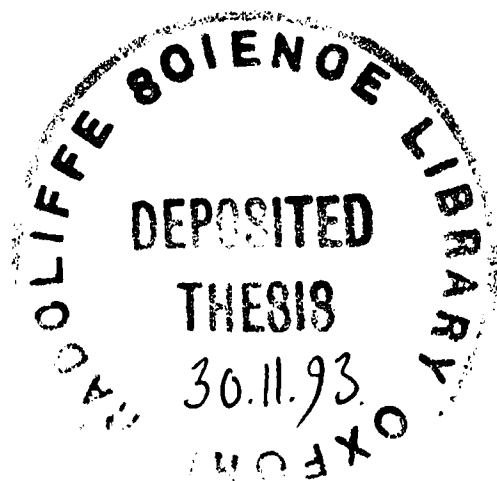


**IMPAIRMENT, DISABILITY AND HANDICAP
IN PATIENTS ON
ORTHOPAEDIC WAITING LISTS**

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CHAPTER SIX

SUMMARY AND CONCLUSIONS

CHAPTER SIX

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Resumé of Study

Overall, this study is broadly concerned with orthopaedic need and attempts to establish the extent of disability and handicap in those on orthopaedic waiting lists, although this does not, of course, represent all orthopaedic need. "Disability" in this context may be defined as any restriction or inability to perform an activity and "handicap" as any limitation on the patient's ability to function and cope with his or her lifestyle. By concentrating on the functional consequences of the orthopaedic condition for the individual, the study investigates both the unmet need for professional treatment and the impact of long waiting times on the processes of personal, family, economic and social life. As well as identifying the personal, social and material circumstances of those on orthopaedic waiting lists, the study also provides some insight into patients' experiences and difficulties in coping with uncertainty and delay.

The study focuses upon the orthopaedic unit of the Horton General Hospital, a District General Hospital in North Oxfordshire, receiving both trauma and elective admissions and serving a population of approximately 120,000. The study population comprises patients referred during specific periods to the orthopaedic unit of this hospital and patients waiting for in-patient treatment at the same hospital. A variety of methodological techniques is employed including detailed analysis of hospital case notes; content analysis of GP referral letters; and the administration of

questionnaires, both by post and at attendance to obtain quantitative and qualitative patient data, utilising standard measures of disability, handicap, pain, anxiety and depression.

This study aims to provide increased awareness of one of the major problems in orthopaedics today and introduces the possibility of routinely assessing disability and handicap in orthopaedic patients so as to improve awareness of patient needs, reduce unnecessary referrals and facilitate a more informed ranking of both out-patient and in-patient waiting lists.

It is suggested that this study provides greater understanding of the problem of orthopaedic need and that the findings from this detailed study at the micro level are capable of generalisation to orthopaedic surgery as a whole.

Resumé of Chapters

Chapter One seeks to define the core concepts with which health policies are centrally concerned and to introduce some of the broader sociological, epistemological and historical issues. It examines the basic concepts of health and illness and explores the evolution of two fundamental models of health, the "medical" and the "social". It is shown how the medical model, where health is seen as freedom from clinically ascertainable

disease and where the human body is viewed from an essentially mechanistic perspective, came to dominate western scientific medicine. Definitions and values concerning health and illness are, however, socially determined and vary between different cultural and social groups and over time. Illness behaviour, the individual response to symptoms, is also socially and culturally determined and this has important implications in terms of utilisation of health services and for establishing unmet need within any given population. Utilisation of health services is related to access and it is shown that the geographical distribution of health care facilities is inversely related to need. Numerous studies, most notably the Black Report¹ have demonstrated the existence of clear social class inequalities in mortality, morbidity, access to health care resources and utilisation of services.

Chapter One also examines the development of health services and health policies in the context of the growth of the modern welfare state and identifies the theoretical and historical antecedents for the establishment of the National Health Service. The policies of successive governments are described, most notably their efforts to keep escalating costs in check and to promote "efficiency" within the Service through reform of its administrative structure.

There is evidence to suggest that health care systems in western industrialised nations share the same problems - insatiable demand; wildly

escalating costs; limited resources; rapid technological advances; and demographic and epidemiological trends towards a more aged population with a chronic rather than an acute disease profile. Health care resources are finite and all health care provision involves some degree of rationing. It is argued that this is particularly evident in the specialty of orthopaedic surgery, where the outstanding developments of the last thirty years have resulted in a situation where elective surgery, though never lifesaving, can dramatically transform patients' lives. Within the NHS, access to orthopaedic surgery is strictly limited and the excess of demand over supply is expressed in large waiting lists and long waiting times.

Chapter Two addresses the key issues in orthopaedic surgery and seeks to establish the specialty's credentials as a microcosm of hospital-based health care. Beginning with an overview of the whole issue of disability (for it is with avoidable physical disability that orthopaedics is primarily concerned), this chapter chronicles the development of the specialty and highlights the principal technical advances of the last thirty years. It is seen that these technical advances have created difficulties within the specialty which has failed to expand rapidly enough to meet the greatly increased demand for elective surgery which has resulted from a combination of demographic change and increased patient expectations.

Orthopaedics straddles both the acute and the chronic sectors of medicine and orthopaedic trauma, compounded by the rising incidence of trauma in

the elderly, exerts a major influence upon the specialty's ability to handle elective cases efficiently. The influential Duthie Report and its recommendations are analysed in detail, together with other political responses to the problem of waiting lists. The waiting process and related factors such as GP referral practices, the out-patient system itself and the problem of non-attendance are all examined in detail.

It is suggested that for the majority of patients, both out-patient and in-patient waiting times in the NHS are unacceptably long and for those out-patients who ultimately require in-hospital treatment, the waiting process is a cumulation of two successive queues. For the individuals on waiting lists, the waiting process involves varying degrees of distress, disability and loss of physical and social independence.

Chapter Three presents some insights into the main issues in the delivery of orthopaedic care at the level of the District General Hospital. It provides an overview of the processes involved in the provision of hospital-based orthopaedic care and a perspective on the various stages through which patients pass from initial referral to eventual discharge. It reports upon a retrospective study of all 299 patients given a first orthopaedic out-patient appointment over a three-month period, a sample comprising a wide cross-section of patients of all ages, presenting with a broad range of orthopaedic problems. This retrospective study shows that little is known about patients waiting for their first out-patient appointment, even

clinically. Still less is known of the levels of pain or disability in these patients or of the impact of their orthopaedic problem on their personal, family, social or economic circumstances. It points to the need for further research into levels of disability and handicap in patients on orthopaedic waiting lists, into patient satisfaction with waiting times and into the strategies employed by patients for coping with long out-patient and in-patient waiting times.

Chapter Four seeks to establish the extent of disability and handicap in patients waiting for orthopaedic treatment at the study hospital. It reports on a postal survey of all 256 adult patients (18 years and over) listed as waiting for orthopaedic in-patient treatment at 28 February 1990. The results from this survey reveal that for the individuals on orthopaedic waiting lists, the waiting process involves varying degrees of pain, distress, disability and loss of physical and social independence. Moreover, they reveal that disadvantage appears to be related to the social class structure. Patients in Social Classes IV-V were the most numerous on the waiting list, had the highest mean and median ages, waited the longest before consulting a doctor, had the longest waiting times, were waiting for the most complex operations, had histories of the most previous operations, reported the most pain and the least relief from pain, recorded the highest levels of anxiety and depression, and, additionally, were further disadvantaged in terms of education, housing and household income.

The data in Chapter Four are supplemented by data from a further survey reported on in Chapter Five. This chapter seeks to establish the extent of disability and handicap in patients attending orthopaedic out-patient clinics at the study hospital and reports on a survey of all patients attending orthopaedic out-patient clinics during the month of September 1990. The results from this survey confirm that for those waiting for orthopaedic treatment, the waiting process involves varying degrees of pain, disability and loss of independence. The relationship between disadvantage and the social class structure is not as apparent as in the previous study, but nevertheless, it is clear that a substantial proportion of patients attending orthopaedic out-patient clinics experienced significant levels of restriction in mobility, impairment in their activities of daily living, in their sex lives and in their performance at work; had significant levels of pain, disturbed sleep, anxiety and depression; and, again, were further disadvantaged in terms of education, housing and household income.

The Role of Private Practice

This study is primarily concerned with patients waiting for specialist orthopaedic consultations and various kinds of treatment within the National Health Service. The prevalence of private practice within orthopaedics, however, means that these patients are in effect a highly selected sub-sample, disadvantaged by their lack of ability to pay.

No study broadly concerned with orthopaedic need, therefore, can be complete without a discussion of the role of private practice.

In contrast to other countries, private practice in Britain is not the principal form of provision and it is primarily used by those who can afford to step outside the system or those who are forced to pay because of restrictions in public supply. In general, the majority of patients still expect to receive free health services but also expect to have to wait. Consumer expectations, however, are changing and the private sector has grown rapidly over the last two decades to form a significant component of medical provision in UK.

A study by Nicholl *et al*,² published in 1989, showed that admissions in the private sector in England and Wales increased by 57 per cent from 1981 to 1986. Moreover, most admissions were for conditions for which there were waiting lists in the NHS. In terms of elective surgery, the authors estimated that 17 per cent of all in-patients and 11 per cent of day cases in 1986 were treated in the private sector.

The proportion of the population covered by private medical insurance has also increased rapidly. Persons insured per thousand population in the United Kingdom increased from 11.5 in 1955, to 41.2 in 1975 and to 79.5 in 1985.³ In 1989, 7.2 million people were insured privately. Exactly

comparable figures for previous years are not available. However, between 1971 and 1989, the number of people insured by the largest medical insurers British United Provident Association (BUPA), Private Patients Plan (PPP) and Western Provident Association (WPA) rose from 2.1 million to 5.2 million, an increase of 147.6 per cent.⁴

The percentage of the UK population having private health insurance rose from 3.6 per cent in 1970 to 11.7 per cent in 1990. Data from the General Household Survey show that approximately half of policyholders were covered individually, the other half being covered at least partly through their employers.⁵ According to a special market report by consultants Laing and Buisson,⁶ subscriptions from private medical insurance in the United Kingdom totalled £1069 million in 1990, representing a 15 per cent increase over 1989. Despite an overall drop in subscribers for the first time since the 1970s of 0.6 per cent in 1991, attributed to recession-hit companies going into liquidation or buying less cover for their staff,⁷ Laing and Buisson predict that the proportion of the population covered by private medical insurance will rise to 18 per cent by 2000.

However, as Goldacre⁸ has observed, although the private sector has grown considerably, it still provides treatment for only a limited range of conditions and a limited group of people in limited areas. The study by Nicholl *et al* showed that overall, compared with the NHS, the private

sector treated proportionately fewer children and patients aged 65 years and over. There was also wide geographical variation in the proportion of elective surgical conditions treated in the private sector - ranging from 6.3 per cent in the Northern region to 31.2 per cent in the North West Thames region.⁹

In terms of private bed provision, the emphasis has changed from being based mainly inside NHS hospitals to independent hospital chains run for profit. During the mid-1980s American medical corporations invested heavily in Britain and the number of British beds owned by United States corporations grew tenfold to approximately 2300 between 1979 and 1986. However, predicted levels of lucrative private business did not materialise and, faced with increased competition in their domestic market, US investors withdrew and by 1988 the number of American-owned British beds had fallen to about 1600.¹⁰ More recently, new NHS hospital trusts have actively sought to secure private business in competition with the independent hospital sector.

Private practice in Britain provides, in theory, a free market for patients who can pay, but in reality it cannot be separated from the National Health Service. The private sector recruits staff from the NHS and advances only because the NHS itself is in difficulty. In an effort to provide more services, or even to maintain services at the same level,

within limited budgets, the NHS has to accommodate more patients in less time. As it attempts to cope with increased demand without a comparable increase in resources, its flexibility decreases. Contact between the NHS patient and the consultant can be brief, inconclusive and frustrating, whilst the time spent waiting for these contacts is uncomfortably long.

"The pattern of stress and strain within the NHS works to the advantage of commercial medicine. A lengthy consultation with a specialist, rapid referral for further investigation or treatment by other specialists and follow-up by the same doctor are all possible for paying customers. The patient who can meet the private specialist's fees may be able to escape waiting a long time for an initial appointment, being briefly assessed by a doctor in a training grade, waiting again for investigation, admission, or out-patient treatment, and being reviewed by a different member of the NHS consultant's team. The paying patient does not have to negotiate, and renegotiate, the terms of his/her treatment with a succession of doctors." ¹¹

The private sector is clearly attractive to individual patients who are able to pay, offering more comfort, more privacy, more choice and the facility to avoid long queues for non-urgent treatment. For the consultants, private practice offers clinical autonomy and the obvious attraction of financial gain. Most consultants are able to enter the commercial sector with little or no detriment to their NHS salaries.

In 1990, there were 15,134 consultants working in the National Health Service,¹² most earning between £34,960 and £45,130 per annum. Approximately 7,000 of these consultants were eligible for additional annual merit awards ranging from £7,955 to £42,870. 12,000 consultants did at least some private work, sharing a total fee revenue from insured and non-insured work of £455 million in 1990.¹³ This works out at an average of approximately £38,000 each, but masks a wide range between those earning only £3,000 or £4,000 and an unknown number earning much larger sums.

When the Royal College of Physicians of London was founded in 1518, the Charter gave as the objects of the College:

*"...to resist the endeavours of wicked men and especially to repress the audacity of those who profess medicine rather because of their own avarice than in any assurance of a good conscience, whence arise very many ills for the rude and credulous populace".*¹⁴

With the level of financial inducement provided by private practice today, it is likely that the problem identified in the early part of the sixteenth century has not altogether been resolved. Whilst most consultants undoubtedly work very hard for the NHS, certainly more than the minimum required to fulfil their contractual obligations, some conflict of interest with private practice is inevitable. Potentially, private practice can

damage the NHS in three ways. It can draw consultants' time away from NHS patients, it can distort consultants' priorities, and it can erode their commitment to the NHS. Simply, consultants cannot be in two places at once. Consultants may argue that private work eats into their leisure time rather than their NHS work, but in practice, it is probably a bit of both. Private practice can also place an extra burden on junior staff who are obliged to take on additional responsibilities whilst the consultants are detained elsewhere and it can also lead to restrictive practices:

"Not only may consultant staff doing private practice create extra work for their NHS colleagues but they may actively oppose the recruitment of other consultant staff to share the burden. Sharing the burden, of course, invariably means that any new consultant staff will also share the private work".¹⁵

A key concern is the impact that private medicine may or may not have upon NHS waiting lists, the political unit of measurement used to determine the efficiency of NHS hospitals. One assumption is that the private sector assists the NHS by taking some patients off its waiting list and shortening the queue for other patients. However, not all the patients who find their way into private practice have ever been on a NHS waiting list. Some will have been deterred from ever seeking treatment in the public sector by their assumptions about waiting times and will have elected for the private sector from the outset.

