV to VI provide information on these points.

Crude discharge rates are perhaps not a very satisfactory method of measurement, since they do not relate to the patient's condition at the time of discharge; but they do provide a measure of the extent to which the population is moving rather than static. It will be seen that, when transfers and short-term cases are excluded, the rate of 'normal discharges' is comparatively small in all types of colonies, but highest in the Voluntary colonies. The very high crude discharge rate in the N.H.S. colonies is accounted for largely by the high percentage of transfers to other colonies or hospitals, or to Part III Accommodation.

**Table V****Percentage of colony patients free from epileptic attacks for one year or more**

<i>Voluntary colonies</i>	<i>Local Authority colonies</i>	<i>Health Service colonies</i>
13.7	23.9	16.7



All three types of colonies have a proportion of patients free from epileptic attacks, though the reservations previously mentioned concerning the conditions under which they are likely to remain free from attacks still apply. The proportion of 'attack-free' patients in the Voluntary colonies is lower than that in either Health Service or Local Authority colonies.

**Table VI**

**'Attack-free' patients: reasons for continued residence in colony, by types of colony**  
(Percentage in parentheses)

	<i>Voluntary</i>	<i>Local Authority</i>	<i>N.H.S.</i>	<i>Total</i>
Awaiting Part III Accom. . . . .	4 (2.1)	—	—	4 (1.0)
Awaiting employment . . . . .	6 (3.0)	2 (1.5)	1 (1.7)	9 (2.3)
Old age and domestic difficulties . . . . .	89 (44.9)	47 (36.4)	26 (43.3)	162 (42.1)
Physical disabilities . . . . .	5 (2.5)	32 (24.8)	11 (18.3)	48 (12.5)
Mental subnormality . . . . .	50 (25.2)	22 (17.1)	8 (13.3)	80 (20.4)
'Difficult behaviour' . . . . .	24 (12.1)	20 (15.5)	10 (16.7)	54 (14.0)
No home, home unsuitable . . . . .	20 (10.2)	6 (4.7)	4 (6.7)	30 (7.7)
<b>Total . . . . .</b>	<b>198 (100.0)</b>	<b>129 (100.0)</b>	<b>60 (100.0)</b>	<b>387 (100.0)</b>

This table indicates slightly different configurations in colonies of different types—the Voluntary colonies have slightly more aged patients than Local Authority and N.H.S. colonies, but considerably fewer patients with physical disabilities; they have more subnormals, and fewer with 'difficult behaviour'; but apart from the small numbers (5 per cent of the total) who are *known* to be awaiting a return to the community, there is no indication that the Voluntary colonies have more patients who could be rehabilitated than colonies of other types.

### **Conclusion**

The survey took place six years after the Cohen Committee reported, and many changes have occurred in the medical and social services during this period. We have considered the work of the colonies within the present medico-social context—that is, with reference to what is possible now, and not to ideal conditions. Conditions for epileptics are in general very far from ideal. From our study of the colony populations in 1962, we have been unable to find any evidence that the voluntary colonies are now materially failing in the task of

rehabilitating their patients in comparison with other agencies. On the whole, they are dealing with a severely- and multiply-disabled group of people who need a sheltered environment to protect them from the pressures of a highly competitive society. Where the main need was for accommodation and/or employment, the patients remained in the colonies precisely because this was not available elsewhere. One patient had been 'awaiting Part III Accommodation' since 1956. In the circumstances, the onus would seem to be on the community services to provide these necessary conditions rather than on the colonies to discharge without them.

Analysis of the discharge rates, the percentage of 'attack-free' patients and the reasons why these patients continue to remain in colonies shows some difference in function between Voluntary, Local Authority and Health Service colonies, but does not suggest that any one of these types of colony is keeping patients after the need for residential accommodation is past.

All seven of the Voluntary colonies are registered as Homes for the disabled, and the majority of their patients are sponsored by local welfare authorities, though the actual amount paid towards the cost of care varies. Nearly all the colonies have waiting lists. Patients are commonly sent to them when all the other resources of the medical-social services have been tried and have failed.

Many of the patients whose records were analysed came into care in the days when a full assessment of their condition and potentialities was not possible. It may be that some of them, particularly those for whom 'social and domestic difficulties' were the main cause of admission, could have remained in the community if modern conditions of community care had then been available; but they are now very disabled people, for whom residential care must be provided.

Attempts to rehabilitate individual patients must continue, and much will depend on the extent to which the community services can provide hostel accommodation and sheltered employment, particularly for the homeless and high-grade subnormals; but it seems unlikely that discharges of this kind will have more than a marginal effect on the present population of the colonies.

For the future, the Cohen Committee's recommendation that hospital authorities should establish diagnostic and assessment centres on a regional basis seems of the utmost importance. No patient should in future be sent to a colony (since the colonies are primarily centres for long-term care) until a full physiological, psychiatric, educational and social assessment has been made. As the

Cohen Committee forecast, Regional Hospital Boards have in some cases argued that there is insufficient demand to justify the establishment of such centres. In view of our findings concerning the nature of the colony population, this would seem to be a small but very necessary part of the services provided for people suffering from severe forms of epilepsy.

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