GENERAL PRACTITIONER HOSPITALS

AND THE RELATIONSHIP OF

GENERAL PRACTICE TO HOSPITAL MEDICINE

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by

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GENERAL PRACTITIONER

WANTAGE BERKSHIRE

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INTRODUCTION

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PREFACE

The purpose of this thesis is to examine the relationship between consultants and general practitioners, particularly as far as hospital in-patient care is concerned.

How has the role of each of them evolved?

What is the effect of the division between consultants and general practitioners on in-patient care?

What is the role of the general practitioner as far as in-patient care is concerned, particularly in general practitioner units?

In order to examine these questions the historical origin of the general practitioner and consultant is described, and the results of two surveys are presented.

The first survey was carried out in 1970 in a teaching hospital, The Radcliffe Infirmary, Oxford, and is called the Radcliffe Survey. The second was carried out in 1970-71 and consisted of a survey of all medical admissions from one general practice in Wantage to Wantage Hospital and consultant wards in the United Oxford Hospitals; this is called the Wantage Survey.

The results of these surveys are used to examine a number of hypotheses. These will be stated in detail, but broadly speaking the aim of the surveys was to try to discover how much hospital care can be provided in a general practitioner hospital as an alternative to consultant care, how the admissions to the two types of hospital are selected and how they differ. Obstetrics is not included in either survey because the role of G.P. obstetric units has been well covered in a number of publications. The Radcliffe Survey was concerned with medical and surgical patients, but it is medical admissions that form

the largest part of in-patient care in general practitioner hospitals and, at the same time, the least investigated. Therefore, the Wantage Survey was concerned almost exclusively with medical admissions.

DEFINITIONS

G.P. Units, G.P. Hospitals, Cottage Hospitals and Community Hospitals

When the Radcliffe Survey was planned at the end of 1969, a term was sought to describe all the different places where N.H.S. hospital beds were allocated to general practitioners. In the past, the term Cottage Hospital would probably have been adequate but the term had fallen into disrepute; any nostalgia associated with the word "Cottage" was outweighed by the image of out-dated inefficiency which had become attached to the label "Cottage Hospital".

The term General Practitioner hospital was a good substitute, but some general practitioner beds are included in the same building as consultant beds, either as separate wards or as beds in consultant wards, and the term "General Practitioner Units" was coined to cover all types of general practitioner hospitals and wards. Although this term may be justified by its all-inclusiveness it has the disadvantage of being slightly obscure and perhaps a little bit pompous. Awareness of this has made the author slip back into the habit of using "General Practitioner (or G.P.) hospitals" in place of "G.P. Units"; the two are synonymous.

In the meantime the concept of the Community Hospital was evolved by the Oxford Regional Board, and was first published in a document circulated by the Board in 1969. The concept of the Community Hospital

and its relationship to existing G.P. hospitals is discussed in the final part of this thesis. Although the kind of in-patient care included in the concept of a Community Hospital corresponds quite closely to the in-patient care carried out in Wantage and some other G.P. hospitals, the term Community Hospital is not simply a new name for existing G.P. hospitals; it is a term linked to a specific and new policy for community care, of which in-patient care is only one part.

Consultant Hospitals

In contrast to G.P. hospitals or G.P. units, the term "consultant hospitals" is used. It is self-explanatory and is used to cover teaching hospitals, district general hospitals and any other hospitals in which the beds come under the control of consultants. In many publications the term "specialist hospitals" is used in the same sense, but this term was avoided as it can be confused with the description of hospitals devoted to a single specialty.

Medical Admissions

Next, there is the term "medical" as applied to "medical admissions". It is unfortunate that this term can be used in different ways by different authors. In this thesis it is used in the broadest sense of simply meaning "not surgical" (including obstetrics and specialist surgical categories as well as general surgery) and also, "not pediatrics", since both surveys were concerned only with adults. "Medical" therefore includes Neurology, Chest Diseases and Infectious Diseases and - most important of all - Geriatrics, as well as categories covered by the term "General Medicine".

Early Discharge

Finally there are patients who are transferred from one type of hospital to another. Those transferred from consultant care to care in a G.P. unit form a large and important part of G.P. unit in-patients. They have been variously described as early discharge, very early discharge, post-operative pre-discharge and pre-convalescent patients. None of these terms are elegant, and it's difficult to know what pre-convalescence means except the state of being ill. The term early discharge is the shortest and no less accurate than the others so it is used throughout the thesis with the addition of "medical" or "surgical" as the case may be.

Significance of Results

When the results of the surveys are discussed, the convention has been adopted of using the following terms:-

"significant" - meaning P is less than .05

"highly significant" - meaning P is less than .01

ACKNOWLEDGEMENTS

In the preparation of this thesis the author is indebted most of all to Dr A.E. Bennett, Director of the Health Services Evaluation Group of the Department of the Regius Professor of Medicine, Oxford University, whose help and advice has been invaluable.

The author is also most grateful to the Regius Professor of Medicine, Sir Richard Doll, for reading the draft of the thesis.

In 1969 the author was invited by Mr E.J.R. Burrough, The Consultant Adviser for Special Projects at the Radcliffe Infirmary, Oxford, to undertake a survey of in-patients. Part of that survey is included in this thesis under the title "The Radcliffe Survey". The help and encouragement of Mr Burrough and of the medical and nursing staff of the Radcliffe Infirmary was acknowledged in the full report of that survey, published in 1970. It is appropriate here to acknowledge once again the help and friendly encouragement received by that author when the survey was carried out.

The Wantage Survey, which forms the major part of the thesis, depended on the help given to the author by his partners at the time, Dr C.W. Seward, Dr G.P. Greenhalgh and Dr R.C. Squires. They provided the information on patients under their care as well as constant encouragement from a shared interest and enthusiasm for the work of the practice. It is pleasant to be able to acknowledge their help and one's pride in belonging to such a partnership.

Finally the author acknowledges with gratitude the very efficient secretarial assistance of Mrs Pamela Wornham, who prepared the draft of the full report of the Radcliffe Survey in 1970 and of this thesis in 1972-73 - a total of many hours work, always done with rapid and cheerful efficiency.

CHAPTER 1

THE HISTORICAL BACKGROUND

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Introduction

It is a commonplace - even banal - observation that in order to understand the present and the alternatives for the future we must know something of the past; yet it is an observation that is usually forgotten when the organisation and structure of medicine is discussed and plans are made to change them. Professor McKeown has said that "without historical perspective medical science and service will continue to drift" and "... a rational approach to present and future hospital developments is hardly possible without historical research".

Now, in 1972, there is evidence of renewed confidence and vitality in general practice, although a mere ten to fifteen years ago it was the one branch of the profession whose future looked dim. One part of this renaissance in general practice is a new interest in hospital care by general practitioners in the form of community hospitals. Professor Cochrane, in his monograph "Effectiveness and Efficiency" (1972) argues most persuasively for a scientific approach to the organisation of medical care, and in particular for the use of the randomised controlled trial in this field. He states, with cautious optimism, that he sees in the future the possibility of:-

> "Health Centres, community hospitals and other specialised units providing care near the patients' homes for all types of disability"

and

> "The G.P. of the future should have a wonderful chance to organise the complete care of the community".

If this happens it will need a new, or at least modified, relationship between general practitioners and the hospital service which, in turn, will need some understanding of the origins of the present relationship.

The origin of the general practitioner

Although the term "general practitioner" was used in the eighteenth century, it first became widely known in the early nineteenth century (Brothenston 1971). It was at this time that the system of medicine that had remained virtually unaltered for three centuries began to break down. The system had consisted of three types of doctor:-

1. The physician, a member of a learned profession.
2. The surgeon, who was a craftsman and
3. The apothecary who was a tradesman.

The division between the three was rigid, not only in terms of qualifications and skills, but also in terms of social class. The physicians would not admit to their midst either surgeons or apothecaries unless they first renounced their previous qualifications and licences; to have belonged to all three simultaneously would have been unthinkable. The hierarchical structure was so rigid (no one had any doubts about the order of the three rungs on the ladder) that it was unsuitable for the changes that occurred in the beginning of the nineteenth century. With the breakdown of the three-tiered system there emerged the consultant and the general practitioner. The distinction between the two was blurred at first, but gradually over the next century became more and more distinct until the classification of doctors reached a form closely resembling the form seen today.

The simplest view of the evolution of the G.P. is that he evolved in a straight line from the apothecary while the physician and surgeon evolved into the consultants of today. This view would seem to be supported by the higher status generally accorded to the consultant in this century. In fact it was not nearly so simple, nor would this form of evolution explain the breakdown of the original hierarchy, for it would

simply be a continuation of the old system under altered titles.

In fact, the term general practitioner as it was used in the mid-nineteenth century, covered a wide range of doctors. At one end of the scale was the direct descendent of the apothecary, the man who kept a shop in which he sold articles of toilet as well as dispensing medicines and medical advice. Next up the scale came the surgeon-apothecary who treated patients and dispensed medicines but had no retail trade. Next came the physician who prescribed but did not dispense, and he would be considered a consultant if he had an honorary appointment to one of the voluntary hospitals and was called in for advice by other practitioners. If the voluntary hospital was one of the large and renowned London teaching hospitals, the appointment as an honorary would confer a status equivalent to that of the present day consultant, but if it was a small Infirmary in a provincial town the honorary physician or surgeon would correspond more closely to the G.P. of today with access to hospital beds. In the latter instance the doctor, whether we was called consultant or G.P. would in fact be carrying out general practice outside the hospital, and none of the consultants at that time would be entirely dependent for their living on being called in by other doctors. The difference between G.P. and consultant was to a great extent based on the social class of the patient. The British Medical Journal in 1876 described the country consultant as "the general practitioner who owes his position to the fact of his holding an appointment in connection with a country hospital". The consultant was little more than "a practitioner among the rich" and the difference between consultant and G.P. really resolved itself into a difference in fees.

Some of the best accounts of the position and status of the G.P. and consultant are to be found in 19th century novels, and "Middlemarch"

is probably the best example. But the opening chapter of "Dombey & Son" gives a particularly vivid caricature of the relationship between the two. For the confinement of Mrs Dombey the down-trodden family practitioner calls in the court physician, Dr Parker Peps, who is presented as a pompous name-dropping snob. Neither are presented as competent in any way, but the distinction between the two is shown clearly to be one of social class and size of fee and not of difference in skill, qualification or training. It is with some surprise that on re-reading this chapter one realises that it is the physician who was called in to advise on a confinement. Midwifery was for a long time looking for a branch of of the profession to become attached to; in 1827 the President of the Royal College of Physicians stated with magnificent pomposity that:-

> "Midwifery is an act foreign to the habits of a gentleman of enlarged academic education"
>
> (Abel Smith 1964).

But the surgeons were no more eager at that time to embrace the art of obstetrics, and it was only in this century that obstetrics finally became recognised as a branch of surgery. In fact the Royal College of Obstetricians and Gynaecology was founded as the College of Obstetricians as recently as 1929.

The G.P., when he evolved, did so along a line that cut at right angles across the traditional parallel but separate lines of physician surgeon as apothecary. He might be any of these three, and the variety in quality and class must have been enormous. One suspects that as certain doctors began to recognise themselves as a distinct group called general practitioners, they began to suffer then, as they have ever since, from a vague uncomfortable feeling of not quite belonging to any branch of medicine. Were they primarily physicians, surgeons, or dispensers of

medicines? Probably for this reason, and in an attempt to find themselves a recognised parent with an ancient tradition, there was a strong move in the mid-nineteenth century to make general practice a branch of surgery and membership of the Royal College of Surgeons a necessary qualification for general practice. Many general practitioners, particularly those in the country districts, not only practised surgery but called themselves surgeons. Later, when cottage hospitals were built, they were used by general practitioners primarily for surgery - a tradition that persisted until after the second world war with, as we shall see, unfortunate consequences for general practitioner hospitals. To this day one of the legacies of this attachment of general practice to surgery is the curious habit of referring to the general practitioner's consulting rooms or office as his "surgery" - a term not used outside the United Kingdom.

The general practitioner, therefore, evolved partly from the apothecary, most of all from the surgeon and only at the higher social levels from the physician. Yet today, when his function can best be described as that of a "general physician to patients of all ages" he corresponds more closely to the nineteenth century physician before the days of pediatrics and geriatrics.

Now, when the distinction beteeen consultant and G.P. is clear, rigid, and too well known to need description, it is difficult to realise that the clarity of the distinction is recent history. There were a number of events of major importance that clarified the distinction, but before considering them one should ask why it was that there was such a profound change in the structure of the medical profession.

The cause of the change in the structure of the profession

The disappearance of the traditional three tiers of doctors in its

stable and rigid form and the emergence of the consultant and G.P. has often been attributed to the advance of medical knowledge and the growth of clinical science. It has been argued that the original hierarchy was no longer appropriate, and increased knowledge required the specialisation that led to the consultant. There seems to be little evidence of any sudden increase in medical science in the late eighteenth or early nineteenth century to justify this view. As McKeown (1971) points out the distinction between consultant and G.P. came long before it was justified by the state of medical knowledge.

One factor was undoubtedly the chaotic state of the colleges and licencing bodies before the Medical Act of 1858.

> "The Colleges waged war against the Universities and, at the same time were at variance both with the Apothecaries Societies and with each other. Exclusive privileges were possessed by the medical corporation and special local jurisdictions in cities and provinces were assigned to them ..."
>
> (Brotherston 1971)

The Act of 1857 led to a legal definition of qualified medical practitioners and the keeping of a Register; it made 'falsely assuming the title or description of a legally qualified medical practitioner' a punishable offence and recognised the right of the legally qualified to practise anywhere in the United Kingdom. This Act grew out of the recognition that the old order was too clumsy to work, but it was (as Acts of Parliament usually are) the result, not the cause of the need for change.

The reason for change lies further back and goes deeper. In part it was the increase in the number of doctors and of hospitals. After 1829 the Apothecaries were allowed to charge fees either for skill and attention or for dispensing, whereas previously they had been allowed to charge only for medicine. This not only increased their fees, but their

status and their ability to compete with surgeons and physicians (Abel Smith 1964). The Apothecary moved up a step from the equivalent of the pharmacist to the equivalent of the dispensing doctor.

At the same time there was an enormous increase in the number of hospital beds. In 1800 it was estimated there were about 3000 patients in hospital, and in 1851 the census of the population showed 7,619 patients in hospital (Abel Smith 1964). In 1861 the estimated number of hospital beds in voluntary hospitals was 14,772 but by 1891 this number had increased to 29,520 (Pinker 1966). Allowing for the difficulty of obtaining accurate statistics and of defining what could be included as a hospital bed, there is no denying the rapid increase in hospital care. Not only did this occur in the cities, but from 1850 onwards cottage hospitals began to appear in the country districts.

Although many of the larger and well known voluntary teaching hospitals were founded in the eighteenth century, the major growth occurred in the nineteenth. Likewise the dispensaries for the poor, which are of great significance in medical evolution, were founded well before 1800, but increased in number and in the scope of the care they gave during the nineteenth century.

What seems to be undeniable is that the nineteenth century saw a very large increase in the amount of medical care that, in the first fifty years, was not due to or matched by any corresponding increase in scientific knowledge or medical skills or techniques. It seems probable that the root causes were an increase in wealth and (possibly more important) a new concern for one's fellow men at all levels of society. In his series of lectures on "Civilization" Sir Kenneth Clark claimed that the particular contribution of the nineteenth century was humanitarianism and the concept of kindness as one of the most important qualities in

human relationships. He pointed out that the heroes of his series of lectures in previous centuries, if asked to name the qualities to be admired, might have named purity, or chastity or justice or obedience or good taste - but not kindness. Kindness, and concern for all fellow citizens, was a particular quality of the nineteenth century. It was the century of the abolition of slavery, reform in prisons and asylums and reform of some of the savagery of the law. It was also the century of philanthropy, a word which became suspect although it simply means in its literal sense "love of human beings": and it was the century that produced Dickens as the greatest novelist to be so passionately concerned with social justice.

Someone described the National Health Service Act, in so far as it aimed to provide medical care regardless of the financial circumstances of the patient, as "the most unsordid Act in History"; a curious phrase, but one saw what he meant. It might be said that the origins of its "unsordid" nature lay in the humanitarianism of the 19th century and could be traced through the Medical Act of 1858 and the National Health Insurance Act of 1911 to the National Health Service.

Although the division of doctors into generalists and consultants occurred before it was justified by advances in medicine, the advances in knowledge that did occur were ultimately so large and so rapid that specialisation was inevitable. Nevertheless it does not follow that, because specialisation was inevitable, so was general practice. The evolution of medicine could have occurred along lines similar to those in the U.S.A. where, except in country areas, the general practitioner virtually disappeared and all doctors chose to specialise to a greater or lesser degree.

The hardening of the division between the G.P. and the consultant

was mainly due to a series of chance events whose influence on inter-professional relationships was accidental rather than designed. The first of these events was the dispute between the consultant staff of voluntary hospitals and general practitioners over the out-patient departments.

The System of Referral and Out-patients

Originally the consultant was distinguished from the G.P. in two ways: first by higher fees and a higher social class of patient, secondly by appointment as an honorary to a voluntary hospital. But there was not a distinction that exists today, where the consultant only sees patients after they have been referred to him by a G.P. The two were, therefore, in competition for patients, particularly for the rising numbers of the middle class, and the clash between them over the out-patient department led to the unique British system of referral.

Out-patients evolved from the dispensaries for the poor, which were founded to provide treatment on an out-patient basis for those near to hospital who were unable to afford even the smallest fees of the poorest practitioners. It was charity, but back-door charity, so it was scarcely surprising that the sick dispensary was usually placed out of sight at the back or the side of the hospital and considered of minor importance compared to the wards. Historically this left its mark on out-patients up to the present day. Out-patients is still the poor relation of in-patients and is often carried out in a relatively gloomy, crowded and old-fashioned part of the hospital. In hospital care the main emphasis was, and remains today, on the wards, on hospital beds and on in-patient care (Forsyth and Logan 1968).

However, in spite of its origin in poverty, out-patients became

increasingly popular throughout the nineteenth century not only with the impoverished who could not pay a G.P. but with the middle classes who could. The G.P. saw his income being diminished by the increasing tendency of his patients to avail themselves of advice and treatment from hospital out-patients. The G.P. therefore began to insist that no patient should be seen by a consultant at out-patients unless he took with him his G.P's permission in the form of a "doctor's letter". The system of referral which began at out-patients was later elevated to the ethical principle that no patients would be seen by a consultant, either at home or hospital, unless the consultant was invited to do so by the general practitioner.

The establishment of the principle of referral was an acrimonious affair which started about 1850 and was still continuing at the beginning of this century. Nowadays it is a principle that is often defended as being entirely in the interests of the patient and it is often forgotten that its origin was mercenary, arising from a dispute over fees which was not in the least altruistic. But the important consequence (and, as mentioned earlier, this consequence was accidental and not deliberate or foreseen) was that the G.P. cut himself off from the hospital by insisting on the principle of referral. As Rosemary Stevens (1966) put it "The physician and surgeon retained the hospital, but the general practitioner retained the patient". Thus the consultant service of the N.H.S. has become the Hospital Service, hospital care and consultant care have come to be seen as synonymous, and the general practitioner has, with few exceptions, become firmly removed from the hospital. Yet the teaching of all doctors still takes place in hospital, for the teaching hospital was well established before the principle of referral. The tradition of confining clinical training to a hospital, although a majority

of doctors will work outside hospital, has persisted.

An example of the feud between the specialist and the G.P. and the impending decline of the latter is to be found in "Rab and His Friends" by Dr John Brown:-

> "Everyone is for ever looking after, and talking of everybody else's health. Besides the bad moral habit this engenders, it breaks up what is now too rare, the old feeling of a family doctor ... The familiar, kindly welcoming face which has presided through generations at births and deaths; the friend who hears about and keeps sacred, deadly secrets which must be laid silent in the grave, and who knows the kind of stuff his flock is made of, their constitutions - all this sort of thing is greatly gone, especially in the large cities, and much from the love of change, of talk, of having every-thing explained, especially if it be in Latin, of running from one 'charming' specialist to another. I don't say these evils are new ..."

Except for the reference to Latin, this has a familiar ring about it. Much the same has been said less elegantly at intervals since the N.H.S. began. In fact, it was written on the 30 October, 1858.

The consultant who followed closely the principle of referral put himself in an unenviable position, particularly when he was first appointed. His work as an honorary was unpaid and he depended on the patronage of the local general practitioners for his living. It has been said that the advantage of this was a closer relationship between consultant and G.P. and a greater respect of the former for the latter. But it was a respect of a mercenary kind and the fact that the principle of referral continued for more than fifty years to be the subject of heated debate shows that the other side of the coin was bitter rivalry.

Both consultants and general practitioners were primarily dependent

on private fees for their living. Work in local authority hospitals was paid, and although many general practitioners worked as part-time medical officers in local authority institutions the work was poorly paid and usually contributed only a small part of their income. The range of income was, by present day standards, enormous. The G.P. in the city whose practice lay amongst the rich could certainly rival the most distinguished consultant. But the G.P. amongst the poor, both urban and rural, could himself be abjectly poor. In Scotland it was often said that the doctor was "the first to be called and the last to be paid" and the life of the country G.P. was often very hard with long hours, slow journeys by horse and trap or on horseback and fees that were often never paid. Accounts of this kind are to be found in John Brown's "Rab and His Friends", and are also part of the author's memories, for my father qualified in Edinburgh in 1900 and did his first assistant-ship in the Lowlands. Stories I was told about those times illustrated how hard it was to make a living as a country G.P.

The second event was the introduction of National Health Insurance.

National Health Insurance: the Act of 1911

Before 1911, as we have seen, the distinction between the G.P and the consultant was blurred. They did, however, share the common factor of dependence on private fees and were therefore in competition.

Dr Rentoul, writing in the British Medical Journal of 1886, was outstandingly frank:-

> "The whole struggle between the general practitioner and consultant is one of bread. Specialists, like other folk, must have their bread and butter or else 'go out'. In order to be fairly successful in their efforts they must,

like other men, be fairly dishonest. If he be called in by friends to consult with the usual medical adviser, he must necessarily try to find out what points of difference exist between the friends and their medical man. Then, if he is a fairly dishonest man and wishes to be a successful consultant, he will strongly back up the relatives."

In the domiciliary consultation today there is a ritual to be followed which was certainly well recognised at the beginning of the N.H.S. The essential part of the ritual was the presence of the G.P. at the consultation with the patient and with the relatives; Dr Rentoul's letter explains its origin.

In the mid-nineteenth century hospital treatment was almost exclusively for the poor who looked to the out-patient department as well as in-patients wards for nearly all medical care. For the middle classes, however severe the illness, treatment was nearly always at home. This was not simply snobbery, it was also common sense; until this century hospitals increased rather than diminished risk in severe illness or surgical treatment (Brotherston 1971).

Towards the end of the 19th century advances in medicine and surgery, particularly in anaesthetics and antisepsis, increased the popularity of the hospitals and made the prospect of institutional treatment much more attractive to the middle classes. One result, as we have seen, was the increasing popularity of out-patients leading to the principle of referral being established. With the hope of effective treatment, whether at home or hospital, came the need for some kind of insurance against sickness and the rapid growth of the "sick clubs" - the provident clubs and friendly societies - bore witness to the growing demand for medical care. Out of these came the Health Insurance Act of 1911 which provided compulsory insurance for wage earners (within an upper

limit at first of £2 a week) but not for their families. The association of National Health Insurance with the sick clubs is illustrated by the phrase "on the club". It is still heard today, though not as commonly as it was twenty years ago.

The importance of the National Health Insurance Act as far as this review is concerned lies in the following facts:-

1. It was the direct predecessor of the National Health Service Act of 1948 and determined the form of general practice under that Act.

2. It established a different method of payment for general practitioners which distinguished them from consultants. General practitioners could rely on a steady and stable income from "the panel" instead of being wholly dependent on the competitive field of private fees.

3. It established a new method of payment - the capitation system. G.Ps were, in many areas, already paid for work in local authority hospitals or as part time medical officers of health. Payment for this work was, like the payment of doctors in the Armed Services or the Colonial Medical Service, by salary. Capitation payment was a new method with far-reaching consequences.

4. The most important consequence was the official recognition of the general practitioners' "list", meaning that all wage earners included under the N.H.I. scheme (and later all patients) "belonged" to "their" general practitioner. It was due to the insistence of the B.M.A. at the time that the patient was able to have a free choice of doctor.

5. The establishment of the Health Insurance Act led to a medico-political organisation for G.Ps which gave them political power as a group. Previously the B.M.A. had been largely dominated by consultants; now the B.M.A. emerged as the agency through which the G.P. could influence his future, and bring pressure on the Government. The

panel committees that were set up became the local medical committees under the N.H.S. The General Medical Services committee is in the uniquely curious position of being at one and the same time a statutory committee, answerable through conference of the L.M.Cs to the Statutory Local Medical Committees and a Representative Committee of the B.M.A.* (Marks 1972).

Because of the National Health Insurance Act of 1911, general practitioners evolved a political organisation of considerable power, and experience in using it, many years before the consultants. The complexity of the political organisation is such that it is understood today by only a minority of general practitioners, and even fewer consultants who are apt to regard the political activities of the G.M.S.C. with puzzled disapproval, sometimes tinged with envy. But the existence of the political organisation and the power of the B.M.A. was an important factor in the development of general practice under the N.H.S. The G.M.S.C. was, in the immediate post-war years, a formidable Committee and it has remained so up to the present time.

*The future form of the G.M.S.C. is in doubt since the Chambers Report on the future structure of the B.M.A. was accepted by the representative body at the time of writing (November 1972).

1911 to 1948 and the second world war

During this period the distinction between consultant and general practitioner settled into its present form. Several factors came together at the same time. The N.H.I. Act established the existence of the G.P. and his list; the rapid increase in medical knowledge now justified the existence of the specialist-consultant who, if he had not existed already would certainly have had to be invented, and the hospitals or nursing homes became important for all sections of the community. The consultant now became firmly established as a hospital doctor and the

general practitioner as the doctor working outside hospital, and paid to do so. The long dispute over the principle of referral was hardly over when the N.H.I. Act made it largely unnecessary. As far as insured persons were concerned it was no longer in the financial interest of the G.P. to keep his patients away from out-patients; in fact the opposite was true. If he could transfer his problems to out-patients he would still retain his capitation fee. The principle of referral, no longer so necessary to protect the financial interests of the G.P., became elevated to a matter of principle in "the best interests of the patient" where it has remained. But the consequence of the separation of the G.P. from the hospital remained, and was reinforced by the existence of the G.Ps "panel" of patients and the capitation system of payment for consultation and treatment given outside and quite distinct from hospital care.

Private practice, of course, flourished between the two wars, and for general practitioners as a whole accounted for about a half to two thirds of their income, the remainder being panel payment and (very much less) salaried work such as part-time work for local authorities. The consultant remained an unpaid honorary and depended on being called in by general practitioners for his living. From this point of view, his role had not changed appreciably from the nineteenth century while the role of the general practitioner had changed profoundly. One factor that had a major influence on consultant care was the second world war and the establishment of the Emergency Medical Service.

In the immediate pre-war period the plans for a Health Service were started, but there was no certainty what form it would take. Many of the consultants who carried most influence - particularly those from the London teaching hospitals - saw little need to abolish the voluntary hospital

system with honorary staff and an income derived from private practice. With the outbreak of war the Emergency Medical Service was started to deal with the expectation of a large number of civilian and military casualties, particularly from air-raids. Out of patriotic fervour consultants agreed to accept a salary and to be posted wherever they were needed. As a result "consultants from the best hospitals found themselves allotted beds in rural workhouses and mental hospitals, and they were shocked by what they found" (Abel Smith 1964). The second world war uncovered inequalities in hospital care that were largely unknown to ministry officials and to the consultants of the teaching hospitals. It also produced a sense of national unity in which the nation was prepared to see "individual needs as common needs and to seek national rather than sectional interests for them" (ibid). Against this background, consultants were willing to accept hospital work on a salary scale and to support a National Health Service; on this basis they entered the National Health Service. But the shock of discovering the worst of hospital care also led to a firm opinion that the general practitioner should not be free to undertake hospital work - particularly surgery.

In 1938 in the pamphlet "A General Medical Service for the Nation" (B.M.A. 1938) it was agreed that there was:-

> "A growing need for a more extensive provision of a type of hospital or accommodation in which the general practitioner can treat cases falling within his sphere of competence ... for a social reason such as unsatisfactory home conditions, a patient is admitted to hospital (and) it is contrary to the interest of the patient and damaging to the efficiency of general practice if social conditions lead to a discontinuity of medical treatment".

This statement, which was not controversial in 1938, was no longer

easily accepted by consultants after the experience of the E.M.S. in the Second World War. The future of general practitioner hospitals became doubtful and it is only recently after an interval of more than thirty years that statements, very similar to the one quoted above, have been heard again (Joint Report of Royal Coll. of Physicians and Royal Coll. of Gen. Pract: 1972; Oxford Reg. Hosp. Board 1969 and 1972; Rue 1973).

From 1948: the National Health Service

It is clearly impossible to try to describe all the changes in medicine that have occurred in the last twenty-four years in a short historical introduction, or even those in general practice. It may be that each new generation of doctors comments on the "rapidity with which changes are occurring nowadays", so that one states with slight reservation the commonplace observation that medicine has changed more rapidly and profoundly in the last twenty years than in any previous corresponding period. Probably the same was said in each preceding generation, but it may nevertheless be true. In this section an attempt is made to select out of this period a number of events that have had a direct or important bearing on the relationship of general practice to hospital medicine.

One point that is often forgotten is that compared to the hospital service the introduction of the N.H.S. meant, as far as general practice was concerned, an extension of an existing scheme (the panel system) rather than the introduction of a radical change. Free medical care was obtainable for all the population instead of the wage-earners alone, and the G.P. built up a registered list of all his patients, except those who preferred to remain as private patients. Even the medical record card is familiar, for the one issued under the N.H.S. was virtually identical to the one introduced in 1920 for panel patients. The main change was the

introduction of a box on the envelope labelled "date of birth" instead of the eccentric entry on the original envelope which reads "age at first attendance and date of first attendance" - an entry which has exercised the mental arithmetic powers of G.Ps since 1920.

The most profound change in general practice was the abolition of the sale of goodwill, a regulation that caused a great deal of bitterness, whatever its merits. Plans for improving G.P. premises by the widespread introduction of health centres were unsuccessful. Distrust between general practitioners and the government, particularly over the sale of goodwill, grew steadily in the first years of the N.H.S. In the absence of radical change in the field of clinical care and clinical organisation the political activities of G.Ps were concentrated on disputes over pay and little else. Many who were involved in medical politics found the Annual Conference of Local Medical Committees with its strident demands for more pay and its relative lack of interest in improving clinical standards an unhappy experience. Even if there was often justice in the claims of general practice, the constant bitter wrangling over money gave general practice a poor image, and this was perceived by students and junior doctors. From the wards of the hospital, medicine outside looked unattractive, and recruitment for general practice, high at first because of the large number of demobilized doctors from the Armed Services, rapidly fell away. Advertised vacancies in general practice in the first few years of the National Health Service, particularly in popular areas, would attract twenty, fifty or even more applicants. By 1960 the number of applicants dwindled to single figures, and in some areas it was impossible to recruit new entrants to general practice. In a time when post-graduate training was increasing in scope, and the acquisition of post-graduate qualifications was essential for any career in the hospital service, the

absence of any formal post-graduate training for general practice and the very ease with which it was possible to enter a vacant post made general practice unattractive as a career to younger doctors.

In 1950 an Australian doctor surveyed general practice under the N.H.S. and produced a paper in which the standard of practice was attacked with a frankness that produced a state of shock (Collings 1950). There was no denying most of his strictures and he fastened on to the separation of the G.P. from the hospital as the main cause of what he saw as a deplorable state of affairs. Some of his criticisms are still valid today, but a recent attempt to repeat the shock effect of the Collings Report (Honigsbaum 1972) is less effective because of its obvious bias and inaccuracies.

Collings reinforced the view of general practice as it was seen from the teaching hospitals. The general practitioner was usually judged on the quality of his letters to the hospital, as this was often the only point of cnntact; and the standard of these was often poor (Forsyth & Logan 1968). His premises were often inadequate and, for the first few years of the N.H.S., he was unable to obtain access to ordinary laboratory investigations. The increasing importance of the latter in the management of patients was a fact that had been appreciated by the G.P. in his days as student and houseman and then, when he entered general practice, he found himself unable to order laboratory investigations that he had ordered as a matter of course as a junior hospital doctor. When open access to laboratories became established, many general practitioners had lost the habit and their interest had atrophied. It was therefore several years before general practitioners began to use laboratories and undertake investigations of their patients on a large scale. Even now, a majority of investigations are undertaken by a minority of general practitioners,

mostly younger members, but the intelligent use of laboratory investigation by general practitioners is increasing rapidly (The General Practitioner in the Hospital 1972).