The only evidence that the private sector has succeeded in reducing NHS waiting lists is in those specific cases where NHS patients have been contracted out to the private sector on a one-off basis to clear a particular backlog. Contractual arrangements with the private sector accounted for £4.5 million of the government's Waiting List Fund in 1989.¹⁶ A report by the National Audit Office, however, published in January 1990,¹⁷ revealed that contracts with the private sector under the government's waiting list initiative cost nearly twice as much as operations performed within the NHS. In one notable case of contracting out, in Bath, it transpired that not only did the private operations cost ten per cent more than they would have done in the NHS, but they were actually performed by the NHS consultant from whose NHS waiting list they had been removed.¹⁸

An alternative assumption is that it is likely that the increase in private practice may have reduced the amount of consultant time available to NHS patients and may therefore have contributed to the lengthening rather than the shortening of waiting lists.

The number of patients waiting for treatment in the NHS, which had remained fairly constant at around 500,000 from 1948 to the early 1970s, had risen dramatically to 752,000 by 1979. In addition, waiting times for hospital appointments steadily increased over the same period.¹⁹

Waiting lists are artefacts which reflect consultant preferences as well as medical need:

"Hospital doctors have the discretion to decide who shall and who shall not join the list and there have been regular reports that waiting lists in some specialties are maintained at an artificially high level in order to create a demand for private practice and to protect the private incomes of the consultants concerned." ²⁰

Speaking in the debate on the National Health Service and Community Care Bill in the House of Commons on 7 December 1989, Kenneth Clarke, the Secretary of State for Health stated:

"I do not wish to attribute ill-will to anyone in the Health Service but no-one has an incentive to reduce waiting lists. People strive to do so because they want to keep up with the work but no reputable consultant would be without a waiting list because it is a badge of status." ²¹

Although many consultants would react angrily to such suggestions, there is enough anecdotal evidence to suggest that they are not entirely inaccurate. It is unlikely to be a coincidence that the five specialties having the longest waiting lists - general surgery, orthopaedics, ENT, gynaecology and ophthalmology - are also those having the smallest proportions of staff holding whole-time NHS appointments.²² In other

words, the specialties with the longest waiting lists are also those which offer the greatest opportunity for private practice.

The role of the private sector in orthopaedic surgery is substantial. For example, the number of total hip replacements performed in the private sector in England and Wales increased by 182 per cent from 3890 in 1981 to 7066 in 1986.²³ The private sector accounted for 27.7 per cent of all total hip arthroplasties in 1986, a significantly higher proportion than for all other elective surgery excluding abortions.²⁴ Total hip replacement was the most common major operation in the private sector in 1986.²⁵

The Duthie Report took the view that private practice has little influence on orthopaedic waiting lists:

"We have been presented with no evidence to support the view that long waiting lists exist to bolster private practice or that private practice materially affects the time which National Health Service patients have to wait for treatment; but a spill-over effect in areas where waiting lists are long is probably inevitable. " ²⁶

"...private practice has so far contributed little either to the shortening of waiting lists and the reduction of waiting times on the one hand or to their lengthening on the other." ²⁷

In denying the absence of any association between private practice and NHS waiting times because of lack of evidence, the Duthie Report failed

to emphasise that the evidence required might well have been too sensitive to acquire, which of course, renders such a refutation valueless.

Overall, all the available evidence, other than the anecdotal, about the relationship between private practice and NHS waiting lists suggests either that the growth of private medicine has had little effect on waiting times or waiting lists in the NHS because it accounts for such a small proportion of clinical activity or that it has had a deleterious but marginal effect. However, this is clearly not the case within the specialty of orthopaedic surgery, particularly with regard to operations such as total hip replacement. With private operations accounting for more than one in four of all hip replacements, it is extremely unlikely that this is because people with osteoarthritis of the hip are generally wealthier than the rest of the population. Indeed, the converse is more likely to be true. Faced with the prospect of enduring the levels of pain, disability and handicap revealed in Chapter Four of this study, it is hardly surprising that many patients not fortunate to have either the disposable income or the appropriate health insurance cover to automatically seek treatment in the private sector would consider drastic action such as spending their life savings or taking out a second mortgage on their home to secure the treatment, albeit classified as "non-urgent", that they urgently need.

The College of Health's *Guide to Hospital Waiting Lists 1990* quotes a not untypical example:

"Mrs F's husband is 80 and needs a second hip replacement. They have had waiting list problems before and in the end decided to spend their £4,000 savings to have it done privately. Now that he needs another one, it seems that the waiting list is still just as long. The surgeon has said that he will do it "next week, if you pay privately." They have no savings left and the only way they could pay would be to try for a second mortgage on their house or sell it. As they have no children, they are seriously thinking of doing this but are worried about where that might leave them if something similar crops up in the future." ²⁸

The relationship between orthopaedic waiting lists and private practice in the catchment area of this study is not easy to quantify because of the difficulties in obtaining data on the private sector. The retrospective study reported upon in Chapter Three revealed virtually no evidence of NHS out-patients being converted to private patients. Only two of the 104 patients (1.9%) for whom surgery was indicated opted to have their operations performed privately. This is because, in general, private patients are identified as such at the outset and thus follow a path quite different from that of NHS patients. They are referred as private patients by their general practitioners and their first consultations are on a private basis, held outside the hospital, usually at the nearby private hospital.

Data obtained from general practitioners and the consultants themselves revealed that the catchment area of the study hospital generates around 2,750 new orthopaedic referrals per annum. Of these, approximately 2,000 patients are referred to the study hospital for NHS out-patient appointments, the balance of 750 (27 per cent) being referred privately. The geographical nature of the catchment area means that GPs referring private patients have a broad range of options and only 450 (60 per cent) of these new patients are referred to consultants based at the study hospital, the balance of 300 being referred to Oxford (Nuffield Orthopaedic Centre), Northampton, Warwick and elsewhere.

Of the 450 patients referred to consultants based at the study hospital for private consultations, approximately 80 per cent are covered by private health insurance, either individually or through their employers. Approximately 200 of these patients are operated on privately, a "conversion" rate of 44 per cent, slightly higher than the NHS conversion rate of 40 per cent for the same consultants.

Virtually unrestricted access to a consultant opinion means that private patients are likely to have a lower consultation threshold than NHS patients and would thus be more likely to seek earlier consultations for more trivial conditions. It would therefore be reasonable to expect the surgical conversion rate for private patients to be lower than that for NHS patients and the fact that it is actually higher suggests that either there are

less chronic cases in the private sector or the consultants have a greater incentive to operate.

Very few private elective orthopaedic operations are carried out at the study hospital, the great majority being carried out at the nearby private hospital. This hospital publishes no data on patients or surgical rates, its Prospectus²⁹ concentrating primarily on the hospital's "hotel" facilities. Approaches to the hospital management, both individually and through one of the consultants, failed to produce any useful data. Whilst there was no claimed theoretical objection to providing details of orthopaedic consultations and operations, it was argued that these data were not routinely available and the hospital had neither the staff nor the facilities to extract them from its record-keeping system. Requests for direct access to patient case notes and operating theatre records were flatly refused.

The co-operation of the consultants themselves was more forthcoming and their understandable reticence to discuss matters relating directly to their private income was largely overcome. All information provided by the consultants, however, was obtained on the strict understanding that it would be presented in aggregated form so that individual comparisons could not be made. The consultants' own records on private patients are primarily maintained for accounting rather than clinical purposes and, without access to the more detailed records kept by the private hospital,

data other than simple numbers of patients seen and numbers of operations proved impossible to obtain.

The two principal consultants in this study were both on maximum part-time contracts and both engaged in a significant level of private practice. There was, however, no evidence of any kind that this had any deleterious effect upon their NHS duties. Indeed, it was quite evident that both consultants routinely worked far in excess of their contractual NHS obligations.

However, the fact remains that although recent reforms have shifted the balance of power slightly, in general, consultants still wield enormous power and influence within the NHS. The government's stated objective is to run the NHS on the lines of a business, but no other business would tolerate its key workers simultaneously conducting what is effectively a rival business.

The specialty of orthopaedics provides a lucrative ground for the consultant with more than a passing interest in private practice and the inefficiency of the NHS provides ample scope for the unscrupulous consultant to manipulate waiting lists and exaggerate waiting times for personal gain. There are undoubtedly some whose NHS salary represents the minor proportion of their total income and who remain within the

NHS purely for the prestige and the opportunity for further private business that long waiting lists present.

The evidence for such claims, however, is purely anecdotal. Some members of the medical profession will acknowledge that such practices occur, although they are unlikely to condone them. Private practice, rather like the system of consultant merit awards, is shrouded in secrecy with few of the participants genuinely prepared to co-operate in any programme likely to demystify the process.

A detailed study of private orthopaedic practice would clearly be very worthwhile, but falls outside the scope of this study. Similar methodological techniques to those employed in this study, however, could be utilised to advantage.

Factors Influencing Waiting Lists

Waiting lists within the National Health Service are a politically sensitive and complex issue. Waiting lists vary enormously between regions, districts, hospitals, specialties and between individual clinicians within the same specialty.

There are two kinds of waiting lists, comprising those waiting for out-patient consultations and those waiting for in-patient treatment. All in-patient waiting lists have their origin in out-patient waiting lists and there is therefore a two-stage waiting process. Of course, many orthopaedic patients can be treated without admission to hospital, but for those who do require hospital treatment, particularly if such treatment is classified as non-urgent, the waiting process is a cumulation of two successive queues. For the individual patient, to this time must be added the period from the onset of the orthopaedic problem to the general practitioner consultation (or in some cases, the accident and emergency department attendance) and the time from this first consultation to referral.

In common with much of the literature, this study has confirmed that for the majority of orthopaedic patients, progress through the NHS system is extremely slow. Mean waiting time for a first out-patient appointment during the study period reported upon in Chapter Three was 9.8 weeks, with a range from 1 to 30 weeks, depending on the consultant and the grade assigned to the GP referral letter. These figures, however, are substantially better than those revealed by a survey of selected hospitals carried out by the National Audit Office. In a report published in 1991, auditors found that waiting time between referral and first out-patient appointment in orthopaedics ranged, for example, from 7 to 12 weeks at Milton Keynes District Hospital and from 32 to 72 weeks at Prince Charles Hospital, Merthyr Tydfil.³⁰

For those patients in the study reported upon in Chapter Three who were placed on the in-patient waiting list, mean waiting time from the date placed on the list to admission was 22.68 weeks. For these patients, however, this was in addition to out-patient waiting time and the more meaningful statistic of mean waiting time from referral to admission was 35.47 weeks. Total patient "careers" overall from date of referral to final discharge ranged from 1 to 110 weeks, with a mean length of 27.45 weeks.

Waiting times in the waiting list survey reported upon in Chapter Four do not represent total waiting time but rather the time that the patients had already waited at the time that the study commenced. Time already waited by patients in this study ranged from 1 to 299 weeks. 20.2 per cent of patients had already waited more than 60 weeks. Mean time already waited was 44.8 weeks and median time already waited was 23 weeks. Median time already waited ranged from 14 weeks for an investigation to 39.5 weeks for an operation classified as Major. Median time already waited for the 53 operations classified as Major Plus (all total hip or total knee replacements) was 32 weeks.

53.2 per cent of patients on the waiting list for surgery claimed that they had been suffering the symptoms for more than six months before they first consulted a doctor about their orthopaedic problem. 51.5 per cent had consulted their general practitioner more than once about their orthopaedic problem and 13.9 per cent had seen their GP six times or

more. 65.3 per cent waited up to 12 weeks from their first visit to a doctor to their first hospital out-patient appointment; 7.5 per cent waited up to 24 weeks and a further 7.5 per cent waited for more than 24 weeks. Mean length of wait overall was 14.9 weeks and median length of wait 6 weeks. These waiting times are significantly less than those found elsewhere in this study, suggesting that patients most likely to benefit from surgery might tend to be given earlier appointments.

Whilst patients in the older age groups, females and those in the lower social classes tended to wait slightly longer than average, there were no significant differences in time already waited by age, sex or social class. The largest single category of patients on the waiting list was those waiting for total hip replacements including revisions. Almost one third of patients were waiting for either total hip or total knee replacements.

Waiting times for the 58 patients attending their first orthopaedic out-patient consultation in the study reported upon in Chapter Five ranged from 1 to 33 weeks. Mean and median waiting times for this group were 12.7 weeks and 12 weeks respectively. There were no significant differences in waiting time by age, sex or social class. 42.4 per cent of out-patients stated that they had been suffering the symptoms for more than six months before they first consulted a doctor about their orthopaedic problem.

Government policy on waiting lists does not take into account the totality of the waiting process and is almost exclusively concerned with in-patient waiting lists. *The Patient's Charter*,³¹ for example, makes only a passing reference to out-patient waiting lists. In recent years, government policy has shifted from a preoccupation with the gross numbers of those waiting for in-patient hospital treatment to an emphasis on long waiting times. In the run up to the 1992 General Election, the government's stated objective, outlined in *The Patient's Charter*, that no one should wait longer than two years for in-patient treatment led to a scramble to clear the backlog of patients waiting in excess of this time.

However, whilst a significant reduction in numbers of people waiting over two years was undoubtedly achieved, it is by no means clear that this was not at the expense of patients who had waited less time, but were in greater need of treatment. As Pope has observed:

*"...the assertion that the reduction in numbers of people waiting over two years for inpatient treatment is linked to increased or more efficient hospital activity may well be fallacious. Cutting numbers can be achieved without actually treating patients. One way of doing this, pioneered by North East Thames Regional Health Authority, is simply to abolish waiting lists altogether, such as those for varicose vein surgery. Another is to make inpatient waiting less visible, perhaps by making patients wait longer for outpatient appointments, temporarily suspending their admission, or sending them back to their general practitioner."*³²

A recent report by the British Orthopaedic Association ³³ has suggested that the government's commitment to reduce waiting lists in orthopaedic surgery has adversely affected the satisfactory management of trauma cases.

One of the problems with the government's recent preoccupation with waiting time is that waiting lists are not administered as queues. A recent study³⁴ has demonstrated that patients are not admitted in strict chronological order and has shown that differences in patient characteristics, not just in terms of urgency or severity, but apparently mundane factors such as whether or not the patient has a telephone and can therefore be contacted at short notice, even the manner in which patient data is stored, can all determine how long individual patients wait. Different organisational practices such as theatre utilisation or bed management can also influence waiting lists.³⁵

Whilst waiting time is clearly important to the patient, it is just one element of the waiting list problem. Factors such as severity of the condition, clinical urgency, likely outcome and the social, economic and family circumstances of the patient are equally important in ranking in-patient waiting lists. In the drive to reduce the number of patients waiting more than two years for in-patient treatment, there is a very real danger that a waiting period of two years for non-urgent hospital treatment will come to be regarded as acceptable. There is ample evidence from this

study that many patients on orthopaedic waiting lists experience levels of pain, lack of sleep, disability and loss of independence that are quite unacceptable in a caring society. In this respect, the label non-urgent is fundamentally misleading.

Whilst in clinical terms, these patients' conditions are not life-threatening and treating them as emergencies cannot be justified, surgery can transform them from housebound depressives dependent upon others into independent outgoing individuals, freed from continuous pain. For the elderly arthritic patient, two years can be more than a seemingly endless wait, it can quite literally be a lifetime.

During the period of this study, the National Health Service has undergone dramatic changes with the implementation of the changes introduced by the National Health Service and Community Care Act 1990.³⁶ The Act has made changes to the relationship between general practitioners and hospital consultants described in detail in this study and shifted the balance of power slightly in favour of general practitioners. However, in practice, it has had little effect upon waiting lists, which at best have simply been realigned. People still wait for hospital treatment whether as out-patients or in-patients and the process of waiting and its attendant problems remain the same. Indeed, the Act has introduced the additional possibility that cash-limited general practitioners may well postpone referrals or even not refer certain patients at all.

Central to government thinking on health care funding is the notion of the infinity of demand and the persistence of long waiting lists is used to support and sustain this view. Metaphors such as the "clinical iceberg" of morbidity and the "bottomless pit" of demand are used to support the argument that however much money is put into the health service, demand for its services will never be met. By holding out the spectre of a "bottomless pit", the government has justified spending limits proportionally below most other European countries. Yet it is evident that in orthopaedics at least, even though demand consistently exceeds supply, the concept of a "bottomless pit" is a myth. The nature of orthopaedic conditions means that there is less of a "clinical iceberg" in orthopaedics than in other specialties and the majority of need is translated into demand. Part of this demand is satisfied by the private sector and by non-medical practitioners, the balance being channelled into the NHS system where access is rationed, first by the general practitioner as "gatekeeper" and subsequently by the hospital waiting list mechanism.

The central problem is not the infinity of demand, but rather a lack of resources. In terms of surgical workload, for example, those waiting for in-patient treatment at any given time can be identified and the cost, time and resource implications of clearing the backlog of cases can be quantified. It simply does not follow that if the waiting list backlog were cleared then GPs would merely refer at a higher rate and the waiting list

problem would re-appear. It is extremely likely that the absence of a waiting list would lead to increased GP referral rates, but as demand is not infinite, then with sufficient resources, a balance between supply and demand could eventually be achieved.

The surgical workload at the study hospital in 1990 shows a mean monthly operating rate of 51 elective cases and 41 cases of orthopaedic trauma. Mean length of stay is 6.1 days for elective cases and 15 days for trauma cases, clearly demonstrating the "bed-blocking" effect that trauma cases have. (See Table 139). With trauma in the elderly such as fractured neck of femur consuming enormous resources simply in terms of beds alone, it is clear that the effect of a unanticipated increase is devastating. One additional fractured neck of femur consumes on average the same bed resources as five elective total hip replacements.

However, it will be clearly seen that if the unit were able to work at maximum efficiency, then even with no increase in available consultant time, theatre sessions or beds and with no decrease in trauma workload, then the backlog of surgical cases could be cleared within a maximum of 17 months. (See Table 140). Figures for maximum capacity have been calculated on the basis that trauma workload remains as the 1990 monthly average, consuming a full 540 bed days per month and requiring 19 orthopaedic beds in the 30-bedded ward. The availability of resources,

theatre and nursing staff and the impact of confounding variables such as illness and holidays have, however, not been taken into account.

Table 139.
HGH DEPARTMENT OF TRAUMA AND ORTHOPAEDIC SURGERY.
SURGICAL WORKLOAD 1990.

PROCEDURE	MEAN NO. OF CASES PER MONTH	AVERAGE LENGTH OF STAY
Elective Surgery		
Total hip replacement	8	11 days
Total knee replacement	2	14 days
Laminectomy	4	9 days
Arthroscopy	12	2 days
Miscellaneous foot operations	12	4 days
Miscellaneous hand operations	8	1 day
Others	5	2 days
Trauma Surgery		
Fractured neck of femur	6	56 days
Tibial fracture	2	18 days
Ankle fracture	4	7 days
Acute knee injury	4	5 days
Fractured femur	2	40 days
Hand injury	5	3 days
Forearm fracture	4	2 days
Colles fracture	4	2 days
Others	6	2 days

Table 140.
HGH DEPARTMENT OF TRAUMA AND ORTHOPAEDIC SURGERY.
SURGICAL WORKLOAD 1990. TIME TO CLEAR BACKLOG ON
WAITING LIST AT MAXIMUM SURGICAL CAPACITY.

SURGICAL PROCEDURE	NUMBER WAITING AT 28/02/90	OPERATIONS PER MONTH		NEW CASES ADDED TO LIST PER MONTH	TIME TO CLEAR BACKLOG
		MEAN	MAX		
Total hip replacement	30	8	10	6	8 months
Total knee replacement	27	2	4	2	14 months
Laminectomy	1	4	6	4	< 1 month
Arthroscopy	19	12	16	4	2 months
Misc foot operations	35	12	12	10	17 months
Misc hand operations	31	8	12	10	16 months
Other operations	30	5	8	5	10 months

Where the number of new cases added to the list equals or exceeds the operating rate as was the case, for example, with total knee replacements and with miscellaneous hand operations in 1990, then supply cannot keep pace with demand and the waiting list for these procedures at best remains static and at worst is constantly growing. Without the resources to at least keep pace with additions to the list, it is clear that the scope for long term improvement is severely limited.

Waiting lists are dynamic, with new cases continually being added and thus the effect of confounding variables is both significant and cumulative. Higher than predicted levels of trauma admissions can wreak havoc upon an elective waiting list - just two additional cases of fractured neck of femur, for example, can mean the postponement of up to ten elective total hip replacements. Unforeseen occurrences, such as the outbreak of influenza amongst hospital staff at the study hospital in December 1989, led to the cancellation of virtually a whole month's elective orthopaedic cases.

Short term management responses to financial crises and budget overspending can also have severe long term effects upon waiting lists - for example, at the study hospital the prosthesis budget was overspent before the end of the financial year and all major joint replacement operations planned for the period February to April 1990 were simply cancelled. This was followed by further cancellations and bed closures in May 1990.

Quite apart from the catastrophic effect decisions such as these have upon the waiting list as a whole, for the individual patient, the misery of waiting is made much worse by disappointment and further uncertainty. A typical example is the case of a female patient aged 78 put on the in-patient waiting list for a right total hip replacement in June 1989. Reporting constant, severe pain and with a high level of depression as measured by

the HAD Scale, this patient was confined to home except for escorted outings:

"My ability to walk and stand is getting worse and the pain at times is unbearable...I was waiting for admission on 14th Dec 1989, only to be told that due to staff illness admission would be delayed until after Xmas. I waited with mixed feelings (not at all nice!) the whole of January 1990 to hear. My husband rang thro, finally only to be told that admission would now be delayed until April - hopefully it will be third time lucky."

NHS budgeting and accounting systems encourage administrators and managers to take short term decisions without regard for their long term consequences. The relatively minor cost of a hip prosthesis can be shown as a saving because the real cost of an empty operating theatre with surgeons, nursing staff and technicians standing idle is not taken into account. Similarly, a full bed is seen as a cost; an empty bed as a saving.

Not only are resources insufficient *per se*, they are not distributed on an equitable basis. In 1990, for example, the prosthesis budget for the two orthopaedic consultants at the study hospital was £23,000 each. Moreover, plates, screws and other items required for the fixation of fractures and other emergency reconstructive surgery have to be purchased from this same budget.

This contrasts, for example, with the Nuffield Orthopaedic Centre (NOC) where the 1990 budget allocation was exactly double at £46,000 per surgeon exclusively for elective surgery, no trauma surgery being undertaken at the NOC. Even when the fact that certain highly specialised procedures, not undertaken at the study hospital, are carried out at the NOC, this remains a large discrepancy. The inequality of resource provision is further demonstrated by the fact that, again in 1990, not only was nursing allocation per bed greater, but also the number of physiotherapists per bed was almost eight times greater at the NOC.

The introduction of an "internal market" into the NHS seems to have made matters worse and hospitals all over the country are running out of money before the end of the financial year. A typical pattern seems to be that after nine months budgets are spent and consultants are asked to slow down or stop treating non-urgent cases, leaving three months of the year where virtually no elective surgery is carried out. It seems quite clear that the NHS reforms have generated no additional funds for elective surgery and that District Health Authorities do not have sufficient resources to provide for the needs of the population within their districts. GP fund-holders, however, can provide additional funds and thus a two-tier system seems to be emerging, favouring patients of fund-holding general practitioners.

The Problems of Patients on Waiting Lists

A key feature of this study has been a detailed examination of the implications of the waiting process for individuals and their families. 57.2 per cent of those on the in-patient waiting list felt that their orthopaedic problem had deteriorated whilst they had been waiting for surgery. Increased pain and pain frequency were most frequently cited, followed by decreased mobility, increased deformity and decreased range of movement.

A significant number of patients in the in-patient study had constant, severe self-reported pain, unrelieved by prescribed medication. Only nine patients reported no pain. 35.8 per cent reported moderate pain and 32.4 per cent severe pain. 25 of the 56 patients reporting severe or unbearable pain stated that it was constant. 44.5 per cent of respondents stated that they took pain killers to relieve their pain. The category of patients taking analgesics included all those reporting unbearable pain and 78.6 per cent of those reporting severe pain. 64 of the 77 patients taking analgesics (83.1%) stated that they were prescribed by a doctor. Only 4 patients stated that their medication provided complete relief from pain. 82.1 per cent of patients reporting that their prescribed medication gave very little or no relief from pain described their pain as unbearable or severe. 93 patients (53.8%) also reported some disturbance in their sleeping habits as a result of their orthopaedic problem.

A significant number of patients in both the in-patient and out-patient studies reported constant, severe pain, unrelieved by prescribed medication together with disturbed sleeping patterns. Pain is an inevitable feature of the majority of orthopaedic conditions and the amount of pain that the patient is suffering is an important clinical indicator of the need for surgery. It therefore comes as no surprise to find that patients on an orthopaedic waiting list report varying degrees of pain and distress. However, there is no reason why in the majority of cases pain should not be controlled by medication prescribed either by the hospital consultant or by the patient's general practitioner.

Borderline or morbid scores on the HAD Anxiety subscale were recorded by 26.6 per cent of patients waiting for surgery and by 20.9 per cent on the Depression subscale. 46 patients (26.6%) reported at least some restriction in their sex life resulting from their orthopaedic problem and a further 19.1 per cent declined to answer the question. 117 patients (67.6%) waiting for hospital treatment reported some degree of restricted mobility as a result of their orthopaedic problem and almost half of these patients reported significant levels of impairment in activities of daily living as measured by the Frenchay Activities Index.

More than half of those on the in-patient waiting list and more than 80 per cent of out-patients in employment reported some degree of impaired performance at work as a result of their orthopaedic problem and 40.5 per

cent stated that their partner and/or family at least partly depended upon them for financial support. Pain and discomfort were cited by the majority of respondents as being the hardest things they had to cope with as a result of being on a waiting list, followed by restricted mobility and uncertainty.

71.6 per cent of respondents waiting for surgery declared themselves very satisfied with the quality of care provided by their own doctor, with only 6.4 per cent stating that they were dissatisfied or very dissatisfied. Satisfaction with the quality of care received so far from the hospital was at a relatively high level with 56.7 per cent of patients declaring themselves very satisfied and only 1.7 per cent stating that they were dissatisfied. Levels of satisfaction with time already waited for operation were relatively low with only 12.7 per cent of respondents declaring themselves very satisfied.

These levels of satisfaction, however, compare favourably with national figures. Reports from British Social Attitude Surveys reveal that between 1983 and 1990 the percentage reporting dissatisfaction with the National Health Service increased from 25 per cent to 47 per cent. Dissatisfaction with hospital in-patient services increased from 7 per cent to 15 per cent and with hospital out-patient services from 21 per cent to 28 per cent over the same period.³⁷

In the out-patient study reported upon in Chapter Five, objective assessments were also obtained using a simple out-patient assessment form. This provided the consultant's assessment of disability, pain, probable outcome of treatment and patient motivation. In 53.3 per cent of cases, the consultants expected treatment to lead to significant improvement or complete recovery. Patient motivation was ranked highly by the consultants with 79.3 per cent of patients being classified as well or highly motivated. However, consultants appeared to be unaware of the extent of patients' pain and consistently underrated it. 15 patients ranked by the consultants as suffering moderate, mild or no pain, rated their own pain as severe. In making their objective assessments, the consultants also tended to underestimate patients' disabilities and the restrictions on their physical mobility resulting from their orthopaedic problem. 57.1 per cent of the patients ranked by the consultants as having no disability reported at least some restriction on their mobility and one of these patients reported being confined to home except for escorted outings.

The Measurement of Disability and Handicap

Given the excess of demand over supply in elective orthopaedic surgery, if differential need can be established, then at least those in greatest need can be treated first and waiting lists can be ranked so that resources can be concentrated where they will do most good. Establishing orthopaedic need in this context requires a broader definition than a purely clinical

one. Orthopaedic conditions can be classified according to the functional consequences of diagnosis - in terms of Impairment, Disability and Handicap. The World Health Organisation (WHO) has defined these three categories as follows:

- Impairment* - *any loss or abnormality of psychological, physiological or anatomical structure or function.*
- Disability* - *any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.*
- Handicap* - *a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfilment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual."* ³⁸

The WHO International Classification of Impairments, Disabilities and Handicaps (ICIDH), however, is not a rating system - it is simply a system for coding, rather than ranking, the functional consequences of disease.

Whilst the classification of impairment is relatively straightforward, one of the main features emerging from this study is the lack of a suitable

instrument for measuring disability and handicap in a clinical orthopaedic context. Both the in-patient and out-patient questionnaires used in this study incorporated two established, well-validated standard measuring instruments, the Barthel ADL Index,³⁹ which is more concerned with disability and the Frenchay Activities Index,⁴⁰ which is more concerned with handicap. Originally known as the Maryland Disability Index, the Barthel Index, introduced by Dorothea Barthel in 1955 to monitor progress in self-care and mobility skills during in-patient rehabilitation, has been recommended as the disability "gold standard" and is widely used in a rehabilitation context.