One other factor that has hindered the development of general practice, and has received little attention, is medical records. It was particularly unfortunate for general practice that there was in existence in 1948 a medical record envelope that was invented in 1920. It is still in use fifty years later. The old pretence that the good general practitioner could carry in his head all the details of his patients' lives and illnesses was probably always a myth; it is certainly not true today, and even if it were, the G.Ps supposedly infallible memory was not available to his partners when he was off duty, on holiday, sick, or dead. What is more important in the context of this thesis is that the absurdity of pretending that the medical record envelope can serve as a proper record of all aspects of a patient's medical care has been obvious to anyone who entered general practice and thought about the subject. Poor medical records have been a major factor in hindering the improvement of general practice. The prospect of a real improvement by 1974 is in sight, but the author has particular reason to know how difficult it has been and how long it has taken to produce reform in an area where reform was clearly long overdue (Hawkey et al., 1968 & 1971).

There is therefore ample evidence that the standard of care in general practice taken as a whole in the first ten to fifteen years of the N.H.S., was seen to be low, at least by the medical profession. Of course the quality varied widely, as it always had, but G.Ps tended to be on the defensive and often to admit, privately if not in public, that they had a low opinion of themselves. Oddly enough the people who, on the whole, had a higher opinion of general practice were the patients

(Cartwright 1967). But from the point of view of the relationship between G.Ps and consultants, the image of general practice was as poor and the gulf between the two branches of the profession wider than it ever had been.

In contrast to general practice, the introduction of the N.H.S. really did provide a revolution in hospital care; to a much greater extent it meant a clean start, and the impetus given to hospital care led to a rapid increase in the amount and quality of care and an even greater emphasis on the importance of the hospital in medical care.

"The development of widely available consultant specialist services has been perhaps the greatest single achievement of the N.H.S." (Brotherston 1971). The hospitals may have lagged behind in the period before the N.H.S., but after 1948 they caught up and rapidly overtook general practice.

To some extent, disillusionment followed in the hospital service. Aneurin Bevan's firm belief that expenditure on the N.H.S. would drop, because free treatment would lead to such an improvement in health that sickness would decrease, was seen to be as false as it was naive. Soon it became obvious that hospital care was expensive and the money for it was limited. Enoch Powell in 1966 suggested that the demand for medical care was limitless, or at least that the demand was greater than the taxpayer would ever be willing to meet. It followed, in his view, that some form of rationing in the form of waiting-lists or queues for out-patients was inevitable and necessary. This view upset many people at the time, for it seemed that life and health were too precious to be at the hazard of lack of money now there was a National Health Service. Now it is easier to accept, in the jargon of today, that "resources for health-care

are limited and their allocation must be determined by a due consideration of priorities". A hundred years ago G.Ps and specialists were in competition for private fees. Now they are apt to find themselves in competition for "allocation of resources". When a branch of the professinn puts in a claim for change or improvement in clinical care it can no longer assume that economics is none of its concern; a claim has to be presented in both clinical and economic terms. Gradually this has been recognised by everyone in the medical profession.

At the beginning of the N.H.S. the consultants who had been appointed as honoraries before 1948 had some experience of general practice, because of their dependence on the general practitioner for their income. The financial link meant there was some mutual understanding. After 1948 this dependence was removed and as the older consultants died or retired a new generation of consultants came whose contact with general practice was slight. Apart from private work and domiciliary consultations, the sole experience of general practice is often a short attachment as a student and the experience gained by reading the G.P's letter at out-patients, so that the gap between the hospital service and general practice has grown wider. But the continuation of general practice was recognised as a necessity by the hospitals as the waiting-lists grew longer and out-patients more crowded. It would be impossible if general practice disappeared and the whole load of medical care descended on the hospitals. Yet at one time, particularly around 1955 to 1960 it looked as if the future of general practice was doubtful. Then, for reasons which are still far from clear, morale in general practice began to improve; health centres were built and the demand for them has increased rapidly. Simultaneously the number of applicants for posts in general practice increased in number and in quality, and a beginning has been made

in the organisation of a formal post-graduate training for general practice. Many of these changes have occurred so recently that it is impossible to forecast the long term results. The main factor in the change was probably the foundation of the College of General Practitioners. Deliberately it kept clear of medical politics and disputes over pay and concentrated on research and post-graduate training. By doing so it took a calculated risk that the support it could lose by ignoring the financial disputes would be outweighed by the respect it would gain as a professional college. The risk was justified. The Royal College of General Practitioners has become the centre of the renaissance in general practice.

It could be argued however that the Royal College of General Practitioners is as much a result of a new interest in general practice as the cause. If that is true, other factors must be responsible which it will be easier to assess from a better distance in the future. For instance there has been some disillusionment in the Hospital Service with the feeling that the N.H.S. is starved of money. The rate of new hospital building has been disappointing and the amount of work has increased, both in-patient and out-patient. In the peripheral hospitals away from teaching centres where it may be difficult to get junior staff, consultants who have worked long hours as junior hospital doctors now find themselves working harder. For the houseman aiming at a career in the hospital service there is the prospect of intense competition, higher examinations that are difficult, many years of moving from one area to another in junior posts and no certainty of a consultant appointment. Even if a consultant post is obtained it may not necessarily be in the area of choice and there may be the prospect of long hours and the difficulty of attracting junior staff of good quality.

In contrast, general practice offers security, a wider choice of area and an income that compares favourably. From the material point of view a hospital career offers little that cannot be matched in general practice. But even more important, and possibly a major factor in the renewed interest in general practice, is a notable change of attitude in the young. With the reduced interest in the physical sciences there has been an increase in interest in the social. A desire to be involved and concerned with people and with social circumstances is fashinnable and though the aims and motives may be vague they are real. With this change goes an intolerance of authoritarianism, and a dislike of a rigid hierarchical structure of the kind found in teaching hospitals. The non-hierarchical structure of general practice and the greater concern with people, with families, and with social conditions in general practice, makes it more attractive to many school leavers taking up medicine. Some tendency of this kind has been noted and remarked on by many concerned in the teaching of medical students.

Another stimulus to improvement in general practice was the negotiations between the G.M.S.C. and the Minister of Health over the "G.Ps charter". The Minister of Health at the time, Mr Kenneth Robinson, came to the Ministry in 1964 informed on, and interested in, medical affairs, particularly general practice. The charter was published in 1965 as "A Charter for the Family Doctor Service"; it formed the basis for new and improved contractural arrangements between the Ministry of Health and general practitioners.

Because the changes in attitude in general practice are recent, and the extent of these changes not accurately known, the effect on the future of medicine in the United Kingdom is uncertain. One aspect of medical care that may influence the choice of career in the future is the

access of the general practitioner to hospital beds. Is the extent of this likely to increase or decrease?

The G.P. and hospital beds.

In the early nineteenth century the G.P. was not distinguished from the consultant solely, or even mainly, by the question of access to hospital beds. Indeed apart from the status attached to an honorary appointment, hospital beds were of little importance. Patients could be treated, operated on, or delivered as safely, at home as in hospital (Brotherston 1971). When the G.P. was concerned with in-patient beds it was either because he was an honorary in one of the smaller provincial towns or because he was appointed medical officer to a local authority hospital. As provincial hospitals grew larger the G.P. honorary was gradually replaced by the fully-fledged consultant, although he remained in a few places until 1948. Likewise, appointments in local authority hospitals dwindled as more and more full-time medical officers were appointed.

But there was one place where the G.P. started and remained, and that was the Cottage Hospital. The first of these was established in Cranleigh in 1858 by Dr Albert Napper. A claim for seniority by Teignmouth hospital (founded in 1851) can be dismissed for reasons given by Dulake (1971). Teighmouth hospital did not conform to the clear ideas laid down by Napper, who meant by "Cottage Hospital" literally a cottage, with an optimum of six beds "identical to the homes from which the patients were drawn differing only in cleanliness, warmth, proper hygiene and absence of overcrowding". The reason for them is clear. They were to serve rural areas - villages and small towns - from which it was difficult or impossible to transport the sick to the nearest Infirmary. Moreover the Infirmaries

were often feared by the rural population, and not unreasonably in view of their high mortality. The idea of the cottage hospital was to allay fear by making it homely as well as providing some sort of hospital care where none was available before. The idea was popular; within seven years sixteen had been built, conforming to the criteria of Napper.

After that the term Cottage Hospital was used more loosely to describe any hospital in a village or small town that didn't merit the description of Infirmary. Wantage Hospital, for instance, was first sited in a large late Victorian house, now the office of the Rural District Council and was opened in 1886. A Mr Percy Smith of Letcombe Bassett, who died in 1883, left the sum of £5000 "for the establishment and maintenance of a Cottage Hospital (sic) for the poor and sick inhabitants of Wantage and its neighbourhood, including particularly the township of East Hanney and the parish of Letcombe Bassett. A newly erected and suitable house in Belmont (a part of Wantage) was purchased ... The institution is in the hands of a Committee of influential residents and is excellently conducted" (Wantage Past and Present by Agnes Gibbons 1901). In 1927 the hospital moved to its present site and was built specifically and recognisably as a market town hospital but it retained the name of Wantage Cottage Hospital and only in the last few years has the habit emerged of omitting the word Cottage. "Cottage Hospital", therefore, came to mean quite simply a rural hospital, generally of small size varying from six beds to forty or fifty but generally cnntaining about twenty. It was always undisputed general practitioner territory and has remained so. As such it remained an uncomfortable anomaly when the N.H.S. was introduced.

From 1948 the policy was clear; hospitals would be administered by Regional Boards, with the exception of the teaching hospitals which retained their autonomy. But all hospitals should be staffed and controlled

by consultants in the hospital service. The only exception was the "cottage" hospitals which came under the Regional Boards but were staffed by the general practitioners, although the nursing staff were appointed, paid, and administered by the appropriate Hospital Management Committee. This led to the situation of group practices such as those in Wantage having local authority nursing staff attached to their practices, and across the threshold of the hospital door, hospital nursing staff employed by the hospital service. The two could not be interchanged, or share in the general nursing duties of the area. Only very recently in two areas (Peppard and Wantage) has the barrier between the local authority and the hospital service been removed. At first, in Wantage, the local authority midwives came in and took over the obstetric unit in Wantage Hospital and more recently, in August 1972, the nursing leader of the local authority nursing staff in Wantage (who was also a health visitor) was appointed as Nursing Officer (or Matron) of Wantage Hospital and at the same time retained her post as nursing leader. It was the first appointment of its kind.

From 1948 onwards the future of cottage hospitals was in doubt. Apart from the administrative discomfort of something anomalous that does not fit neatly into the hospital system, they had acquired a questionable reputation. Prior to 1948 the dominant activity was surgery; it always had been. Partly, no doubt, this was because surgery offered effective treatment that could not be given at home when medicine had little to offer and even less that required hospital care. Some of the surgery was done well and competently, and the G.P. surgeon could acquire wide and profound experience. But there was no check on the G.P. who was over-ambitious and either did not realise or refused to accept the limitations of his skills. The experience of consultants in the E.M.S. concerning

cottage hospital surgery convinced them it should be stopped (Brotherston 1971, Abel Smith 1964, Royal Coll. of G.Ps 1971) and their views were known to the Ministry of Health. Apart from surgery, it was felt that in some Cottage Hospitals there was a tendency to use the beds for very long term care of chronic illness with the general practitioner visiting only at infrequent intervals. This use of G.P. beds was condemned as a second class geriatric service. The bad reputation of G.P. hospitals in some quarters was based on these suspicions but it was not known to what extent the reputation was justified. G.P. hospitals remained isolated and cut off from the mainstream of hospital care. The consultant was unable to come and see unless invited and he was seldom invited, partly because there was a defensive reaction that if a consultant came he would want to "take over" the whole hospital. This fear, whether justified or not (and there is no evidence to suppose it was) was commonly expressed. G.P. hospitals remained as institutions which were usually valued locally, but from the distance of Regional Boards and the Ministry of Health, often regarded as anachronisms which it was unfortunately not politically expedient to abolish.

Oddly enough, a large number have survived. In England and Wales there are about 400, but Dr Emrys Roberts, the founder and Chairman of the Association of General Practitioner Hospitals, found that no-one at the Department of Health seemed to know exactly how many there were, let alone what work they did (Emrys Roberts 1972). The 400 are oddly distributed.* In spite of their rural origin they are not confined to rural areas. The highest concentration in one small area is in the suburbs of London to the west and south.

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* See Appendix 1.

These remaining G.P. beds, the descendants of the cottage hospitals and the smallest provincial hospitals are playing a part in the hospital service that is largely unknown. In most of them general operative surgery has gone, although post-operative care of early discharge patients from district general hospitals continues. Most admissions are medical admissions, but few admit children. Some of the hospitals are purely obstetric, and some contain both acute and obstetric beds. Most contain acute (or general) beds only and the future of obstetric care in G.P. units far removed from consultant units may be in doubt since the publication of the Peel Report.

It is against this historical background that the potential and the actual use of general practitioner beds is examined in this thesis, and the use of general practitioner beds hinges upon the relationship between G.Ps and consultants and the role of each in the care of patients.

CHAPTER 2

THE RADCLIFFE INFIRMARY

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Table 2. Alternative Care and Age.

INTRODUCTION

In the autumn of 1969 the author was invited to undertake a survey of in-patients in the Radcliffe Infirmary, Oxford. A steady increase in the number of admissions in the Oxford area had not been matched by an increase in the number of beds. Between 1958 and 1968 the annual admissions (to the U.O.H.) had increased by 50.86% from 27,600 to 51,151 and the annual turnover per available bed had increased by 36.93% (Oxford Regional Hospital Board 1969). As a consequence shortage of beds was causing serious concern. The medical and nursing staff believed the length of stay had been reduced as far as it was possible to reduce it, and the average length of stay in 1969-70 for medical patients (10.6 days) and for surgical patients (8.2 days) was the shortest of any teaching hospital in England and Wales. Nevertheless there was the possibility that a general practitioner might, by surveying in-patients from the point of view of a doctor working outside hospital, be able to suggest ways of reducing the in-patient load. If there were such a possibility, it would probably be realised by methods involving the co-operation of hospital staff and general practitioners.

During the months in which the survey was planned the original plan, which was simply to explore the possibility of bed-saving by earlier discharge, was extended. In effect, the plan of the survey in its final form was to examine a number of hypotheses. These were:-

1. That a certain number of in-patients remained in the wards longer than necessary and could be discharged earlier.

2. That if all the general practitioners in the area had access to hospital beds, a substantial number of consultant beds would be saved. This could occur either through the direct admission of patients to G.P. hospital

care instead of consultant care or by the early discharge of patients to G.P. hospitals as a stage on their way back home.

3. That the amount of alternative care that could be undertaken in a G.P. hospital would be larger if the hospital were situated in the grounds of a consultant hospital than it would be if separated by a distance of some miles.

It was considered by the staff in the Radcliffe Infirmary that the standard of general practice in the Oxford area was high and the relationship between consultants and general practitioners was good. A recent survey (Oxford Regional Hospital Board 1969) in the region had demonstrated that two-thirds of the G.Ps in the Oxford area had expressed a willingness to undertake the care of "very early discharge patients". It therefore seemed unlikely, before the survey began, that further bed-saving by early discharge was going to be possible. Local conditions were such that the use of early discharge as a method of alleviating the shortage of beds could, and presumably would, have been put into operation already. In many ways this made the Radcliffe Infirmary at that time an ideal place for such a survey.

The survey, therefore, was concerned with the alternatives to consultant in-patient care, and the alternatives came under two headings:-

1. General practitioner care at home
2. General practitioner care in G.P. units

The important practical difference between them was simply that the first was an immediate practical possibility while the second was a theoretical exercise because it was only a minority of G.Ps in the Oxford area who had access to G.P. beds; moreover there was no immediate prospect of a substantial increase in G.P. beds.

In addition, part of the survey was concerned with factors that

delayed the discharge of patients and therefore contributed to the bed shortage. Most of these were administrative delays arising out of the complexity of the activities of a large teaching hospital but they have no immediate bearing on this thesis and will not be considered here.

The results of the survey were published in full in a booklet entitled "The demand for hospital care. In-patient care: alternatives and delays" (1970), and the account that appears here is a summary of part of the survey.

METHOD

When the survey was planned it was clear that the data required would have to be obtained on the wards, and would have to be based on an unselected group of consecutive admissions. The questions to be answered about this group were as follows:-

1. How many patients did not need hospital admission and could have been managed at home?
2. Alternatively, if admission to hospital was necessary, how many could have been admitted to a general practitioner unit where admission and clinical care is decided by the patient's general practitioner?
3. How many patients could have been discharged home earlier?
4. How many could have been discharged earlier to a general practitioner unit?

The information required to answer these questions was obtained on the wards, partly during ward-rounds and partly by discussion with medical and nursing staff, and was recorded on forms designed for the purpose. The data recorded included the patient's name and age, provisional and final diagnosis, date of admission and discharge, date on

which early discharge home could have occurred or early discharge to G.P. unit, whether the patient could have been managed at home or admitted to a G.P. unit instead of being admitted to the Radcliffe Infirmary, progress while in the ward (including any factors causing delay), whether admitted from waiting list or as an emergency and the final place to which the patient was discharged.

In order to record these details for every patient, every ward was visited at least once a day and sometimes more often (if the ward was admitting emergencies, for instance). New admissions were entered on the day they arrived and checked against a daily list supplied by the admissions office, and the progress of the remaining patients was assessed each day until they were discharged. Nursing staff and junior medical stall rapidly learnt what information was required and were outstandingly helpful in providing it. Equally important was the readiness of the staff to discuss freely and informally the problems associated with admissions, delays and the discharge of patients.

Although the patients were <u>seen</u> by the author they were <u>not</u> <u>interviewed</u> by him because of the danger that questions about early discharge and delay coming from an unknown doctor could have disturbed the equanimity of the patients and interfered with confidence between patients and hospital staff. In most instances the answers to the four questions were not difficult; in a few it was more difficult, but only in about 5%. In those cases where the answer was borderline or where it was disputed it was decided <u>not</u> to include the case as one suitable for alternative G.P. care. This was a deliberately cautious decision in a survey where the data depended on subjective assessment and not on precise objective criteria. As a result the data obtained were more likely to be an underestimate of alternative care, and not an exaggeration. In addition, where

the amount of bed-saving by earlier discharge would be trivial in proportion to total in-patient stay - for instance a saving of one or two days in a total stay of two or more weeks it was not recorded; to have done so would have been to produce a spurious impression of the number of patients who were unnecessarily delayed in hospital, and would have consisted of recording trivial amounts of bed-saving that, for administrative reasons would often have been of no use.

The method of calculating the number of bed-days that could be saved is illustrated in the accompanying diagram (Fig. 1).

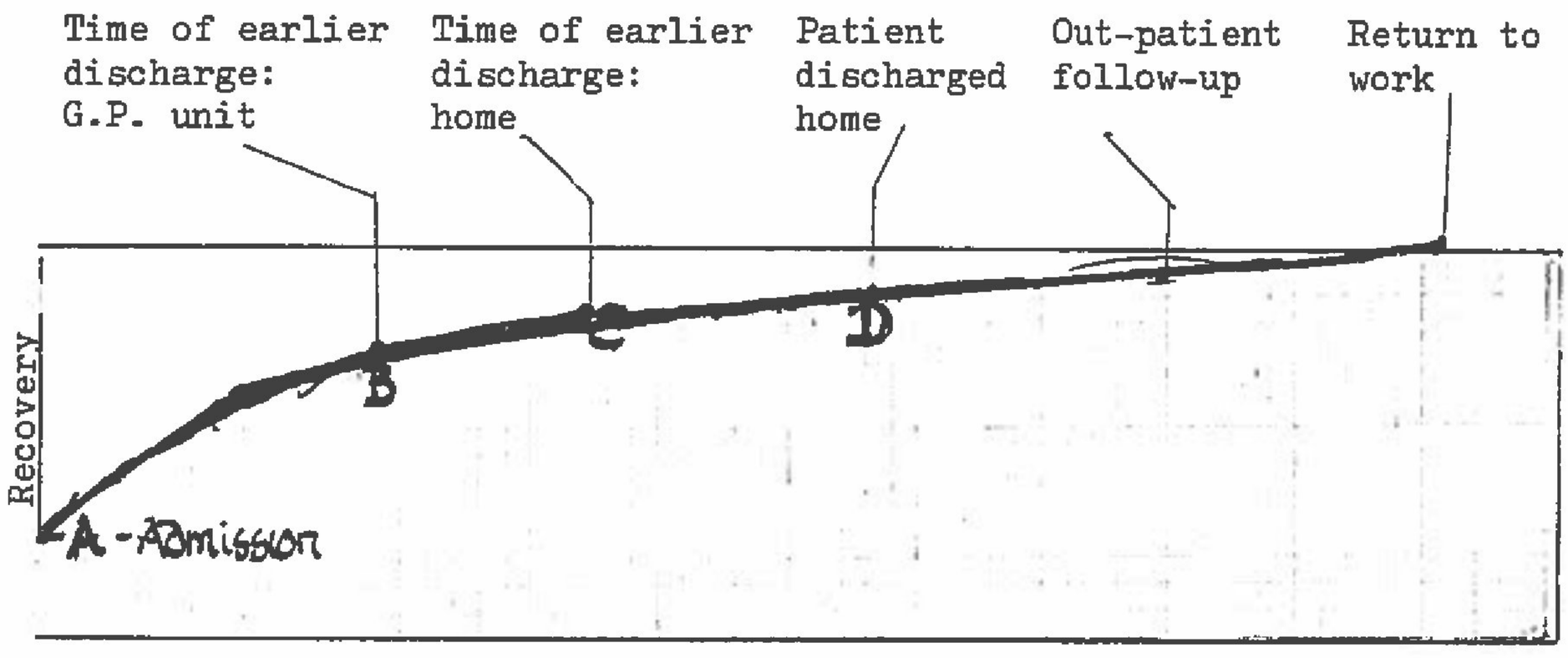


Fig. 1. Diagram to illustrate the calculation of bed-saving by earlier discharge.

The diagram illustrates the recovery of a patient from an "average" illness or operation. Point D is the point at which the patient was actually discharged home and point C the point at which he could have been discharged home. C-D would represent the bed-saving by earlier discharge home and B-C (not B-D) the bed saving that would result from earlier discharge to a G.P. unit. If the patient could have been cared for altogether in a G.P. unit as an alternative to admissions to consultant care the bed-saving would be represented by the whole in-patient stay, that is A-D.

The total bed-days saved by earlier discharge home (C-D) would be less if G.P. units were more widely available than they were under actual circumstances at the time. The reason is simply that some of the patients assessed as capable of being discharged home earlier were also assessed as being suitable for alternative admission to a G.P. unit.

It should be added that where it was recorded that a patient could be discharged home earlier it was always ensured that such a plan was feasible from the home point of view. Patients delayed in hospital solely because there was no-one to care for them at home (so called "social-delays") were not included in the data for early discharge.

The results of the survey depended on the subjective assessment of whether a patient would have been suitable for general practitioner instead of consultant care for all or part of his actual stay in the Radcliffe Infirmary. This assessment could either be carried out by two or more G.Ps, possibly with the assistance of ancillary staff from general practice, or by one general practitioner alone making decisions from what he conceived to be the average general practitioner's point of view. A group of investigators might have had the advantage of diluting the risks of idiosyncratic views and bias, inherent in the assessment by a single investigator. But for reasons implicit in the planning of the survey it was decided that a single-handed approach was wiser. Many of the questions that needed to be asked would be, or seem to be, potentially critical. An informal approach to the hospital staff would be needed and it was essential that the investigator should try as far as possible to be a tactful but persistent individual, observing what was going on and quietly taking notes, but not a disruptive influence who might disturb and alter what he was trying to observe while he was on the wards. It seemed likely that this kind of approach might be possible with one general

practitioner but much more difficult with a group of investigators.

The scope of the survey had,therefore, to be limited and was confined to general medical and general surgical wards.

RESULTS

The results of the survey are shown in Table 1. They were based on 602 consecutive admissions during March 1970. 370 of the admissions were medical and 232 surgical.

The results show the estimated saving (measure as number of patients and number of bed-days) as a result of:-

1. Treatment at home or admission to a G.P. unit as an alternative to admission to consultant care.
2. Early discharge, either home or to a G.P. unit.

DISCUSSION OF RESULTS

Alternatives to admission

With so few exceptions that they can be disregarded, all the patients in the survey were considered to need hospital admission. For surgical patients, consultant hospital admission was necessary in 97% of admissions. Only for 3% (all short stay admissions of a day or two for minor surgery) was the alternative of admission to a G.P. unit considered feasible.

For medical patients the picture was entirely different. Approximately 1 in every 6 admissions (16%) could have been cared for entirely in a general practitioner hospital if one had been available, with a saving in terms of consultant hospital bed days of 20%. This was the most striking result to emerge from the survey and it was responsible for the decision to carry out the Wantage Survey.

Table 1. RADCLIFFE SURVEY

Medical Patients

		Patients		Bed-days	
		No.	%	No.	%
Total Numbers in Survey		370	100	4127	100
Alternative to admission	Home	3	0.8	22	0.5
Early discharge	Home	48	13.0	325	7.9
	Total	51	13.8	347	8.4
Direct admission to G.P. Unit		60	16.1	787	19.1
Early discharge to G.P. Unit		41	11.1	441	10.7
Early discharge	Home	32	8.7	229	5.5
	Total	133	35.6	1457	35.3

Surgical Patients

		Patients		Bed-days	
		No.	%	No.	%
Total Numbers in Survey		232	100	1927	100
Alternative to admission	Home	0	0	0	0
Early discharge	Home	16	6.9	47	2.4
	Total	16	6.9	47	2.4
Direct admission to G.P. Unit		7	3.0	19	1.0
Early discharge to G.P. Unit		53	22.8	368	19.3
Early discharge	Home	16	6.9	47	2.4
	Total	76	32.7	434	22.7

The number of patients for whom earlier discharge home was possible would be reduced if G.P. Units were available in sufficient numbers. The reason for this lay in the fact that some patients classified as suitable for early discharge home from consultant care would, if G.P. Units had been available, have been direct admissions to G.P. care and would not, therefore, have occupied consultant beds at all. This applied only to medical patients - not surgical.

If the result was striking it was because it caused some surprise. The fact that it did so is in itself interesting, because it illustrates how firmly the habit has become established of thinking that hospital care and consultant care are synonymous. Of course they are not, and the fact that a patient needs admission to hospital does not mean that he also and necessarily needs specialist care. The factors on which medical admissions to hospital may be selected for consultant care on the one hand and G.P. hospital care on the other were investigated in the Wantage Survey. But the reasons for the habit of equating all hospital admission with the need for consultant care are primarily due to the historical origin of the pattern of medicine in this country.

Early discharge as an alternative: surgical patients.

For surgical patients the amount of bed-saving that would have been possible by earlier discharge home was small; 7% of patients but only 2% of bed-days. Yet the interesting fact was that any bed-saving was possible. It was no exaggeration to say that the surgical staff were overworked and constantly concerned with the shortage of beds. They were also continually worried that they might be sending patients home too soon. The significance of this feeling, which to a great extent was shared by the physicians, is considered below.

If, on the other hand, sufficient G.P. beds had been available to accept the early discharge post-operative cases, the saving in surgical beds could have been much larger. It was found that 23% of the patients could have been discharged to a G.P. unit with a saving of 19% of bed-days. In more practical terms, however, this bed-saving could not have been utilised under the prevailing circumstances. There was a large waiting-list of patients ready to come in to any vacant beds, but if the

beds had been available the theatre time would not have been. Nor, if the turnover of patients had been substantially increased, would the medical and nursing staff have been able to cope with the extra work.

In general, surgical patients need most attention from doctors and nurses in the first two days of admission. After that the attention they need decreases as they enter the convalescent phase - a stage at which they would be suitable for transfer to G.P. units. A certain number of convalescent patients on a ward are a hindrance only if the theatres are idle and the staff underworked. If the theatres are occupied day and night, and if the medical and nursing staff are working at their maximum capacity, convalescent patients are a protection against a breakdown of surgical services. They were tacitly recognised and valued as such on the surgical wards. Even if a large number of G.P. beds had suddenly become available it is unlikely that the surgeons would have been able to use them to maximum effect. They would have been faced with the alternative of empty beds or a breakdown of the whole complex system on which a surgical service depends. The practical implications of this in terms of hospital planning are important.

<u>Earlier discharge as an alternative: medical patients.</u>

For medical patients the prospects of bed-saving were more appealing and just as urgent. Lack of sufficient medical beds was illustrated by the frequency with which emergency admissions had to be "farmed out" on the wards of other departments in the hospital. They were (and still are) known as "outliers". The disadvantages of "outliers" from the point of view of the patients, the staff, and the general smooth running of the hospital are discussed in the full report.

The reason why the prospect of increased early discharge for medical patients was more appealing than for surgical was the absence of any

practical difficulties. The empty beds that resulted could have been used without the consequences that would result in the case of surgery; the "outliers" could have been accommodated in their right territory and the increased turnover could have been managed with the prevailing services available in the hospital. Moreover some of the bed-saving could have been put into effect at once because it consisted of earlier discharge home (as an immediate practical possibility) for 13% of patients and 8% of bed-days. The latter was the equivalent of saving half the beds of one medical ward. In terms of cost it was estimated that the saving from this one measure alone would have amounted to approximately £50,000 a year.

The obvious question that arises is why, if there was such a bed-shortage, were the patients not discharged earlier? The answer lies in the difficulty experienced by hospital staff in assessing the appropriate time. The explanation of this difficulty is comprehensible only in terms of the division between general practice and the hospital service. The best way to illustrate this is to consider the procedures of admission to hospital and discharge from hospital as they were observed during the Radcliffe Survey.

Discharge and admission contrasted

Admission to hospital requires an admissions department with full time staff, although the criteria for admission are usually clear and not disputed. The procedure of admission at the Radcliffe Infirmary was highly organised, impressively efficient and flexible enough to cope with rapid changes in the bed-state.

By the time the patient arrived on the ward he would have seen at least two doctors, have a folder of notes, and some of his treatment

would have been planned. It is not surprising that few patients in the survey were found to be unnecessary admissinns because they had all passed, as it were, through a series of filters that effectively keep out of the wards any patients who can be treated at out-patients or at home.

Nevertheless the number of patients needing admission rose every year, and this rise was not balanced by an equivalent increase in beds, in nursing staff or in medical staff. When suggestions are made about reducing the shortage of beds they nearly always concern admissions and how they can be reduced, or beds and how they can be increased. Relatively little thought is given to length of stay and the possibility of earlier discharge home. There are several reasons that may explain this.

1. The first is the fact that the average length of stay had become shorter. It seemed impossible to shorten it any more, until one remembered that the same belief had been held every year for years past.

2. The second was the knowledge that reducing the length of stay may help the bed shortage but it may not help the staff shortage. Empty beds attract patients and the new patient means more work than the convalescent. This applied to surgical patients.

3. The third reason was that it's very difficult to know how soon a patient can leave the hospital if the hospital staff know little or nothing about the care of patients in general practice. This was the important reason, although it is seldom recognized in hospital. It explained the lack of importance given to the procedure of discharge, and it explained the contrast between the highly organised efficient procedures for admission and those concerning discharge.

Discharge decisions and procedures

Either the consultant, the registrar, or senior house officer made the decision that a patient was able to go home, but it was rare for a consultant to insist on making this decision himself for all his patients. The decision, when it was made, was likely to reflect the attitudes, policies and traditions of the firm and the temperament of the person making the decision, but it rarely followed any consistent plan or policy for the hospital as a whole.

There was no reason why there should have been a consistent policy, and no reasonable objection to delegating the responsibility for discharging a patient. But whoever took on this responsibility did so in the knowledge that responsibility for the patient's subsequent care lay with the general practitioner as soon as the patient arrived home. The episode of in-patient care was one episode in a patient's medical history, sometimes the only major one, but often one short event in a long-term illness. The act of handing over care from hospital to general practice was therefore one of great importance that should have merited care, thought, and a reasonably foolproof procedure. What in fact happened at the time of discharge?

When a patient was due to leave hospital, a discharge note was supposed to be sent out a day or two before to the general practitioner. In practice this system failed very often, and the discharge note did not arrive at all, or it arrived late. This was well known by general practitioners in the area and was confirmed during the survey by a random check of the notes, waiting to go back to the records department, of recently discharged patients. In several the discharge note was still untouched, in the folder. After a few weeks the summary was sent. This is a very important record for the hospital as well as the general practitioner which

explains the care that was taken over it. It was not, and was not meant to be, a part of the process of discharge. (See Appendix 5)

The discharge form was often difficult to read, and often difficult to interpret because of fashionable abbreviations which may have been commonplace to junior staff but not necessarily to general practitioners, or to staff in other departments of the hospital. In a few cases the general practitioner was telephoned, but this was not a recognised regular part of a houseman's or registrar's duties.

Why should the process of handing the care of a patient over to his general practitioner have been so haphazard and demonstrably inefficient? Mainly, because it meant dealing with the unfamiliar territory of general practice; there was often a noticeable hesitation to share responsibility with the unknown general practitioner.

Once the patient had been admitted the tendency was to keep him in hospital until the stage had been reached where he could go home and survive the interval to the follow-up visit at out-patients without any medical attention except a medical certificate and a repeat prescription. The follow-up at out-patients was as often as not quite unnecessary: a fact often recognised by the patient who might have a brief interview with a new houseman who was a total stranger to him.

The desultory nature of discharge procedures, and the unnecessary return to out-patients were evidence of the failure of the hospital to share responsibility with the general practitioner.

During the survey, questions were asked of junior and senior members of staff about group attachment of nurses, midwives, and health visitors, appointment systems, access to X-ray and pathology departments, and other aspects of clinical organisation and administration in general practice. The answers showed an almost total lack of any knowledge of

present trends in general practice by a majority of the staff.