The Barthel Index has a maximum score of 20 indicating no disability. The lower the patient score, the more severe the disability. 128 patients in the in-patient waiting list sample (73.9%) scored the maximum of 20, with only 13 patients (7.6%) achieving a score under 15. Of the 128 patients with maximum Barthel scores, 25 had borderline or morbid anxiety measured by the HAD Scale, 16 had borderline or morbid depression, 34 reported unbearable or severe pain, 15 reported being in constant pain, 50 had Frenchay scores of under 45, 13 were on the waiting list for total knee replacement, 12 for total hip replacement, including one revision and 4 reported that they were confined to home except for escorted outings. Despite all this, the Barthel Index failed to detect any disability in these patients.

More than anything else, this highlights the limitations of the Barthel ADL Index because of its ability to identify only the very severest cases of disability. While it may be suitable for the assessment of rehabilitation outcomes in orthopaedic trauma, it is completely unsuitable for use in an elective orthopaedic context.

Moreover, functional ability as measured by scales such as the Barthel Index represents only one aspect of patient evaluation. As Dewing has observed:

"Concentrating on functional ability or disability can mean that nurses and other healthcare professionals are adopting a reductionist perspective to working with people who have disabilities...Impairment, disability and handicap must be seen as a set of inter-related problems or needs if people with disabilities are to live independently in the community. Independent living is more dependent on the patient's perspectives and psychological, environmental and social factors than on functional ability." ⁴¹

The Frenchay Activities Index, which is more concerned with ability to fulfil domestic and social roles, has a minimum score of 15 indicating the severest handicap and a maximum score of 60 indicating no handicap. 20 patients in the in-patient study (11.6%) scored under 30 and a further 61 (35.3%) scored between 30 and 44. The greatest single limitation of the Frenchay Activities Index is that it does not distinguish between ability to perform a task and inclination. A number of married males in the older

age groups indicated that they had never prepared main meals, done the washing of clothes or done heavy or light housework, but from their answers to other questions it was at least probable that this was no indication of any functional limitation on their ability to do so, but rather a reflection of their normal lifestyle. Conversely, for similar reasons, the responses of a number of married women who indicated that they had not done any gardening, household or car maintenance, did not necessarily reflect anything other than their normal lifestyle.

A simple, universal system for routinely recording disability status would clearly be of great value in orthopaedics for assessing need, for ranking out-patient and in-patient waiting lists, for measuring the outcome of surgical and non-surgical intervention and for monitoring progress in rehabilitation. While there is a profusion of existing scales, the majority are extremely complex and time-consuming to complete and there is no one simple scale that is appropriate for routine clinical use in orthopaedics.

This study has clearly shown that a substantial number of patients on orthopaedic waiting lists experience varying degrees of pain, distress, disability and limitations on their ability to fulfil social, economic and family roles. No mechanism exists within the system for identifying these kind of problems and as a result those responsible for the care of these patients are largely unaware of their difficulties. If these problems could

be identified, measured and ranked then the structure of waiting lists could be altered leading to a more rational allocation of priorities.

A by-product of this study has been the development of a new scale,⁴² which utilises the logic of the WHO ICIDH system and overcomes the deficiencies of the Barthel and Frenchay scales. This new scale represents a reconstruction of the WHO concept of IDH into a rating scale that is both simple to administer and specific to orthopaedics. The scale comprises a questionnaire designed for self-completion by the patient, supplemented by a simple checklist to be completed by the clinician. It incorporates a section on pain, a key component of orthopaedic morbidity and a dimension notably absent from most other scales. A visual analogue scale is included within this section as a simple means of recording subjective estimates of pain intensity. Visual analogue scales have been widely used in measuring pain and have demonstrated reliable results.^{43,44,45,46,47}

The new IDH Scale is currently being validated elsewhere.⁴⁸ A pilot project utilising this new scale has already been carried out and early results indicate that the scale has inherent content validity, is reliable and is sensitive enough to reflect small but significant changes in patients' disability status. This ability to detect discreet changes also makes the new IDH Scale an appropriate instrument for measuring and comparing the efficacy of different treatment regimes.

This study has clearly demonstrated that basic information on disability and handicap is rarely included in GP referral letters, neither is it routinely sought by the clinician at the out-patient consultation. Studies in the United States have shown that doctors consistently underestimate or fail to recognise a substantial number of the disabilities reported by their patients.⁴⁹ There is also evidence that patients are inclined to under-report their disabilities in face-to-face interviews and are more willing to divulge details of their functional difficulties through the medium of a questionnaire or other instrument designed for self-completion rather than directly to a doctor.⁵⁰

It is suggested that the new IDH Scale can be used in a clinical orthopaedic context to routinely assess disability and handicap in all patients and improve awareness of patient needs. Patient scores could then be used to produce a more informed ranking of both out-patient and in-patient waiting lists. In addition to administration at attendance, the scale could also be routinely sent out after 3-6 months and a more refined assessment made of change in disability status over time. This would not only identify those situations where patients' personal, social or economic circumstances had changed, or where their orthopaedic problem had deteriorated, but it would also highlight improvements such as spontaneous resolution of the orthopaedic condition.

Moreover, if the scale could be administered in the context of a general practitioner consultation, the referral process would be transformed. Not only would unnecessary referrals tend to be reduced, but, more importantly, the patient could be given an appointment on a more rational basis than the currently inadequate information contained within the referral document.

Summary

This concluding chapter highlights the conclusions that can be drawn from the overall study and discusses the key issues. It has been demonstrated that need for elective orthopaedic surgery is substantial and is not met within a timescale that would be considered reasonable by the patient, the clinician or, indeed, by a caring society. Factors such as the changing age structure of the population mean that orthopaedic need will continue to increase for the foreseeable future, but this does not mean that orthopaedic need is infinite. Large waiting numbers and long waiting times for elective orthopaedic surgery reflect lack of resources rather than infinity of demand.

Orthopaedic surgeons themselves are in short supply. In England and Wales, the ratio of orthopaedic surgeons to the population is 1:66,000 compared with 1:20,000 in the United States.⁵¹ Although there has been

considerable expansion within the specialty over the last twenty years, this has failed to keep pace with the needs of an increasingly aged population and the specialty's increased ability to offer effective surgical solutions to orthopaedic problems.

As a result, many patients on orthopaedic waiting lists suffer unacceptable levels of pain, disability and interference with their family and social lives. It has been shown that the disability status of patients on waiting lists is not routinely assessed and tends to be underestimated by clinicians. It is suggested that a mechanism for routinely assessing and ranking disability and handicap would highlight patients' difficulties and lead to a more informed ranking of waiting lists.

A detailed analysis of the personal, family and social circumstances of those on orthopaedic waiting lists has revealed varying degrees of pain, distress, disability, loss of physical and social independence and disadvantage in terms of social class, education, housing and household income. Government targets to reduce waiting time to less than two years are still unacceptable and do not take account of the severity of many orthopaedic problems. Patients in this study talked of *"terrible pain"*, *"sleepless nights"*, *"loss of independence"*, inability to *"walk more than a few steps"* and for these patients the label "non-urgent" is fundamentally misleading.

The primary purpose of medicine is to relieve pain and suffering. Orthopaedic surgeons have the technical expertise to dramatically transform the lives of large numbers of patients, but lack of resources means that access to orthopaedic surgery is strictly rationed. This study identifies the consequences of such rationing and its effects upon the personal, family, economic and circumstances of those waiting.

FOOTNOTES

CHAPTER SIX

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APPENDIX A

APPENDIX A

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Table A.
HGH OUT-PATIENT CLINICS. OCTOBER-DECEMBER 1986.
REFERRALS BY GP (INCLUDES PATIENTS WHO DID NOT ATTEND).

GP	CONSULTANT			TOTAL
	A	B	C	
GP1			1	1
GP2		5	2	7
GP3	3	4	1	8
GP4			3	3
GP5		1		1
GP6	3	1		4
GP7		1		1
GP8		4		4
GP9	4	1		5
GP10	2	2		4
GP11	4			4
GP12	4	3		7
GP13		1	2	3
GP14	5	1		6
GP15	4			4
GP16	1	1		2
GP17	1			1
GP18	1		1	2
GP19	3	2		5
GP20	2	4	3	9
GP21	6			6
GP22	1	1	2	4
GP23		1		1
GP24	8			8
GP25	6			6
GP26			1	1
GP27	7	1	3	11
GP28	4		1	10

Table A (Continued)

GP	CONSULTANT			TOTAL
	A	B	C	
GP29	2			2
GP30	5	6		11
GP31	1	4		5
GP32	5		2	7
GP33	1	1	1	3
GP34	6		1	7
GP35	1			1
GP36		1	1	2
GP37	1			1
GP38	8	1		9
GP39	1	1		2
GP40	3	4	2	9
GP41			1	1
GP42	1	5	1	7
GP43		1		1
GP44	3	2	2	7
GP45	1			1
GP46	1	5	4	10
GP47	1			1
GP48		8		8
GP49		2		2
GP50	1		1	2
GP51	1	1		2
GP52	3	1		4
GP53		2		2
GP54	9	4	3	16
TOTAL	124	88	39	251

Table B.
HGH OUT-PATIENT CLINICS. OCTOBER-DECEMBER 1986.
NEW PATIENTS BY ORTHOPAEDIC CONDITION FOR WHICH
REFERRED.

DIAGNOSIS/DESCRIPTION ¹	n
Hand/Wrist	
Laceration/penetrating injury	3
Laceration with tendon involvement	6
?Nerve injury following laceration	1
Traumatic partial amputation of thumb	1
Epiphyseal injury to phalanx	1
Fractured phalanx	10
Fractured metacarpal	10
Crush injury proximal interphalangeal joint	1
Instability of ulnar collateral ligament	1
Traumatic sub-ungual haematoma	2
Trigger finger	4
Mallet finger	3
Fixed flexion deformity	2
Dupuytren's contracture	7
Congenital joint contracture	1
Bony prominence on wrist	1
Ganglion/cystic swelling	7
Carpal tunnel syndrome	15
Synovial hypertrophy	2
Tenosynovitis	2
?Tendonitis	1
Osteoarthritis	4
Sub Total	85

Key to Abbreviations:

- DNA = Patient did not attend
- NAD = No abnormality found at attendance
- CVA = Cerebrovascular accident (stroke)
- CDH = Congenital dislocation of the hip
- T9 = Ninth thoracic vertebra

Table B (Continued).

DIAGNOSIS/DESCRIPTION ¹	n
Forearm/Elbow	
Ulnar neuritis	1
Tenosynovitis	1
Tennis elbow	3
Epicondylitis	2
Osteoarthritis	2
Sub Total	9
Upper Arm/Shoulder	
Frozen shoulder	3
Acute calcification	1
?Rotator cuff tear	1
Compression of supraspinatus tendon	1
Anterior subluxation	1
Painful shoulder DNA	1
Sub Total	8
Neck/Spine	
Vertebro-basilar ischaemia	1
Recurrent spasmodic torticollis	1
Cervical spondylosis	2
Bilateral pars interarticularis defects	1
Sciatic nerve root compression	17
Segmental instability	1
?Juvenile disc syndrome	1
Spinal stenosis	1
Narrowing of facet joints	1
Neck pain NAD	1
Low back pain NAD	3

Table B (Continued).

DIAGNOSIS/DESCRIPTION ¹	n
Neck/Spine (Continued)	
Low back pain DNA	1
Coccygeal pain NAD	1
Spondylolisthesis	1
Scoliosis of lumbar spine	2
T9 crush fracture	1
Osteoporotic crush fracture	1
Osteoarthritis	2
Sub Total	39
Hip/Thigh	
Osteoarthritis of hip	27
Dysplastic hip	1
Osteochondritis of femoral condyle	2
Clicky left hip ?CDH NAD	1
Asymmetrical thigh creases ?CDH NAD	1
Sub Total	32
Knee	
Painful knee NAD	13
Painful knee DNA	3
Osteoarthritis	22
Torn or unstable meniscus	14
?Torn medial collateral ligament	1
Chondromalacia patella	4
Genu varum	1
?Quadriceps spasm	1
Prepatellar bursitis	2

Table B (Continued).

DIAGNOSIS/DESCRIPTION ¹	n
Knee (Continued)	
Patellar tendonitis	1
Sub Total	62
Lower Leg	
Ruptured plantaris tendon	1
Post-traumatic tibial deformity	1
Leg discomfort NAD	1
Anterior shin pain NAD	1
Postural deformity of leg NAD	1
Popliteal nerve compression syndrome	1
Severe bruising lower leg	1
Sub Total	7
Ankle/Foot	
Soft tissue swelling/nodule/cyst	5
Achilles tendonitis	1
Exostosis	2
Callosity	1
Collateral instability	1
Metatarsalgia + damage to interdigital ligament	1
Deformity of toes	4
Bunion	3
Hallux valgus	8
Hallux rigidus	1
Spasm of extensor hallucis longus	1
Osteoarthritis	2
?Crush fracture metatarsal head	1
Glass foreign body in heel	1

Table B (Continued).

DIAGNOSIS/DESCRIPTION ¹	n
Ankle/Foot (Continued)	
Intoeing	3
Talipes equinovarus	2
Posterior tibial tarsal tunnel syndrome	1
Crepitus in dorsum of foot NAD	1
Plantar fasciitis	1
Over-riding toes	1
Pain in toe DNA	1
Flat feet	1
Postural calcaneo valgus	1
Bony prominence from surface of os calcis	1
Ingrowing toenails	1
Drop foot (subsequent to 3 recent CVAs)	1
Sub Total	47
Miscellaneous	
Persistent foetal alignment	3
Recurrent musculotendonis traction injury	1
Osgood-Schlatter's disease	3
Scheuermann's disease	1
Gout	1
Asymmetrical leg length ?early coxa vara	1
Sub Total	10
GRAND TOTAL	299

¹ Consultant diagnoses where available. In those cases where no consultant diagnosis was made (where the patient did not attend or where no abnormality was found at attendance), then the GP diagnosis/description at referral has been used.

Table C.
HGH OUT-PATIENT CLINICS. OCTOBER-DECEMBER 1986.
NEW PATIENTS BY SURGICAL PROCEDURE FOR WHICH PLACED
ON THE IN-PATIENT WAITING LIST.

SURGICAL PROCEDURE	n
Hand/Wrist	
Carpal tunnel decompression	16
Dorsal synovectomy	1
Removal of ganglion/cyst	5
Fasciectomy (Dupuytren's contracture)	6 ¹
De Quervain's release + tendon decompression	1
Release of trigger finger	4
Excision of bony prominence on wrist	1
Examination under anaesthesia	1
Sub Total	35
Forearm/Elbow	
Ulnar nerve decompression	1
Sub Total	1
Upper Arm/Shoulder	
Roos procedure axilla	1
MUA + decompression of supraspinatus tendon	1
Sub Total	2

Key to Abbreviations:

MUA = Manipulation under anaesthesia
MT = Metatarsal
PIP = Proximal interphalangeal
DIP = Distal interphalangeal

Table C (Continued).