Unfortunately, hospital staff were seldom aware that this lack of knowledge was partly responsible for the shortage of beds and the over-crowded out-patients department. If the doctor in hospital considered the general practitioner he was faced with an element of doubt when discharging a patient. If the patient was sent home early would he receive adequate care, or would he be neglected? The understandable reaction was to keep the patient in longer, and the more hazardous or unusual his illness the greater the feeling of personal responsibility towards the patient and the less likely that early discharge would be contemplated.

One point was raised again and again by hospital staff. It was stated that the main objection to early discharge and shared responsibility was the fact that a minority of general practitioners could not be trusted to care (in any sense of the word) for their patients. This was not disputed, for any profession will have members who vary in quality, and, as this is always likely to be true, it seemed unreasonably optimistic to wait for the day when perfection existed in general practice - for this was the implication. Moreover, it was sometimes difficult to know the basis on which general practitioners were judged, for it's probably very difficult to judge the ability of a colleague in a branch of the profession of which one has no working experience.

Faced with the necessity to decide when the patient can go home, the hospital doctor making the decision usually felt he had to compromise. The necessity to make room for other patients forced him to send some patients home earlier than he wanted to. No one liked having to compromise, and this was revealed by the constant remark (mainly by surgeons) 'we send our patients home too soon'.

In spite of the feeling that patients were sent home too soon there was not a single instance in which, from a general practitioner point of view, this was found to occur during the survey. What did happen, however, was that patients were discharged to G.P. units in the area on many occasions at a stage when they could have been sent home. The value of G.P. units in providing early discharge care was therefore diminished. The evidence for this was derived partly from the survey but to a greater extent from the personal experience of the author working in a G.P. hospital. Quite often a patient is discharged to the G.P. hospital (particularly after a straightforward surgical procedure) at a stage when it is quite clear to the G.P., and equally to the patient, that he could be safely managed at home and visited there by the G.P. and the practice nurse. The situation can be mildly embarrassing. The patient has been told, usually quite forcibly, that he must have another week in hospital. He is loth to disregard orders backed by such high authority, even if they conflict with common sense, and the G.P. may be unhappy at the prospect of giving an opinion in direct conflict with his hospital colleagues. Yet, if the patient stays a valuable G.P. hospital bed is blocked and the patient is restive or even homesick. If common sense prevails and the patient goes straight home the fact that this has occurred sometimes filters back to the consultant hospital. If this happens the consultant or his juniors may conclude it is evidence that the G.P. hospital is unpopular or an unsafe place for early discharge and confidence between the two is damaged.

This kind of situation is not of great importance in itself, but it does provide a vivid illustration of the lack of understanding at an everyday clinical level between the hospital service and general practice, and of the consequences that result. It is then easier to understand

the apparent paradox that even in an area that prides itself on good consultant/G.P. relationships the obvious and most straightforward remedy for easing the bed shortage in a teaching hospital was not used.

Age and length of stay

Studies of hospital in-patients usually show that older patients tend to stay longer in hospital than younger ones (for instance, Hospital In-patient Enquiry 1967).

This result was found in the Radcliffe Survey where patients were divided into the following groups according to age and length of stay:

1. Age:- Those under 70 and those aged 70 and over.
2. Length of stay:-

Short stay	0 - 4	days
Medium stay	5 - 14	days
Long stay	15 +	days

Figure 2 shows the results for age and length of stay. The proportion of patients aged 70 or over increased as length of stay increased, both for medical and surgical patients.

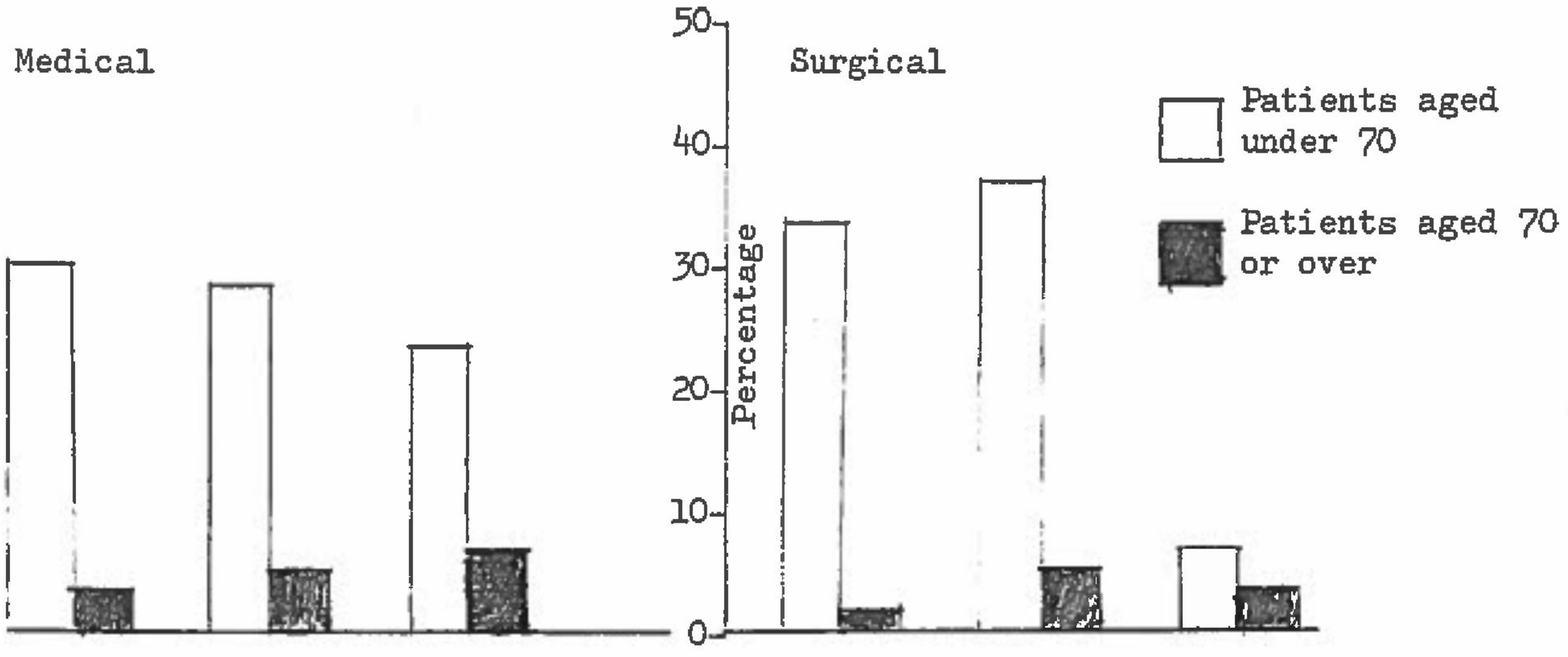


Figure 2. The survey population. Distribution in terms of age and length of stay.

(Columns, reading left to right: Short stay 1-4; Medium stay 5-14; Long stay 15+)

Alternative care and age

Alternative care is the term used to cover both early discharge (whether to home or to a G.P. unit) and alternative admission to a G.P. unit. How did the age of patients judged suitable for alternative care compare to the age of all patients in the medical and surgical wards?

The results are given in Table 2 in terms of two age-groups: those under the age of 70 and those aged 70 or over.

On both medical and surgical wards just over 80% of the patients in the survey were under the age of 70. Those who could have been discharged home earlier showed a similar distribution in age groups, whether medical or surgical.

Those who could have been discharged earlier to a G.P. unit were slightly older; 24% of the medical patients were aged 70 or over compared to 19% for all medical patients, and 19% of surgical patients were 70 or over compared to 16% for the total of surgical patients. These differences are not, however, significant.

The only group where a difference in age structure was significant were medical patients who would have been suitable for direct admission to G.P. units as an alternative to consultant care. 45% of these were aged 70 or over compared to 19% for all medical patients. Alternative admission to G.P. units would, therefore, lower the average age of admissions to consultant medical wards and, in doing so, shorten the average length of stay.

(All the surgical patients suitable for alternative admission to G.P. units were under 70, but the total number was small and the number of bed days occupied by these 7 patients was less than 1% of total surgical bed-days. This particular group was unimportant from the point of view of alternative care.)

Table 2. ALTERNATIVE CARE AND AGE.

The age distribution of patients considered suitable for the various categories of alternative care.

		Under 70		Age 70 and over	
		No.	%	No.	%
MEDICAL	All patients in the survey	300	81.1	70	18.9
	Early Discharge - Home	40	83.3	8	16.7
Alternative admission to G.P. Unit		33	55.0	27	45.0
Early discharge to G.P. Unit		31	75.6	10	23.4
Early discharge Home		29	90.6	3	9.4
SURGICAL	All patients in the survey	195	84.1	37	15.9
	Early Discharge - Home	15	93.7	1	6.3
Alternative admission to G.P. Unit		7	100.0	0	0
Early discharge to G.P. Unit		43	81.1	10	18.9
Early discharge Home		15	93.7	1	6.3

The only group in whom the age distribution differs significantly from the age distribution of all patients in the survey was the group: alternative admission to G.P. unit.

$$X_1^2 = 31.475 \quad P \text{ less than } .001$$

Alternative care and social problems

Discussion with medical and nursing staff during the Radcliffe Survey revealed a great deal of concern about one group of patients who were considered to be the main, if not the only, cause of serious delay in discharging patients and therefore the cause of "blocked" or wasted hospital beds.

This group was called "the social problems". They were more common and of more concern on the medical wards than the surgical but it was widely believed on both that if the problem of this group could be solved there would be no shortage of beds. The group of patients referred to have been recognized in a number of publications under various titles such as patients "delayed" or "stuck" in hospital, or long stay admissions (McIntosh, McKeown and Garratt 1961, McPhail and Bradshaw 1967, Meredith et al. 1968, Kemp 1969, Sutherland 1972).

Although the term "social" was not altogether appropriate, these patients were a homogeneous group in the sense that they could be covered by a simple definition: they were all patients who would have been discharged from the wards if it had been possible to do so, for it was recognized by the staff, both medical and nursing, that whatever kind of care was needed for these patients it was no longer a kind that should be the concern of acute medical and surgical wards. Some patients were judged to have arrived at the state of being inappropriate for acute wards a short time after admission, others after a longer interval. But, regardless of the length of time, the common factor was that they needed no longer the facilities of an acute ward, and their discharge was delayed until somewhere could be found for them to be discharged to.

From the staff point of view, they formed a single recognizable group as defined above; but they really fell into two fairly distinct groups which can be described as "domestic delays" and "transfer delays". The former were patients who could have been discharged home if there were robust relatives to care for them but the latter were either missing or unwilling. This group were usually not the most severely disabled. The transfer delays were patients who could not generally be looked after at home and would need further hospital care, either in a hospital for the

chronic sick, a geriatric hospital or a rehabilitation unit. A shortage of beds in these units was the cause of delay.

These were the so-called social problems.

A number of points should be made about them in relation to alternative care, because they are so often regarded as one of the major problems of acute hospitals.

1. The age of the "social problem" patients.
   They were, as might be expected, predominantly elderly patients. On the medical wards 62% were aged 70 or over compared to 19% of all medical patients. There were only 5 on the surgical wards, but 3 of these (60%) were aged 70 or over.

2. "Social problems" and early discharge home.
   As stated above none of these patients were included in the group of early discharge home.

3. Social problems and G.P. Units.
   If sufficient G.P. units had existed it was thought that many of the social problems would have been appropriate for care in a G.P. unit. This could either have occurred by their direct admission to G.P. units or by early discharge. As far as medical patients were concerned, out of the total of 29 classified as social problems, 15 could have been direct admissions to G.P. units and 8 could have been suitable for early discharge. The remaining 6 were patients in need of transfer from acute consultant wards to another type of specialised unit such as a rehabilitation centre and would not have been suitable for G.P. unit care. Of the 5 surgical "social problems" 4 could have been suitable for early discharge to G.P. units.

It was sometimes believed by the staff of the Radcliffe Infirmaty that the main role of a G.P. unit would be to care for social problem patients and relieve the burden of these patients on expensive teaching hospital beds. Although G.P. units could help substantially with a <u>majority</u> of the social

problems they would still form only a minority of G.P. unit admissions. As far as medical patients were concerned out of a total of 101 suitable for alternative G.P. care, only 23% were social problems, and out of 60 surgical patients only 8%.

4. The size of the "social problems".

How important were these patients as a cause of delay? As a cause of frustration on busy over-crowded wards they were perhaps credited with a greater ability to waste valuable bed-space than they deserved, and believed to be more numerous than they really were. On the surgical wards during the survey there were only 5 social problems out of a total of 232 patients - in other words about 2%. But it was on the medical wards where they were of greater concern. Here, the total number, 29, amounted to about 8% of all medical patients. Their average length of stay, however, was approximately 21 days and this amounted to 15% of medical bed-days. It was difficult to be precise about the number of bed-days that could be classified as "social delay", i.e. the number of bed-days that were occupied by these patients after the need for care in an acute consultant ward had passed. Many of these patients needed consultant care at first and then gradually passed on to a phase when consultant care was no longer needed but discharge from the ward was not possible; often, the exact time when the first phase passed into the second was not easy to decide. However it was estimated that, on average, out of the total stay of 21 days 10 days were days of social delay. On that basis the total number of medical bed-days subject to "social delay" in the Radcliffe Survey was 290. This was actually smaller than the number of medical bed-days that would have been saved by earlier discharge home - 325 bed-days. This, in terms of bed-days, was a measure of the extent of the problem.

THE RADCLIFFE SURVEY. CONCLUSIONS

The survey may be criticised on the grounds that the size of the sample was limited so that conclusions based on the relatively small size of certain sub-groups should be interpreted with caution. Moreover, the survey was limited to a period of one month and that month may have had unusual features as far as medical and surgical admissions were concerned.

The records for three previous years were studied for admissions to the wards on which the survey was carried out. The result of this study showed that in terms of age, length of stay, and numbers admitted there was little difference between the sample included in the survey and the totals for the three previous years. It is therefore unlikely that the survey sample was unrepresentative of the general run of medical and surgical admissions.

These criticisms might have had more force but for the fact that the results of the Radcliffe Survey were based on assessments rather than precise measurements. The line between clinical care in a consultant hospital and in general practice is often difficult to define and cannot be drawn precisely. Other general practitioners under the same circumstances would probably have produced different results depending on their own experience of work in general practice and what they felt was the right place to care for the patients observed in the survey. A comparison of the results of a number of practitioners, surveying the same group of patients but doing so independently, would undoubtedly be interesting although the disadvantage of having a sufficient number of general practitioners on the ward at the same time has already beem mentioned. Certainly the decision to carry out the survey single-handed

seemed, in retrospect, to have been justified. It allowed an informal and friendly relationship to develop between the investigator and the staff. Without this informality much of the information on the causes of delay would have been difficult to obtain. The advantage in this respect was probably not so great in the collection of data concerned with alternative admission to G.P. units and early discharge. As far as these were concerned it is likely that the results were based on data that were under-estimations. The reasons for this have been explained, particularly in the field of alternative care in G.P. units, although the number of cases in the survey where the suitability for G.P. care was disputed was small. Similar difficulties in this kind of assessment were described in a recent paper from workers in Dundee (Torrance et al. 1972).

One can now examine the original hypotheses of the Radcliffe Survey in the light of the results that have been presented.

1. The first hypothesis, that a certain number of patients could be discharged earlier was shown to be correct. The number was small for surgical patients but larger for medical as far as early discharge home is concerned. It was apparent that lack of knowledge by hospital staff of general practice was an important cause of delay in discharge, and it was clear that the procedures concerned with the discharge of patients were inefficient compared to those concerned with admission.

2. The second hypothesis, that a certain number of patients in consultant beds who needed in-patient care could have been admitted instead to a general practitioner hospital for all or part of their stay in hospital was shown to be correct. Only medical patients could have been admitted directly to G.P. beds instead of consultant beds, but the amount of potential bed-saving for medical and surgical patients by early discharge was shown to be large.

3. The third hypothesis was concerned with the difference, if any, in the amount of in-patient care that could be undertaken in a G.P. unit situated within the grounds of a consultant hospital compared to one situated several miles away. This has so far not been mentioned because attempts to make such an assessment proved to be unsatisfactory. The reason was probably the lack of any practical experience of a G.P. unit that was part of a consultant hospital by the author or anyone else involved in the survey. Nor was the author clear in his own mind whether such a unit would be entirely the responsibility of the general practitioner or whether the junior staff of the hospital would be involved with his patients. It was assumed that the latter would not be the case, and on that assumption it was felt unlikely that the site of the G.P. unit would alter to a significant degree the amount of care that could be undertaken. It was thought as far as direct medical admissions were concerned that they were either in need of consultant care or of general practitioner care regardless of the proximity of the G.P. unit to the consultant hospital.

4. The age of patients suitable for alternative G.P. care did not differ significantly from the age of all the patients in the survey (when expressed in the simple terms of two groups below and above the age of 70) except for one group; these were medical patients suitable for direct admission to G.P. units. They were significantly older than the medical patients in consultant wards.

5. The significance of the group labelled "social problems" was discussed at length. It was suggested that most of these could be treated in G.P. units thereby relieving the acute consultant wards of these patients, but they would still only form a minority of the patients suitable for G.P. unit care.

CHAPTER 3

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1. INTRODUCTION

The results of the Radcliffe Infirmary survey suggested that G.P. units could play an important role in total hospital in-patient care. They also indicated that this role would be larger for medical patients than for surgical, for it would consist in the former of alternative admission, i.e. direct admission to the G.P. unit, as well as the acceptance of early discharge patients who were initially admitted to a consultant hospital. For surgical patients the role of G.P. units would be entirely the admission of early discharge patients, and although the number of these could in theory be large (up to a quarter of all surgical admissions) in practice it might be difficult to achieve so much early discharge without a major re-organisation of survery in consultant hospitals.

The role of G.P. units for surgical patients is, therefore, likely to be small; but the role of G.P. units in caring for medical patients is likely to be considerably larger, and also more controversial. The criteria for selecting medical patients for care in a general practitioner unit are more complex and less understood than those employed in selecting surgical patients. It was clear from the Radcliffe survey, and from the small amount of data that has been published on the subject that accurate and detailed information was needed about the role of G.P. units in caring for medical patients.

It was therefore decided to carry out a survey for a period of one year of all adult medical admissions to hospital (adult being defined as aged 15 and over).

This survey is called the Wantage Survey, and details of the practice on which the study is based, of the practice area and of Wantage

Hospital (the general practitioner hospital on which the survey was based) are given in the Appendix.

Data were collected on all adult medical admissions and divided into two main groups, the first being those admitted to a G.P. hospital (Wantage Hospital) and the second, those admitted to consultant care in the United Oxford Hospitals.

From these data a number of hypotheses were tested:-

1. That a substantial number of admissions would be cared for, wholly or partly, in Wantage Hospital.
2. That with few exceptions these latter admissions would otherwise have needed to be admitted to consultant hospitals.
3. That the two groups of adult medical admissions would differ in a number of ways.

In the first place they would differ as a result of selection at the time of admission, and the selection would be made on a number of factors whose relative importance could be evaluated. These, the factors on which the appropriate hospital for admission were chosen for a particular patient, were called the factors of choice.

Finally there would be differences between the two groups in terms of the outcome of hospital care, including length of stay and deaths, which would need to be examined.

2. METHOD

During the year in which the survey was carried out, notes were kept by the author of all medical admissions from the practice and the following details were recorded.

1. The patient's name, address, age and occupation;
2. The date of admission and of discharge;
3. The reason for admission to hospital including the clinical

diagnosis and other factors that influenced both the decision to admit the patient to hospital and the hospital chosen for admission.

4. The course of the patient while in hospital, the final diagnosis and the outcome of the illness.

The admissions were then divided into two groups:

Group 1

Those who were admitted to the G.P. unit, Wantage Hospital.

Group 2

Those admitted to a consultant bed in the United Oxford Hospitals (U.O.H.).

The year in which the survey was carried out lasted from November 1st, 1970 to October 31st, 1971 and the beginning of this period coincided with the establishment of a close liaison between four consultant physicians at the Radcliffe Infirmary, Oxford, and the general practitioners in Wantage. One of the four consultants or one of their senior registrars, would come in turn each week to Wantage Hospital. There they would see and discuss directly with the general practitioners both in-patient and out-patient medical problems, in the case of the former by a ward round, and in the case of the latter by an informal type of out-patient clinic.

In addition, several of the general practitioners regularly attended ward rounds with these consultants in the Radcliffe Infirmary. This liaison was established partly with the aim of increasing the efficiency of early discharge procedures, and partly as an experiment to assess the value of establishing close links between a group of consultants and a group of general practitioners in the management of medical problems, both out-patient and in-patient.

Admissions and Discharges

For surveys of in-patients, numbers are usually expressed in terms of discharges, or discharges and deaths. An alternative method is to

express numbers in terms of admissions, and the two methods are equivalent provided that the data include the whole episode of in-patient care, from admission to discharge or death, for each admission. In the Wantage Survey all admissions were followed through to eventual discharge or death, so the use of the term admissions is equivalent to using the term discharge.

One further difference is the interpretation of the diagnosis in terms of admissions or discharge. The diagnosis at the time of admission is sometimes called the "provisional diagnosis" and the diagnosis at discharge the "final diagnosis" or "diagnosis at discharge". The latter is more likely to be correct than the former because of clinical information obtained during admission. In this survey, although the numbers are expressed as admissions the data on diagnosis are based on the diagnosis at discharge or death.

The population at risk

The population at risk on which this survey was based was the average size of the practice during the year in which the survey was carried out. (The size of the practice only varied by about 20 patients during the year.) The total number of patients of all ages was 11,270 N.H.S. patients and approximately 30 private patients. Of the total number of 11,300 1,440 (12.7%) were aged 65 or over. The number under the age of 15 was estimated to be 2,650. The adult population at risk (aged 15 and over) was therefore 8,650.

3. RESULTS

The results of the Wantage survey fall into three main groups corresponding to the three aims of the survey described above:

1. The Number of Admissions

   Numbers analysed in terms of age, sex, population at risk and seasonal variation.

2. Factors influencing the choice of hospital for admission

   The hypothesis that certain factors were influential in the decision to choose one or other type of hospital as the appropriate one for admission is examined.

3. The outcome of Admission to hospital

   This includes length of stay and number of deaths.

The results are presented first in the form of tables with brief comments on the main features of each table. Following this, the significance of the results is discussed. This method was chosen because of the inter-relationship between the various factors that influenced the decisions about admission to hospital. Often it is necessary to refer to several factors to interpret the significance of one.

Age groups are presented in two ways in these results. In most instances data are expressed in two age groups, under 65 and aged 65 and over. The age of 65 was chosen because it is the most usual age of retirement. Where it is appropriate to show age factors in more detail, the data are presented in ten-year age groups.

1. NUMBER OF ADMISSIONS

Results in this section are shown in tables 1 + 2.

The total number of medical admissions was 207. One hundred and nineteen were admitted to Wantage Hospital and form Group 1.

Eighty-eight were admitted to consultant beds in Oxford and form Group 2. A large majority of these were admitted to the Radcliffe Infirmary, a few to the Churchill Hospital, and one to the Slade Hospital Infectious Diseases Unit. The admissions in Group 2 are referred to as admissions

to the U.O.H. (United Oxford Hospitals).

In twenty-eight of the admissions the patient was transferred either from the U.O.H. to Wantage Hospital or vice versa. These were admissions where one episode of in-patient care was shared between the consultants and the general practitioners. They were included in Group 1 or Group 2 according to the hospital to which they were admitted initially, but they are considered as a separate group in a later section of the results.

Re-admissions

The number of admissions in the year of the survey was 207, but the number of patients admitted was 197. In Group 1 three patients were admitted twice and one three times. In Group 2 four patients were admitted twice. One patient was admitted once in Group 1, returned home and was subsequently admitted in Group 2. Thus there were ten re-admissions.

The number of admissions: Age and Sex — Tables 1 & 2

These data are shown in table 1 in ten-year age groups and in table 2 in two age groups: under 65 and aged 65 and over.

The main features of these tables are:

1. 57.5% of all medical admissions were to Wantage Hospital (Group 1)
2. The admissions to G.P. hospital care (Group 1) were significantly older than those admitted to consultant care. The statistical evidence of this difference in table 2 is:-

   For both sexes $X_1^2 = 26.716$: P .001

   For men $X_1^2 = 18.218$: P .001

   For women $X_1^2 = 9.344$: P .01

3. In both Group 1 and Group 2 there is an excess of females over males in the age groups 75 and over.

Table 1. Wantage Survey. All admissions in terms of age, sex and place of admission.

		Number of admissions in ten-year age groups								
		15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 & over	Totals
Group 1 Wantage Hospital	Men	1	2	2	4	9	19	22	2	61
	Women	1	1	2	6	5	11	25	7	58
	Total	2	3	4	10	14	30	47	9	119
Group 2 U.O.H.	Men	2	5	6	10	8	11	1	0	43
	Women	1	4	2	11	7	9	10	1	45
	Total	3	9	8	21	15	20	11	1	88
Total Group 1 and Group 2	Men	3	7	8	14	17	30	23	2	104
	Women	2	5	4	17	12	20	35	8	103
	Total	5	12	12	31	29	50	58	10	207

Table 2. Wantage Survey. All admissions. Number (and percentages) in two age-groups, under 65 and aged 65 and over.

	Age Groups			
	Under 65	Aged 65 and over	Total	% of all admissions
Gp. 1 (W. Hosp.)				
Males	18 (29.5%)	43 (70.5%)	61	
Females	15 (25.9%)	43 (74.1%)	58	
Total	33 (27.7%)	86 (72.3%)	119	57.5%
Gp. 2 (U.O.H.)				
Males	31 (72.1%)	12 (27.9%)	43	
Females	25 (55.6%)	20 (44.4%)	45	
Total	56 (63.6%)	32 (36.4%)	88	42.5%
Gp. 1 and Gp. 2				
Males	49 (47.1%)	55 (52.9%)	104	50.5%
Females	40 (38.8%)	63 (61.2%)	103	49.5%
Total	89 (43.0%)	118 (57.0%)	207	100%

Seasonal variation

Table 3

This table shows the number of admissions in each calendar month and the absence of any evidence of seasonal variation, and in particular of any increase in admissions during winter months. The latter is commonly expected for medical admissions to hospital although the size of the "winter peak" of admissions varies from one year to another. The possibility that the length of stay of admissions in the winter was greater than in the summer was explored. If it had been found, it might have explained the absence of a winter peak of admissions, as the number of beds available for admissions would have been reduced. In fact the length of stay and the average bed occupancy did not vary significantly between winter and summer. The probable explanation is the absence of an influenza epidemic that winter (information obtained from the infectious diseases reports in the British Medical Journal confirm that the winter of 1970-71 was one that was free of influenzal epidemics) and it was also noted that the work load in terms of visits and surgery appointments did not vary greatly during the year in which the survey was carried out.

Table 3. Wantage Survey. Number of admissions each month.

		Number of Admissions		
		Group 1	Group 2	Total
		Wantage Hospital	U.O.H.	Groups 1 & 2
1970	November	11	2	13
	December	8	5	13
1971	January	13	7	20
	February	5	8	13
	March	11	14	25
	April	11	8	19
	May	8	9	17
	June	14	8	22
	July	8	10	18
	August	11	4	15
	September	9	8	17
	October	10	5	15

2. FACTORS INFLUENCING THE CHOICE OF HOSPITAL FOR ADMISSION

The decision to admit a medical patient to hospital is sometimes made by a consultant or registrar at out-patients. In this survey this happened sixteen times, and often the decision was the result of direct discussion between the consultant and general practitioner. Occasionally a patient is admitted directly from work, often on the advice of an industrial medical officer. In this survey this occurred on two occasions. Occasionally patients go direct to hospital and are admitted (self-referrals) but there were no admissions in this category in the survey.

In the majority of cases (in this survey 189 out of 207 admissions) the decision to admit a patient to hospital is made by the general practitioner who also decides the appropriate hospital for admission. The amount and the type of medical care undertaken in a G.P. hospital is therefore dependent on the decisions of the general practitioner, and the factors on which he makes his decisions are therefore crucial factors in a study of the work undertaken in G.P. hospitals.

An examination of some of these factors was undertaken in this study on the hypothesis that the choice of hospital for admission might be determined by one or more of the following:

A. Age
B. Diagnosis
C. Severity of illness
D. Social conditions
E. Social class
F. Availability of hospital beds.

In order to measure the effect of each of these factors, it was necessary to express them in numerical terms. Within certain criteria this proved to be possible in all of them except severity of illness. Severity is, of

course, a consideration that is by its nature not easily susceptible to measurement. Nevertheless it played a part in decisions, and this part will be examined in the section on the discussion of all the results.

A. Age as a factor

The age groups in each group of admissions have already been considered in Tables 1 and 2. Age as a factor that influenced the choice of hospital was closely linked to other factors; the data presented in the remaining tables in this section are therefore expressed in terms of age as well, either as two groups above and below 65, or in ten-year groups where appropriate.

B. Diagnosis as a factor — Tables 4, 5 and 6.

Table 4 shows the classifications of admissions in main diagnostic groups, arranged in order of frequency. The admissions in Group 1 classified as "other" include one patient with glandular fever; the remainder were either admissions for symptoms to which no diagnosis could be attached or patients with senility. Most admissions in this group came into the categories of "social" or holiday admissions.

A difficulty that besets any attempt to classify medical admissions in terms of clinical diagnosis is the patient with multiple illnesses; to quote one example from this survey, the co-existence of congestive heart failure, a cerebro-vascular accident, diabetes and peripheral vascular disease. This difficulty is most common in patients over 70. In this survey the rule that was followed in cases of multiple diagnosis was to choose the diagnosis that was the principle cause of admission to hospital; in the example given above it was peripheral vascular disease which advanced to gangrene. If two or more conditions carried equal weight

as causes of admission, the diagnosis of the most serious condition was chosen as the diagnostic index.

The main feature of Table 4 is the large number of admissions in the first three groups: heart disease, lung disease and cerebrovascular accidents. Together they accounted for nearly half the total admissions (98 out of 207) and for approximately half in each group of admissions (to Wantage Hospital or the U.O.H.) taken separately.

It seems from these and other features in Table 4 that diagnosis alone was not the sole determining factor in choosing the appropriate hospital for admission in all cases. There was however one group of admissions where diagnosis was the sole factor, and the data on these are shown in Table 5.

Table 4. Wantage Survey. Main diagnostic groups: all medical admissions.

		Group 1 (Wantage)			Group 2 (U.O.H.)			Totals
		15-64	65+	Total	15-64	65+	Total	
Heart Disease	M	2	8		5	2		
	F	6	9	25	5	1	13	38
Diseases of the lungs	M	6	11		2	3		
	F	0	6	23	3	2	10	33
Cerebrovascular accidents	M	0	6		5	4		
	F	1	6	13	3	2	14	27
Other C.N.S. disease	M	2	6		1	0		
	F	2	7	17	0	2	3	20
Gastro Intestinal disease	M	4	1		7	1		
	F	2	3	10	1	4	13	23
Malignancies	M	1	7		1	0		
	F	0	4	12	0	1	2	14
Self-Poisoning	M				5	0		
	F			0	4	1	10	10
D.V.T. & Pulmonary Emboli	M				2	0		
	F			0	4	1	7	7
Diabetes	M	0	0		2	0		
	F	0	2	2	2	1	5	7
Renal disease	M				1	1		
	F			0	2	1	5	5
Diseases of the blood	M				0	1		
	F			0	0	3	4	4
Neuroses	M	1	0					
	F	1	1	3			0	3
Hypothermia	M	0	0		0	0		
	F	0	1	1	0	1	1	2
Peripheral vascular disease	M	0	0					
	F	0	2	2			0	2
Thyroid disease	M				0	0		
	F			0	1	0	1	1
Other	M	2	3					
	F	3	3	11			0	11

Tables 5 and 6

The admissions listed in these tables all had three features in common that, taken together, distinguished them from other admissions in this survey. There features were

1. They were all serious or potentially serious illnesses.
2. They were all conditions carrying the prospect of therapeutic improvement or cure, even if the prospect was remote.
3. The investigation or treatment of these conditions could not be carried out in a G.P. hospital because they needed special knowledge or skills, whether medical or nursing, or specialised facilities.

There were admissions where there was, in the opinion of the practitioners involved in the survey, an absolute need for consultant care, based on the provisional diagnosis at the time of admission.

The diagnosis of these admissions are listed in Table 5, and the age distribution of these admissions are shown in Table 6. Although slightly younger than Group 2 admissions as a whole, the difference is not significant.

Comparing the age distribution of admissions listed in Table 5 with the remainder of Group 2 admissions for two age groups (below 65 and aged 65 and over) shows that the difference was not statistically significant.

$$X_1^2 = 3.142 : 0.1 > P > 0.05$$

Table 5. Wantage Survey. Admissions in Group 2 (U.O.H.) where the determining factor was the need for specialist care.