SURGICAL PROCEDURE	n
Neck/Spine	
Laminectomy/root canal decompression	6
Sub Total	6
Hip/Thigh	
Total hip replacement	18 ¹
Sub Total	18
Knee	
Total knee replacement	5
Medial arthrotomy + stabilisation of medial meniscus	1
Arthroscopy	8
Medial meniscectomy	3
Repair of meniscus	3
Sub Total	20
Lower Leg	
Combined wedge and derotation osteotomy	1
Lateral popliteal nerve decompression	1
High tibial osteotomy	2
Sub Total	4
Ankle/Foot	
Release of posterior tibial nerve	1
Excision of cyst + exostosis	1
Excision of exostosis from hallux	1

Table C (Continued).

SURGICAL PROCEDURE	n
Ankle/Foot (Continued)	
Dorsal wedge osteotomy third MT head	1
Excision of nodule from Tendo Achilles	1
Proximal phalangectomy, proximal hemiphalangectomy + extensor tenotomy	1
Wilson's osteotomy, adductor release + proximal hemiphalangectomy	1
Wilson's osteotomy, adductor release + extensor tenotomies	1
Bilateral first MT osteotomies	2
First MT osteotomy + adductor release	1
Medial wedge osteotomy + first MT PIP fusion	1
Fusion DIP joint + flexor to extensor transfers	1
Keller's procedure + PIP fusion	1
Keller's procedure + proximal hemiphalangectomy	1
Excision of foreign body from heel	1
Excision of swelling from dorsum of foot	1
Flexor to extensor transfer	2
Sub Total	19
GRAND TOTAL	105

¹ Includes one operation performed privately.

SAMPLE OF PATIENT DATA FORM

PATIENT DETAILS

Unit No:

Surname:

Sex:Male[]

Other Names:Female[]

Date of Birth:
Age at 31/12/86:

Address:

Status:Single[]

Married[]

Widowed[]

Other[]

Telephone:

Occupation:

DNA []

Date:

GP:

ReferralYes[]A&E[]

Blue FormYes[]No[]

Ref Cont:Poor[]Fair[]

Good[]

Cond Ident:Yes[]No[]

Prev Hist:Yes[]No[]

Drugs Info:Yes[]No[]

Graded:Yes[]No[]

If Yes:Urg[]SU[]

WC[]AP[]

Consultant:A[]B[]C[]

Rank:R[]S[]U[]

Clinic:Hand[]B[]

Sp[]O[]

Referral Date:

Ist OP Date:

Waiting Time 1:

Last OP Date:

Career Time:

No. of OP Atts:

Presentation/Diagnosis:

Secondary:

Consultant Treatment/Action:	No Action	☐	☐	☐	☐	☐	☐
	Discharged	☐	☐	☐	☐	☐	☐
	Ref to GP	☐	☐	☐	☐	☐	☐
	Investigatn	☐	☐	☐	☐	☐	☐
	Review	☐	☐	☐	☐	☐	☐
	Drugs	☐	☐	☐	☐	☐	☐
	Appliance	☐	☐	☐	☐	☐	☐
	Physio	☐	☐	☐	☐	☐	☐
IP WL	☐	☐	☐	☐	☐		

Treatment/Name of Operation:

Waiting List	☐	IP WL From:
Emergency	☐	Admission Date:
Accident	☐	Waiting Time 2:
		Waiting Time 1 + 2:
Private Bed	☐	Operation Date:
Amenity Bed	☐	Discharge Date:
Staff Bed	☐	Length of Stay:
General Bed	☐	Follow Up OP Date:

Post-operative Summary:

Notes:

APPENDIX B

APPENDIX B

CONTENTS

- Example of GP Referral Letter rated "Good"
- Example of GP Referral Letter rated "Fair"
- Example of GP Referral Letter rated "Poor"

EXAMPLE OF GP REFERRAL LETTER RATED "GOOD"¹

Male aged 50 years
Consultant Ranking: Soon

I would be most grateful for your opinion about this 50 year old man who works for [name of company] at [place] and who has had trouble with his back and left thigh for a long time. He gets pain down his left leg when he is standing but this is relieved by sitting and his SLR is as expected, reasonable. However I suspect that this is sciatica. He has in fact attended a chiropractor with some relief but recently this has been unhelpful.

I feel rather sorry for this chap. His wife died when she was in her forties of cardio-myopathy and I think he is a rather lonesome chap. He drinks a bit although not excessively and he is a heavy smoker. He is keen to remain at work and fears that he may have to soon give his job up.

An x-ray of his lumbar spine in February this year showed narrowing of the L5 and S1 disc space with marginal osteophytes and some osteoarthritic change in the apophyseal joints. He does not like taking tablets because of a past history of indigestion but I have given him Voltarol to take occasionally with his food.

I would be most grateful for your opinion and advice as to whether he requires a surgical corset or other more active treatment to help him.

With thanks and best wishes.

Yours sincerely,

1 Detailed clinical information including details of pain and/or disability. Some mention of the functional consequences of the orthopaedic condition and the patient's social, economic or family circumstances.

EXAMPLE OF GP REFERRAL LETTER RATED "FAIR"¹

Male aged 41 years
Consultant Ranking: Routine

I am not sure what is wrong with this man's left arm. The symptoms began to bother him in 1983. He gets parasthesiae in his left palm and discomfort in the left biceps region. The symptoms come on when he is brushing his teeth or riding his bike and occasionally at work. It leaves him with a poor grip and this is what has prompted him to come. His symptoms settle when his position is changed. It would seem to be some form of compression, but I could not incriminate carpal tunnel and his neck seems mobile.

I shall be grateful for your opinion.

Yours sincerely,

1 Reasonable level of clinical information. Some mention of pain or disability. No mention of the patient's economic, social or family circumstances.

EXAMPLE OF GP REFERRAL LETTER RATED "POOR"¹

Male aged 47 years
Consultant Ranking: Routine

This man has a little cyst or ganglion on his left little finger. It is beginning to be a nuisance and he is anxious to have it removed.

With many thanks for seeing him.

Yours sincerely,

1 Little clinical information. No mention of pain or disability. No mention of the patient's economic, social or family circumstances.

APPENDIX C

APPENDIX C

CONTENTS

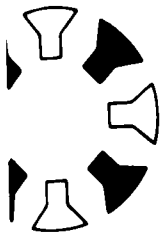
In-Patient Study: Covering Letter

In-Patient Study: Questionnaire

In-Patient Study: Reminder Letter 1

In-Patient Study: Reminder Letter 2

In-Patient Study: Reminder Letter 3



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

tel. Ext.

our ref:

our ref:

COVERING LETTER

28 February 1990

PATIENT NAME
ADDRESS
ADDRESS
ADDRESS
POSTCODE

Dear TITLE NAME,

WAITING LIST SURVEY

According to our records, you are currently on the waiting list for treatment as an in-patient at this hospital. We hope that you will be able to help us by completing the enclosed questionnaire.

We are trying to find out the kinds of problems people have while they are waiting for hospital treatment. We are particularly interested to know how the orthopaedic problem for which they need hospital treatment affects their daily life, family life, social life and work. We are also very interested in peoples's attitudes to waiting.

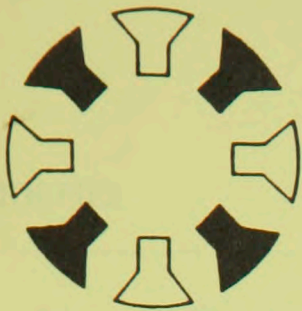
This information requested is for research purposes only and will not be recorded in your hospital notes. Your own doctor is aware of the study, but will not have access to any of the data. Your replies will be treated in the strictest confidence and the results will only be presented in aggregated form so that the identification of individuals will not be possible.

It is most important that we obtain full details from everyone, so that we can make a complete assessment. Please help us by completing and returning the questionnaire as soon as possible using the stamped addressed envelope provided.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery



STRICTLY CONFIDENTIAL

UNIT NUMBER:

CONSULTANT:

OFFICE USE ONLY

THE HORTON GENERAL HOSPITAL
DEPARTMENT OF ORTHOPAEDIC SURGERY
IN-PATIENT QUESTIONNAIRE

We are trying to find out what problems people have while they are waiting for hospital treatment. We are particularly interested to know how the orthopaedic problem for which they need hospital treatment affects their daily life, family life, social life and work. We are also very interested in people's attitudes to waiting. We hope that you will help us by completing this questionnaire.

This information is for research purposes only and will not be recorded in your hospital notes. Your own doctor is aware of the study, but will not have access to any of the data.

Your replies to this questionnaire will be treated in strict confidence. The results will be presented only in aggregated form so that the identification of individuals will not be possible.

The first part of this questionnaire asks a number of questions about your orthopaedic problem and about the operation you are waiting for. The second part asks some questions about how your orthopaedic problem affects your daily life. The third part asks for some background information about you and your family.

Most of the questions can be answered by putting a tick in the appropriate box or by writing your answer in the space provided. If you cannot remember or do not know the answer to any of the questions, please write "don't know."

APPROVED BY THE NORTH OXFORDSHIRE ETHICS COMMITTEE

SECTION 1

Q1. Please give brief details of the orthopaedic problem or condition for which you need an operation.

.....

.....

.....

Q2. What is the name of the operation or procedure you are on the waiting list for?

.....

.....

Q3. Do you still want this operation?

YES ☐

NO ☐

IF NO, please state why

.....

.....

Q4. Do you feel that you were given enough information as to why you needed this operation?

YES ☐

NO ☐

Q5. Whom do you feel gave you the most information about your condition?

The hospital consultant (or his deputy) ☐

Your family doctor ☐

Someone else (please specify)

.....

Q6. How long had you been suffering the symptoms before you first saw a doctor about this problem?

Less than a week ☐
1-4 weeks ☐
1-3 months ☐
4-6 months ☐
More than 6 months ☐

Q7. Whom did you first approach about this problem?

GP/family doctor ☐
Hospital casualty department ☐
Non-medical practitioner (please specify) ☐
.....
Someone else (please specify)
.....

Q8. How many times have you seen your own doctor about this problem?

.....
number of times

Q9. Are you satisfied with the quality of care you received from your own doctor?

Very satisfied ☐
Fairly satisfied ☐
Dissatisfied ☐
Very dissatisfied ☐

Q10. Are you satisfied with the quality of care you have received so far from the hospital?

Very satisfied ☐
Fairly satisfied ☐
Dissatisfied ☐
Very dissatisfied ☐

Q11. How long did you have to wait between your first visit to a doctor and your first hospital out-patient appointment?

.....
number of weeks

Q12. How do you feel about the amount of time you had to wait for this appointment?

- Very satisfied ☐
- Fairly satisfied ☐
- Dissatisfied ☐
- Very dissatisfied ☐

Q13. How many times did you attend hospital as an out-patient before being put on the waiting list?

.....
number of times

Q14. How long have you been on the in-patient waiting list?

.....
number of weeks

Q15. How do you feel about the amount of time you have already waited for your operation?

- Very satisfied ☐
- Fairly satisfied ☐
- Dissatisfied ☐
- Very dissatisfied ☐

Q16. As far as you personally are concerned, what would you say has been the single hardest thing you have had to cope with as a result of being on a hospital waiting list?

.....

.....

.....

.....

.....

.....

.....

Q17. Do you think that your orthopaedic problem has got worse while you have been waiting for this operation?

YES ☐

NO ☐

IF YES, please give details

.....

.....

.....

.....

Q18. Have you been in hospital for a surgical operation before?

YES ☐

NO ☐

IF YES, what was the last operation you had?

.....

name of operation

When did you have this operation?

.....

year

SECTION 2.

THE BARTEL ADL INDEX

In this section we are interested in learning how your orthopaedic problem has affected your ability to perform a number of everyday tasks. Read each item and place a firm tick in the box opposite the reply that best describes your usual situation or abilities over the past week.

Please tick only one box in each section.

Q19.

- i)

Feeding

Can you feed yourself a meal from a tray or table when someone puts it within your reach?

Yes, independently, at reasonable speed

Yes, but need help with cutting, spreading

No, unable to do so, even with help

☐ 2

☐ 1

☐ 0
- ii)

Bed/Chair Transfer

Can you move from a chair (or wheelchair) to a bed, sit up in bed and return to a chair?

Yes, independently

Yes, but need (minimal) help or supervision

Able to sit, but need major help

No, unable. Have to be lifted bodily

☐ 3

☐ 2

☐ 1

☐ 0
- iii)

Personal Care

Can you wash your hands and face, comb your hair, clean your teeth and shave/put on your own make-up?

Yes, face, hair, teeth, shave/make-up, all alone

No, dependent on others

☐ 1

☐ 0
- iv)

Managing Toilet

Can you use the toilet without help? (includes getting on/off toilet, adjusting clothes, cleaning yourself).

Yes, independently

Yes, but need help

No, unable

☐ 2

☐ 1

☐ 0
- v)

Bathing

Can you take a bath or shower without anyone's help? (includes sponge bath).

Yes, independently

No, unable without someone else

☐ 1

☐ 0

- vi)

Mobility

Can you walk (or manoeuvre a wheelchair) on a level surface for at least 50 yards without help or supervision? (with any aid except a rollator/walking frame)

Yes, may use aid.

Yes, but with help of another person (verbal or physical)

Yes, but only in wheelchair

No, unable (immobile).

☐ 3

☐ 2

☐ 1

☐ 0
- vii)

Stairs

Can you go safely up and down stairs without help or supervision? (using rails, sticks or crutches, if necessary)

Yes, without help or supervision

Yes, but need help or supervision.

No, unable

☐ 2

☐ 1

☐ 0
- viii)

Dressing

Can you dress and undress yourself, including doing up zips, buttons and your shoelaces without help?

Yes, independently

Yes, but need help (can do at least half the work myself)

No, unable

☐ 2

☐ 1

☐ 0
- ix)

Bowels

Can you control your bowels and avoid having accidents?

Yes, no accidents

Yes, but have occasional accidents or need help

No, unable (incontinent of bowels)

☐ 2

☐ 1

☐ 0
- x)

Bladder

Can you control your bladder day and night?

Yes, no accidents (includes managing catheter alone).

Yes, occasional accidents (or need help with catheter etc)

No, unable (incontinent of bladder).

☐ 2

☐ 1

☐ 0

TOTAL BARTEL SCORE

THE HAD SCALE

We are also interested in learning how your orthopaedic problem has affected how you feel. Read each item and place a firm tick in the box opposite the reply which comes closest to how you have been feeling in the past week.

Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought-out response.

Please tick only one box in each section.

Q20.

- i)

I feel tense or 'wound up':

Most of the time.....

A lot of the time.....

Time to time, occasionally.....

Not at all.....

☐

☐

☐

☐
- ii)

I still enjoy the things I used to enjoy:

Definitely as much.....

Not quite so much.....

Only a little.....

Hardly at all.....

☐

☐

☐

☐
- iii)

I get a sort of frightened feeling as if something awful is about to happen:

Very definitely and quite badly.....

Yes, but not too badly.....

A little, but it doesn't worry me.....

Not at all.....

☐

☐

☐

☐
- iv)

I can laugh and see the funny side of things:

As much as I always could.....

Not quite so much now.....

Definitely not so much now.....

Not at all.....

☐

☐

☐

☐
- v)

Worrying thoughts go through my mind:

A great deal of the time.....

A lot of the time.....

From time to time but not too often.....

Only occasionally.....

☐

☐

☐

☐
- vi)

I feel cheerful:

Not at all.....

Not often.....

Sometimes.....

Most of the time.....

☐

☐

☐

☐

vii)	I can sit at ease and feel relaxed:	
	Definitely	☐
	Usually	☐
	Not often.....	☐
	Not at all	☐
viii)	I feel as if I am slowed down:	
	Nearly all the time	☐
	Very often.....	☐
	Sometimes	☐
	Not at all	☐
ix)	I get a sort of frightened feeling like 'butterflies' in the stomach:	
	Not at all	☐
	Occasionally.....	☐
	Quite often.....	☐
	Very often.....	☐
x)	I have lost interest in my appearance:	
	Definitely	☐
	I don't take so much care as I should.....	☐
	I may not take quite as much care	☐
	I take just as much care as ever.....	☐
xi)	I feel restless as if I have to be on the move:	
	Very much indeed.....	☐
	Quite a lot	☐
	Not very much	☐
	Not at all	☐
xii)	I look forward with enjoyment to things:	
	As much as ever I did	☐
	Rather less than I used to.....	☐
	Definitely less than I used to.....	☐
	Hardly at all.....	☐
xiii)	I get sudden feelings of panic:	
	Very often indeed	☐
	Quite often.....	☐
	Not very often	☐
	Not at all	☐
xiv)	I can enjoy a good book or radio or TV programme:	
	Often	☐
	Sometimes	☐
	Not often.....	☐
	Very seldom.....	☐

TOTAL HAD SCORE

THE FRENCHAY ACTIVITIES INDEX

We are also very interested in learning how your orthopaedic problem has affected your social and domestic life.

Please tick only one box in each section.

Q21. In the last 3/6 months how often have you...

i) **Prepared main meals?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 1-2 times a week..... ☐ 3
 Most days..... ☐ 4

ii) **Done the washing up?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 1-2 times a week..... ☐ 3
 Most days..... ☐ 4

iii) **Done the washing of clothes?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

iv) **Done light housework? (eg dusting)**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

v) **Done heavy housework? (eg wash floors)**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

vi) **Done local shopping?**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

vii) **Gone out socially?**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

viii)

Walked outdoors for over 15 minutes?

Never.....

1-2 times in 3 months

3-12 times in 3 months

At least weekly

☐

1

☐

2

☐

3

☐

4

ix)

Taken an active interest in a hobby?

Never.....

1-2 times in 3 months

3-12 times in 3 months

At least weekly

☐

1

☐

2

☐

3

☐

4

x)

Driven a car or travelled on public transport?

Never.....

1-2 times in 3 months

3-12 times in 3 months

At least weekly

☐

1

☐

2

☐

3

☐

4

xi)

Gone on outings? (e.g. car rides)

Never.....

1-2 times in 3 months

3-12 times in 3 months

At least weekly

☐

1

☐

2

☐

3

☐

4

xii)

Done some gardening?

None.....

Light (e.g. greenhouse).....

Moderate (e.g. electric mower).....

All necessary (heavy digging).....

☐

1

☐

2

☐

3

☐

4

xiii)

Done household and/or car maintenance?

None.....

Light

Moderate.....

All necessary

☐

1

☐

2

☐

3

☐

4

xiv)

Read books?

None.....

1 in 6 months.....

Less than 1 a fortnight.....

Over 1 a fortnight

☐

1

☐

2

☐

3

☐

4

xv)

Gainfully worked? (i.e. paid)

Not at all.....

Up to 10 hours a week

10-30 hours a week.....

Over 30 hours a week.....

☐

1

☐

2

☐

3

☐

4

TOTAL FRENCHAY SCORE

In the final part of this section, we are interested in the amount of pain and distress that you attribute to your orthopaedic problem. We are also interested in the effect that this orthopaedic problem has on some aspects of your personal life. **Please confine your answers to the effects of the orthopaedic problem for which you need hospital treatment.**

Q22. Pain

Please describe the amount of pain that you attribute to your orthopaedic condition:

- No pain ☐ 4
Slight discomfort ☐ 3
Moderate pain ☐ 2
Severe pain ☐ 1
Unbearable pain ☐ 0

Q23. Visual Analogue Pain Rating

Now, place a mark on the line below at a point which represents as closely as possible your opinion of the severity of your pain.

UNBEARABLE
PAIN

NO
PAIN



Q24. Pain Frequency

How frequent is this pain?

- No pain at any time ☐ 2
Pain at certain times (eg at night),
in certain positions (eg when sitting)
or in certain circumstances (eg when walking) ☐ 1
Constant pain ☐ 0

Q.25

Pain Relief

Do you take pain killers to relieve your pain?

YES

NO

IF NO, please go to Q27.

IF YES,

i)

Are these pain killers prescribed by a doctor?

YES

NO

ii)

Do these pain killers give:

Complete relief from pain

Moderate relief from pain

Very little relief from pain

No relief from pain

3

2

1

0

Q26.

Visual Analogue Pain Rating

Now, place a mark on the line below at a point which represents as closely as possible the degree of relief from pain which your pain killers give you:

COMPLETE RELIEF

NO RELIEF

Q27.

Sleep

How does your orthopaedic problem affect your sleeping habits?

Sleep well

Have less than 8 hours sleep

Have less than 6 hours sleep

Have less than 4 hours sleep

Have less than 2 hours sleep

4

3

2

1

0

Q28.

Mobility

Does your orthopaedic problem impose any restriction on your mobility?

No restriction

Some restriction

Confined to home except for escorted outings

Confined to chair or wheelchair or able to move around house only with support from an assistant

Confined to bed

4

3

2

1

0

- 13 -

Q29.

Employment/Availability for Work

How does your orthopaedic problem affect your work (or your availability for work if unemployed)?

Not applicable/retired

No problems at work

Impaired performance at work

Performance at work severely limited

Unable to undertake existing work

Unable to undertake any paid employment

☐ 4

☐ 4

☐ 3

☐ 2

☐ 1

☐ 0

Q30.

Sex Life

Does your orthopaedic problem impose any restriction on your sex life?

No restriction (normal)

Some restriction

Severe restriction

Complete restriction (no sex life)

☐ 3

☐ 2

☐ 1

☐ 0

Q31.

Financial dependents

Does your partner and/or your family depend on you for financial support?

Not at all/not applicable

Partly

Mostly

Completely

☐ 3

☐ 2

☐ 1

☐ 0

Q32.

Physical dependents

Does your partner (or close relative) depend on you for physical support (ie is he/she disabled or infirm)?

Not at all/not applicable

Partly

Mostly

Completely

☐ 3

☐ 2

☐ 1

☐ 0

SECTION 3

It would be very helpful if you could now answer a few questions about yourself, your background and your family.

Q33.

- i) Thinking back to when you were aged about 14, what job did your FATHER have then?

.....
name or title of his job

- ii) What did he actually do in this job? (Please describe as fully as possible)

.....
.....
.....

- iii) What training or qualifications were needed for the job at that time?

.....
.....

- iv) Did he supervise or was he responsible for the work of any other people?

YES ☐

NO ☐

IF YES, how many?

- v) Was he an employee? ☐
self-employed? ☐

- vi) What did his employer (or if self-employed, he) make or do?

.....
.....

- vii) Roughly how many people were employed at the place where he worked?

No other employees ☐

Under 10 ☐

10-24 ☐

25-99 ☐

100-499 ☐

500 or more ☐

Q34.

- i) Which of the following descriptions applies to what you were doing last week, that is, in the seven days ending last Sunday?

In full-time education (not paid for by employer) ☐

On government training/employment scheme ☐

In paid work (or away temporarily)

for at least 10 hours in the week ☐

Waiting to take up paid work already accepted ☐

Unemployed and registered at a benefit office ☐

Unemployed, not registered, but actively looking for a job ☐

Unemployed, wanting a job (of at least 10 hours per week),

but not actively looking for a job ☐

Permanently sick or disabled ☐

Wholly retired from work ☐

Looking after the home ☐

Doing something else (please specify)

.....

IF NOT WORKING NOW, how long ago did you last have a paid job of at least 10 hours a week, excluding Saturday and holiday jobs?

Within past 12 months ☐

Over 1-5 years ago ☐

Over 5-10 years ago ☐

Over 20 years ago ☐

Never had paid job of 10+ hours a week ☐

If you have never had a paid job of 10+ hours a week please go to QUESTION 35.

- ii) Are you now or have you ever been a member of a trade union or staff association?

YES, trade union ☐

YES, staff association ☐

NO ☐

- iii) What is/was your present or (if not working now) most recent job? (If waiting to take up paid work please describe your future job)

.....

name or title of job

iv) What do/did you actually do in this job? (Please describe as fully as possible)

.....

.....

.....

v) What training or qualifications are/were needed for this job?

.....

.....

vi) Do/did you supervise or are/were you responsible for the work of any other people?

YES ☐

NO ☐

IF YES, how many?

.....

vii) Are/were you an employee? ☐
self employed? ☐

IF YOU ARE/WERE AN EMPLOYEE, which type of organisation do/did you work for?

- Private firm or company ☐
- Nationalised industry/public corporation ☐
- Local Authority/Local Education Authority ☐
- Health Authority/NHS hospital ☐
- Central Government/Civil Service ☐
- Charity or trust ☐

Other (please specify)

.....

viii) What does/did the firm or organisation you work/worked for (or if self-employed, you) make or do?

.....

.....

.....

ix) Including yourself, how many people are/were employed at the place you usually work/worked from?

- Under 10 ☐
- 10-24 ☐
- 25-99 ☐
- 100-499 ☐
- 500 or more ☐

- x) IF SELF-EMPLOYED, do/did you have any employees? YES ☐
NO ☐

IF YES, how many?

- xi) Is the job Full-time (30 hours + per week)? ☐
Part-time (10-29 hours per week)? ☐

Q35. What is your marital status now? (Please tick one box only)

- Married ☐
Living as married ☐
Widowed ☐
Divorced/separated ☐
Not married ☐

IF NOT MARRIED, OR NOT LIVING AS MARRIED, please go to QUESTION 37.

Q36.

- i) Which of the following descriptions applies to what your husband/wife/partner was doing last week, that is, in the seven days ending last Sunday?

- In full-time education (not paid for by employer) ☐
On government training/employment scheme ☐
In paid work (or away temporarily) for at least 10 hours in the week ☐
Waiting to take up paid work already accepted ☐
Unemployed and registered at a benefit office ☐
Unemployed, not registered, but actively looking for a job ☐
Unemployed, wanting a job (of at least 10 hours per week), but not actively looking for a job ☐
Permanently sick or disabled ☐
Wholly retired from work ☐
Looking after the home ☐

Doing something else (please specify)

.....

IF NOT WORKING NOW, how long ago did your partner last have a paid job of at least 10 hours a week, excluding Saturday and holiday jobs?

- Within past 12 months ☐
 Over 1-5 years ago ☐
 Over 5-10 years ago ☐
 Over 10-20 years ago ☐
 Over 20 years ago ☐
 Never had paid job of 10+ hours a week ☐

If your partner has never had a paid job of 10+ hours a week please go to QUESTION 37

ii) Is your partner now or has he or she ever been a member of a trade union or staff association?

- Yes, trade union ☐
 YES, staff association ☐
 NO ☐
 Don't know ☐

iii) What is/was your partner's present or (if not working now) most recent job? (If waiting to take up paid work, please describe his or her future job)

.....

 name or title of job

iv) What does/did he or she actually do in this job?
(Please describe as fully as possible)

.....

v) What training or qualifications are/were needed for the job?

.....

vi) Does/did he or she supervise or is/was he or she responsible for the work of any other people?

- YES ☐
 NO ☐

IF YES, how many?

.....

vii) Is/was he or she

- an employee? ☐
 self-employed? ☐

IF YOUR PARTNER IS/WAS AN EMPLOYEE, which type of organisation does/did he or she work for?

- Private firm or company ☐
 Nationalised industry/public corporation ☐
 Local Authority/Local Education Authority ☐
 Health Authority/NHS hospital ☐
 Central Government/Civil Service ☐
 Charity or trust ☐

Other (please specify)

viii) What does/did the firm or organisation your partner works/ worked for (or if self-employed, he or she) make or do?

.....

ix) Including your partner, how many people are/were employed at the place where he or she usually works/worked?

- Under 10 ☐
 10-24 ☐
 25-99 ☐
 100-499 ☐
 500 or more ☐

x) IF SELF-EMPLOYED, does/did he or she have any employees?

- YES ☐
 NO ☐

IF YES, how many?

xi) Is the job

- Full-time (30 hours + per week) ☐
 Part-time (10-29 hours per week)? ☐

Q37. Are you, or is anyone in your household, covered by a private health insurance scheme that allows you to get private medical treatment?

- YES, through group ☐
 YES, individually ☐
 NO ☐
 Don't know ☐

Q38. At what age did you complete your full-time formal education (ie school, college or university)?

.....
age in years

Q39. What type of secondary school did you attend?
(Please tick one box only)

- Secondary modern or technical school ☐
 Comprehensive school ☐
 Grammar school ☐
 Direct grant school ☐
 Independent (fee-paying) school ☐

Other school (please specify)

No secondary schooling ☐

Q40. Have you passed any of the exams or got any of the following qualifications?
(Please tick all those that apply)

- No formal qualification ☐
 CSE Grades 2-5 ☐
 CSE Grade 1/GCE 'O' level/School Certificate/
 Scottish (SCE) Ordinary/Lower ☐
 GCE 'A'/'S' level/High School Certificate/
 Scottish (SCE) Higher ☐
 Recognised trade apprenticeship completed ☐
 RSA/other clerical/commercial qualification ☐
 City & Guilds Craft/Intermediate/Ordinary/Part I ☐
 City & Guilds Advanced/Final/Part II/Part III ☐
 City & Guilds Full Technological ☐
 BEC/TEC General, ONC or OND ☐
 BEC/TEC Higher, HNC or HND ☐
 Teacher Training qualification ☐
 Nursing qualification ☐
 Technical/professional/business qualification ☐
 University or CNAA degree or diploma ☐

Other qualification (please specify)

.....