	Age 15-64	Age 65 & over	Total
Heart Disease			
associated with heart-valve prosthesis	3	0	3
Subacute endocarditis	1	0	1
Diseases of the lungs			
Pneumothorax	1	1	2
Pulmonary embolus	1	0	1
C.N.S. Disease			
Meningitis	1	0	1
Gastro Intestinal Disease			
Haematemesis & melaena	4	3	7
Investigation of jaundice	5	0	5
Malignant Disease			
Investigation	1	1	2
Self-Poisoning	9	1	10
Diabetes			
Diabetic coma & pre-coma	5	1	6
Renal Disease			
Renal failure	1	1	2
Diseases of the Blood			
Investigation of anaemia	0	4	4
Totals	32	12	44

Table 6. Wantage Survey. The admissions in Group 2 where the determining factor was the need for specialist care. Numbers and percentages in ten year age groups, compared to values for all Group 2 admissions.

		10 Year Age Groups								
		15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-	Totals
Admissions listed in Table 5	No.	3	7	5	9	8	9	3	0	44
	%	6.8	15.9	11.4	20.4	18.2	20.4	6.8	0	99.9
All Group 2 admissions	No.	3	9	8	21	15	20	11	1	88
	%	3.4	10.2	9.1	23.9	17.0	22.8	12.4	1.1	99.9

C. Diagnosis and age together Table 7

This shows the number of admissions to hospital for heart disease, diseases of the lung and cerebrovascular accidents, presented in terms of hospital of admission and age. These were the three most frequent diagnostic groups.

Seven of the admissions in Group 2 were for conditions where there was an absolute need for consultant care: these were admissions for illnesses associated with a heart valve prosthesis, sub-acute bacterial endocarditis, pulmonary embolus and pneumothorax. But there were 91 other admissions in these three diagnostic groups where the diagnosis was not the determining factor in the choice of hospital for admission.

The distribution of admissions between the two groups in terms of age suggest that, within a given diagnostic group, the choice of hospital for admission is likely to be determined largely by age, unless the diagnosis points to the absolute need for consultant care.

Age of course was not the sole factor, and the severity of illness also influenced the choice of hospital for admission. The part played by severity is discussed in a later section. It can be seen, for instance, that there was approximately the same number of admissions (but not the same proportion) under the age of 65 to G.P. care and consultant care for heart disease and diseases of the lung, but in each of these two categories the admissions in Group 1 were generally older or less severely ill than those in Group 2. In all three categories included in Table 7 there was a degree of overlap as far as age was concerned between the admissions to the two Groups, i.e. to G.P. care or consultant care; but the amount of overlap was small enough to display within each diagnostic group the tendency to select patients either for G.P. or consultant care on the basis of their age.

Table 7. Wantage Survey. The three largest diagnostic groups, showing the influence of age on the choice of hospital for admission.

	Hospital chosen for admission	Age Groups		Total No. of Admissions
		Under 65	Aged 65 & over	
Heart Disease	Group 1 (Wantage)	8	17	38
	Group 2 (U.O.H.)	10	3	
Diseases of the Lung	Group 1	6	17	33
	Group 2	5	5	
Cerebro-Vascular Accidents	Group 1	1	12	27
	Group 2	8	6	
Totals	Group 1	15	46	98
	Group 2	23	14	

D. Social Conditions as a factor

The term social admission, social problems and social conditions are often used loosely in the context of in-patient care - a point that was mentioned in the section on the Radcliffe Infirmary.

In this survey the term "social conditions" as a factor influencing admission to hospital was used in three precise ways.

1. Poor housing conditions. This would include only housing that was so poor that it was a hazard to medical care. In fact there were no admissions in this category.

2. Living alone. This was used first in the literal sense of living alone; secondly it included patients who lived with a relative who, for reasons of age or infirmity, was unable to provide simple domestic and home-nursing care. These patients could have been treated at home if robust but unskilled 24-hour cover had been available, but had to be admitted to hospital because it was not.

   The results in this category are shown in Table 8. There were eight other admissions of patients who lived alone, but in these admission to hospital was necessary for other reasons, e.g. the diagnosis, or the severity of the illness.

3. Distance as a factor. These were patients who lived at a long distance from the centre of the practice and, in some cases, whose homes were particularly inaccessible.

   Distance was a factor of small importance. In 3 admissions to Wantage Hospital the patient was admitted because his home was so far and/or so difficult to reach that it constituted a serious inconvenience to frequent visiting. Distance might have been expected to operate in another way viz: by influencing the decision to admit a patient to Wantage Hospital rather than the U.O.H. because it would be easier for relatives to visit but in practice it was found that this factor was not used as a factor in the choice of hospital for admissions. The ease with which

relatives can visit patients in a local general practitioner hospital is, of course, a well known advantage and was recognized as such for both direct admissions and early discharges from the U.O.H.; but in this survey it was not the basis for choosing G.P. care rather than consultant care because, if the latter were indicated on grounds such as diagnosis, age or severity, these indications outweighed in importance the factor of easier visiting.

Table 8. Wantage Survey. Admissions to hospital for "social conditions" (as defined in the text) and admissions to Group 2 (U.O.H.) solely because no beds were available in Wantage Hospital.

		Under 65	Aged 65 & over	Total
Admissions for social conditions.	Group 1	2	11	13
Patients living alone	Group 2			Nil
Admissions to the U.O.H. because no beds were available in Wantage.	Group 1			Nil
	Group 2	0	5	5

E. Social class as a factor. Tables 9 and 10

All admissions were analysed in terms of social class, based on the Registrar General's classification by occupation. In the case of married women the husband's occupation was used, and in the case of unmarried women, their own occupation.

The similarity of distribution of social class in the two groups of admissions suggests that selection on the basis of social class played little if any part in the choice of hospital for admission.

F. Availability of beds. Table 8

On five occasions patients were admitted to the U.O.H. because there were no beds available in Wantage Hospital. Needless to say, in all five admission to hospital was essential. All five patient were over the age of 65.

Table 9. Wantage Survey. All medical admissions. Social class, age and sex.

Social Class	Group	Sex	Age Groups 15+	25+	35+	45+	55+	65+	75+	85+	Totals	
I	Group 1	M						1	4		5)	9
		F				3			1		4)	
	Group 2	M					2				2)	9
		F	1	1			1	2	2		7)	
II	Group 1	M					1	1	4	1	7)	13
		F			2			1	1	2	6)	
	Group 2	M		1	1	1		1			4)	7
		F					1		2		3)	
III	Group 1	M	1	2		1	7	7	2		20)	35
		F		1		1	1	4	5	3	15)	
	Group 2	M		3	2	4	1	2			12)	26
		F		1	1	3	2	3	3	1	14)	
IV	Group 1	M			1	3	1	7	7		19)	39
		F				2	1	5	10	2	20)	
	Group 2	M	1	1	2	2	3	7	1		17)	27
		F		1	1	3	1	2	2		10)	
V	Group 1	M			1			3	5	1	10)	23
		F	1				3	1	8		13)	
	Group 2	M	1		1	3	2	1			8)	19
		F		1		5	2	2	1		11)	
Totals	Group 1		2	3	4	10	14	30	47	9	119	
	Group 2		3	9	8	21	15	20	11	1	88	

Table 10. Wantage Survey. All medical admissions. Social class in age groups under 65 and aged 65 and over.

Social Class	Hospital of admission. Groups 1 & 2	No. in each age group		
		Under 65	Aged 65 & over	All ages Total
I	Group 1 Wantage	3	6	9
	Group 2 U.O.H.	5	4	9
II	Group 1 Wantage	3	10	13
	Group 2 U.O.H.	4	3	7
III	Group 1 Wantage	14	21	35
	Group 2 U.O.H.	17	9	26
IV	Group 1 Wantage	8	31	39
	Group 2 U.O.H.	15	12	27
V	Group 1 Wantage	5	18	23
	Group 2 U.O.H.	15	4	19
Total	Group 1	33	86	119
	Group 2	56	32	88

There is no significant difference between Group 1 and Group 2 admissions according to social class.

χ^2_4 2.145 $.90 > P > .50$

G. Marital status

Table 11

Marital status is a factor that is likely to influence the rate of admission to hospital. Unmarried people (defined as the single, widows or widowers and divorced or separated) may need admission to hospital for an illness that could be managed at home but for the absence of help from a husband or wife. Obviously this applies to less serious illnesses that do not require consultant care. It would therefore be expected that there would have been a larger percentage of unmarried admissions in Group 1; as shown in Table 11, this proved to be the case, the proportion of unmarried being 42.8% compared to 21.6% in Group 2. This difference, however, was partly due to the difference in age of Group 1 and Group 2 admissions. Thus the percentage of unmarried in those under 65 is approximately the same in Group 1 and Group 2 (18.3% and 16.1% respectively). This information, however, has little meaning as none of the unmarried in Group 2 under 65 were admitted because of lack of home support from a husband or wife; all had an illness needing consultant care and in fact 6 of the 9 were admitted for self-poisoning, one of the commonest causes for medical admission to consultant care in adolescents and young adults. Likewise the reasons for hospital admission of those aged 65 and over were different in Groups 1 and 2 as a whole.

Analysis of the admissions in Groups 1 and 2 in terms of marital status did not seem to provide much information of a useful or interesting nature. There was however an important and close relationship between marital status and length of stay which is considered in the next section.

Table 11. Marital status of admissions in Groups 1 and 2.

Marital Status		Group 1 (Wantage Hospital)	Group 2 (U.O.H.)
Under 65	Married	27	47
	Unmarried	6 (18.3%)	9 (16.1%)
65 & over	Married	41	22
	Unmarried	45 (52.4%)	10 (31.2%)
Total	Married	68	69
	Unmarried	51 (42.8%)	19 (21.6%)

3. LENGTH OF STAY IN HOSPITAL

Tables 12 to 15.

Length of stay is shown in Table 12 as the average length, and in Tables 13 to 15 as the numbers in successive weekly periods, i.e. the number staying 0-6 days, 7-13 days, 14-20 days and so on. In all these tables the length of stay is shown in relation to age.

The average length of stay for patients in Group 1 was approximately twice as long for those aged 65 or over as it was for those under 65. In Group 2 there is little difference between the two age groups because of the early discharge of long stay patients from the U.O.H. to Wantage Hospital. This is demonstrated in the next section.

The main difference in length of stay was due to the relatively large percentage of Group 1 admissions whose length of stay exceeded 21 days. These amounted to 29% of all Group 1 admissions and nearly all were aged 65 or over. This is shown most clearly in Table 14, where it

can be seen that the percentage of admissions exceeding 21 days formed the second largest group in Wantage Hospital admissions but the smallest in admissions to the U.O.H.

There was no significant difference when men and women were compared for length of stay either in Group 1 or Group 2.

In Group 1 (Table 13) $X^2_3 = 4.561$ $(.50 > P > .10)$

In Group 2 (Table 14) $X^2_3 = 3.709$ $(.50 > P > .10)$

Table 12 Wantage Survey.
All medical admissions. Average length of stay in terms of age.

		No. of Admissions	Average length of stay
Total		119	17.5
Group 1 Wantage Hospital	65 & over	86	20.9
	Under 65	33	8.8
	Total	88	10.7
Group 2 U.O.H.	65 & over	32	11.4
	Under 65	56	10.3

Table 16

Length of stay of patients who were transferred. (Group 3 admissions)

Added complexity in presenting the results for length of stay is due to the fact that a number of patients in each group of admissions was transferred from the U.O.H. to Wantage Hospital, or vice versa. The data in Tables 12 to 15 are based only on the time spent by the patients in the hospital to which they were initially admitted - Group 1 to Wantage Hospital and Group 2 to the U.O.H.

In order to present a complete picture of length of stay, the patients who were transferred are considered as a separate group, which

Table 13. Wantage Survey. Group 1 (Wamtage Hospital)
Age - length of stay in Wantage Hospital.

		Age Groups								
		15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Totals
0-6 days	M	1	2	1	2	5	5	9	0	25
	F	1	0	1	3	1	6	2	2	16
	T	2	2	2	5	6	11	11	2	41
7-13 days	M	0	0	0	0	2	6	3	0	11
	F	0	1	1	1	3	4	6	2	18
	T	0	1	1	1	5	10	9	2	29
14-20 days	M	0	0	0	1	0	2	3	2	8
	F	0	0	0	2	0	1	3	0	6
	T	0	0	0	3	0	3	6	2	14
21 days & over	M	0	0	1	1	2	6	7	0	17
	F	0	0	0	0	1	0	14	3	18
	T	0	0	1	1	3	6	21	3	35
Totals	M	1	2	2	4	9	19	22	2	61
	F	1	1	2	6	5	11	25	7	58
	T	2	3	4	10	14	30	47	9	119

can be called group 3. Then, the total length of stay of all Group 3 admissions in both G.P. and consultant beds can be calculated. The results are shown in Table 16, and further results on Group 3 admissions appear in subsequent tables.

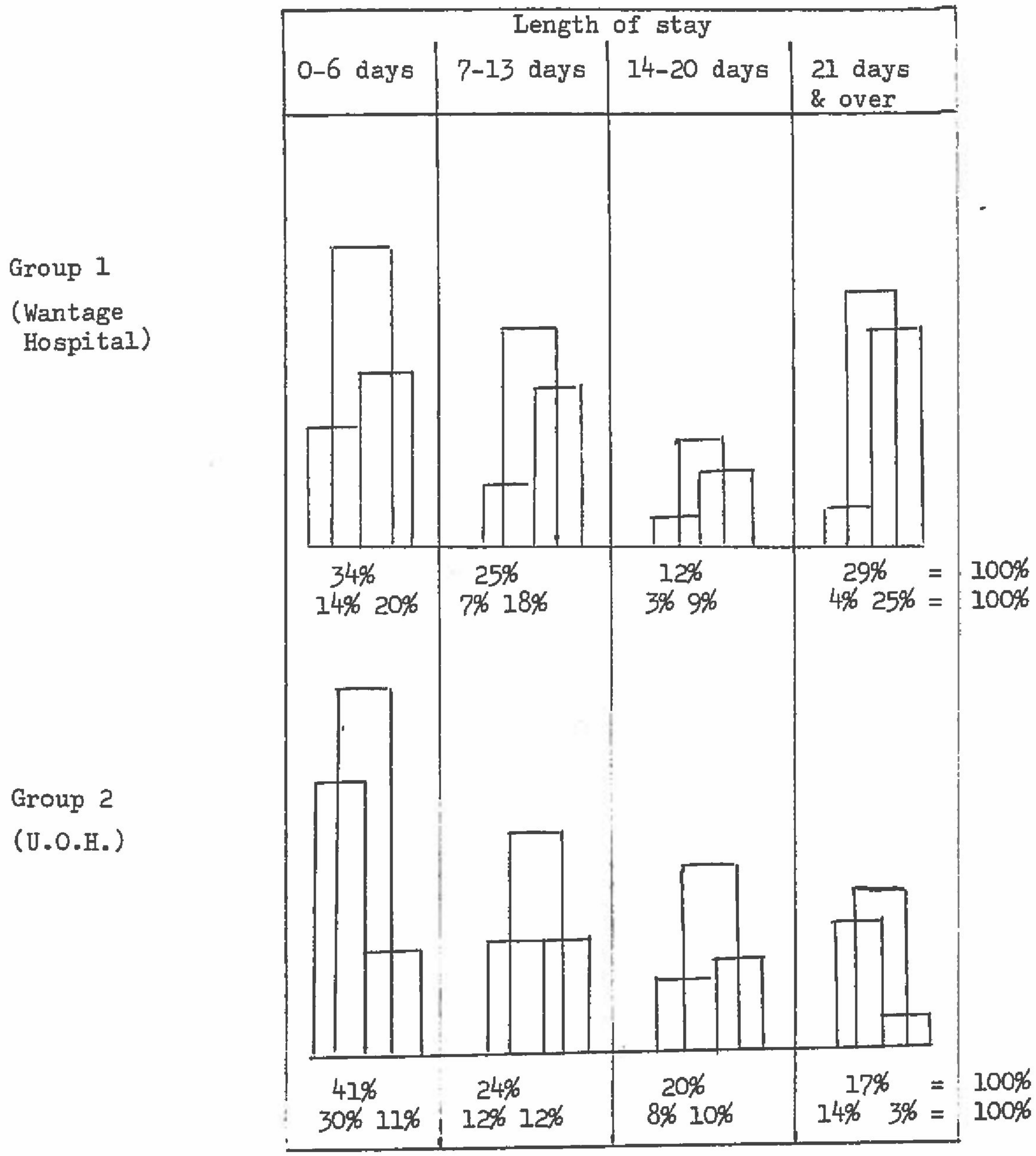
It can be seen in Table 16 that Group 3 admissions were characterised by two features: first, the large number aged 65 and over, and secondly the large proportion of long-stay admissions. Group 3 admissions, as stated above, consisted of transfers in both directions. The total number was 28, 12 being transferred from Wantage Hospital to the U.O.H.

Table 14. Wantage Survey. Group 2 (United Oxford Hospitals) Length of stay in the U.O.H.

		Age Groups								
		15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Totals
0-6 days	M	2	3	1	5	3	3	0	0	17
	F	1	2	0	5	4	4	2	1	19
	T	3	5	1	10	7	7	2	1	36
7-13 days	M	0	1	3	2	2	6	0	0	14
	F	0	0	1	1	1	2	2	0	7
	T	0	1	4	3	3	8	2	0	21
14-20 days	M	0	1	0	1	2	1	1	0	6
	F	0	1	0	2	0	3	4	0	10
	T	0	2	0	3	2	4	5	0	16
	M	0	0	2	2	1	1	0	0	6
	F	0	1	1	3	2	0	2	0	9
	T	0	1	3	5	3	1	2	0	15
	M	2	5	6	10	8	11	1	0	43
Totals	M	1	4	2	11	7	9	10	1	45
	T	3	9	8	21	15	20	11	1	88

The majority of these, however, were transferred for only a short period of time (usually so that some specific investigation could be carried out) and subsequently returned again to Wantage Hospital. The 16 admissions in Group 2 who were transferred from the U.O.H. to Wantage Hospital were, on the whole, long stay patients in Wantage and remained there until they were discharged home or died: none were transferred back again to the U.O.H. Thus the early discharge of potential long stay admissions from the U.O.H. to Wantage Hospital lowered the average length of stay of all Group 2 admissions in the U.O.H. and particularly those aged 65 and over.

Table 15. Wantage Survey. Length of stay for admissions in Group 1 and Group 2.



Key

Centre column
% of admissions - all ages

Left hand column
% of admissions aged under 65.

Right hand column
% of admissions aged 65 and over.

The values are shown below each column.

If the average length of stay of all admissions is now calculated to include all hospital days spent by Group 1 admissions in Wantage Hospital and the U.O.H. the results are:-

Under 65	8.8 + 1.1 days = 9.9 days
Aged 65 & over	20.9 + 1.5 days = 22.4 days

while the results of a similar calculation for Group 2 admissions are

Under 65	10.3 + 1.5 days = 11.8 days
Aged 65 & over	11.4 + 9.5 days = 20.9 days

(In these calculations the first of each added pair of figures is the average length of stay in the hospital to which the admission was initially made.)

Thus the average length of stay in the two age groups, presented in this way, is closely similar, showing that average stay is significantly longer for older patients regardless of the hospital to which they were first admitted, but admissions of the 65s and over in Group 2 spent a large proportion of their total stay in hospital in Wantage, after early discharge.

Long stay admissions. Tables 17 and 18

Long stay admissions are defined here as 21 days or over. In these two tables further results are given about these by showing the number of weekly periods up to 8 weeks. It can be seen that in Group 2 no patients stayed longer than 5 weeks, and only 4 stayed longer than 4 weeks.

In Group 1 the long stay admissions were scattered over a large range, and 2 (1.7% of Group 1 admissions) stayed longer than 8 weeks.

In Group 3, however, where the combined length of stay of transferred patients is shown, the range of length of stay is shown to include a larger

Table 16. Wantage Survey. Group 3 - Patients who were transferred. Age and total length of stay. (Wantage Hospital and U.O.H.)

		Age Groups							
		15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
0-6 days	M									
	F									
	T									
7-13 days	M				1	1				2
	F				1					1
	T				2	1				3
14-20 days	M	1				4	1			6
	F				1		1			2
	T	1	1		4	2				8
21 days & over	M				2	5	1	1		9
	F	1	1		1	5	0			8
	T	1	3		6	6	1			17
	M	1	3		10	2	1			17
	F	1	3		1	6	0			11
	T	2	6		11	8	1			28

proportion in the longer period; thus 4 out of 28 (14%) had a total hospital stay of 8 weeks or more. Moreover, 60% of the transferred (Group III) were long stay admissions, compared to 30% in Group 1 and 17% in Group 2.

Marital Status and length of stay — Tables 19 and 20

The influence of marital status on length of stay is well recognized, was noted in the Wantage Survey, and is demonstrated in Tables 19 and 20. Fifty-one (43%) of the admissions in Group 1 were unmarried

Table 17. Wantage Survey. Long stay admissions (over 3 weeks)

		Length of stay in weeks						
		3-4	4-5	5-6	6-7	7-8	8 weeks & over	Total
Group 1 (Wantage) Length of stay in Wantage Hospital	M	9	2	1	2	2	1	17
	F	8	6	1	2	0	1	18
	T	17	8	2	4	2	2	35
Group 2 (U.O.H.) Length of stay in U.O.H.	M	4	2					6
	F	7	2					9
	T	11	4					15
Group 3 Wantage & U.O.H. Total in-patient stay of patients who were transferred.	M	4		3	1		1	9
	F		3	1	1		3	8
	T	4	3	4	2		4	17

Table 18. Wantage Survey. Long stay admissions

	% of admissions in each group according to length of stay in weeks.						
	0-3	3-4	4-5	5-6	6-7	7-8	8 or over
Group 1 admissions	70.1*	14.3	6.9	1.7	3.5	1.7	1.7
Group 2 admissions	83.0	12.5	4.5				
Group 3 admissions	39.2	14.3	10.8	14.3	7.1		14.3

Group 1	Admissions to Wantage Hospital Length of stay in Wantage Hospital
Group 2	Admissions to U.O.H. Length of stay in U.O.H.
Group 3	Patients transferred between Wantage Hospital and U.O.H. Total length of stay in hospital.

*Seven of the admissions in Group 1 were holiday admissions of less than 3 weeks, where the length of stay was arranged at admission. If these are excluded the percentage of admissions in this group is reduced from 70% to 68%.

patients and of these 45 were aged 65 and over. In Group 3 admissions (patients who were transferred) fifteen (54%) were unmarried and twelve of these were aged 65 or over.

Of the long stay admissions in Group 1 twenty-three out of thirty-five were unmarried and all ten patients whose stay was five weeks or longer were unmarried.

In Group 3 admissions out of 17 long-stay admissions 10 (59%) were unmarried.

In summarised form, two-thirds of long stay admissions to Wantage Hospital were unmarried patients while the proportion of short stay admissions who were unmarried was only one-third.

Table 19. Wantage Survey. Marital Status and Length of Stay.

		Length of stay in weeks						
		0-3	3-4	4-5	5-6	6-7	7-8	8 weeks & over
Group 1 Admissions								
Males	Married	39	6	2	0	0	0	0
	Unmarried	5	3	0	1	2	2	1
Females	Married	17	1	3	0	0	0	0
	Unmarried	23	7	3	1	2	0	1
Totals	Married	56	7	5	0	0	0	0
	Unmarried	28	10	3	2	4	2	2
Group 3 Admissions								
Males	Married	6	4	0	1	1	0	0
	Unmarried	2	0	0	2	0	0	1
Females	Married	0	0	0	0	0	0	1
	Unmarried	3	0	3	1	1	0	2
Totals	Married	6	4	0	1	1	0	1
	Unmarried	5	0	3	3	1	0	3

Table 20. Wantage Survey. Marital status, age and length of stay for Group 1 and Group 3 admissions.

Group 1 Admissions

Length of stay	Married		Unmarried	
	Under 65	65 & over	Under 65	65 & over
Less than 3 weeks	23	33	5	23
3 weeks and over	4	8	1	22
Total	27	41	6	45

Group 3 Admissions

Length of stay	Married		Unmarried	
	Under 65	65 & over	Under 65	65 & over
Less than 3 weeks	1	5	3	2
3 weeks and over	4	3	0	10
Total	5	8	3	12

4. ADMISSION CATEGORIES

Table 21

This section is concerned with the purpose or object of admission.

All admissions in Group 2 were for medical or nursing care. This includes admission for therapeutic reasons, whether the therapy was medical or nursing, and admissions for investigations.

In Group 1, 99 admissions were categorised as admissions for medical or nursing care. Under this heading were included 10 patients with malignant disease admitted for terminal care. There were also 25 patients admitted for observation and investigation, but in all instances

therapeutic care was an additional reason for admission. It was not possible to separate admissions for medical treatment, nursing care and observation and investigation into different categories; the three went hand-in-hand.

Of the remaining admissions, 13 were for hostel care, and 11 of these were aged 65 or over; finally, there were 7 holiday admissions. The latter were, of course, patients who were admitted for a specified period (usually one or two weeks) in order to allow the relatives who looked after them to go away on holiday. Those admitted for hostel care were patients who lived alone (see Table 8).

Table 21. Wantage Survey. Admission Categories.
Group 1 (Wantage Hospital).

Categories of admission	Sex	Age: Under 65	Age: 65 & over	Total
1. Medical & Nursing Care (including terminal care)	Males	17	34	51
	Females	12	36	48
	Total	29	70	99
2. For Hostel Care	Males	1	6	7
	Females	1	5	6
	Total	2	11	13
3. Holiday admissions	Males	0	3	3
	Females	2	2	4
	Total	2	5	7

4. DISCHARGES AND DEATHS

Table 22

The deaths, in terms of sex, age and numbers are presented in Table 19.

There were 32 deaths in Group 1 admissions, but two of these

occurred after the patient had been transferred to the Radcliffe Infirmary.

There were 8 deaths in Group 2 admissions, but one of these occurred after the patient was transferred back to Wantage Hospital.

Further details on the deaths are given in the discussion of the results of the Wantage Survey.

All patients who survived were discharged home.

Table 22. Wantage Survey. Deaths.

Group 1 (Wantage Hospital)

Certified cause of death	Age Groups 35+	45+	55+	65+	75+	85+	Total
Malignant disease	1	1		2	5	2	11
Cerebro vascular accidents					4	1	5
Myocardial Infarcation			2	2	2		6
Chronic Bronchitis & Pneumonia				3	1	1	5
Congestive Heart Failure			1		2	1	4
Myelofibrosis					1		1
Totals	1	1	3	7	15	5	32
Males	1		2	5	8	1	17
Females		1	1	2	7	4	15

Group 2 (U.O.H.)

Certified cause of death	Age Groups 35+	45+	55+	65+	75+	85+	Total
Cerebro Vascular Accidents			2				2
Pulmonary Emboli			1		1		2
Renal Failure				1		1	2
Self-poisoning				1			1
Hypothermia					1		1
Totals			3	2	2	1	8
Males			2	1			3
Females			1	1	2	1	5

5. SURGICAL EARLY DISCHARGES Table 23

The Wantage survey was concerned with medical admissions. Some details on surgical early discharges to Wantage Hospital during the survey period are given in Table 23; all the patients came to Wantage for post-operative care from the U.O.H. The reason for presenting them here is partly to complete the picture of admissions to the general beds in Wantage Hospital, but mainly for comparative purposes. In many of the papers published about general practitioner hospitals there is no clear distinction between medical and surgical cases, or, where the distinction is clear, the proportion of one to the other varies greatly. If the results of the Wantage Survey are to be compared with results from other G.P. hospitals, data on surgical early discharges are obviously needed.

Three points should be made about the surgical early discharges:-

1) The majority of the early discharge patients were post-operative gynaecological. Hence the predominance of females, particularly in the short stay groups. The reason was the exceptional pressure on gynaecological consultant beds and a particularly close liaison with one gynaecologist.

2) Patients with malignant disease admitted for terminal care were all included under medical admissions. Some of the patients had been under the care of physicians, some under the care of surgeons, or of both. The distinction had no clinical importance at the stage of admission for terminal care, for it had often been a matter of chance whether the diagnosis of inoperable malignant disease had been made or confirmed by a physician, a surgeon, or the two in conjunction. It seemed sensible to include them all in one group, and "medical" was chosen.

3) Twenty-seven out of the total of 34 stayed less than two weeks, including all those under 65. The two patients whose stay

exceeded 8 weeks were both orthopaedic patients, both elderly and both with a fractured neck of femur. Also, both of them lived alone but ultimately returned home successfully, one after 60 days and one after 80.

Table 23. Wantage Survey. Surgical early discharged.

Length of stay	Under 65		65 & Over		Total		Total both sexes
	M	F	M	F	M	F	
0-1 week	4	14	1	1	1	15	20
1-2 weeks	0	3	1	3	1	6	7
2-3 weeks	0	0	0	0	0	0	0
3-4 weeks			1	1	1	1	2
4-5 weeks			3		3		3
5-6 weeks							0
6-7 weeks							0
7-8 weeks							0
8 weeks or over			1	1	1	1	2
Totals	4	17	7	6	11	23	34

Average length of stay all surgical early discharges = 12.3 days

CHAPTER 4

WANTAGE SURVEY - DISCUSSION

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1. INTRODUCTION

This survey was designed to collect data so that the two hypotheses described at the beginning of the previous section could be tested.

These hypotheses were concerned with the differences between the two groups of admissions, Group 1 and Group 2, and the factors on which the appropriate hospital for admission was chosen. It was clear that if there were factors of choice that could be defined, they would explain and determine the difference between the two groups of admissions and the relative size of each group.

In addition, a number of hypotheses can be explored concerning the role of the G.P. hospital in the braoder context of total in-patient care. In order to do so the results of the Wantage Survey will be compared with other data that have been published about in-patient care.

Finally, the outcome of admission needs to be examined, particularly in terms of the effectiveness of care, or quality of care. Can effectiveness of care be measured? If so, what criteria can be used? These questions need to be discussed because it is clearly important to measure effectiveness of care, if it is possible to do so, and to compare the effectiveness in G.P. hospitals with that in consultant hospitals for selected groups of patients.

The logical starting point is the hypothesis concerned with factors of choice. This is the point at which admission to hospital begins, when the general practitioner decides it is necessary for a patient to be admitted and then bases his choice of hospital on certain factors as they apply to that patient.

2. FACTORS INFLUENCING THE CHOICE OF HOSPITAL FOR ADMISSION.

The hypothesis that a number of factors might influence decisions on the choice of hospital, and a list of these factors, has been noted. Before examining these factors there are some general points to consider.

The absence of a generally recognized policy on medical admissions to G.P. hospitals.

Many G.P. hospitals (such as Wantage) admit obstetric patients and surgical patients as well as medical. For obstetric patients the choice of hospital for delivery is determined by a number of "indications", or clinical rules for deciding which hospital should be chosen. These rules, even if they are not always observed, are generally well-known. In the case of surgery the choice of hospital for admission is (with few exceptions) always a consultant hospital, and the role of the G.P. hospital is simply that of post-operative care. There is still some major surgery undertaken in G.P. hospitals, but there is none in the area served by the United Oxford Hospitals, and has not been any for at least a decade.

On the other hand the general practitioner decides on the appropriate hospital for admission for medical patients without any guide-lines or generally accepted policy of the kind that applies to obstetrics or surgery. It is a unique situation, for in all other situations concerning hospital care the choice of hospital or out-patient clinic is usually obvious and well-recognized. The absence of any recognized policy or indications for G.P. hospital care has had several consequences. It has, for instance, led to a number of assertions about medical patients in G.P. hospitals which reflect a wide variety of beliefs about the role of the G.P. hospital. It also makes it very difficult to compare the results

that have been published about work in G.P. hospitals; the data are scanty, and the absence of any generally accepted policy for medical patients has resulted in different classifications being used when in-patient data are published. One of the most detailed of recent publications is the study of long stay admissions in the Aberdeen area by Dr Audrey Sutherland which includes data on general practitioner hospitals, but unfortunately no data on the way patients were selected. This led her to believe that the choice "must be a matter of common sense", by which she meant, presumably, that general medical knowledge would provide the obvious answers to obvious questions. However, the data that have been published about G.P. hospitals on the selection of cases appropriate for G.P. care show a wide variety of opinions. This was particularly well illustrated in a recent paper by Torrance et al. (1972) where the appropriate level of care for 573 medical admissions was assessed independently by general practitioners and hospital staff. There was agreement on the appropriate level in 326 of the admissions but disagreement in 247, and it was interesting to note that the latter group was not uniform but consisted of 69 admissions where the G.P. felt consultant care was needed but the hospital staff did not and 178 where the reverse opinion was held.

In view of this amount of disagreement it is unlikely that the common sense hypothesis, quoted above, is true.

In the absence of any accepted policy on the selection of cases for G.P. hospital care, what is the basis on which a local policy, with reasonably uniform acceptance within that locality, is formed?

The answer is probably imitation, and the evolution of a generally accepted policy by discussion within a partnership.

In the Wantage survey it was shown that the selection of the

appropriate hospital for admission was made by the general practitioner for 90% of admissions, and in only 10% was the decision to admit made by someone else. The uniformity of opinion within the partnership on the indications for either G.P. or consultant hospital care was illustrated by the distribution of the admissions to Wantage Hospital in terms of the G.P. who looked after the patient in hospital. Of the four partners, partner A cared for 30% of the admissions, partner B for 26%, partner C for 27% and partner D for 17%. The latter, as the junior partner, tended to see a larger proportion of young patients compared to the others (particularly children) and for this reason was less likely to attend patients needing G.P. hospital care. Amongst the other three the distribution of G.P. hospital admissions was closely similar.