Q41. What type of accommodation do you live in?
(Please tick one box only)

- Council house or flat ☐
- Privately rented or Housing
Association house or flat ☐
- Owner-occupied (owned by yourself
or your family) ☐
- Accommodation that comes with
your or your partner's job ☐
- Other (please specify)
-

Q42. Which of the following is the main source of income for you (and
your husband/wife/partner) at present? (Please tick one box only)

- Earnings from employment (own or partner's) ☐
- Occupational pensions(s) from previous employer(s) ☐
- State retirement or widow's pension ☐
- Unemployment benefit ☐
- Supplementary benefit ☐
- Invalidity, sickness or disabled pension or benefit ☐
- Other state benefit (please specify)
-
- Interest from savings or investments ☐
- Student grant ☐
- Dependent on parents/relatives ☐
- Other main source (please specify)
-

Q43. What is the total weekly income of your household from all sources, before tax? (Includes income from earnings, benefits, savings etc)

- £ 0.01 – £ 40.00 ☐
- £ 40.01 – £ 60.00 ☐
- £ 60.01 – £ 80.00 ☐
- £ 80.01 – £ 100.00 ☐
- £ 100.01 – £ 120.00 ☐
- £ 120.01 – £ 140.00 ☐
- £ 140.01 – £ 160.00 ☐
- £ 160.01 – £ 180.00 ☐
- £ 180.01 – £ 200.00 ☐
- £ 200.01 – £ 250.00 ☐
- £ 250.01 – £ 300.00 ☐
- £ 300.01 – £ 350.00 ☐
- £350.01 or more ☐

Q44. Are there any other comments you would like to make about you or your friends' or relations' experience of waiting for hospital treatment that have not already been covered in this questionnaire?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

NOW, PLEASE CHECK THAT YOU HAVE ANSWERED ALL THE QUESTIONS

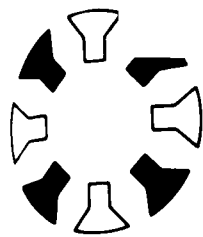
Thank you very much for helping us by filling in this questionnaire. Please return it as soon as possible using the stamped addressed envelope supplied.

PLEASE RETURN TO:

P. McCree BA, MSc, DHMSA, FRSA
Department of Orthopaedic Surgery
The Horton General Hospital
Oxford Road, Banbury, Oxon OX16 9AL
Tel: Banbury (0295) 264521

SPONSORED BY

THE BANBURY ORTHOPAEDIC & REHABILITATION TRUST



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

Tel. Ext.

Your ref:

Our ref:

17 April 1990

REMINDER 1

PATIENT NAME
ADDRESS
ADDRESS
ADDRESS
ADDRESS
POSTCODE

Dear TITLE NAME,

WAITING LIST SURVEY

We recently sent you a questionnaire, which does not seem to have been returned. It is very important to our study that we obtain full details from everyone and we would be most grateful if you could complete and return the questionnaire as soon as possible using the stamped addressed envelope provided.

I would stress that the information requested is for research purposes only and will not be recorded in your hospital notes. Your replies will be treated in the strictest confidence and neither your own doctor nor the hospital consultant will have access to any of the data.

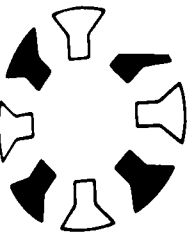
If for any reason, you did not receive the questionnaire, or you would like another copy, please let me know and I will arrange for another to be sent to you.

If you would like some assistance in completing the questionnaire, please do not hesitate to contact me.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

Tel. Ext.

Your ref:

Our ref:

12 May 1990

REMINDER 2

PATIENT NAME
ADDRESS
ADDRESS
ADDRESS
ADDRESS
POSTCODE

Dear TITLE NAME,

WAITING LIST SURVEY

We sent you a questionnaire some time ago, which does not seem to have been returned. It is very important to our study that we obtain full details from everyone and we would be most grateful if you could complete and return the questionnaire as soon as possible.

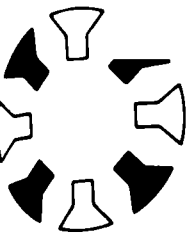
I would stress that the information requested is for research purposes only and will not be recorded in your hospital notes. Your replies will be treated in the strictest confidence and neither your own doctor nor the hospital consultant will have access to any of the data.

If for any reason, you did not receive the questionnaire, or you would like another copy, please let me know and I will arrange for another to be sent to you. If you would like some assistance in completing the questionnaire, please do not hesitate to contact me.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

Tel. Ext.

Your ref:

Our ref:

REMINDER 3

12 June 1990

PATIENT NAME

ADDRESS

ADDRESS

ADDRESS

ADDRESS

POSTCODE

Dear TITLE NAME,

WAITING LIST SURVEY

We sent you a questionnaire some time ago, which does not seem to have been returned. Overall, we have had a 75% response, but it is very important to our study that we obtain full details from everyone and we would be most grateful if you could complete and return the questionnaire as soon as possible.

We realise that filling in a questionnaire of this type can be tedious, especially if some of the questions do not seem to be particularly relevant. The questions in Section Three, for example, may not appear to have much to do with your orthopaedic problem, but these are standard questions and only by asking all of them can we compare our waiting list with a standard population. However, if you feel that some of the questions are too personal or too intrusive, then by all means leave them blank.

If for any reason, you did not receive the questionnaire, or you would like another copy, please let me know and I will arrange for another to be sent to you. If you would like some assistance in completing the questionnaire, please do not hesitate to contact me. If you are unwilling to complete the questionnaire for any reason, I would be grateful if you could let me know.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery

APPENDIX D

APPENDIX D

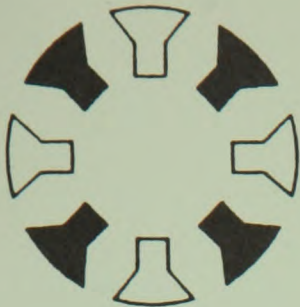
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Out-Patient Study: Questionnaire

Out-Patient Study: Reminder Letter 1

Out-Patient Study: Reminder Letter 2

Out-Patient Study: Consultant Assessment Form



STRICTLY CONFIDENTIAL

UNIT NUMBER:

CONSULTANT:

CLINIC:

DATE:

OFFICE USE ONLY

THE HORTON GENERAL HOSPITAL

DEPARTMENT OF ORTHOPAEDIC SURGERY

OUT-PATIENT QUESTIONNAIRE

We are trying to find out what problems people have while they are waiting to be seen by a hospital specialist. We are particularly interested to know how the orthopaedic problem for which they are waiting to be seen affects their daily life, family life, social life and work. We are also very interested in people's attitudes to waiting. We hope that you will help us by completing this questionnaire.

This information is for research purposes only and will not be recorded in your hospital notes. Your own doctor is aware of the study, but will not have access to any of the data.

Your replies to this questionnaire will be treated in strict confidence. The results will be presented only in aggregated form so that the identification of individuals will not be possible.

The first part of this questionnaire asks a number of questions about the orthopaedic problem for which you are attending hospital today. The second part asks some questions about how your orthopaedic problem affects your daily life. The third part asks for some background information about you and your family.

Most of the questions can be answered by putting a tick in the appropriate box or by writing your answer in the space provided. If you cannot remember or do not know the answer to any of the questions, please write "don't know."

APPROVED BY THE NORTH OXFORDSHIRE ETHICS COMMITTEE

SECTION 1

Q1. Why are you attending hospital today? (Please give brief details of the orthopaedic problem or condition for which you are seeking a consultant opinion).

.....
.....
.....

Q2. How long had you been suffering the symptoms before you first saw a doctor about this problem?

- Less than a week ☐
- 1-4 weeks ☐
- 1-3 months ☐
- 4-6 months ☐
- More than 6 months ☐

Q3. Whom did you first approach about this problem?

- GP/family doctor ☐
- Hospital casualty department ☐
- Non-medical practitioner (please specify) ☐

.....

Someone else (please specify)

.....

Q4. How many times have you seen your own doctor about this problem?

.....
number of times

Q5. Are you satisfied with the quality of care you received from your own doctor?

- Very satisfied ☐
- Fairly satisfied ☐
- Dissatisfied ☐
- Very dissatisfied ☐

Q6. How long have you had to wait between your first visit to a doctor and your appointment today?

.....
number of weeks

Q7. How do you feel about the amount of time you had to wait for this appointment?

- Very satisfied ☐
- Fairly satisfied ☐
- Dissatisfied ☐
- Very dissatisfied ☐

Q8. Do you think that your orthopaedic problem has got worse while you have been waiting for this appointment?

- YES ☐
- NO ☐

IF YES, please give details

.....
.....
.....
.....

SECTION 2.

OFFICE USE ONLY

THE BARTEL ADL INDEX

In this section we are interested in learning how your orthopaedic problem has affected your ability to perform a number of everyday tasks. Read each item and place a firm tick in the box opposite the reply that best describes your usual situation or abilities over the past week.

Please tick only one box in each section.

Q9.

- i) **Feeding**
Can you feed yourself a meal from a tray or table when someone puts it within your reach?
- Yes, independently, at reasonable speed ☐ 2
Yes, but need help with cutting, spreading ☐ 1
No, unable to do so, even with help ☐ 0
- ii) **Bed/Chair Transfer**
Can you move from a chair (or wheelchair) to a bed, sit up in bed and return to a chair?
- Yes, independently ☐ 3
Yes, but need (minimal) help or supervision ☐ 2
Able to sit, but need major help ☐ 1
No, unable. Have to be lifted bodily ☐ 0
- iii) **Personal Care**
Can you wash your hands and face, comb your hair, clean your teeth and shave/put on your own make-up?
- Yes, face, hair, teeth, shave/make-up, all alone ☐ 1
No, dependent on others ☐ 0
- iv) **Managing Toilet**
Can you use the toilet without help? (includes getting on/off toilet, adjusting clothes, cleaning yourself).
- Yes, independently ☐ 2
Yes, but need help ☐ 1
No, unable ☐ 0
- v) **Bathing**
Can you take a bath or shower without anyone's help? (includes sponge bath).
- Yes, independently ☐ 1
No, unable without someone else ☐ 0

- vi) **Mobility**
Can you walk (or manoeuvre a wheelchair) on a level surface for at least 50 yards without help or supervision? (with any aid except a rollator/walking frame)
- Yes, may use aid ☐ 3
 Yes, but with help of another person
 (verbal or physical) ☐ 2
 Yes, but only in wheelchair ☐ 1
 No, unable (immobile) ☐ 0
- vii) **Stairs**
Can you go safely up and down stairs without help or supervision? (using rails, sticks or crutches, if necessary)
- Yes, without help or supervision ☐ 2
 Yes, but need help or supervision ☐ 1
 No, unable ☐ 0
- viii) **Dressing**
Can you dress and undress yourself, including doing up zips, buttons and your shoelaces without help?
- Yes, independently ☐ 2
 Yes, but need help (can do at least half the
 work myself) ☐ 1
 No, unable ☐ 0
- ix) **Bowels**
Can you control your bowels and avoid having accidents?
- Yes, no accidents ☐ 2
 Yes, but have occasional accidents or need help ☐ 1
 No, unable (incontinent of bowels) ☐ 0
- x) **Bladder**
Can you control your bladder day and night?
- Yes, no accidents (includes managing catheter alone) ☐ 2
 Yes, occasional accidents (or need help with
 catheter etc) ☐ 1
 No, unable (incontinent of bladder) ☐ 0

TOTAL BARTEL SCORE

THE HAD SCALE

We are also interested in learning how your orthopaedic problem has affected how you feel. Read each item and place a firm tick in the box opposite the reply which comes closest to how you have been feeling in the past week.

Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought-out response.

Please tick only one box in each section.

Q10.

- i) **I feel tense or 'wound up':**
- | | |
|----------------------------------|--------------------------|
| Most of the time | ☐ |
| A lot of the time | ☐ |
| Time to time, occasionally | ☐ |
| Not at all | ☐ |
- ii) **I still enjoy the things I used to enjoy:**
- | | |
|--------------------------|--------------------------|
| Definitely as much | ☐ |
| Not quite so much | ☐ |
| Only a little | ☐ |
| Hardly at all | ☐ |
- iii) **I get a sort of frightened feeling as if something awful is about to happen:**
- | | |
|---|--------------------------|
| Very definitely and quite badly | ☐ |
| Yes, but not too badly | ☐ |
| A little, but it doesn't worry me | ☐ |
| Not at all | ☐ |
- iv) **I can laugh and see the funny side of things:**
- | | |
|----------------------------------|--------------------------|
| As much as I always could | ☐ |
| Not quite so much now | ☐ |
| Definitely not so much now | ☐ |
| Not at all | ☐ |
- v) **Worrying thoughts go through my mind:**
- | | |
|---|--------------------------|
| A great deal of the time | ☐ |
| A lot of the time | ☐ |
| From time to time but not too often | ☐ |
| Only occasionally | ☐ |
- vi) **I feel cheerful:**
- | | |
|------------------------|--------------------------|
| Not at all | ☐ |
| Not often | ☐ |
| Sometimes | ☐ |
| Most of the time | ☐ |

- vii) **I can sit at ease and feel relaxed:**
 Definitely ☐
 Usually ☐
 Not often ☐
 Not at all ☐
- viii) **I feel as if I am slowed down:**
 Nearly all the time ☐
 Very often ☐
 Sometimes ☐
 Not at all ☐
- ix) **I get a sort of frightened feeling like 'butterflies' in the stomach:**
 Not at all ☐
 Occasionally ☐
 Quite often ☐
 Very often ☐
- x) **I have lost interest in my appearance:**
 Definitely ☐
 I don't take so much care as I should ☐
 I may not take quite as much care ☐
 I take just as much care as ever ☐
- xi) **I feel restless as if I have to be on the move:**
 Very much indeed ☐
 Quite a lot ☐
 Not very much ☐
 Not at all ☐
- xii) **I look forward with enjoyment to things:**
 As much as ever I did ☐
 Rather less than I used to ☐
 Definitely less than I used to ☐
 Hardly at all ☐
- xiii) **I get sudden feelings of panic:**
 Very often indeed ☐
 Quite often ☐
 Not very often ☐
 Not at all ☐
- xiv) **I can enjoy a good book or radio or TV programme:**
 Often ☐
 Sometimes ☐
 Not often ☐
 Very seldom ☐

TOTAL HAD SCORE

THE FRENCHAY ACTIVITIES INDEX

We are also very interested in learning how your orthopaedic problem has affected your social and domestic life.

Please tick only one box in each section.