It was found in the Wantage Survey that the partners were admitting approximately the same number of patients for G.P. hospital care and consultant care and it can be asserted with confidence that there was close agreement and understanding between the partners on the way that selection was made. Often, in fact, selection was made after a discussion between two or more of the partners and it was, and remains, common practice for the partners to seek each others' opinion on the patients in the hospital, and to discuss with the partner on night or week-end duty all the practice patients in the hospital. The pattern of care and selection for care within a close-knit partnership is therefore a result of a policy that evolves from discussion and from observation. Each partner, from the time he enters general practice in the partnership, learns by observation and continuous discussion; he learns the expectations of his partners, the hospital nursing staff, the patients and their relatives concerning admissions to the local G.P. hospital. As a result he learns to make decisions which rapidly become "second nature" to him,

thereby giving spurious support to the idea that decisions of choice are simply a matter of common sense; but, as the results of this survey show, a number of factors were being used in a consistent manner in the selection of patients either for G.P. care or for consultant care. The first to be considered is the diagnosis or, more strictly, the provisional diagnosis at the time admission to hospital was decided.

The Provisional Diagnosis — Tables 5 and 6

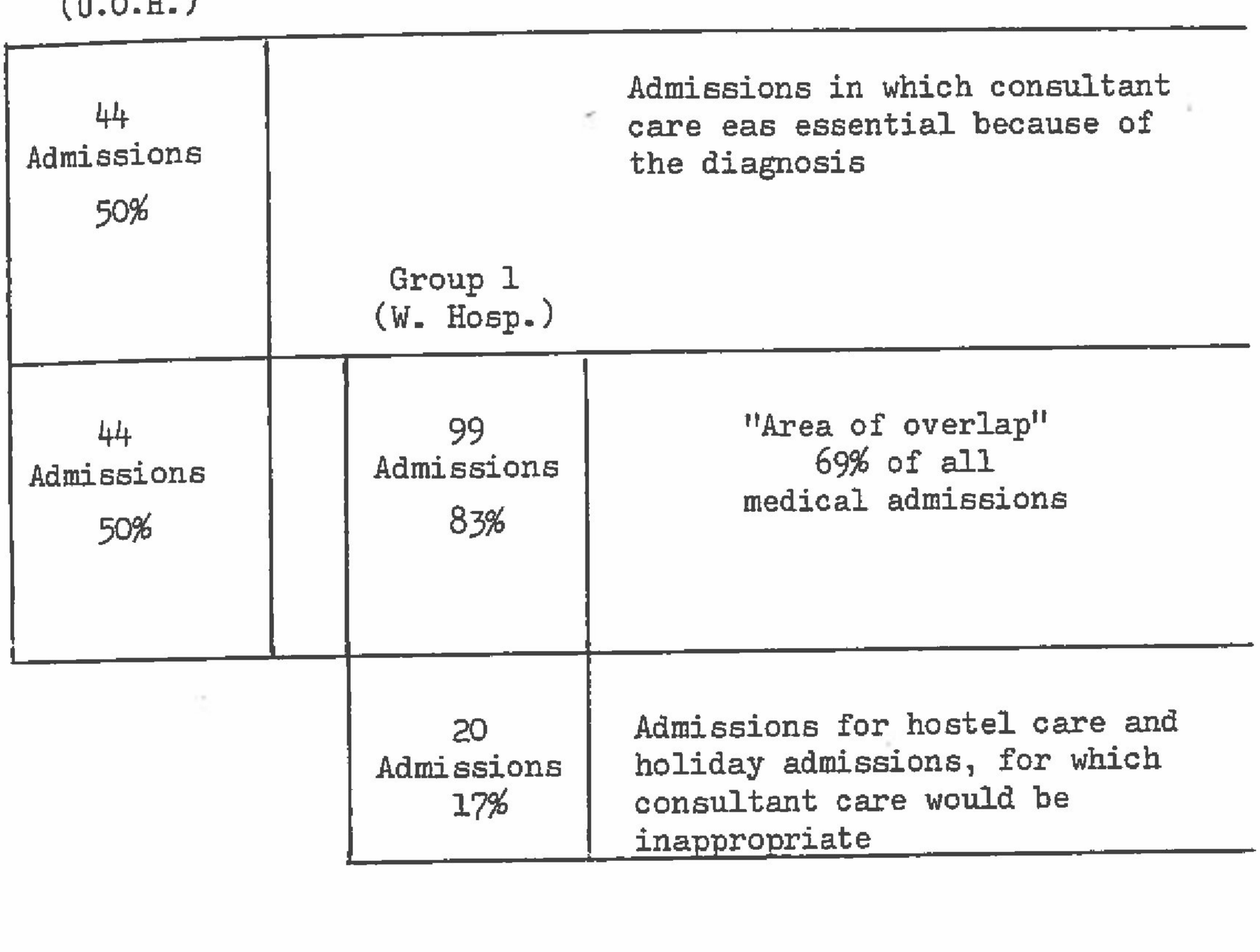
For the admissions in Group 2 (U.O.H.) the diagnosis was an important factor. The results showed that in 50% of admissions in this group the choice of hospital was decided solely by the need for consultant care, in the opinion of the general practitioners. For admissions in Group 1 there was a number of admissions where the diagnosis in social terms implied that consultant care would be inappropriate. These were admissions for hostel care and holiday admissions, and for both of these the use of consultant medical beds would have been wasteful and unjustified. The remainder of admissions in Group 1, i.e. admissions for medical and nursing care, and the admissions in Group 2 where diagnosis alone was not the factor of choice constitute 69% of all admissions. In Figure A these are shown in diagrammatic form as "the area of overlap", meaning the admissions in the two Groups where choice of hospital was not determined by the diagnosis alone.

Taking all the admissions in both Groups, therefore, the diagnosis was the factor on which the choice of hospital depended in 31% of the total.

Age — Tables 1, 2, 6, 7 & 24

The results of comparing Groups 1 and 2 show that there was a significant difference in the age of the patients who were admitted, those admitted to G.P. care being older than those admitted to consultant care.

Figure A. The influence of diagnosis on the choice of hospital for admission.



This raises two possibilities:

1. The first is that the age of the patient was by itself a factor influencing the choice of hospital. It would not be surprising if this was the case. Few would dispute that the vigour with which a patient with a stroke is treated and subjected to special investigations is likely to be much greater if the patient is 40 than if he is 80. Occasionally there is a definite policy as far as age is concerned; all patients with a certain diagnosis may receive one kind of treatment under a certain age and another above that age. This is apt to happen if a certain kind of treatment is expensive or in limited supply. "Rationing" by age is sometimes used, for instance, in coronary care units.

McKeown, KacKintosh and Lowe (1961) in a paper entitled "Influence of age on type of hospital to which patients are

admitted" showed how, in the Birmingham area, the choice of hospital was often determined by age rather than clinical need. Patients were divided into four groups according to clinical need.

A. Those needing the full resources of a modern hospital.

B. Those needing limited hospital facilities - essentially simple nursing care without mental supervision - because of physical illness.

C. Those needing limited hospital facilities because of mental illness.

D. Those needing no hospital facilities and retained chiefly for social reasons.

The first two groups correspond to a great extent with the two groups in the Wantage Survey. The authors found that for patients under 15 in Group A nearly all were in the appropriate hospitals (general and special hospitals) but the proportion fell to 4 out of 5 in the age group 15-44 and only 1 out of 5 in those aged 85 or over. Equally, many of the young patients, but few of the old, whose clinical needs came in Group B were cared for in specialised hospitals. In other words, the authors showed that patients were segregated to a large extent either to general and special hospitals with full hospital facilities, or to chronic sick hospitals with limited facilities, on the basis of age rather than clinical need; younger patients were more likely to be admitted to general and special hospitals with full facilities and older patients to hospitals for chronic sick.

Age is accepted as a factor that influences medical management with a tendency to expect a higher and more intensive level of medical management for the seriously ill when they are young than when they are old. This expectation is shared by the public as well as the profession, so that the patient and his relatives will often expect consultant hospital admission for a young patient and G.P. hospital admission for the old. It would therefore be reasonable to expect that selection by age would be a factor that influenced the choice of hospital for admission.

2. The second possibility, however, is that the age difference between admissions in Group 1 and 2 was a secondary result, and that other factors used in selection happened to be related to age. The only possibility in this respect was diagnosis. It was noted in Table 6 that in Group 2, where the need for consultant care determined the choice, the admissions were predominantly younger patients. At the same time, admissions in Group 1 for hostel care or holiday admissions were predominantly old. These admissions in Group 1 and 2 can be excluded in order to see if there is still an age difference in the remaining admissions, i.e. in the admissions shown in Figure A within the "area of overlap".

The results of doing so are shown in Table 24. The difference in age distribution is highly significant ($P < .01$) suggesting that the choice of hospital was influenced by the age of the patient. But perhaps the most striking evidence of selection by age is shown in Table 7 where, for the three largest diagnostic groups (heart disease, cerebro vascular accidents and disease of the lungs) selection by age was seen to occur.

The conclusion is that age was an important factor influencing the choice of hospital for admission, and the difference in age distribution in Groups 1 and 2 is partly due to deliberate selection by age, and partly a result of the relationship between age and diagnosis when diagnosis was the influential factor of choice.

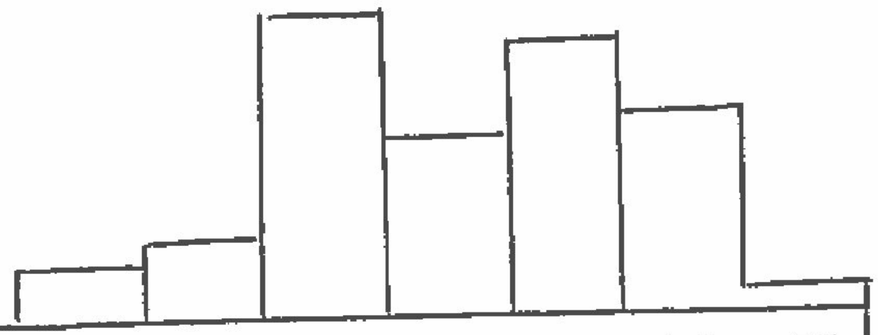
Severity of Illness

It would be natural to expect severity of illness to be an important factor in the choice of hospital. It is generally believed that a large teaching hospital will have more facilities and expertise to aid the seriously ill than a small G.P. hospital, and therefore natural to expect a selection of consultant care to occur on the basis of severity of illness.

It is, however, difficult to test this hypothesis, because severity

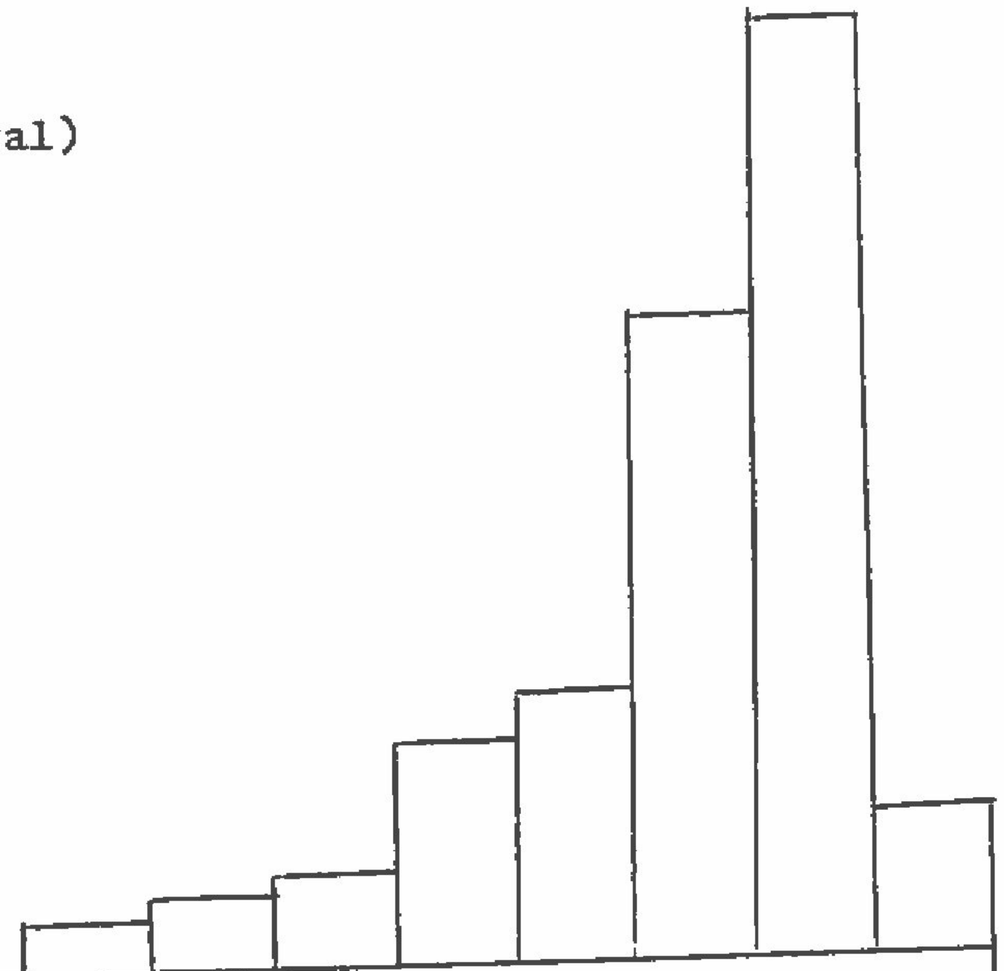
Wantage Survey. Table 24. A comparison in terms of age of those admissions that are included in Figure A in the "area of overlap".

Group 2
(U.O.H.)



Age Groups	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-
No. of Admissions	0	2	3	12	7	11	8	1

Group 1
(Wantage Hospital)



Age Groups	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-
No. of Admissions	2	3	4	9	11	26	38	6

The difference in age distribution is highly significant

$$X_3^2 = 11.91 \qquad P < .01$$

cannot be measured as if it were an isolated factor, independent of other factors such as diagnosis and age. But it would be foolish to believe that it played no part in the process of selection. The influence of severity can be illustrated by considering all seriously-ill admissions in three categories.

1. The first were those for whom effective treatment was available (meaning treatment that could lead either to cure or to considerable improvement) but consultant admission was necessary to obtain it. Obvious examples would be haematemesis, diabetic coma and subacute endocarditis.

2. The second were the seriously ill for whom effective treatment was available and could be provided in a G.P. hospital, e.g. bronchitis, pneumonia or congestive heart failure.

3. The third were those for whom no effective treatment is possible, except for palliation and nursing care, e.g. cerebro vascular accidents and terminal care in malignant disease.

For admissions in the first category consultant hospital admission was always obtained regardless of any other factors. For the second and third categories the choice of hospital depended more than anything else on the patient's age. For both categories the young would generally be admitted to consultant care and the old to G.P. care. The middle aged might be admitted to one or the other. In the second category awareness of the possibility of cure would sharpen the awareness of the G.P. and of the patient's relatives to the possibility of failure, making it more likely that consultant care would be sought if there was doubt about the appropriate hospital for admission. In the third category, provided the diagnosis was not in serious doubt, there would not be this bias towards consultant admission.

The effect of age as a factor of greater importance than severity was illustrated by two admissions within a few days of each other. The

first was a woman in her early twenties who suffered a sudden weakness of an arm and leg while out shopping; when she was seen it was probable she had a mild hemiparesis though she was fully conscious and not unduly distressed. She was immediately admitted to the U.O.H. with a provisional diagnosis of a cerebro-vascular accident. The alarming nature of the illness in one so young was the undisputed reason for consultant admission. She second was a woman of 75 who lived in a council bungalow and was found in deep coma with a profound hemiplegia. She was admitted to Wantage Hospital. Unexpectedly, she made a complete recovery, but at the time of admission she was very severely ill.

Although these examples are chosen from the extremes of age they emphasise how the factor of age predominated over severity in the choice of hospital.

For this reason it was the general experience that there were many seriously ill patients admitted to Wantage Hospital as there were to the U.O.H., but those admitted to Wantage Hospital were generally older and in many cases seriously ill from an illness for which there was no effective treatment.

Table 8

Social Conditions

There are numerous references in papers and reports concerned with hospital admissions to the "social admission" and the "social problem". The definition of the word "social" in these contexts is not always clear, but it is often used in a pejorative sense about hospital admissions that are considered wasteful and unnecessary from the clinical point of view. Moreover, the difficulty of a precise definition of social factors often arises from the habit of thinking that social factors ought to be clearly separable from clinical factors and the belief that it is solely

on the strength of the latter that admission to acute medical beds can be justified.

In this section social conditions are considered only in the manner they affected the choice of hospital for admission. Here they are considered under three clearly defined headings.

A. Admissions because of poor housing conditions, which played no part at all, and therefore need not be considered further.

B. Admissions because of "living alone" as defined on p.

C. Admissions because of "distance".

Admissions where social conditions were the dominant factor were, of course, admissions where the choice was G.P. hospital admission. By implication, it was not the diagnosis or severity of the illness that led to hospital admission, and the admissions were predominantly elderly. Were it not for the adverse social conditions these patients could probably have been cared for at home. Therefore they came within the scope of general practitioner care. Numerically they played a relatively unimportant part as a factor influencing the choice of hospital for admission, as shown in Table 8.

Tables 9 and 10

Social Class

There are few private patients in the practice on which this survey is based. Private practice is discouraged or declined by the partners and the number of private patients has fallen since 1948, now amounting to no more than 0.2% of the practice population. These patients and a few who belong to private hospital insurance schemes seek private care when admitted to hospital, but for medical admissions this is a rare event, occurring only once every year or two. The remainder are N.H.S. patients and hospital admission is to N.H.S. beds.

There was only one private hospital admission in the survey and the patient, though elderly (aged 80) would, for reasons of diagnosis, have needed consultant care in any case.

What part was played by social class in the selection of hospital for admission under the N.H.S.?

It was expected that it would play some part, although not necessarily a large part. It was believed that the professional classes, when they need hospital admission, would be likely to prefer the attention of a consultant and the surroundings of a highly respected teaching hospital to the alternative of care by their G.P. in a G.P. hospital. It was also believed that the labouring classes in general would not have the same expectations, or at least not to the same degree, and might indeed prefer G.P. hospital care out of fear of the larger remote hospital with its unknown staff. This was a belief that was shared by the partners in the practice, not very strongly perhaps, but in a general sort of way. Even so, this belief about the different level of expectation could not be stated as simply as that without some reservations. In the first place this preference of the professional classes for consultant care, if it occurred, would be expected to diminish with age so that care in a G.P. hospital would seem to be appropriate for the elderly irrespective of the factor of social class. The young scientist or lawyer might consider a G.P. hospital was not appropriate for himself, but might prefer it for the care of his elderly relatives. The second reservation is that if social preference occurred it was only in the field of medical admissions. For maternity patients there is no evidence of social preference, and the hospital selection for delivery is chosen solely on clinical indications. The same holds for surgical early discharges.

These were the impressions of the partners in the practice on which

the survey is based and they apply to one partnership, one area and one period of time.

The result (Tables 8 and 10) of analysing admissions in terms of the Registrar General's classification by occupation, shows no evidence of social class being used as a factor in selecting consultant care rather than G.P. care or vice versa.

The effects of social class are subtle and difficult to classify with precision, for they are concerned not only with social class but with social pretentions and the expectations about medical care that are connected with both. It is therefore possible that the use of the Registrar General's classification failed to reveal the influence of certain social class effects, but there is no evidence to support this.

If social class were a significant factor in the choice of hospital in the way that age and diagnosis influenced the choice it would have been revealed in the appropriate tables. It is therefore unlikely that it played an important part.

The Availability of Beds — Table 8

On occasions when all available beds in Wantage were occupied and immediate admission was required, there was no other choice but consultant admission. The reverse situation (admission to Wantage Hospital because no beds were available in the U.O.H.) never occurred.

There were 5 admissions to the U.O.H. for this reason, all over the age of 65. Obviously, it was the belief of the general practitioners in each case that hospital admission was essential, but consultant care was not. There were other occasions when patients would have been admitted to Wantage Hospital if beds had been available, but the patients were managed at home instead. In these, the need for hospital admission was

not so urgent that consultant admission was sought. No record was kept of the number of times this happened although, as a measure of a need for G.P. hospital admissions that could not be met, it would have been a measurement of some interest. The reason for not recording this information was that the recording of data on hospital admissions was initiated after admissions had occurred. To have attempted to record the times when admission might have been requested by any of the partners, at a time when all the partners knew there were no G.P. beds available, would have been difficult, and unlikely to have produced accurate answers.

Summary: Factors influencing the choice of hospital for admission

The purpose of this section was to examine the hypothesis that the choice of hospital for admission was not an arbitrary choice, but was influenced by a number of factors whose relative importance can be estimated.

Which were the most important factors? Importance can be estimated in two ways; first as the relative strength of a factor to influence a clinical decision, secondly as the number of times a factor was seen to be decisive. It is mainly in the latter sense that importance is estimated for the purpose of comparing the various factors.

1. The provisional diagnosis at the time of admission and the age of the patient were the two most important factors.
   Half of the admissions in Group 2 (to consultant care in the U.O.H.) were selected on diagnosis alone, and 17% of admissions in Group 1 (to G.P. care in Wantage Hospital).
   For the remaining admissions (69% of the total) age was apparently the most important factor on which the choice of hospital was based.
2. Severity of illness was a factor that, by its nature, was not susceptible to measurement. The evidence produced suggests

that it played a part in the choice of hospital, particularly when other factors were not decisive in pointing to the appropriate choice. But it was also clear that age and diagnosis were usually more decisive factors than severity.

3. Social conditions, and the availability of hospital beds were factors that affected the choice of hospital less frequently than age and diagnosis and were, therefore, of relatively small importance.

4. There was no evidence that social class played any part in the choice of hospital for admission.

Finally it should be emphasised that these factors were closely linked together. For the purpose of analysis it was necessary to discuss them individually as isolated factors. In practice they were not used in this way, or at least, not always. On many occasions the decision of choice depended on a rapid assessment of several factors whose relative importance would vary from one case to another. These factors were used in a consistent manner by the partners in the practice and there is evidence that the consistency originated from custom and imitation leading to a policy for admissions which was not explicitly formulated but tacitly recognized within the partnership.

3. THE TOTAL NUMBER OF MEDICAL ADMISSIONS AND THE DIVISION BETWEEN CONSULTANT CARE AND GENERAL PRACTITIONER CARE OF IN-PATIENTS.

The purpose of this section is to examine two hypotheses which are:

1. That in-patient care can be provided in a general practitioner hospital for a substantial number of patients who would otherwise need to be admitted to consultant hospital beds.

2. That practitioners who have access to G.P. beds may be admitting more medical patients to hospital than those who have not, including patients who could otherwise be treated at home as well as (or instead of) those patients for whom alternative to G.P. hospital admission would be consultant hospital admission.

These hypotheses are concerned with the role of the general practitioner hospital in the total hospital care of medical in-patients. One view might be that the role of the general practitioner hospital is simply as an alternative to domiciliary care, and on this view it might be said that medical admissions to general practitioner hospitals are unnecessary admissions while those to consultant hospitals are necessary. The opposite view would be that the general practitioner hospital is sharing the work-load of medical in-patient care with the consultant hospitals, that all admissions to both types of hospital are necessary, and that if the G.P. hospital did not exist the in-patient work would have to be transferred to consultant hospitals.

It need not be emphasized that the importance of the general practitioner hospitals in the National Health Service depends on which view is correct; but it is also true that it is unlikely that either view is wholly correct and the truth lies somewhere between the two extremes. The results that have been considered certainly suggest that some of the admissions to Wantage Hospital were "necessary" in the sense of being alternatives to consultant admission, but they do not provide the information to decide between the two views.

There are two ways in which this problem can be approached:

1. By defining "necessary" medical admissions to see how many of the Group 1 admissions were necessary.
2. By comparing the total number of medical admissions in the

Wantage Survey with the admissions from other areas,
and other practices with and without access to G.P. beds.

It is in fact more difficult to do both of these than it would appear at first sight.

The difficulty of defining necessary admissions

It was pointed out that there are certain qualitative differences between medical admissions on the one hand and surgical and obstetric admissions on the other. One of these differences is the relative ease with which the concept of "necessary" or "unnecessary" can be applied to hospital admission. In the Wantage area for instance all obstetric cases have been delivered in hospital for a number of years and domiciliary confinements no longer occur. For obstetrics and surgery (except minor out-patient surgery) hospital admission is considered a necessity. In medicine the situation is different. For some admissions, as we have seen, there is an absolute need for consultant hospital admission (in the Wantage Survey 44 out of 207 admissions), but it would not be true to say that these and only these admissions were necessary, because a medical admission may be necessary for a number of reasons that are irrelevant to surgery and obstetrics. These reasons may depend on such factors as the help available in a patient's home, the facilities that can be provided by the general practitioner and his nursing staff and the hospital facilities available in the area.

It was shown (Mackintosh, McKeown and Garratt 1961) for instance that although a percentage of acute and chronic admissions to hospital in Birmingham were for "social" rather than clinical reasons, the provision of more domiciliary services would not in practice greatly reduce the need for hospital care. If it were possible to provide on a very large scale

continuous day and night nursing care in patients' homes the number of medical admissions might be greatly reduced. This is done on rare occasions by wealthy patients who employ private nurses for the purpose, but there is no prospect of this level of domiciliary care becoming available for all levels of society.

The concept of necessity, as applied to medical admissions, must therefore include factors outside purely clinical considerations and considerations of organic illness. Factors such as home circumstances must be recognized as necessary factors on some occasions, although the force of these factors usually has to be judged by the general practitioner who is able to assess their importance in any particular instance.

It is not therefore easy to define "necessary" medical admissions in a precise manner so that the definition can be used to distinguish with clarity necessary admissions as opposed to unnecessary.

The comparison of rates of admission to hospital

If the concept of necessity cannot easily be applied to medical admissions in an attempt to assess the work of G.P hospitals, one has to turn to comparative data.

How does the rate of admission to hospital in the Wantage Survey compare with the rate of admission in other areas? Before attempting to answer this question it is important to recognize that the rate of admission is subject to a number of variables. Amongst the more important of these are:

1. The age structure of the population at risk, because the rate of admission for elderly patients is higher than for young. The difference in rate is large so that a large increase in medical admission rate can result from a comparatively small increase in the average age of population.

2. The variation between regions in the number of beds available.
3. Variations between different doctors and different practices in the rates of referral both for in-patients and out-patient care.
4. Changes in methods of treatment which may involve either more or less in-patient care.
5. Variations in the categories of admission that are included under the heading "medical".

Variations in the age structure of populations

The age structure of the population at risk is important because of the effect on admission rates. In the Wantage Survey the rate of admission per 1000 at risk was nearly 7 times as great for patients aged 65 and over as it was for patients under 65. A similar ratio was found by Sutherland (1972) in Aberdeen. In Table 25 it can be seen that the percentage of patients aged 65 or over was 2.7% higher than the percentage in the surrounding area. If the total annual admissions for the Wantage Survey are estimated on the basis of the practice having 10% of the patients over 65 instead of the actual figure of 12.7% the number of admissions, on the basis of this estimate, would have been reduced from 207 to 182, a reduction of approximately 12% for the practice population of the same size. Clearly it is important in comparing rates of medical admissions to know the age structure of the populations that are being compared.

Variation in beds available, rates of referral and methods of treatment.

The ratio of beds to population varies between one region and another and this may affect the rate of admission.

Table 25. Wantage Survey. Population and Age Structure.

	Total Number	Number Aged 65 & over	% Aged 65 & over
Population United Kingdom 1966 Census	52 million	6.65 million	12.75%
Berkshire N.H.S. patients	516,613	51,563	10%
*Population of Wantage Urban & Rural District Council	23,261	2,327	10%
Population of Practice in Wantage Survey	11,300	1,440	12.7%

*Approximately 80% of this population is served by the two practices in Wantage.

Kemp (1969) pointed out the embarrassment of finding that "in some places the natives live happily with half the beds that Liverpool, for instance, clamorously finds to be too few". He also asserts that hospital beds are used, "quite simply, because they are there", and "whenever there is an empty bed there is always an apparently valid reason for filling it". This view was supported by Forsyth & Logan (1960) in their attempt to introduce order and exactitude into an estimate of the right number of beds available for a given population for each specialty; they found themselves forced to conclude that "the number of beds used is simply the number available".

Estimates of the exact number of hospital beds available per 1000 population at risk are difficult because the borders of hospital regions do not necessarily correspond to the borders of the population served by that region. Patients cross regional boundaries when seeking hospital care and the extent to which this occurs at the edge of hospital

regions is seldom known exactly. Nevertheless it is clear that some areas are more richly endowed with hospital beds than others (Forsyth & Logan 1960).

Not only does the ratio of hospital beds to population vary, but so does the length of stay. Both are well recognized facts. In 1969, for instance, the average length of stay of patients in the provincial teaching hospitals of England and Wales was 10.5 days but the range was from 7.6 days to 17.0 (Dept. of Health Annual Report 1969: Loudon 1970).

The variation of G.P. beds between different regions is very large. G.P. beds, other than maternity, represent 3% of all hospital beds (excluding psychiatric) and this proportion has remained constant over the past 15 years. (Israel & Draper 1971.) But G.P. beds (non-maternity) expressed as a percentage of all medical beds amount to about 10%.

Clarke (1971), on the basis of data derived from the Department of Health, calculated that out of 72,000 medical beds in England and Wales 7,000 were general practitioner beds. (Medical beds included general medicine, Infectious and chest diseases, Dermatology, Neurology and Cardiology, Physical Medicine, Rheumatology and Venereal disease.) The regional variations were striking. Over the whole of England and Wales the proportion of medical beds that were G.P. beds was 10%, but the range was from 2% in Liverpool to 30% in the South Western Regional Board area. Generally the highly populated urban areas had the lowest percentage (Leeds 3%, Manchester 4%, Birmingham 6%) and the more sparsely populated areas the highest. The Oxford area had 14%. These figures were based on data for 1968.

Under the N.H.S. there has been an attempt to provide a more

uniform distribution of hospital facilities. The variations in hospital facilities are largely due to historical accident, and the rapid increase in hospital beds that occurred in the second half of the nineteenth century. This was the result of funds being made available on a local basis without any regard to overall national needs. Our hospital service is partly based on the legacy of this chance distribution, and the admission rate is to some extent influenced by the arbitrary factor of the beds available in a particular region or district.

The difference in admission rates between regions can be illustrated by considering two common conditions: vascular lesions of the C.N.S. and arteriosclerotic heart disease (including coronary artery disease). The average discharge rate per 1000 population at risk for the former was 1.74 in 1967, but varied from 1.33 in Wessex to 2.07 in Leeds. The average discharge rate for arteriosclerotic heart disease was 2.15 for all regions, but the variation was wide - from 1.45 in the Oxford Region to 3.11 in the N.E. Metropolitan. (Hospital In-patient Enquiry 1967.)

It is not possible to explain these variations simply in terms of available beds; other factors, such as variation in morbidity rates, may be partly responsible for the variation in admission rates, but one of the largest variables (and also the least understood) is the variation in rates of referral. The admission rate to hospital is governed by the number of patients referred to hospital by general practitioners, and it is well known that the rates of referral from different practices within the same area can vary widely, both for in-patients and out-patients (Forsyth & Logan 1960 & 1968: report of the South East England Faculty of G.Ps 1967, Oxford Regional Hospital Board 1970, Starey 1971, Handfield Jones et al. 1959). It was found by Forsyth & Locan, for instance,

that the rates of admission per 100 at risk for all categories of admission varied between different practices in Barrow & Furness from 41 to 108. The margin is so wide that it cannot be explained simply in terms of differences in morbidity or age structure, and it is far from clear why it varies so much.

If, therefore, one is looking at the admission rates for a large population the differences due to individual practices may be ironed out to an average figure: but comparing data for G.P. hospitals is often comparing the admission rates between a small number of practices, and differences in rates of referral may be significant. Unfortunately this is a variable that is seldom known; as general practices work in isolated groups it is rare for a practice to know whether its rate of referral is high or low compared to other practices in the same area.

If one is comparing admission rates to various hospitals at the same time, all these variables have to be considered. If, however, one is comparing admission rates at different times, there is the added complication of changes in methods of treatment which can have quite a marked effect on admission rates.

The importance of the time factor is the rapidity with which changes in treatment can occur. If the change of treatment involves a change of place (for instance from home to hospital, or from G.P. hospital to consultant hospital) and the condition treated is a common and serious one the effect on admission rates can be important. One obvious example is the advent of chemotherapy and mass X-ray for pulmonary tuberculosis which has almost eliminated the need for long stay "T.B." beds. In that case there was a fall in the rate of admissions for one particular condition. Sometimes, new techniques and forms of treatment can lead to an increase in admission rates to consultant hospitals. One example is

myocardial infarction, where opinion on the need for consultant care has swung like a pendulum over the last twenty years.

Before the introduction of anticoagulants in the early 1950's it was widely recognized there was little to do for the patient except rest. There was little advantage in hospital admission and, because of therapeutic impotence, a lack of the stimulus to accurate diagnosis that occurs when a dangerous illness is curable.

The advent of anticoagulants, and the early mistaken belief that they improved the mortality rate substantially increased the rate of admission and, in all probability, the rate of recognition of cases of myocardial infarction. The number of patients admitted to the Radcliffe Infirmary with myocardial infarction in the four years up to 1950 was 20, 14, 24, and 18. In 1950 it rose to 32 and in 1951 to 66. (Loudon, Pease & Cooke 1953.)

Thus a condition, not previously considered primarily a hospital illness, rapidly became an illness for which hospital care was considered necessary for a majority of cases. In spite of disillusionment with anticoagulants the habit of using them persisted and then the introduction of coronary care units produced an added reason for consultant admission for myocardial infarction. In those areas where coronary care units are available it would be reasonable to expect a higher rate of admission for myocardial infarction than those where they are not. In some areas, such as Oxford, the coronary care unit is restricted to patients under 65 and certainly, in Wantage, this has a marked influence on the policy for admission of patients with myocardial infarction. Recent evidence that the advantages of coronary care units may also be illusory (Mather et al. 1971) may also affect the rate of admission in course of time.

When admission rates are compared, therefore, wide variations may

occur between regions and these may be linked to variations in beds available, variations in rates of referral and variations in the fashions of treatment. Apart from these, there are often variations in definition and variations due to the differing age structure of the populations at risk.

Variations in the classification of admissions

It is much easier to compare rates of hospital admission for all categories than it is for one, such as medical admissions. Medical admissions are particularly difficult because different categories may be included under the heading "medical". Data derived from the Ministry of Health Annual Report for 1967 and quoted in "The Present State and Future Needs of General Practice" (Royal Coll. of Gen. Pract. 1970) give the average annual admission per 1000 at risk for general medicine as 13.2. But this does not include chest diseases, skin diseases, C.N.S. diseases, infectious diseases, geriatrics or chronic sick (the last two being the largest). If these are added, the rate is 19.2 and the categories included in the Wantage Survey as "medical admissions" correspond to the latter figure not the former. Very often it is difficult to be sure what is included under the heading "medical" and the main difficulty is geriatrics.

The term "geriatrics" implies a specialty differentiated from general medicine by age alone, in the same way that pediatrics is differentiated. In fact, the overlap of age groups in general medical and geriatric wards is considerable; it is generally recognized that between 40% and 50% of the admissions to acute general medical wards may be aged 65 or over, although the percentage varies from one area to another. In 1969, 20% of the admissions to the acute medical wards of the Radcliffe

Infirmary were aged 65 to 74 and 10% aged 75 to 84 (Oxford Record Linkage Study). There is, therefore, no exact age at which the classification of admissions changes from "general medical" to "geriatric". Geriatrics is concerned with the management and rehabilitation of the elderly chronic sick; but just as there is a tendency for the age distribution of general medical and geriatric to overlap, so is there a tendency for the acute illness of the elderly admissions to overlap with the chronic. Rehabilitation measures may be carried out in general medical wards as well as geriatric. The distinction between geriatric admissions and general medical admissions is therefore one that is not easy to define in the way for instance that surgical admissions can be distinguished from obstetric admissions, and these from medical. Usually the term "geriatric admission" means simply an admission under the care of a geriatrician. In consultant hospital terms this may be a clear definition from the administrative point of view, but it cannot be applied to G.P. hospital admissions where the patient is under the care of a G.P. whether he or she is classified a geriatric or medical, surgical early discharge or obstetric. Thus for G.P. hospitals the distinction between "general medical" and "geriatric" patients is one that seldom has much significance, unless some of the patients in the G.P. hospital have been admitted under the care of a geriatrician working in liaison with the general practitioner.

In the Wantage Survey there were no admissions to the Geriatric Hospital (Cowley Road) in the year of the survey. All patients with medical conditions were classified as medical admissions, regardless of age, whether they were 15 or 90. For comparisons, therefore, it is important to know whether medical admissions reported in published papers or reports do or do not include geriatric admissions. It is not always

clear whether they do or not.

4. RATES OF ADMISSION TO HOSPITAL IN THE WANTAGE SURVEY AND COMPARISONS WITH ADMISSION RATES TO OTHER HOSPITALS.

The rates of admission are expressed throughout as the number of admissions per 1000 at risk per year. The population at risk on which the data of the Wantage Survey are based is the practice from which the data are derived.

The results for the Wantage Survey are shown in Table 26. For each category of admission, the rates are shown in four columns:

1. Admissions in age group 15-64 per 1000 at risk aged 15-64.
2. Admissions aged 65 and over per 1000 at risk in that age group.
3. All adult admissions (aged 15 and over) per 1000 adults at risk.
4. All adult admissions per 1000 at risk for all ages (0-65 and over) i.e. including children at risk.

The purpose of including admission rates for adult admissions in terms of the whole population at risk, including children, in spite of the fact that hospital admissions of children (age group 0-14) are not included in the survey, is for comparison. Some of the data published on adult admission rates are based on total practice populations including all age-groups, without information on the proportion of children and adults. Comparisons, of course, are then subject to uncertainty because of unknown differences in the age structure between one practice and another, and this factor must be taken into account.

The preferred method of presenting adult admissions, therefore, is in terms of adult population at risk.

The main features of Table 26 are as follows:

1. The rate for all adult medical admissions in the Wantage Survey was 24.0 per 1000 at risk per year, using as the denominator the adult population at risk.

2. In terms of the total practice population including all age groups the rate for all adult medical admissions was 18.3.

3. The rate of admission for patients aged 65 and over was 81.8, which was nearly seven times as high as the rate (12.4) for patients aged 15-64.

Table 26. Wantage Survey. Number of admissions of adult medical patients in terms of the population at risk, expressed as admissions per 1000 at risk per year.

	Aged 15-64	Aged 65 & over	Total Age 15 & over	Total - All Practice Patients
Population at risk	7210	1440	8650	11,300
Gp. 1 Admissions to Wantage Hospital	4.6	59.6	13.8	10.5
Gp. 2 Admissions to U.O.H.	7.8	22.2	10.2	7.8
All adult medical admissions Gp. 1 & Gp. 2	12.4	81.8	24.0	18.3
Early Discharges: Medical	0.7	7.6	1.8	1.5
Surgical	2.9	9.0	3.9	3.0
All non-obstetric admissions to Wantage Hospital	8.2	76.2	19.5	15.0

N.B. The figures in the first and third columns are based on an estimate of the number of patients in the practice under the age of 15. The estimated number was 2,650.

4. The admission rate of those aged 65 and over compared to the rate for those under 65 was markedly different for Group 1 and Group 2. In the former the ratio of admission rates was approximately 13:1 and in the latter nearly 3:1. These ratio emphasize the point that has already been made about the selection of an older group of patients for G.P. hospital care compared to those selected for consultant care.

Comparative data

1. Report on hospital In-patient Enquiry 1967. H.M.S.O.

This report is based on a one in ten sample of all discharges and deaths from all hospitals in England and Wales in 1967.

The discharge rate per 1000 population at risk for all departments except maternity and psychiatry was 78.5, and if maternity is included 94.7 per thousand. In approximate figures this means that, on average, it can be expected that for every 1000 patients in a general practice there will be 100 admissions (excluding admissions for psychiatry) each year. Obviously this figure will vary from one practice to another for the many reasons that have been mentioned, but it is still a convenient figure that is easy to remember in terms of total hospital admissions.

However, the admission rate of interest here is the admission rate for medical admissions. In Table 12 of the H.I.P.E. the discharge rate (used, here as synonymous with admission rates) for the department entitled General Medical were as follows:

Age	0-15	4.5/1000
Age	15-64	12.6/1000
Age	65 & over	34.8/1000
All ages		13.4/1000

If the adult discharge rate (aged 15 and over) is calculated in terms of the total population of all ages (for reasons of comparison, as mentioned

above) the discharge rate was 12.4/1000. However, the term "medical admissions" as used in the Wantage Survey includes a number of other categories of admission included separately in Table 12 of the H.I.P.E. For comparison, these should be included, and the results of doing so are shown here, in Table 27:

Table 27. Admission rates per 1000 at risk per year (Source: H.I.P.E. 1967)

Departments	Age groups 15-64	65 & over	All ages
General medical	12.6	34.8	13.4
Infectious diseases	0.5	0.6	1.2
Chest diseases	2.9	4.9	1.9
Neurology	0.6	0.4	0.4
Geriatric	0.3	19.2	2.6
Chronic sick	0.1	5.6	0.8
Total	17.0	65.5	20.3

If the admission rate for all 6 departments in Table 27 is calculated for adult admissions, i.e. age 15 and over, the result is 25.4. And if, for reasons of comparison, adult admissions only are expressed in terms of the total population at risk, i.e. age 0-65 and over, the result is 20.3.

We are now in a position to compare the results of the Wantage Survey with the data from the H.I.P.E. for adult medical admissions:

Table 28. Admission rates: adult medical admissions. Comparison of Wantage Survey and Hospital In-patient Enquiry.

	Age Groups 15-64	65 & over	All adults 15-65 & over	All Ages 0-65 & over
Wantage Survey				
Group 1 (Wantage Hosp.)	4.6	59.6	13.8	10.5
Group 2 (U.O.H.)	7.8	22.2	10.2	7.8
Group 1 & Group 2	12.4	81.8	24.0	18.3
Hospital In-patient Enquiry	17.0	65.5	25.4	20.3

It can be seen from this comparison that the total rate of adult medical admissions recorded in the Wantage Survey (24.0) was close to the value recorded in the H.I.P.E. (25.4). In the Wantage Survey the admission rate for patients aged 65 and over was higher, and for patients aged 15-64, lower, than in the H.I.P.E.

However the main point of the comparison is that the total rates in the Wantage Survey are no larger than in the H.I.P.E., and the admission rates in Group 2 to consultant care are considerably lower. The implication is that admissions to Wantage Hospital were mainly alternatives to consultant care. If they had been additions to the hospital care of medical patients (and in this sense "un-necessary" admissions) the total admission rate would have been expected to be higher than the rate in the H.I.P.E., and admission rates in Group 2 would have been of the same order as those recorded in the H.I.P.E. The result of comparing admission rates in Table 28 supports the hypothesis that the admission of medical patients to Wantage Hospital was an alternative to admission to consultant hospitals in the Oxford area.

2. The Community Hospital: a pilot trial.
Oddie, Vine, Hasler & Bennett.

This paper describes work undertaken in a newly opened ward in a peripheral hospital, used for the admission of adult patients (but not maternity) under the clinical care of three general practitioners in a group practice of 7300 patients. The paper describes the results for the year 1970, and additional details for 1971 have been obtained (Bennett 1972).

The total number of adult hospital discharges (aged 15 and over, but excluding maternity) from all hospitals for 1970 was 88.4 per 1000. Of these, 38.8% were discharged from the community hospital. The patients

cared for in the community hospital came into 3 categories:

1. Direct admissions (corresponding to Group 1 admissions in the Wantage Survey).
2. Early surgical discharges (defined as patients on whom an operation had been performed).
3. Early medical discharges (no operation).

Sixty per cent of all discharges from the community hospital were aged 65 and over compared to 65% in the Wantage Survey.

The admission rate (per 1000 at risk per year) for direct admissions was 23.7 in 1970 and 18.7 in 1971. The corresponding rate for the Wantage Survey (Group 1 admissions) was 13.8.

The admission rates for medical and surgical early discharges was 10.6 in 1970 and 12.1 in 1971 compared to 5.7 for the Wantage Survey. In both cases the majority of early discharges were surgical.

If the total discharge rates from the Community Hospital are compared to the total admission rate (excluding maternity) to Wantage Hospital the values were 34.3 in 1970 and 30.8 in 1971 for the former and 19.5 for Wantage.

It can be seen that the admission rates for all categories of admission was higher for the Community hospital than for the Wantage Survey. One reason may be that the Community Hospital was a trial project, well supported from outside the practice with the stimulus of a new experimental project. More important, probably, was the ratio of beds to population at risk.* For a population of 7300 the Community Hospital ward had 15 beds, or just over 2 beds per thousand. In Wantage there were 13 acute beds shared between two practices with a total popu-

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*It was, for instance, noted that nearly half of the direct admissions would, in the absence of G.P. beds, have been treated at home.

lation of about 20,000; giving a ratio of 0.65 beds per thousand. It is more than likely that the admission rate to Wantage Hospital would have been higher if more beds had been available, particularly in the categories of early discharges. On several occasions during the survey requests from the U.O.H. for the transfer of early discharge cases had to be turned down, reluctantly, because there were no beds available; and, as already noted, a few patients had to be admitted to the U.O.H. for the same reason. As the largest difference between admission rates to the Community Hospital pilot project and to Wantage Hospital was in the categories of early discharge it is probable that the difference was mainly due to the relative numbers of G.P. beds available.

3. Kyle 1971 Brecon.

Until recently, the nearest consultant hospitals to Brecon were at Merthyr (about twenty miles) or Cardiff (over 40 miles) and the road between them, passing over the shoulder of the Brecon Beacons, may be closed in winter. It has therefore been the tradition to provide a much more comprehensive hospital service in the general practitioner hospital in Brecon than in areas such as those around Oxford. The hospital contains forty beds and operative surgery and caeserean section are undertaken here. But the majority of in-patients are nevertheless medical.

In this paper Dr David Kyle presents an analysis of the work undertaken in Brecon Hospital, including the figures for admissions from a known population, the population of the Brecon practice consisting of 12,000 patients.

Seventy per cent of all in-patients from Dr Kyle's practice were cared for in Brecon Hospital, which is a much higher proportion than the Oxford Regional Board area for practices with access to G.P. beds. The

difference is probably due to geographical reasons (distance from consultant hospitals), reasons of tradition, and the facilities available in Brecon, which is a particularly well equipped G.P. hospital.

The total rate of in-patient admissions for all causes per 1000 at risk per year was 110, compared to 94.7 in the H.I.P.E.

The total rate of medical admissions (including children) was 40.0 and of medical admissions to Brecon Hospital 33.7; 84.5% of medical admissions were cared for in Brecon Hospital and only 15.5% in consultant hospitals.

Although the term "medical admissions" as used in the report from Brecon included everything except operative surgery, trauma and obstetrics, the rates are probably higher than those recorded in the H.I.P.E., but direct comparison is difficult.

In Brecon, the G.P. beds were also available to some G.Ps outside the Brecon practice. The population served by Brecon Hospital was not given, but the total admissions in one year for all causes was 1,125 of which 870 came from the Brecon practice of 12,000 patients. It seems likely that the ratio of beds to population was about three times the number available in Wantage. Without so many beds it would not have been possible to deal with 70% of in-patient admissions locally.

4. Bangour General Hospital, West Lothian.
Barber, Bain, Bassett & Haines 1972.

This paper describes the work undertaken in a general practitioner ward in a district general hospital which was opened in 1970. Details are available for admissions from one practice of 8,250 patients.

From this practice the admissions to the G.P. ward classified as general medicine, and geriatrics, were 93 during a period of one year.

This gives an admission rate of 11.3 per 1000. Information on admissions to consultant care are not available.

The population at risk (in Livingston New Town) is not representative of the country as a whole because of the high proportion of young patients; 40% were under the age of 15 (compared to 23.5 in the Wantage Survey) and only 10% over the age of 45 (compared to 12.7% aged 65 and over in the Wantage Survey). Because of the tendency to select older patients for G.P. unit care, a lower rate of medical admissions would be expected in a practice with a relatively young population.

5. A study of long stay admissions: Aberdeen.
Audrey Sutherland 1972

This is a report of long stay admissions in the acute medical wards of Aberdeen Hospitals in 1967. It contains detailed information about medical admissions, some of which can be extracted for comparison with the Wantage Survey.

The area was divided into four for the purposes of the survey. The first was the City of Aberdeen and the second the surrounding rural areas (Aberdeenshire and Kincardine) which were entirely dependent on the consultant hospitals of Aberdeen. The third were the most remote areas with general practitioner hospitals where there were surgical and medical facilities, called G.P. surgical, and the fourth area was intermediate in distance and included general practitioner areas with medical facilities only. The last was called the G.P. medical area and probably corresponds most closely to the conditions that exist in the Wantage area. The total estimated population in the G.P. medical area was 91,408 but it is not clear whether all the practitioners in the area had access to, and used, G.P. beds. Another difference from the Wantage area is that

there were a certain number of old people's homes and convalescent home which presumably accepted some of the admissions that would, in Wantage, have come to Wantage Hospital.

The amount of in-patient care undertaken in the most remote areas (called G.P. surgical) was higher than in the intermediate areas (G.P. medical) because of the greater difficulties of transport from the former to consultant hospitals in Aberdeen. For the same reason, the tradition of operative treatment in G.P. hospitals persisted in the remote areas (G.P.S.) but not the intermediate (G.P.M.).

In the G.P. surgical areas 57.0% of all admissions were to G.P. care, and the percentage was approximately the same for all age groups. In the G.P. medical areas 17.7% of all admissions were cared for locally, but the proportion differed with age: 31% of those aged 65 and over, 14.1% of those aged 15-64 and 13.5% of those aged 0-14.

There is, however, clear evidence that the total hospital discharge rates were not any higher in those areas when there were G.P. beds, as the following table shows (Table 26 of the report).

Table 29.

Catchment area:	Discharges per 1000 pop. in 1965		
	Specialist Hospitals	G.P. Hospitals	All Hospitals
City of Aberdeen	96.2		96.2
Rural Aberdeenshire & Kincardine	82.3		82.3
General Practitioner Medical beds (G.P.M.)	77.4	16.7	94.1
General Practitioner Surgical beds (G.P.S.)	37.3	47.4	84.7

Detailed information on categories of admission in the G.P. hospitals was

not available for this report, but data on the general medical discharges per 1000 population at risk was calculated for the four catchment areas shown above are given.

For the first two (no G.P. beds) the discharge rates for general medicine were 24.3 and 23.1 respectively. For the G.P.M. catchment area the discharge rates from specialist hospitals was 17.3 and from G.P. surgical areas 6.2. As the total hospital discharge rates were similar in all four areas, the implication is that the lower discharge rate from specialist hospitals for general medical illness in the G.P.M. and G.P.S. areas was due to the use of G.P. beds for patients who would otherwise need consultant care.

6. Data on admission rates for Oxford City Table 30

So far, the results of the Wantage Survey have been compared with data from the country as a whole (Hospital In-patient Enquiry 1967) or from regions containing consultant hospitals other than the U.O.H.

Because of the tendency for hospital admission rates to vary from one region to another, a closer comparison would be for admissions from Oxford City to the U.O.H., and data for adult medical admissions to the U.O.H. in 1969 were kindly supplied by the Oxford Record Linkage Study. These consisted of admissions to the acute medical wards of the Radcliffe Infirmary and the Churchill Hospital and to Cowley Road Hospital.

As there are no medical G.P. beds available to general practitioners in Oxford, these medical admissions correspond to the total admissions (Group 1 and Group 2) in the Wantage Survey.

While these data, because they deal with the same general area and the same consultant hospitals, provide a closer comparison with the Wantage Survey results, there are certain factors to be remembered in

making the comparison:

1. Some (but probably very few) Oxford City residents may have been admitted to medical beds outside the U.O.H.

2. The data supplied by the Oxford Record Linkage Study are for medical admissions in the strict sense rather than the broader sense used in the Wantage Survey (vide supra) and do not include Neurology, Chest diseases, Dermatology or Infectious diseases.

3. The Oxford City data are for 1969 and the Wantage Survey for 1970-71. Data for admissions from Wantage in 1969 are not available, but there is no reason to believe there was a large difference in the admission rate.

The results are shown in Table 30 and show that the rate of admission for adult medical patients to G.P. hospital care and consultant care together (Group 1 plus Group 2) was no higher than the rate of admission for Oxford City residents for whom no G.P. hospital beds were available. These results provide further confirmation of the hypothesis that the care of patients in Wantage Hospital resulted in a reduction in the number of adult medical admissions to consultant care.

The Comparison of Rates of admission: Conclusion

From the published results that have been reviewed in this section, and from the results of the Wantage Survey some tentative conclusions can be drawn. These are:

1. On the available evidence, the rate of hospital admission is no higher for those general practitioners who have access to hospital beds than for those who do not.

2. Moreover, the evidence suggests that the rate of admission of medical patients to consultant hospitals is considerably lower from general practitioners with access to hospital beds than those without.

Table 30. Adult medical admissions in 1969 from Oxford City compared to the admissions in the Wantage Survey:

(admission rates number/1000 at risk/year)

	15-64	65 & Over	Age 15 & Over
All adult medical admissions of OXFORD CITY RESIDENTS to the U.O.H.			
Population at risk	73,853	14,067	87,920
No. of admissions	1,176	1,146	2,322
Admission rates	16.0	81.6	26.4
WANTAGE SURVEY (Table 26)			
Admission rates:			
Group 1	4.6	59.6	13.8
Group 2	7.8	22.2	10.2
Total Group 1 & 2	12.4	81.8	24.0

3. Therefore, the evidence suggests that general practitioner beds are being used as an alternative to consultant admission, implying that closure of G.P. hospitals would inevitably lead to an increase in the number of admissions to consultant hospitals.

4. The data also suggest, but with much less certainty, two further points, neither of them unexpected:
   - First, that the overall rate of admission is likely to be highest where the ratio of G.P. beds to population is highest; in other words, the more beds, the higher the rate of admission.
   - Secondly, the results from Brecon (Kyle) and Aberdeen (Audrey Sutherland) suggest that the greater the distance between the G.P. hospital and the nearest consultant hospitals the larger the proportion of in-patient care undertaken in the G.P. hospital, provided beds and other necessary facilities are available.

These conclusions are only tentative and it is clear that more information is needed about general practitioner hospitals and their role in in-patient care.

5. THE OUTCOME OF ADMISSION

Length of stay and quality of care

The discussion so far has been centred on admission - the factors on which the choice of hospital was made, the concept of necessity as applied to admissions and the rate of admissions as observed in the Wantage Survey and compared to other data that have been published. In the remaining section the outcome of admission will be discussed in terms of

1. Length of stay
2. Discharge and deaths
3. Quality of care

Length of Stay

Length of stay can be influenced by a number of factors. For instance, older patients stay on average longer than young and for surgical patients the average length of stay is usually shorter than it is for medical patients. Marital status affects length of stay. The unmarried (including single, separated and divorced, widows and widowers) have, on average, a greater length of stay than the married and the difference is generally longer for females than for males; the latter is particularly noticeable for chronic illness:

Table 31.

	Mean duration of stay in days			
	Males		Females	
	Married	Unmarried	Married	Unmarried
All causes (all ages)	16.7	16.0	14.5	24.9
All causes (aged 65 and over)	22.6	38.3	27.0	51.3
Vascular Lesions of the C.N.S. (all ages)	37.7	60.7	60.6	126.4
Senility without mention of psychosis (all ages)	39.8	186.5	75.9	144.6

(Source: Hospital In-patient Enquiry 1967)

Length of stay also varies for patients admitted for the same condition in different regions and in different hospitals. For instance the mean duration of stay for varicose veins in 1967 was 8.5 days but for the region with the lowest figure (Newcastle) it was 5.5 days, and the highest was 10.1 (Wales). Similar wide variations can be found for many other conditions (H.I.P.E. 1967). Within the same hospital the length of stay may vary between different consultants - a fact that was noted in the Radcliffe Survey with the rather surprising additional fact that consultants working in the Radcliffe were often unaware that they differed in their policies on length of stay.

Length of stay, therefore, is influenced by a number of factors which are usually recognized in statistical comparisons of large consultant hospitals. The same kind of factors also influence the length of stay in G.P. hospitals, where they are less well recognized. Probably the small size of G.P. hospitals leads to a belief that length of stay need only be considered for all in-patients as a whole. This is a mistaken view, and, in the present state of uncertainty about the role and future of G.P.

hospitals it is often length of stay that is used as an index of efficiency. A high bed occupancy and a short average length of stay leading to low cost per patient may be regarded as evidence of efficient and economical use of G.P. beds.

Comparisons between the length of stay in different G.P. hospitals must take into account the kind of in-patient care they are providing, because G.P. hospitals are, in effect, small general hospitals with a wide freedom to make their own policies on admissions. Obstetrics, for instance, is undertaken in some but not in others; some admit children or patients for operative surgery, while most do not. Most, if not all, admit medical patients, but even here there may be admission policies to exclude the elderly, or cases which may need "heavy nursing care" such as strokes or cases for terminal care; and these are often long stay patients. In some areas, close co-operation with geriatric hospitals allows patients to be transferred from G.P. hospitals; in others geriatric hospitals are reluctant to accept patients from G.P. hospitals because priority is given to those at home or in consultant beds.

It is obviously necessary to accept with reservation any comparisons on average length of stay unless there is information on the types of admission, the age structure and policies for admission.

The results of the Wantage Survey show how the length of stay is influenced by some of these factors. It was shown, for instance, that on a superficial examination the length of stay of Group 1 admissions was longer than Group 2, and that the difference was due simply to the larger number of longer-staying elderly patients in Group 1. On closer examination, by allowing for length of stay, after transfer, of those patients who were transferred between Wantage Hospital and the U.O.H., a different picture emerged. It was then found that the average stay of patients under

65 was about 11 days and of those aged 65 and over about 21 days whether the admission was initially to Wantage Hospital or the U.O.H.

The conclusion seems to be that, for medical admissions, the average stay was influenced by age and not by the choice of hospital for admission. This conclusion, however, is based on the values for average length of stay. More information can be gained by examining the distribution of length of stay in various periods such as weekly periods, and the results for the Wantage survey were expressed in this way in Tables 13 to 18.

When admissions in Groups 1 and 2 are compared in this way the pattern was similar for durations of stay of less than 3 weeks. The largest number stayed for less than one week and the numbers increased for the next two periods of one to two and two to three weeks. As the length of stay increased so did the proportion of patients aged 65 or over. The similarity ceased for long stay admissions, defined as lengths of stay of 21 days or over. The percentage of long stay admissions was larger in Group 1 where the ratio of the 65's and over to those under 65 was approximately 6 to 1; in Group 2 where the long stay admissions were a much smaller group the ratio of age groups was reversed, and the number under 65 was five times as large as those aged 65 and over. The difference in the pattern for long stay admissions was largely due to the transfer of patients between Wantage Hospital and the U.O.H., which have already been defined as Group 3 admissions.

Group III admissions and surgical early discharges.

In general it would be expected that the early discharges to Wantage Hospital would have had a shorter length of stay in Wantage than direct admissions, because part of their in-patient stay had occurred

before they were transferred. This was found by Oddie et al. (1971).

In the Wantage survey this proved to be true for surgical early discharges. For them, the average stay was 12.3 days; 27 out of 34 stayed less than 2 weeks, and 20 less than 1 week. For medical early discharges it was not true. In fact Group 3 admissions were characterised by a high proportion of long stay admissions (Table 17); 60% stayed for more than 21 days and 14% stayed for more than 8 weeks.

Group III admissions were a selected group, mostly of seriously ill elderly patients with a high incidence of chronic disorders; for example cerebrovascular accidents, peripheral vascular disease, ischaemic heart disease and cancer. Their admission to Wantage Hospital resulted in a considerable saving of consultant hospital care, and this occurred in two ways. The first and obvious way was by the early discharge of potential long-stay admissions from the U.O.H. to Wantage Hospital. The second way was by using selective transfer of patients from Wantage Hospital to the U.O.H. for pre-planned investigations. In most instances of this kind a patient was admitted to Wantage Hospital initially and then failed to follow the course expected on admission; the failure suggested some underlying pathological cause which may not have been suspected at admission. Usually a consultation with the visiting consultant was arranged, and if further investigation was required of a specialist nature the patient would be transferred to the U.O.H. so that the necessary investigations could be carried out. One example was a patient with a chest infection who developed a pleural effusion; he was suspected of having a carcinoma of lung and was transferred for bronchoscopy. Another example was a patient admitted in a confused state with some neurological signs who was transferred to the U.O.H. for cerebral angiography.

The number of patients who were transferred from Wantage to the

U.O.H. was small: 12 out of the total of 207 admissions, but they were an example of the economical use of hard-pressed consultant beds. Some of them returned to Wantage Hospital after an admission of only two or three days required for specialist investigations. As a group, these 12 admissions were long stay admissions who required in-patient care somewhere, but whose required time in specialist beds was only brief. Their average total length of stay in hospital was 31 days but their average stay in consultant beds was only 12 days. By close contact with visiting consultants it was possible to cut down the length of time in consultant beds to the minimum that was required. It could be argued that these admissions should have been directed to the U.O.H. in the first place. This point was discussed with the visiting consultants and in no instances was there any evidence that to have done so would have altered the course of the illness or affected the outcome.

The use of early discharge as a method of economising in the use of consultant beds is well recognized; the use of consultant beds for short periods to carry out special investigations or treatment of patients admitted to G.P. hospitals is a procedure that was deliberately encouraged in the Wantage survey and is probably worth further experiment. It depends for its success on close personal contacts between the consultant and the general practitioners and a high degree of mutual confidence. In practice it proved not to be as easy to carry out as it seemed in theory, but as an experiment it had a fair degree of success.

Length of stay - Conclusions and Comparisons.

The results of the Wantage Survey can be summarised, as far as length of stay is concerned, as follows:

1. The average stay of medical admissions to Wantage Hospital was

17.5 days, and of medical admissions to the U.O.H., 10.7 days.

2. Length of stay was related to age. For those aged 65 or over the average stay was about 21 days and for those under 65 it was about 11 days. These figures include the total bed days of patients transferred between Wantage Hospital and the U.O.H., and the average stay was approximately the same regardless of the initial choice of hospital for admission.

3. The difference in average stay in 1 (above) is due partly to the difference in age structure of Group 1 and Group 2 admissions and partly to early discharge of long-stay cases from the U.O.H. to Wantage Hospital.

4. The average length of stay of surgical early discharges was shorter than the average stay of direct medical admissions.

5. Medical early discharges on the other hand, and patients transferred from Wantage Hospital to the U.O.H. (that is, Group 3 admissions) had a higher proportion of long-stay admissions than any other group. This was due to the high incidence in Group 3 admissions of seriously ill elderly patients with chronic illnesses.

6. There is definite evidence that by encouraging the transfer of patients between G.P. beds and consultant beds considerable saving in the latter is the result. The process of transfer depends on close co-operation between G.Ps and consultants.

How does the length of stay found in the Wantage Survey compare with the length of stay in other general practitioner hospitals? Data have been published from several hospitals which can be used for comparison. But it should be emphasized again that when comparisons are made they should, when possible, be made in conjunction with comparisons of the type of admission, the age structure of admissions, and so on. Full information of the latter kind is not always available.

The way that values can vary, depending on the way they are presented, can be demonstrated for admissions to Wantage Hospital:

The average length of stay during 1970-71:

1. For direct medical admissions: 17.5 days
2. For direct medical admissions and early medical discharges: 21.8 days
3. For surgical early discharges: 12.3 days
4. For all non-obstetric admissions, i.e. direct medical, and early discharge medical and surgical: 16.4 days
5. All admissions including obstetrics: 10.9 days

Comparative data

1. Other G.P. hospitals in the region.
   Source - Annual Returns Nuffield Hospital Management Committee.
   There are six general practitioner hospitals administered by the Nuffield Hospital Management Committee: Wantage is one of them. The average stay per case in the year 1970-71 was:

Hospital	No. of beds	Type of admission	Average stay
Abingdon	55 acute*	Acute	)
	12 maternity	Obstetrics	)- 14.5 days
Burford	9 acute only	Acute	17.0 days
Didcot	18 acute only	Acute	20.0 days
Thame	19 acute only	Acute	13.3 days
Watlington	20 acute only	Acute	19.8 days

*(in all cases acute admissions means direct medical admissions and early discharge medical and surgical.)

2. Hospital In-patient Enquiry 1967 (Table 12)
   The mean duration of stay of patients admitted under the heading "General Medicine" was 18.5 days for all ages and 23.6 days for those aged 65 and over. This group did not, however, contain geriatrics, for whom the mean duration of stay was 90 days. By comparison, therefore, the mean duration of stay of admissions in the Wantage Survey were not excessive.

3. Published data from other G.P. hospitals

The five ways in which the duration of stay of admissions to Wantage Hospital can be presented was shown above in order to emphasize the difficulty of getting precise comparative figures. Amongst the papers published on G.P. hospitals there are few that give enough information for precise comparison. One exception is the Report by Oddie et al. (1971) where it is clear that the data for mean duration of stay apply to all admissions including direct admissions and early discharges. For these, it was found that the mean duration of stay for all discharges was 12.3 days; for men it was 10.8 days and for women 19.7 days. For comparison the equivalent length of stay in the Wantage Survey was 16.4 days (vide supra) and the greater length of stay may be related to the higher proportion of elderly patients at Wantage. One curious difference is that the mean length of stay for men and for women did not differ significantly in the Wantage Survey. As wives are supposed to be better at looking after convalescent husbands than vice versa these results were unexpected, while those of Oddie et al. were more traditional. Possibly the males of Wantage are more domesticated.

Other data are less easy to compare. A report from Tamworth (Weston Smith and Donovan 1970) quotes an average length of stay of 6.3 days, but this is an unusual G.P. hospital in that a high proportion of admissions are surgical, either for operation or casualty. Thus there were, in 1967-68, 292 admissions for accidents out of a total of 889, compared to 86 for respiratory diseases and 22 for cardiovascular. Separate data for length of stay of medical admissions were not published.

Wilkinson (1968), writing about the work of the G.P. unit in Birmingham, gives an average stay of 16 days, and most admissions were direct medical admissions.

Neil Brown (1969), in a brief paper on a G.P. hospital in Girvan quotes an average length of stay of 14 to 15 days for all admissions, including maternity as well as general medical.

Barber et al. (1972) published a paper on a G.P. ward in a district general hospital where a limit of 28 days was allowed for any admission, unless special circumstances warranted a longer stay. The average length of stay for acute admissions, the largest group, was 11.6 days; for admissions for investigation the average stay was 12.7 days and for social admissions (the smallest group) it was 20.1 days. The population at risk, mainly from Livingston New Town, were significantly younger than average, and the average age of all admissions to the G.P. ward was 47. Once again there is evidence of the close relationship between average length of stay and age.

The results of the Wantage Survey correspond to those of other publications such as the Hospital In-patient Enquiry in demonstrating the relationship of length of stay to age and to marital status. The selection of older patients and patients with chronic illness for G.P. hospital care resulted in an average length of stay in Wantage Hospital that was longer than the average stay in the United Oxford Hospitals.

Although the same factors are likely to affect the length of stay in other G.P. hospitals, from the evidence available the length of stay of medical admissions to G.P. hospitals does not seem to differ greatly from the length of stay in consultant hospitals. However, the results that are available must be interpreted with caution because it has been noted that length of stay is influenced by a large number of factors and complete information on these factors is seldom available.

Deaths

The numerical data on deaths were presented in Table 19. There were 32 deaths in Group 1 admissions and 8 in Group 2, giving rates of 26.8 and 11.0 per 100 admissions respectively.

It has been shown that Group 1 and Group 2 admissions differed in several ways, particularly in age, so that a higher death-rate in the older group (Group 1) would be expected. Nevertheless the higher death-rate in Group 1 admissions raises the question of whether it indicated a lower standard of medical care; this aspect is considered in the context of the problem of measuring "quality of care" in the next section but the deaths need to be considered here in more detail.

They can be divided into five diagnostic groups:

1. Malignant disease

   These were clearly unavoidable deaths where the role of admission was terminal care. Twelve of the deaths came in this category (including one from myelofibrosis).

2. Myocardial Infarction

   The effectiveness of therapy of the kind provided by consultant hospitals is, in the case of myocardial infarction, disputed (Mather et al. 1971). If the consultant hospital is able to improve the prognosis of this illness it is probably by the provision of coronary care units. In the Radcliffe Infirmary, at the time of the survey, admission to the coronary care unit was limited to patients under 65 who were admitted for a period (usually) of one or two days when the risk of arrhythmias is greatest.

   It was therefore the policy of the practice in Wantage generally to admit patients with suspected myocardial infarction to the Radcliffe Infirmary if they were under 65. Those aged 65 or over were usually admitted either to Wantage Hospital, or treated at home if conditions were suitable. There were exceptions, but this was the general policy.

   There were 6 deaths from myocardial infarction in Group 1. Four of these were aged 65 and over. Three had pre-existing severe ischaemic disease with a clear history of mycardial infarction and extremely poor prognosis. One, a man aged 77, was seen at home by a consultant cardiologist

and the clinical diagnosis of a ruptured papillary muscle confirmed. His admission to Wantage Hospital rather than the Radcliffe Infirmary was recommended by the cardiologist and his expected death occurred three days later.

There were two admissions under the age of 65. One was a man aged 57 who had suffered a severe infarct a year before leading to angina and congestive failure. He was in extreme shock after his second infarct and died shortly after admission to Wantage Hospital. The other was a butler aged 60 who was admitted to Wantage Hospital for "social" reasons; being cared for by the family to whom he was the butler was not considered practicable. He was admitted to Wantage Hospital because it was clear from his history that the infarct had occurred four days earlier and the time for admission to the coronary care unit had already passed when he first consulted. He was admitted on a Friday and seen by the visiting consultant the next Monday, when the appropriateness of the care he was receiving was fully confirmed. He seemed, in fact, to be making an excellent recovery but a week later, just before he was due to go to relatives for convalescence, he suffered a second infarct. He was then transferred to the coronary care unit at the Radcliffe Infirmary but died two days later. Post mortem showed very extensive myocardial damage.

3. Congestive Heart Failure

Of the four deaths from this cause, three were aged 83, 84 and 86 respectively. All had a long history of heart failure; their admission was a terminal episode and their deaths not unexpected. The one patient under the age of 65 was a woman with a long history of severe mitral valve disease who had been under the care of a cardiologist for some years and for whom cardiac surgery was

impractical because of severe co-existing renal disease; for her, as well, the prognosis was known to be extremely poor.

4. Chest Diseases

The five deaths in this category ranged in age from 67 to 84. In four of them there was a previous history (in two cases of more than ten years) of progressive bronchitis, bronchospasm and emphysema. In two cases there had been several previous admissions to Wantage Hospital. In one patient (the oldest) the cause of death was bronchopneumonia together with pre-existing congestive failure. Four of the five patients were seen by visiting consultants (one died shortly after admission and before a consultant's visit) who checked and confirmed the management of the illness.

5. Cerebrovascular accidents

There is, so far, no evidence of any specific effective therapy for strokes, and the death rate is usually higher in the elderly. Data published in the Hospital In-patient Enquiry (1967) for instance shows that under the heading "Vascular legions affecting the central nervous system" death occured in hospital in 52.6% of admissions aged 65 and over, while the deaths in admissions under the age of 65 amounted to 31.2%.

There were 5 deaths from cerebrovascular accidents out of thirteen admissions in Group 1 of which twelve were aged 65 or over. Two of the deaths were in patients aged 76, one was aged 79, one 84 and one 85. There state on admission varied from moderately severe (two cases) to severe, and two were in coma and died rapidly.

There seems, therefore, to be no evidence that admission of any of these patients to consultant care would have resulted in recovery instead of death, although it is obviously impossible to be certain. The higher death rate in Group 1 admissions appears to have been associated with two factors:

1. The selection of older patients
2. The selection of patients suffering from illnesses with a high mortality for which there is no specific remedy.

This discussion of deaths does, perhaps, demonstrate a difference in emphasis between consultant care on one hand and G.P. hospital care on the other for medical admissions. In the former the emphasis is more on therapy with a higher expectation of effective results; in the latter the emphasis is more on providing (for many of the admissions) nursing care and relief of pain, anxiety, and distress to the patient and the relatives in terminal illness and the irreversible diseases of old age. If this difference in emphasis is realised, it then becomes obvious that death rates cannot by themselves be used as an index of the quality of care when admissions to consultant and G.P. hospital care are compared.

Quality of Care

If an attempt is made to assess the way patients are cared for in a hospital any one of three terms can be used - either the quality of care, effectiveness of care or standard of care. They mean much the same but carry slightly different overtones. Effectiveness of care suggests effectiveness of therapy, or rate of cure or rehabilitation. Standard of care suggests a reference to a recognizable standard and the ability to measure the worth of a hospital against that standard, and by so doing excludes factors that it is either too difficult to measure or factors that are inherently not measureable.

The term quality of care is preferred because it seems to have a wider reach, including effectiveness of care and indeed all aspects of

care while recognizing that, for comparative purposes, some of them may be difficult or impossible to measure.

The importance of quality of care is self-evident, particularly in the context of this thesis where the results of admission to general practitioner hospitals are compared to admissions to consultant hospitals. Indeed, quality of care is clearly more important than rates of admission, numbers admitted, length of stay or other factors that have been discussed. It is, however, very much more difficult to discuss objectively, and for that reason comes last of all in the discussion.

It is a question that has been raised in a number of publications. The need for some regard for quality of care was mentioned in the "Survey of General Practitioners' care of their patients in the hospital service" (Royal Coll. of G.Ps 1970). Oddie et al. (1971) point out that "from the data available so far we cannot determine the efficacy of care given to different groups of patients". The publication "The General Practitioner in the Hospital" produced jointly by the Royal College of Physicians and the Royal College of General Practitioners in July 1972 shows particular concern with quality of care. In this report the suspicions about poor quality are plainly stated and the need for a "watchdog" committee of some kind to ensure good standards of care is mentioned. This latter report voices quite clearly the widely held feeling that, in some general practitioner hospitals at any rate, the standard of care leaves much to be desired. Direct evidence of this may be lacking, perhaps for the obvious reason that publication of data on the work of G.P. hospitals is more likely to come from the hospitals where a better standard of care is associated with the desire to analyse the work and submit the result for publication. But there are several features of G.P. hospitals that are apt to lead to suspicion about quality of care. There is for instance

their isolation from each other and from consultant hospitals. It is seldom that the staff in consultant hospitals have any clear idea of the type of care undertaken in adjoining G.P. hospitals, and the lack of knowledge is combined with an understandable feeling that in-patient care is not the work that general practitioners should undertake.

This point of view was expressed most clearly by Rosemary Stevens (1966) when she explained the reasons underlying the policy of the Ministry of Health for consultant responsibility for all hospital beds:-

> "General practitioners were not trained to utilise the complex facilities of in-patient care. Almost all their experience was in G.P. surgeries and in patients' homes ... the G.P. could not claim a major interest in hospital medicine, either through work as a clinical assistant or through admission of his own patients to hospitals".

The implication is clear: that the general practitioner has an acknowledged field of expertise (she says as much) outside hospital, but not inside any kind of hospital at all; and, lacking that expertise, he will be unable to provide the necessary quality of care.

Concern for quality of care in G.P. hospitals has, therefore, been expressed and the need for some way of measuring and improving quality of care has been recognized. When, however, it comes to the point of comparing the quality of care in different hospitals, what method can be used for comparison? Unfortunately, for medical admissions it is extremely difficult to devise an objective form of measurement. One can look for ways of measurement that are familiar, and the closest model is probably the use of the perinatal mortality rate as a measure of obstetric care. It has been used to a great extent to determine the amount and type of obstetric care that should be undertaken in G.P. obstetric units. Its use has sometimes provoked emotional reactions, but in the end

the justice of appealing to perinatal mortality rates as a judgement of obstetric care cannot be denied.

In consultant hospitals, mortality rates are a familiar method of comparing quality of care; in operative surgery for instance. But in G.P. hospitals it is only in obstetrics that mortality rates have been used as a measurement of care. Could they be used for medical admissions? It is doubtful if they could, for the process of selecting patients for medical care in G.P. hospitals is usually a process of selecting those whose prognosis is poor or, in the case of terminal care, hopeless. It is theoretically possible to select a number of G.P. hospital admissions for a specific condition and compare their outcome with those admitted to consultant care. But the process of selection for G.P. hospital care is, as we have shown, one that usually ensures the two groups of admissions would differ significantly in factors that would affect the prognosis.

It would therefore be very difficult to use mortality rates to measure and compare the quality of care of G.P. and consultant hospitals for medical admissions. Nor would it necessarily be sensible to attempt to do so, because it would be confusing quality of therapy with quality of care. The two are not always the same. The point was made clearly by Professor Cochrane in his book "Effectiveness and Efficiency":-

> "Having chosen my two indices 'Effectiveness' and 'Efficiency' and made them mean what I wanted them to mean, I soon discovered that they were only applicable to a part of the N.H.S. I see the N.H.S., rather crudely, as supplying on the one hand therapy and on the other board and lodging and tender, loving, care. My two indices are very relevant to the former, but only to a limited extent to the latter."

Discussion of quality of care implies, of course, comparison and in this instance the comparison of one hospital or one type of hospital

with another. There are certain indices that might be used in an attempt to measure quality of care, but their application would depend on what comparisons were being made.

It may be, for instance, easier to compare the quality of care in a number of G.P. hospitals because it is comparing like with like. For such a comparison mortality rates might have a certain limited value. If for example the mortality rate for bronchitis and pneumonia was consistently and significantly higher in one G.P. hospital than it was in a number of other neighbouring G.P. hospitals it would merit investigation. The explanation might lie in different age groups, or a population with a high incidence of underlying industrial chest disorders served by the one G.P. hospital; but in the absence of such explanations the higher mortality rate might reflect a poor quality of care.

For comparisons between G.P. hospitals and consultant hospitals mortality rates would, for reasons that have been given, be of little value in assessments of quality of care. Other indices that could be used would likewise be more difficult to apply in comparisons between G.P. hospitals and consultant hospitals than they would in comparisons between different G.P. hospitals; these could include:

1. Length of stay. Excessive length of stay could be interpreted as evidence of failure to provide effective therapy or rehabilitation since the aim for most patients in most hospitals is to get them better and back home again. Obviously that would be a superficial judgement stated as baldly as that. It would not, for instance, be applicable to patients admitted for terminal care, and the length of stay is governed, as we have seen, by so many factors such as age, diagnosis, marital status and so on that these have to be considered before length of stay can be considered

as a measure of quality of care. Sometimes there may be a deliberate policy in a G.P. hospital to exclude patients who are likely to become long-stay. As a result the average length of stay may be low but the hospital, in failing to provide care for these patients may be providing a lower quality of care in the broadest sense. For these reasons length of stay is a complex and very difficult factor to use as an index of quality of care.

2. Time spent in the hospital by the doctor is more likely to be a useful index of care. It would be difficult to measure the quality or effectiveness of the time spent at the hospital, or the relative value of frequent brief visits as opposed to infrequent long ones. Total time spent attending patients and the frequency with which they were seen would both be factors susceptible to measurement and would both have some bearing on the quality of care although the willingness of doctors to submit to such a measurement might reasonably be doubted. If however it were shown that on average the doctors at a G.P. hospital visited their patients for only twenty minutes once a week it would be difficult to see how they could provide care of a reasonable quality. In general the more time spent at the hospital the better the quality of care provided but the limits would br broad, and the amount of time and frequency of visits would depend on the number and the kind of patients who were in the hospital at any particular time.

3. The quality of medical records. Willingness to consider this as a factor indicating quality of care has been resisted by general practitioners not only in G.P. hospitals but also throughout general practice. Poor quality has been imposed by the perpetuation of the medical record envelope long beyond the time when it should have been replaced. The

generally poor quality of medical records in general practice can be attributed more to the failure to replace the present outdated system than to any other factor (Hawkey et al. 1971, Cormack 1971). As far as hospital care is concerned, the quality of the records kept in the hospital is one indication of the quality of care. The records kept in a G.P. hospital may differ in quantity and in arrangement from those kept in a consultant hospital. To a certain extent the difference may reflect the different relationship between the G.P. and his patient compared to consultant hospital staff, and a lesser need to record many features that the G.P. knows about the patient. But the total absence of any records, or records recording so little they were of no value would suggest a poor quality of care.

4. The number of investigations undertaken. It is likely that the number of laboratory and radiological investigations undertaken in a G.P. hospital will be less than those undertaken for the same patients under consultant care. That in itself would not necessarily indicate a lower quality of care in G.P. hospitals. The reasons for the large number of laboratory investigations undertaken in many consultant hospitals are more complex than simple clinical need. Some of the motives were explored in the Radcliffe Survey (Loudon 1970) and the subject of over-investigation has been dealt with by Todd (1970) who pointed out the danger of losing sight of the patient under a welter of pathological investigations, and by Naish (1970) in an article entitled "Medical Hysteria". The importance of laboratory investigations varies with the type of admission, but if the work of a G.P. hospital was undertaken with no laboratory investigations at all, or with virtually none, it would justify suspicions about quality of care.

5. Patient satisfaction. From the commonsense point of view this would seem an obvious and important index of quality of care although it would obviously be difficult to measure. But the absence of patient satisfaction consistently and on a large scale would again justify suspicions about quality of care, and it might be the most sensitive index of those qualities which it would be difficult to measure by any other method - for instance the kindness and consideration of the staff, both nursing and medical.

Taken individually, none of these indices can provide a simple, reliable and easy measurement of the quality of care. Taken together they might provide, within broad limits, a form of measurement although their application would often depend on subjective assessment carrying the risk of bias on the part of the investigator.

To take an extreme example, however, if it were shown that in a particular G.P. hospital the average length of stay was excessive, that the patients were only seen by the doctor briefly once every one or two weeks, that no records were kept and few if any laboratory investigations and in addition the patients were miserable and consistently complaining, it would be unreasonable to assert that these facts taken in conjunction had no bearing on quality of care. Measurement of quality may therefore be possible, but the indices considered would be blunt instruments, only yielding information near the extremes of quality.

Other more accurate and objective forms of measurement may be devised but some of the factors included in quality of care are probably not susceptible to measurement. These might include kindness, consideration and imagination in handling patients and relatives, readiness to change with changing circumstances and good communications with the community

served by the hospital and with other hospitals in the area.

As far as the Wantage Survey is concerned, the differences in mortality rates and length of stay between Groups 1 and 2 have been noted, and the reasons for not using them as indices of quality of care have been discussed. No accurate record was kept of the time spent in Wantage Hospital by the partners involved in the survey, but it is known that for each of them it was not less than seven visits a week and not less than 3½ hours a week. Medical records were kept on the Wantage Records Project A4 system (Hawkey et al. 1971) and laboratory investigations were undertaken but, again, no record was kept of the quantity of either. No attempt was made to assess patient satisfaction.

In conclusion one can say that there is insufficient evidence for measuring quality of care in the survey that has been described. To do so a further survey would need to be planned with the specific aim of trying to measure quality of care; the difficulties would be formidable, but it would not necessarily be an impossibility to devise means of carrying it out.

It would however be considerably easier to compare the quality of care in a number of different G.P. hospitals than it would be to compare the quality of G.P. hospitals and consultant hospitals.

6. WANTAGE SURVEY: SUMMARY

1. A survey of all adult medical admissions from one group practice was carried out for a year. The total number of admissions was 207, ten of which were re-admissions.

2. 58% of the admissions were to G.P. beds in Wantage Hospital and

42% to consultant beds in the United Oxford Hospitals.

3. 72% of the admissions to Wantage Hospital were aged 65 and over compared to 36% of the admissions to the United Oxford Hospitals.

4. 28 patients were transferred from consultant to G.P. hospital or vice versa during one episode of hospital care. 16 of these were early discharges from consultant care to G.P. care.

5. The choice of hospital for admission was, with few exceptions, dependent on the decision of the general practitioner. Therefore the factors on which the decisions were based were crucial in determining the amount of care of medical patients that was undertaken in a G.P. (Wantage) hospital. A number of factors were examined to see what part they played in the choice of hospital for admission. Two factors were most important: diagnosis and age. The diagnosis alone, regardless of other factors, determined the choice of consultant care in half the admissions to the U.O.H. and in 31% of all medical admissions. In the remainder age was the most important factor in the selection of consultant or G.P. care, while the severity of illness, availability of beds and social conditions were relatively minor factors.

6. There is no evidence that the use of a general practitioner hospital led to an increase in the rate of medical admissions. On the contrary, there is evidence that a large majority of medical admissions to Wantage Hospital were an alternative to admission under consultant care.

7. The length of stay of patients in Wantage Hospital was longer than those admitted to the U.O.H. The explanation is chiefly the larger number of old patients in the former and the deliberate selection of long-stay cases for G.P. care in order to save consultant beds.

8. The death rate of patients admitted to Wantage Hospital was higher than for those admitted to the U.O.H. The reason for this was partly the difference in age groups and partly deliberate selection of patients for G.P. care where the prognosis was poor or hopeless.

9. The importance of considering quality of care, but the difficulty of measuring it objectively, is discussed in relation to G.P. hospital care.

10. The results of the Wantage Survey were compared in a number of ways with comparable data from other hospitals.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

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The Radcliffe and Wantage surveys compared

The main conclusions of each survey have already been summarised at the end of the appropriate sections, and need not be repeated. The two surveys covered similar ground but differed in two ways:

1. The Radcliffe survey was undertaken inside a teaching hospital from the point of view of reducing the demand on consultant hospital beds by alternative general practitioner care. The Wantage survey was undertaken in general practice and examined the division of in-patient care between a general practitioner hospital and consultant hospitals and the criteria for selecting the appropriate hospital.

2. Both surveys were concerned with adult in-patients only, but while the Radcliffe survey was concerned with medical and surgical patients the Wantage survey was concerned with medical patients only.

The broad conclusion of both surveys was that a substantial number of patients who need hospital care do not need consultant care. These patients could be looked after by general practitioners in general practitioner hospitals, either as early discharges or (in the case of medical patients only) as direct admissions. The point at which the results of the two surveys can be compared is the direct admissions to G.P. hospitals. In the Radcliffe survey these corresponded to the group of medical patients classified as suitable for G.P. hospital care as an alternative to admission to consultant hospital beds. In the Wantage survey the direct admissions were the Group 1 admissions.

If the results are compared it will be noted that the Radcliffe Infirmary group (suitable for direct admission to a G.P. unit) consisted of 16% of all medical admissions to the Radcliffe Infirmary while the Group 1 admissions in the Wantage survey amounted to 57.5% of all medical

admissions. The difference is large. If the latter figure is representative of the potential G.P. hospital care of all medical admissions, one would have expected the Radcliffe Infirmary findings to have been considerably larger than 16%. What is the explanation of the discrepancy?

1. The first explanation to be considered is whether the Wantage practice was admitting considerably more patients to hospital than G.Ps in the Oxford area considered as a whole.

If this had occurred, the higher value for patients that were direct G.P. hospital admissions in the Wantage survey could be due to a large number of admissions which, if Wantage Hospital had not existed, would not have been admitted to the United Oxford Hospitals. It is true for a few admissions to Wantage Hospital (e.g. the "holiday" admissions) that the alternative might have been admission to hospitals other than the U.O.H. or no admission to hospital at all.

But it is improbable that the explanation of the disparity can be found here. It is clear, from evidence produced in the Wantage survey (see Table 30), that for a majority of admissions in Group 1 the alternative to admission to Wantage Hospital would have been admission to the United Oxford Hospitals.

2. A further explanation of the discrepancy which it is not possible to express numerically lies in the different methods employed. In the Radcliffe survey, when patients were assessed as being suitable for alternative admission to a G.P. unit, great care was taken to make the assessment cautiously from "the point of view of the average G.P." and to avoid any possibility of exaggerating the number by including patients for whom this alternative might have been considered as controversial. The method used probably

resulted in the amount of alternative G.P. care being an under-estimate, and this tendency affected the assessment of the group we are considering here.

3. However, the most important explanation is that the medical admissions to the Radcliffe were a selected group of all medical admissions, because a certain number of medical patients were being admitted to other hospitals in the Oxford area. For practices in Oxford City, in the area of Witney and of Bicester, there are no general practitioner beds for the admission of medical cases. All medical admissions are to the United Oxford Hospitals and, with few exceptions, all emergency admissions are to the Radcliffe Infirmary. The few exceptions are a small number of emergency admissions to the geriatric unit at Cowley Road Hospital direct from general practice.

But for practices in other areas, although the consultant hospitals are those in the U.O.H., there are existing general practitioner hospitals to which some medical admissions are made directly in much the same way as Wantage. These areas - all rural or semi-rural - include Abingdon, Didcot, Thame, Watlington, Chipping Norton and Burford as well as Wantage. Assuming there is a pattern of medical admissions to the G.P. hospitals in these areas that is similar to Wantage, it is clear that some of the medical admissions in the Oxford area were already being cared for in G.P. hospitals. Consequently, the medical admissions in the Radcliffe would be a selected group with a bias towards selection of those specifically needing consultant care.

The number of these may have been considerable because the total number of acute general beds in six of these G.P. hospitals was 135 compared to the 148 medical beds in the Radcliffe Infirmary. An estimate was made (and the basis on which it was made is included in the full report of the Radcliffe survey) of the number of direct admissions to G.P.

hospitals per year for whom the alternative would have been admission to the medical beds of the Radcliffe Infirmary. A conservative estimate was 25% of the annual medical admissions to the Radcliffe Infirmary.

If one assumes again that the pattern of medical admissions to all the G.P. hospitals was smaller, those "filtered off" to the G.P. hospitals would have a higher proportion of elderly patients, and conversely the medical admissions to the Radcliffe would have a lower proportion. This tendency would be further accentuated by the small number of direct admissions to geriatric care in Cowley Road Hospital.

The comparison of the age distribution of medical admissions in the Wantage survey and the Radcliffe survey shows that this supposition was correct:

	Age Groups	
Medical admissions	Under 70	Aged 70 & Over
Radcliffe survey	300 (81.2%)	70 (18.8%)
Wantage survey	108 (52.2%)	99 (47.8%)

The above table provides supporting evidence that the Radcliffe admissions were a selected group with a bias towards younger patients and patients needing consultant care. The apparent discrepancy between the results of the two surveys was probably due to this selection. Further support for the suggestion that medical admissions to the U.O.H. from the areas outside Oxford City are a selected younger group is provided by data from the Oxford Record Linkage Study.

These data apply to all adult admissions to medical and geriatric beds in 1969 from patients resident in Oxford City and outside the city respectively:

Table 32.

	Age Groups 15-64	65-	Total
Admissions from residents in Oxford City in 1969 to:			
The Radcliffe Infirmary only (medical beds)	1864 (68.0%)	501 (32.0%)	1565 (100%)
U.O.H. - all hospitals (medical and geriatric)	1176 (50.7%)	1146 (49.3%)	2322 (100%)
Admissions from residents outside Oxford City in 1969 to:			
The Radcliffe Infirmary only (medical beds)	1627 (72.0%)	634 (28.0%)	2261 (100%)
U.O.H. - all hospitals (medical and geriatric)	1831 (60.4%)	1198 (39.6%)	3029 (100%)

It can be seen that the medical admissions from areas outside Oxford City contained a smaller proportion of those aged 65 and over compared with admissions from Oxford City. The difference is probably due to the admission of more of the elderly to G.P. units in the country areas around Oxford. The age distribution of U.O.H. admissions from residents outside Oxford City corresponds quite closely to the age distribution of Group 2 admissions in the Wantage survey (admissions to consultant care; see Table 2).

The implications of the Radcliffe and Wantage Surveys

Many descriptive papers have been published about the work undertaken in G.P. hospitals, and of their value in terms of added satisfaction in general practice or the advantages for patients and relatives (e.g. Barber *et al*. 1972, Brown 1969, Emrys Roberts 1971, Evans 1969, Kyle 1971, Weston Smith & O'Donovan 1970, Wilkinson 1968).

Most of these papers have been written with the clear purpose of advocating the G.P. hospital or defending it against adverse criticism.

The amount of quantitative data included varies from one paper to another, but in most instances is confined to the numbers of patients admitted and the diagnosis, sometimes with details of age and sex. Valuable as this information is for building up a picture of the work undertaken in G.P. hospitals throughout the country, there is seldom any data on the corresponding admission rates to consultant hospitals or the admission rates in terms of the population at risk. It is the absence of this kind of information that makes it difficult to assess quantitatively the part played by G.P. hospitals in total hospital care, either in clinical or economic terms. The Radcliffe and Wantage surveys represented an attempt to provide the data necessary for such measurements.

1. In the Radcliffe survey the index of measurement was the saving of (consultant) hospital beds, and results were expressed both as numbers of patients and bed-days. The main conclusion was that bed saving was possible in spite of the evidence that, because the pressure on beds was so great, it was believed that the utmost economy in bed-usage was already being exercised. More specifically an attempt was made in the Radcliffe survey to identify and assess in quantitative terms the categories of patients where bed saving by alternative general practitioner care could be achieved (e.g. medical versus surgical, and young versus old). In addition the relative saving by various methods was assessed.

   The most important conclusion of the whole survey, which was not anticipated when the survey began, was that the extensive provision of G.P. hospital beds could result in a substantial saving of consultant beds - perhaps by as much as one third. It was also estimated the existing G.P.hospitals in the Oxford area were already playing a large, but largely unrecognized, part in reducing the number of admissions to the Radcliffe Infirmary by caring for patients admitted directly to these G.P. units in addition to their recognized role in taking early discharge patients.

2. The Wantage survey was confined mainly to medical patients but supplemented the data produced in the Radcliffe survey by looking at the problem from general practice. Data were produced on the relative amount of in-patient care undertaken in consultant and G.P. beds respectively, the basis for selecting the appropriate hospital, and the amount of in-patient care (for both types of hospital separately and in total) in terms of the population at risk. The Wantage survey implied that a larger proportion of medical in-patient care could be undertaken in a G.P. hospital than the Radcliffe survey, but the reasons for the disparity in results were considered in the previous section.

3. From the economic point of view there may be advantages in G.P. hospital care compared to consultant care. The following table shows the cost, measured as cost per in-patient week and cost per case for various hospitals in 1969.

Table 33. Provincial teaching hospitals: England & Wales.

	Cost per week	Cost per case
(Type 1 - Acute - over 100 beds)		
Average all hospitals	£64.56	£96.83
Highest values	£78.70	£142.02
Lowest values	£50.58	£75.74
Radcliffe Infirmary Oxford	£67.38	£75.74
Nuffield Hospital Management Committee		
The five G.P. hospitals in the group		
Average values	£37.11.10	£65.2.10

(Source: Dept. of Health & Nuff. Hosp. Management Committee)

Further data on costs of the G.P. hospitals in the Oxford area are given in Appendix 4.

The evidence provided by all the data available seems to suggest that in-patient care in a G.P. hospital is more economical than care in a district general,or teaching hospital. The extent of the difference in cost depends

on the way it is expressed. Thus, in terms of cost per week the economy is more striking than it is in terms of cost per case. To some extent this can be attributed to the greater average length of stay of patients in G.P. hospitals which, in turn, may be attributed to the process of selection of patients appropriate for G.P. hospital care. In fact, the corollary to this is that the difference in cost per case (between G.P. and consultant hospitals) would presumably decrease if more G.P. hospitals were provided as they would remove a larger proportion of longer stay cases from acute consultant hospitals.

Thus it is clear that the way costs are expressed is important in any consideration of the possible economy of using general practitioner hospitals as a part of the hospital service as a whole.

Whether the economy of G.P. beds compared to consultant is real or apparent depends in the long run on the basic proposition which has come up more than once in this thesis: that G.P. hospital care is, with few exceptions, an alternative to consultant hospital care and not simply an alternative to care at home.

It seems that if this proposition is accepted, two other propositions must follow:

1. First, that if existing G.P. hospitals had all been closed it would have been necessary to build more consultant hospitals or wards (or refuse admission to patients who needed in-patient care).
2. Second, that in the future, if more G.P. hospitals are provided a smaller number of consultant beds will be needed in future building programmes.

The extent to which these two propositions are true could, of course, never be tested exactly because there is no way to determine the exact number of hospital beds needed for a given population. Forsyth & Logan (1960) in

their attempt to find out a way of determining the ideal number of hospital beds were ultimately forced to conclude that the "number of beds used is the number available": or, as Kemp (1969) put it, "whenever there is an empty bed there is always an apparently valid reason for filling it".

Nevertheless, in a leading article in the Lancet (1970) on the subject of primary care, it was written that "these [general practitioner] units might, by saving on more expensive hospital beds, pay for themselves in no time".

If more G.P. hospital beds are going to be provided, it will be in competition with the demands of consultants, and it will be necessary to justify the expenditure not only in economic terms but in clinical terms.

What are the possible future developments of general practitioner hospital beds? The last section of this thesis considers the answers to this question, but before coming to it, one other question must be considered. If more G.P. hospitals are provided, would general practitioners wish to use them?

The attitude of General Practitioners to in-patient care

Here one is considering only the attitude of general practitioners to undertaking clinical care of their own patients in general practitioner hospitals. There are two categories of evidence on this point - the indirect and the direct.

The indirect evidence from a number of sources suggests that many, if not most, general practitioners are in favour of undertaking hospital care.

1. First, there is the fact that the Annual Conference of Local Medical Committees has for many years affirmed and reaffirmed as conference policy that "The Minister be pressed to provide more hospital beds for general practitioners". It must be admitted that this affirmation has not, so far, been followed by a detailed consideration of the kind of G.P. units needed or the purpose for which they are sought, but the policy has the approval of the elected representatives of all general practitioners.

2. Secondly, there is the evidence provided by the existence of the Association of General Practitioner Hospitals. This association arose out of the need for a pressure group to prevent the closure of existing G.P. hospitals. The closures that had occurred were usually the subject of protest by the general practitioners involved (which is itself indirect evidence) but it was felt that the protest would be more effective from an Association based on G.P. hospitals throughout the country. The name of Dr Emrys Roberts is particularly associated with the foundation and continuation of this Association, and there is evidence that it has had some effect on policies about G.P. hospitals.

3. A third source of evidence is the advertisements for vacancies in general practice in the medical journals, where it is the custom to emphasize G.P. hospital facilities in an attempt to attract applicants.

On the basis of indirect evidence there is little doubt that G.P. hospital facilities are valued where they exist, and a probability that they would be welcomed by many who do not have them.

The direct evidence rests on three surveys based on questionnaires:

1. The first of these was carried out by the Wessex Regional Hospital Board and published under the title "What do they really want?" (1964). The questionnaire was sent out to 841

general practitioners in the Regional Board area and replies were received from 80%. The questions referring to general practitioners caring for their own patients in hospital were simple, clear and unambiguous.

At the time of the questionnaire less than half of the general practitioners had access to maternity beds and less than a third to general beds. All who enjoyed these facilities appreciated and used them and four out of five thought that such beds should be available to them. Those in rural areas were predominantly in favour of cottage hospital type facilities, and those in urban areas of beds in district general hospitals.

Thus the Wessex survey provided a clear and emphatic affirmative answer to the question "do general practitioners wish to look after [some of] their own patients in hospital?"

2. The second survey was carried out in the Reading area (Crowe 1969). Out of 232 general practitioners, 100 (43%) already had access to general beds. Of the remainder 85 would have liked access (37% of the total) and 47 (20% of the total) were not interested.

3. The third survey, also published in 1969, was the result of a questionnaire sent out to general practitioners in the Oxford area by the Oxford Regional Hospital Board, entitled "The General Practitioner and The Hospital Service in the 1970s". In this questionnaire it was shown that 36% of practitioners under 50, and 28% of those aged 50 or over would like total clinical control of patients in acute beds.

The second and third surveys, however, can be criticized for the way the questions were framed.

In Dr Crowe's survey, the questions asked were

1) Do you have access to G.P. beds?

2) If "No", would you like access to such beds?

There was no attempt to specify the number of beds or where they would be

sited, and the questions in the above form left a number of other questions unanswered. Nevertheless the questions that were asked at least implied G.P. beds in the form generally recognized.

The questionnaire sent out by the Oxford Regional Hospital Board was so badly designed that it is doubtful whether any value can be placed on the answers obtained, although they have been widely quoted. The questions asked were whether the general practitioner was "very interested" or "interested" or alternatively "not interested" in:

"Involvement in care of hospital in-patients by

(a) Total clinical control of patients in acute beds (36% & 28%)

(b) Care of patients in hospital beds who require admission on social grounds (56% & 41%)

(c) Association with hospital team bringing the expertise of the general practitioner into the hospital (68% & 52%)"

(The precentages in each case refer to the general practitioners aged under 50 or 50 and over respectively who indicated they were interested or very interested.) It was not clear from the way these questions were framed whether they applied to the general practitioners' own patients or to other patients as well, and the first question (a) seemed to imply that these patients might be admitted to consultant wards: this possibility seemed to be further confirmed by question (b) which seemed to suggest, as an alternative, caring for patients when the reason for admission was social grounds rather than clinical. Thus the questions seemed to suggest vaguely some new plan for incorporating general practitioners into consultant hospitals to take charge of some categories of in-patients, and not necessarily their own. As a consequence, some of the general practitioners who replied to this questionnaire, and already

had access to beds in G.P. hospitals that they valued highly, answered that they were not interested. It is probable that to most general practitioners the meaning of these questions was obscure.

It seems therefore that most general practitioners with the experience of G.P. beds value them, and most others would like to have access to G.P. beds. It is probable that the younger the G.Ps the more likely they would be to wish for access to G.P. beds. Apart from the obvious fact that it is usual to become more conservative and less willing to accept change and new ideas as one gets older, there is some evidence of this. Part of the evidence is contained in the O.R.H.B. Survey quoted above. In the Wessex survey the percentage of general practitioners in favour of having access to hospital beds varied inversely with age. 90% of the youngest age group were in favour and 67% and 70% (for midwifery and for other cases respectively) of the oldest.

In addition, evidence in another context was produced by Cormack (1971) in a study on attitudes of general practitioners to medical records. He showed that the percentage of G.Ps in favour of using a new type of record (he specified a quarto-sized folder) was inversely proportional to age. Amongst the most recently qualified 80% were in favour, but of those qualified longest only 18%.

Conclusion

There seems to be little doubt from the available evidence that the majority of general practitioners who already have access to G.P. hospital beds value that facility, and a majority who have not would like to be able to care for their patients in hospital beds. There is likely to be more enthusiasm amongst younger doctors than older for the future provision of hospital beds, as well as for other innovations in medicine.

General Practitioner hospitals: future developments

The need for a planned policy

As they exist today, G.P. hospitals have evolved from the Cottage Hospitals (in the strict sense of the term) and from the smaller general hospitals, mostly in country towns, whose small size did not justify the appointment of consultant staff.

Originally, most G.P. hospitals provided the majority of hospital care in medicine, surgery and obstetrics for most of the patients in their area. In this way they were the rural counterparts of the larger hospitals and infirmaries in the towns and cities. Gradually, as the larger hospitals were able to provide more specialist care, they extended their care to the country areas, admitting patients that were previously treated in G.P. hospitals. The change was occurring before 1948, but the introduction of the N.H.S. led to an acceleration of the process.

The result of the change was a reduction in the amount of in-patient care undertaken in G.P. hospitals while the amount in consultant hospitals steadily increased. But the extent of the reduction varied in different parts of the country. In some of the larger and more remote G.P. hospitals a wide variety of cases are still treated while in others the reduction in the scope of care that was undertaken was so great that they were closed down. Thus, while the amount of in-patient care undertaken in G.P. hospitals as a whole has steadily been reduced, the extent to which this has occurred varies from one area to another, but not necessarily in response to varying local needs or as a result of rational planning.

In contrast, the consultant hospitals have been subject to a number of national plans as well as regional plans. The Hospital Plan

for England and Wales (Ministry of Health 1962) provided a policy for building large district hospitals in the main population centres, centralising as far as possible all hospital services on these hospitals. While the smaller hospitals, including the G.P. hospitals, were mentioned, it was chiefly to acknowledge their existence as an anomaly in the overall plan with no attempt clearly to define their role in the N.H.S.

The absence of any planned policy on a national basis for G.P. hospitals left them isolated and implied at least the possibility that they would gradually disappear.

The initiative for producing the first clear plan for the way G.P. hospitals could develop came from the Oxford Regional Hospital Board. It was the concept of the Community Hospital.

The Community Hospital

The concept of the Community Hospital grew out of a series of discussions and conferences held by the Oxford Regional Hospital Board from 1965 onwards. The actual name was first suggested in 1968 (Rue 1972).

The Oxford region is still predominantly a rural area. Less than a quarter of the hospital beds are situated on the sites of district general hospitals and of the total of 103 hospitals in the region, 46 have less than 30 beds. The Community Hospital concept originated from the need to supplement the plan of district general hospitals in a region where these hospitals alone might be insufficient. The concept was therefore tied to the idea of decentralising certain hospital services and the first step was to look at hospital services and see what elements could be decentralised. By this process, a general plan for the Community Hospital emerged and is being tested experimentally at Peppard (Oddie, Vine, Hasler & Bennett 1971) and at Wallingford in Berkshire (Oxford

Regional Hospital Board: the Wallingford project 1973).

> "The ideal model of a community hospital consists of a health centre for general practitioners, local authority staff, consultant clinics and certain diagnostic services; day treatment facilities and in-patient accommodation. This arrangement allows for integration at community level of all the appropriate services needed for a defined population". (Rue 1972)

Patients considered as suitable for admission to Community Hospitals are:

1. Acute medical cases admitted for social reasons.
2. Early discharge surgical cases.
3. Selected post-assessment geriatric and psychiatric patients.
4. Selected physically and mentally handicapped patients requiring hospital care.
5. Holiday admissions.
6. Selected terminal care patients.

Patients considered as unsuitable for care are:

1. Patients requiring the facilities of an acute treatment department.
2. Children.
3. Severely disturbed patients.
4. Patients presenting a cross-infection hazard. (Rue 1972)

In addition to the definition of the patients suitable for admission, two important points emerged in connection with the concept of the Community Hospital.

1. The first was the realisation that the community hospital should be regarded as an extension of general practice rather than a take-over of fragments of consultant care. The importance of this

idea was described thus:

> "The conceptional breakthrough was the recognition of local in-patient and day patient treatment facilities as an extension of primary care rather than, as previously suggested, a peripheralisation of secondary services ... The requirement is for an expansion of responsibility and potential among the domiciliary team, rather than a dissipation of strength of the specialist teams". (Rue 1972)

2. The second point was an appreciation of a subtle difference between community hospital care and care in a consultant hospital. It has been described thus:

> "It is important to emphasize here that there is a difference in the approach of a general practitioner to his care of in-patients to that of a consultant. At any one time a general practitioner will be concerned with only a small number of in-patients and he will focus on the type of care which each requires. It is a secondary consideration to him to classify the patient by specialty and such an exercise is usually only associated with arranging a specialist consultation or admission. If the general practitioner and his team are to care for the patient themselves, they will think of the case not as 'surgical' or 'geriatric' but as an individual requiring a particular level of medical and nursing care. This patient oriented and more flexible approach renders allocation of beds to 'specialties' unrealistic in the G.P.-managed community hospital.
>
> Community hospital care, therefore, comes to be understood as a style of care, an approach to patient management". (Ibid)

These two points emphasize the difference between the concept of a Community Hospital and previous ways of looking at general practitioner hospitals. For in-patient care, the Community Hospital would be providing an extension of primary care and in doing so a different approach to in-patient care compared to the traditional consultant hospital; and the

difference, though appearing to be slight, would be important. The whole concept can be said to have lifted the idea of general practitioner in-patient care out of the secondary or consultant services and placed it firmly into the sphere of primary care.

What, therefore, is the relationship between Community Hospitals and existing general practitioner hospitals? It is probable that the two points we have considered are of most importance to those who have not actually experienced working in a G.P. unit; of these who have, many would feel that they had always regarded "their" G.P. hospital as an extension of their practice and had realised there was a difference in their style of care. The two points may have been realised dimly and without the clarity with which they are expressed above. Is the term "Community Hospital", therefore, simply a new name for existing G.P. hospitals?

This point is worth considering because it has not been dealt with specifically in the publications from the Oxford Regional Hospital Board on Community Hospitals. Indeed, the very avoidance of this point in the original document produced by the Board in November 1969 was the cause of confusion. It was not clear whether the term Community Hospital was meant to apply to all existing G.P. hospitals in the region, to some of them, or to none. If it was none, the implication was that the Community Hospital was such a new concept that it could only be realised by planning and building '<u>ab initio</u>'.

The weight of eviddnce (although it was evidence based on implication) from reading the original document was that the term was <u>not</u> meant to apply to any existing G.P. hospitals, although it was clear that to a greater or lesser extent the activities of many G.P. hospitals corresponded to those outlined for a Community Hospital. There seemed

to be an act of dissociation between the Community Hospital concept and the existing G.P. hospitals, possibly because of the danger that if this were not done the name Community Hospital could simply be seen as a new name for the Cottage Hospital, devised to give it a new appearance and perpetuate its existence.

In fact, the concept was genuinely new, with positive features of which the most important was the mere fact of producing a clear policy for the development of general practitioner hospitals in the 1970's in place of the laissez-faire attitude that had persisted and seemed to be leading to their dissolution. The preservation of the new qualities in the concept, on which the force of the concept depended, probably explains the absence of any mention of existing G.P. hospitals in the original, and most of the subsequent, publications on the Community Hospital.

The Wantage Survey and the concept of the Community Hospital

The relationship of an existing G.P. hospital to the Community Hospital concept can be examined by considering the results of the Wantage Survey and the kind of in-patient care considered in the concept. In-patient care is, of course, only one part of the concept, but as far as other aspects are concerned, consultant clinics and some day treatment facilities have been in operation for many years at Wantage Hospital, while the building started in December 1972 will provide a health centre, further day treatment facilities and accommodation for local authority staff, all of these linked to the existing hospital on the same site.

1. In-patients not considered suitable for a Community Hospital:

   The first of these were "patients needing the facilities of an acute

treatment department" including all operative surgery. For medical patients this corresponds to those patients in Group 2 of the Wantage Survey (admissions to the United Oxford Hospitals) whose admission was determined by the need for consultant care. The remainder considered unsuitable were children, patients presenting a cross-infection hazard and severely disturbed patients; none were admitted in the year of the Wantage Survey.

From the point of view of patients who were excluded, there is close correspondence.

2. In-patients considered suitable for a Community Hospital:

Three categories - early discharge cases from consultant care, holiday admissions and selected terminal patients - were included in the Wantage Survey. But the main group of admissions (Group 1, the direct admissions) may or may not correspond to the definition of "acute medical cases admitted for social reasons". It depends on the way "social" is interpreted. It could be argued that any admission that does not require acute (consultant) treatment facilities is by definition a social admission because treatment at home is always possible provided enough home support is available. This definition would, however, involve stretching "social admission" to cover much more than is generally understood by the term; for instance, a patient with a profound hemiplegia from a stroke for whom the problem of nursing at home would require exceptional help and ability of a kind rarely found. The term "a medical case admitted for social reasons" usually means a patient who would not need hospital care except for particularly unfavourable domestic circumstances such as living alone without support from family or neighbours or living in particularly unsuitable housing conditions. While some of the Group 1 admissions in the Wantage Survey came in this category, most did

not, yet none of the Group 1 admissions required acute treatment facilities in a consultant unit. On closer examination, it seems likely that the main facilities offered by a Community Hospital for direct admissions that require in-patient care for more pressing reasons than "social" (as that word is generally used), are three:

1. Sufficient nursing care, meaning more than one nurse at a time, if needed, as well as 24-hour nursing cover.
2. Close and continuous observation by nursing and medical staff.
3. The ability to monitor (and alter at short notice if necessary) any treatment that is given including treatment by mouth, by injection or inhalation (in practice this last means oxygen) and physiotherapy.

It might be suggested therefore that a better definition of acute admissions suitable for a Community Hospital would be "a patient who does not need facilities that are only available in a consultant hospital" or alternatively that are "not available in that Community Hospital". Such a definition, while more clumsy, would have certain advantages.

1. It would be more comprehensive.
2. It would be more flexible as it would allow for differences between one Community Hospital and another; differences in facilities available (e.g. X-ray units) as well as differences in the experience and skill of the practitioners working there.
3. It would make easier the acceptance of changes in management of various conditions, for it is possible that advances in therapeutics will make some conditions that now need consultant care suitable for admission to Community Hospitals as well as <u>vice versa</u>. The swing of opinion on the methods of managing patients with myocardial infarction is a good example.

If a definition of the direct admissions to a Community Hospital such as the one suggested above were acceptable, then the Group 1 admissions in the Wantage Survey would conform to the criteria for a Community Hospital.

Liaison with Consultants

The remaining in-patients considered suitable for admission to Community Hospitals implied a feature that has not been considered closely, viz: liaison with consultants. These were the admission of certain post-assessment geriatric psychiatric and handicapped patients where the assessment would presumably be made jointly by the general practitioner and the consultants, nursing or para-medical staff of the appropriate specialty.

1. Liaison with Geriatricians:

Of all the post-assessment liaisons, that with the geriatrician is probably the most important. If such liaison does not exist it is possible for a Community Hospital to find a large proportion of the beds blocked by geriatric long-stay cases for whom alternative care is extremely difficult to obtain. When this occurs the ability to use the hospital for acute admissions is seriously hindered. In time, the reaction of many of the general practitioners will be to refuse to admit patients who would be suitable for G.P. hospital care if it appears there may be difficulties in discharging them home.

Experience in Wantage has shown that the absence of an effective link with a geriatrician is the main cause of difficulty and concern in the admission of patients. There may be certain long-stay cases for whom care in a Community Hospital is the best solution, but it should always be as a result of deliberate planned policy and not the result of the admission

of a patient who accidentally or unexpectedly remains "stuck" in the hospital with the inevitable frustration that is caused.

2. Liaison with Physicians:

There is, however, one other aspect of liaison that has not been considered at all, which is liaison with consultant physicians. Some experience of this was gained in the Wantage Survey and has been mentioned briefly.

The majority of the in-patients in a Community Hospital are likely to be medical cases, and these (in contrast to early discharge cases) are the cases most likely to present problems in diagnosis or treatment for which consultant advice may be needed. The value, both clinical and educational, of close links between G.Ps and consultants at out-patient clinics held in peripheral hospitals is well recognized: the extension of this liaison to cover in-patients is not. Experience in Wantage suggests that one ideal model of this type of liaison would consist of a link between a specific consultant physician (and his senior registrar) and a Community Hospital. The disadvantage of spreading the liaison between several consultants who attend in rotation is that there is too little continuity. The consultant physician could then:

1. Be requested to see and advise on any in-patient medical problems at a pre-arranged visit, not less than once a week.
2. Be able to arrange the admission to his hospital beds of patients initially admitted to the Community Hospital who subsequently proved to need consultant in-patient investigation.

The advantage of the latter is that it is often possible to arrange a brief admission to consultant beds for a series of investigations planned beforehand and then discharge the patient back to the Community Hospital

for further care if necessary. This is a very economical way to use consultant beds.

In addition to visits by the consultant to the Community Hospital, the possibility of the reverse process could be explored - a process that has been called "the domiciliary visit in reverse" because it could apply to general practitioners without hospital beds as well. When a patient is admitted to consultant care it is quite common for the consultant to find difficulty in judging the appropriate time and place for discharge. The general practitioner could then be asked to visit the hospital and discuss, on the ward, the home conditions and the kind of help that could be made available. It was shown clearly in the Radcliffe Survey that the absence of knowledge about general practice and about the patient's home was the main cause of delay in discharge. Better liaison between consultants and G.Ps along these lines should reduce or abolish any delay of this kind.

The educational value of liaison policies such as these described above need not be stressed; there is no form of post-graduate education more valuable than that gained by discussion of one's own patients. But another effect of such liaison would be the monitoring of standards of care in a Community Hospital, and the need for this was stressed in the joint report by the Royal Colleges of Physicians and General Practitioners (1972).

The effect of the imminent reorganization of the National Health Service on liaison schemes of the kind described remains uncertain. But the basis of the reorganization is intended to be improved integration between the various branches of the Health Service. Improved liaison should occur through Area and District Management teams, and should make it easier for general practitioners and consultants to share the skills and responsibilities needed for looking after patients in hospital.

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APPENDICES

1. Map of General Practitioner Hospitals in England and Wales.

2. Wantage Survey. The Practice and Wantage Hospital.

3. Total Admissions to Wantage Hospital from the practice during the year 1 November 1970 - 31 October 1971.

4. Wantage Survey. Nuffield Hospital Management Committee. Data on bed occupancy and costs of a number of G.P. hospitals in the Oxford area.

5. Radcliffe Survey. Further evidence on procedures accompanying discharges from consultant hospitals.

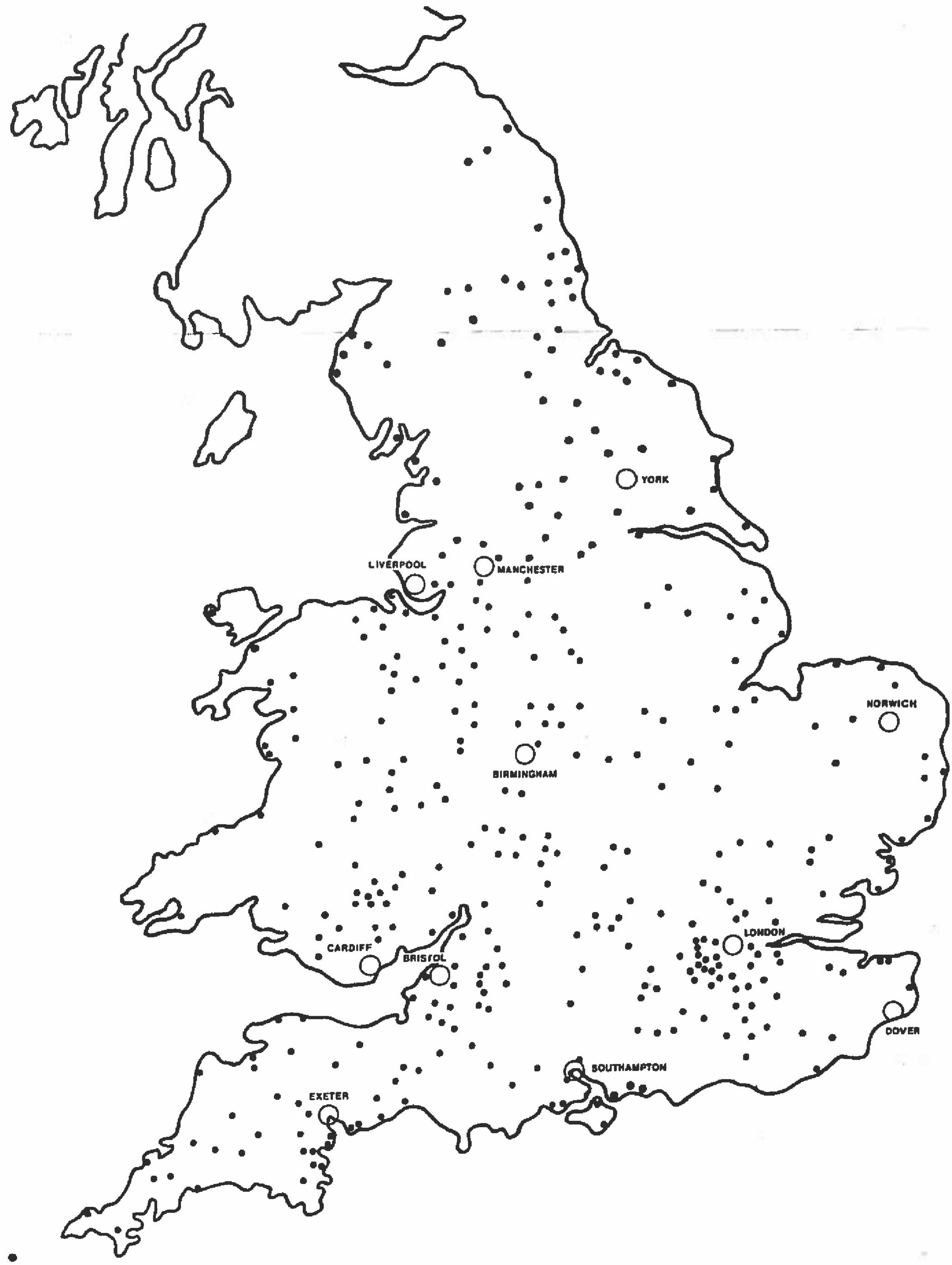
Appendix 1

Map showing the distribution of General Practitioner Hospitals in England and Wales.

This map is reproduced by kind permission of Dr R.M. Emrys-Roberts, Chairman of the Association of General Practitioner Hospitals. Each dot represents a general practitioner hospital, and the total is approximately 400. As far as is known the map is complete, but the absence of any central register of general practitioner hospitals at the Department of Health caused some difficulty when the list was compiled by Dr Emrys-Roberts.

I

General Practitioner ("Community") Hospitals in England and Wales



Appendix 2

Wantage Survey

The practice.

The practice on which the survey is based is one of two group practices in Wantage. The number of patients in the practice at the time of the survey was approximately 11,300. There were four partners (there are now five) and attached to the practice were two full-time nurses and one part-time, two health visitors and one midwife; these attached staff were employed by the Berkshire Health Authority. In addition there was one dispenser and a number of part-time receptionists and secretaries. The practice is carried out from a group practice surgery in the town of Wantage and the area covered includes Wantage and a number of villages within a radius of approximately five miles. Approximately half the patients live in the town and half in the villages. Main employment in the area consists of agriculture, service industries in the town, the Atomic Energy Research Establishment at Harwell and the car industry in Oxford. There are a number of small industries in the town including a mill, and light engineering works of various kinds.

The hospital.

The hospital was built by public subscription in 1927. The main layout of the hospital is shown in the accompanying diagram. The staff consists of a nursing officer (previously matron), three full-time and a number of part-time State Registered Nurses, some State Enrolled Nurses and domestic staff. The midwifery is run entirely by the local authority midwives who work both as hospital and "district" midwives.

As well as in-patient care the following activities are carried out at the hospital:

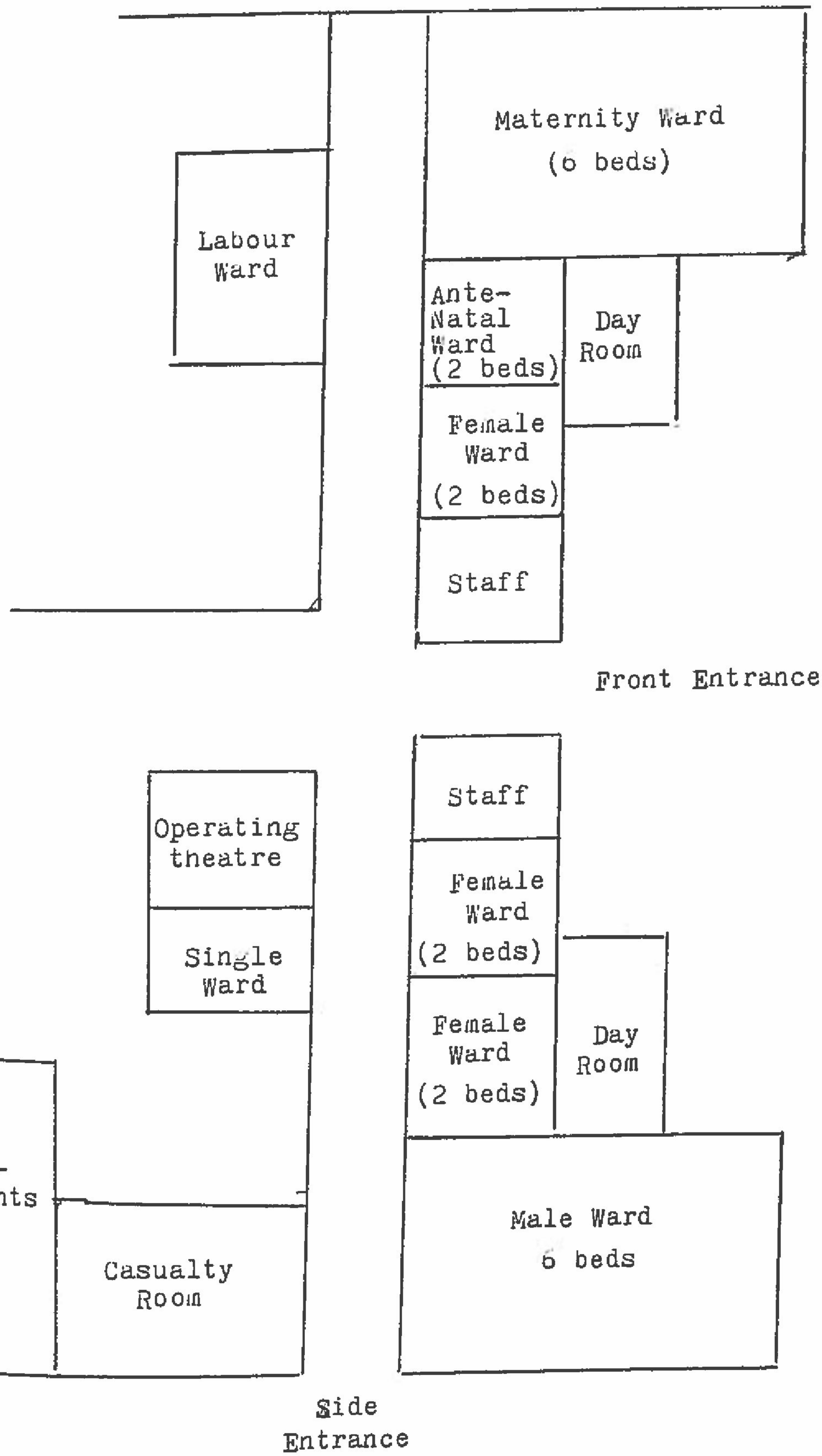
1. Minor casualty work on a 24 hour basis.
2. Minor surgery in the theatre, mostly under local anaesthesia. All surgery is carried out on an out-patient, or, occasionally, a day-case basis.
3. Physiotherapy is run from the physiotherapy department for out-patients and in-patients five and a half days a week, and a specialist in Physical Medicine attends each week.
4. Out-patients' clinics are held by a number of consultants from the United Oxford Hospitals in the following specialties:

Medicine	-	once a week at the time of the survey; now twice a month.
Surgery	-)	Once a month
Gynaecology	-)	
Orthopaedics	-)	
E.N.T.	-)	
Physical Medicine	-	weekly
Ophthalmology	-	weekly
Family Planning	-	twice a week (Family Planning Association)
Cytology	-	once a month (Local Authority)

All of the general practitioners in the practice attend the hospital each morning between 8.30 and 9.0 and on average once more each day and more often when necessary. Since the survey was completed further integration between local authority and the hospital service has occurred in several ways but notably by the appointment of a Nursing Officer jointly as Matron of the hospital and nursing leader of the group-attached staff of both practices.

Building has started on a new health centre which will be attached to the hospital and will contain a suite of consulting rooms for visiting

Diagram of the layout of Wantage Hospital (not to scale)



consultants and form a local headquarters for local authority staff. The building is due to be completed in January 1974. Plans have been approved for increasing the number of beds in Wantage Hospital from the present total of 21 to between 30 and 35. In the meantime, because of the falling demand on obstetric beds and the shortage of general beds, the wards are being rearranged so that there will be 17 general beds instead of 13 and 4 obstetric beds instead of 8, with facilities for increasing the obstetric beds in an emergency from 4 to 6.

Appendix 3

Total Admissions to Wantage Hospital from the Practice during the Year 1st November 1970 - 31st October 1971.

	No.	% of total
MEDICAL		
Direct Admissions (Group 1)	119	42.6
Early Discharges (Part of Group 3)	16	5.8
SURGICAL		
Early Discharges	34	12.2
MATERNITY		
Direct Admissions	66	23.6
Early Discharges	44	15.7
TOTAL		
Direct Admissions	185	66.2
Early Discharges	94	33.7
TOTAL	279	99.9

Appendix 4

G.P. hospitals within the Nuffield Hospital Management Committee.

Comparative data (Source: Nuffield Hospital Management Committee)

The Nuffield Hospital Management Committee, in addition to being responsible for the main hospital, the Nuffield Orthopaedic Centre, is responsible for a number of G.P. hospitals in the area. Data are given in the accompanying table for in-patient costs, average length of stay per case, number of beds available and percentage occupancy of in-patient beds. Two of the hospitals (Abingdon and Wantage) have maternity units and the data are given for all in-patients, including maternity. The remainder have acute beds only.

For Wantage Hospital during the year in which the survey of in-patients was carried out, the average in-patient cost per week was £34.70 compared to a Regional average of £44.65 and a National average of £50.67. The in-patient cost per case was £54.22 compared to a Regional average of £84.17. (The Regional and National Averages are for acute hospitals type No. 1 with 1-50 beds.)

The value for % bed-occupancy for 1970-71 in Wantage was 75%, but this includes acute and maternity beds. In fact the % occupancy for acute beds ranged from 88% to 98% and for maternity beds from 30% to 45%. Likewise the length of stay is shown for all in-patients, and for maternity patients was an average 4 to 5 days.

		1969-70	1970-71	1971-72
In-patient cost per week (£)				
	Abingdon	41.41	48.92	58.54
	Didcot	26.13	28.58	33.02
	Thame	38.52	39.88	48.37
	Wantage	30.69	34.70	43.38
	Watlington	31.40	33.05	41.87
Regional average :	50-100 beds	48.52	61.63	73.58
Acute Hospitals Type 1 :	1- 50 beds	38.25	44.65	52.57
In-patient cost per case (£)				
	Abingdon	79.69	101.62	117.12
	Didcot	72.40	82.88	88.69
	Thame	79.13	76.00	78.62
	Wantage	38.97	54.22	60.31
	Watlington	85.58	93.32	107.92
Length of stay per case (days)				
	Abingdon	13.5	14.5	14.0
	Didcot	19.4	20.3	18.8
	Thame	14.3	13.3	11.4
	Wantage	8.9	10.9	9.7
	Watlington	19.1	19.8	18.0
No. of beds available (& % occupancy)				
	Abingdon	62 (68%)	62 (72%)	62 (77%)
	Didcot	18 (83%)	18 (89%)	18 (89%)
	Thame	19 (74%)	19 (79%)	19 (76%)
	Wantage	21 (70%)	21 (75%)	21 (69%)
	Watlington	20 (79%)	20 (80%)	20 (76%)

Appendix 5

Radcliffe Survey: Further evidence on discharge procedures

The need to estimate the frequency with which the hospital discharge procedure fails to meet the required standard, and the consequences of this failure, has led to a survey which is still in progress at the time of writing. Preliminary results are included here as evidence in support of the statements made in the Radcliffe Survey about the inefficiency of discharge procedures.

The survey, which is being carried out in the author's practice, consists of recording a number of details about every patient from the practice discharged from in-patient care in the United Oxford Hospitals and Nuffield Orthopaedic Centre. From the data recorded it is intended to calculate how often the practice is notified of a patient being discharged on or before the day of discharge, within two days of discharge or at varying periods after that. The method of notification is being recorded and the results will be correlated with the time of notification. When notification of discharge is late, records are kept of the occasions when the lateness was the cause of embarrassment or of clinical danger, whether potential or actual.

The preliminary results, reproduced in the accompanying table, appear to bear out the assertion, made in the account of the Radcliffe Survey, that the process of notifying the general practitioner when a patient is discharged from hospital falls short of the idea.

Table showing preliminary results of a survey in progress concerning the delay in notification of discharge of patients from the United Oxford Hospitals to the Wantage practice on which the Wantage Survey is based.

Department	Time (in days) between day of discharge & day of notification				
	0 or minus	1-2	3-7	8-14	15-
Medical	8	2	4	0	1
Surgical	6	6	12	7	3
Obstetrics & Gynaecology	5	2	2	1	1
Totals	19	10	18	8	5
% separately	32%	16%	30%	14%	8%
cumulative	32%	48%	78%	92%	100%

Surgical includes general surgery, orthopaedics, accident service, E.N.T., Ophthalmology, neurosurgery, and plastic surgery.

Medical includes general medical, cardiology, neurology, dermatology and geriatrics.