Q11. In the last 3/6 months how often have you...

i) **Prepared main meals?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 1-2 times a week..... ☐ 3
 Most days..... ☐ 4

ii) **Done the washing up?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 1-2 times a week..... ☐ 3
 Most days..... ☐ 4

iii) **Done the washing of clothes?**

- Never..... ☐ 1
 Under once weekly..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

iv) **Done light housework? (eg dusting)**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

v) **Done heavy housework? (eg wash floors)**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

vi) **Done local shopping?**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

vii) **Gone out socially?**

- Never..... ☐ 1
 1-2 times in 3 months..... ☐ 2
 3-12 times in 3 months..... ☐ 3
 At least weekly..... ☐ 4

- viii) **Walked outdoors for over 15 minutes?**
- Never..... ☐ 1
- 1-2 times in 3 months ☐ 2
- 3-12 times in 3 months ☐ 3
- At least weekly ☐ 4
- ix) **Taken an active interest in a hobby?**
- Never..... ☐ 1
- 1-2 times in 3 months ☐ 2
- 3-12 times in 3 months ☐ 3
- At least weekly ☐ 4
- x) **Driven a car or travelled on public transport?**
- Never..... ☐ 1
- 1-2 times in 3 months ☐ 2
- 3-12 times in 3 months ☐ 3
- At least weekly ☐ 4
- xi) **Gone on outings? (e.g. car rides)**
- Never..... ☐ 1
- 1-2 times in 3 months ☐ 2
- 3-12 times in 3 months ☐ 3
- At least weekly ☐ 4
- xii) **Done some gardening?**
- None..... ☐ 1
- Light (e.g. greenhouse)..... ☐ 2
- Moderate (e.g. electric mower)..... ☐ 3
- All necessary (heavy digging)..... ☐ 4
- xiii) **Done household and/or car maintenance?**
- None..... ☐ 1
- Light..... ☐ 2
- Moderate..... ☐ 3
- All necessary..... ☐ 4
- xiv) **Read books?**
- None..... ☐ 1
- 1 in 6 months..... ☐ 2
- Less than 1 a fortnight..... ☐ 3
- Over 1 a fortnight ☐ 4
- xv) **Gainfully worked? (i.e. paid)**
- Not at all..... ☐ 1
- Up to 10 hours a week ☐ 2
- 10-30 hours a week..... ☐ 3
- Over 30 hours a week..... ☐ 4

TOTAL FRENCHAY SCORE

In the final part of this section, we are interested in the amount of pain and distress that you attribute to your orthopaedic problem. We are also interested in the effect that this orthopaedic problem has on some aspects of your personal life. **Please confine your answers to the effects of the orthopaedic problem for which you are attending hospital today.**

Q12. Pain
Please describe the amount of pain that you attribute to your orthopaedic condition:

- No pain ☐ 4
- Slight discomfort ☐ 3
- Moderate pain ☐ 2
- Severe pain ☐ 1
- Unbearable pain ☐ 0

Q13. Visual Analogue Pain Rating
Now, place a mark on the line below at a point which represents as closely as possible your opinion of the severity of your pain.

UNBEARABLE PAIN

NO PAIN

Q14. Pain Frequency
How frequent is this pain?

- No pain at any time ☐ 2
- Pain at certain times (eg at night),
in certain positions (eg when sitting)
or in certain circumstances (eg when walking) ☐ 1
- Constant pain ☐ 0

Q.15 Pain Relief

Do you take pain killers to relieve your pain?

YES ☐NO ☐

IF NO, please go to Q17.

IF YES,

i) Are these pain killers prescribed by a doctor?

YES ☐NO ☐

ii) Do these pain killers give:

Complete relief from pain ☐ 3Moderate relief from pain ☐ 2Very little relief from pain ☐ 1No relief from pain ☐ 0**Q16. Visual Analogue Pain Rating**

Now, place a mark on the line below at a point which represents as closely as possible the degree of relief from pain which your pain killers give you:

COMPLETE
RELIEFNO
RELIEF

Q17. Sleep

How does your orthopaedic problem affect your sleeping habits?

Sleep well ☐ 4Have less than 8 hours sleep ☐ 3Have less than 6 hours sleep ☐ 2Have less than 4 hours sleep ☐ 1Have less than 2 hours sleep ☐ 0**Q18. Mobility**

Does your orthopaedic problem impose any restriction on your mobility?

No restriction ☐ 4Some restriction ☐ 3Confined to home except for escorted outings ☐ 2Confined to chair or wheelchair or able to move around
house only with support from an assistant ☐ 1Confined to bed ☐ 0

Q19. **Employment/Availability for Work**
How does your orthopaedic problem affect your work (or your availability for work if unemployed)?

Not applicable/retired ☐ 4
No problems at work ☐ 4
Impaired performance at work ☐ 3
Performance at work severely limited ☐ 2
Unable to undertake existing work ☐ 1
Unable to undertake any paid employment ☐ 0

Q20. **Sex Life**
Does your orthopaedic problem impose any restriction on your sex life?

No restriction (normal) ☐ 3
Some restriction ☐ 2
Severe restriction ☐ 1
Complete restriction (no sex life) ☐ 0

Q21. **Financial dependents**
Does your partner and/or your family depend on you for financial support?

Not at all/not applicable ☐ 3
Partly ☐ 2
Mostly ☐ 1
Completely ☐ 0

Q22. **Physical dependents**
Does your partner (or close relative) depend on you for physical support (ie is he/she disabled or infirm)?

Not at all/not applicable ☐ 3
Partly ☐ 2
Mostly ☐ 1
Completely ☐ 0

SECTION 3

It would be very helpful if you could now answer a few questions about yourself, your background and your family.

Q23.

- i) Thinking back to when you were aged about 14, what job did your FATHER have then?

.....
name or title of his job

- ii) What did he actually do in this job? (Please describe as fully as possible)

.....
.....
.....

- iii) What training or qualifications were needed for the job at that time?

.....
.....

- iv) Did he supervise or was he responsible for the work of any other people?

YES ☐

NO ☐

IF YES, how many?

.....

- v) Was he an employee? ☐
self-employed? ☐

- vi) What did his employer (or if self-employed, he) make or do?

.....
.....

- vii) Roughly how many people were employed at the place where he worked?

No other employees ☐

Under 10 ☐

10-24 ☐

25-99 ☐

100-499 ☐

500 or more ☐

Q24.

- i) Which of the following descriptions applies to what you were doing last week, that is, in the seven days ending last Sunday?

- In full-time education (not paid for by employer) ☐
- On government training/employment scheme ☐
- In paid work (or away temporarily)
for at least 10 hours in the week ☐
- Waiting to take up paid work already accepted ☐
- Unemployed and registered at a benefit office ☐
- Unemployed, not registered, but actively looking for a job ☐
- Unemployed, wanting a job (of at least 10 hours per week),
but not actively looking for a job ☐
- Permanently sick or disabled ☐
- Wholly retired from work ☐
- Looking after the home ☐

Doing something else (please specify)

IF NOT WORKING NOW, how long ago did you last have a paid job of at least 10 hours a week, excluding Saturday and holiday jobs?

- Within past 12 months ☐
- Over 1-5 years ago ☐
- Over 5-10 years ago ☐
- Over 20 years ago ☐
- Never had paid job of 10+ hours a week ☐

If you have never had a paid job of 10+ hours a week please go to QUESTION 25.

- ii) Are you now or have you ever been a member of a trade union or staff association?

- YES, trade union ☐
- YES, staff association ☐
- NO ☐

- iii) What is/was your present or (if not working now) most recent job? (If waiting to take up paid work please describe your future job)

.....
name or title of job

iv) What do/did you actually do in this job? (Please describe as fully as possible)

.....

.....

.....

v) What training or qualifications are/were needed for this job?

.....

.....

vi) Do/did you supervise or are/were you responsible for the work of any other people?

YES ☐
NO ☐

IF YES, how many?

vii) Are/were you an employee? ☐
self employed? ☐

IF YOU ARE/WERE AN EMPLOYEE, which type of organisation do/did you work for?

Private firm or company ☐
Nationalised industry/public corporation ☐
Local Authority/Local Education Authority ☐
Health Authority/NHS hospital ☐
Central Government/Civil Service ☐
Charity or trust ☐

Other (please specify)

.....

viii) What does/did the firm or organisation you work/worked for (or if self-employed, you) make or do?

.....

.....

.....

ix) Including yourself, how many people are/were employed at the place you usually work/worked from?

Under 10 ☐
10-24 ☐
25-99 ☐
100-499 ☐
500 or more ☐

x) IF SELF-EMPLOYED, do/did you have any employees?

YES ☐

NO ☐

IF YES, how many?

xi) Is the job

Full-time (30 hours + per week)? ☐

Part-time (10-29 hours per week)? ☐

Q25. What is your marital status now? (Please tick one box only)

Married ☐

Living as married ☐

Widowed ☐

Divorced/separated ☐

Not married ☐

IF NOT MARRIED, OR NOT LIVING AS MARRIED, please go to QUESTION 27.

Q26.

i) Which of the following descriptions applies to what your husband/wife/partner was doing last week, that is, in the seven days ending last Sunday?

In full-time education (not paid for by employer) ☐

On government training/employment scheme ☐

In paid work (or away temporarily) for
at least 10 hours in the week ☐

Waiting to take up paid work already accepted ☐

Unemployed and registered at a benefit office ☐

Unemployed, not registered, but actively looking for a job ☐

Unemployed, wanting a job (of at least 10 hours
per week), but not actively looking for a job ☐

Permanently sick or disabled ☐

Wholly retired from work ☐

Looking after the home ☐

Doing something else (please specify)

.....

IF NOT WORKING NOW, how long ago did your partner last have a paid job of at least 10 hours a week, excluding Saturday and holiday jobs?

Within past 12 months ☐

Over 1-5 years ago ☐

Over 5-10 years ago ☐

Over 10-20 years ago ☐

Over 20 years ago ☐

Never had paid job of 10+ hours a week ☐

If your partner has never had a paid job of 10+ hours a week please go to QUESTION 27

- ii) Is your partner now or has he or she ever been a member of a trade union or staff association?

Yes, trade union ☐

YES, staff association ☐

NO ☐

Don't know ☐

- iii) What is/was your partner's present or (if not working now) most recent job? (If waiting to take up paid work, please describe his or her future job)

.....

.....

name or title of job

- iv) What does/did he or she actually do in this job?
(Please describe as fully as possible)

.....

.....

.....

- v) What training or qualifications are/were needed for the job?

.....

.....

- vi) Does/did he or she supervise or is/was he or she responsible for the work of any other people?

YES ☐

NO ☐

IF YES, how many?

.....

- vii) Is/was he or she

an employee? ☐

self-employed? ☐

IF YOUR PARTNER IS/WAS AN EMPLOYEE, which type of organisation does/did he or she work for?

- Private firm or company ☐
 Nationalised industry/public corporation ☐
 Local Authority/Local Education Authority ☐
 Health Authority/NHS hospital ☐
 Central Government/Civil Service ☐
 Charity or trust ☐

Other (please specify)

viii) What does/did the firm or organisation your partner works/ worked for (or if self-employed, he or she) make or do?

.....

ix) Including your partner, how many people are/were employed at the place where he or she usually works/worked?

- Under 10 ☐
 10-24 ☐
 25-99 ☐
 100-499 ☐
 500 or more ☐

x) IF SELF-EMPLOYED, does/did he or she have any employees?

- YES ☐
 NO ☐

IF YES, how many?

xi) Is the job

- Full-time (30 hours + per week) ☐
 Part-time (10-29 hours per week)? ☐

Q27. Are you, or is anyone in your household, covered by a private health insurance scheme that allows you to get private medical treatment?

- YES, through group ☐
 YES, individually ☐
 NO ☐
 Don't know ☐

Q28. At what age did you complete your full-time formal education (ie school, college or university)?

.....
age in years

Q29. What type of secondary school did you attend?
(Please tick one box only)

Secondary modern or technical school ☐

Comprehensive school ☐

Grammar school ☐

Direct grant school ☐

Independent (fee-paying) school ☐

Other school (please specify)

No secondary schooling ☐

Q30. Have you passed any of the exams or got any of the following qualifications?
(Please tick all those that apply)

No formal qualification ☐

CSE Grades 2-5 ☐

CSE Grade 1/GCE 'O' level/School Certificate/
Scottish (SCE) Ordinary/Lower ☐

GCE 'A'/'S' level/High School Certificate/
Scottish (SCE) Higher ☐

Recognised trade apprenticeship completed ☐

RSA/other clerical/commercial qualification ☐

City & Guilds Craft/Intermediate/Ordinary/Part I ☐

City & Guilds Advanced/Final/Part II/Part III ☐

City & Guilds Full Technological ☐

BEC/TEC General, ONC or OND ☐

BEC/TEC Higher, HNC or HND ☐

Teacher Training qualification ☐

Nursing qualification ☐

Technical/professional/business qualification ☐

University or CNAA degree or diploma ☐

Other qualification (please specify)

.....

Q31. What type of accommodation do you live in?
(Please tick one box only)

- Council house or flat ☐
- Privately rented or Housing
Association house or flat ☐
- Owner-occupied (owned by yourself
or your family) ☐
- Accommodation that comes with
your or your partner's job ☐
- Other (please specify)
.....

Q32. Which of the following is the main source of income for you (and
your husband/wife/partner) at present? (Please tick one box only)

- Earnings from employment (own or partner's) ☐
- Occupational pensions(s) from previous employer(s) ☐
- State retirement or widow's pension ☐
- Unemployment benefit ☐
- Supplementary benefit ☐
- Invalidity, sickness or disabled pension or benefit ☐
- Other state benefit (please specify)
.....
- Interest from savings or investments ☐
- Student grant ☐
- Dependent on parents/relatives ☐
- Other main source (please specify)
.....

Q33. What is the total weekly income of your household from all sources, before tax? (Includes income from earnings, benefits, savings etc)

- £ 0.01 – £ 40.00 ☐
- £ 40.01 – £ 60.00 ☐
- £ 60.01 – £ 80.00 ☐
- £ 80.01 – £ 100.00 ☐
- £ 100.01 – £ 120.00 ☐
- £ 120.01 – £ 140.00 ☐
- £ 140.01 – £ 160.00 ☐
- £ 160.01 – £ 180.00 ☐
- £ 180.01 – £ 200.00 ☐
- £ 200.01 – £ 250.00 ☐
- £ 250.01 – £ 300.00 ☐
- £ 300.01 – £ 350.00 ☐
- £350.01 or more ☐

Q34. Are there any other comments you would like to make about your or your friends' or relations' experience as an out-patient that have not already been covered in this questionnaire?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

NOW, PLEASE CHECK THAT YOU HAVE ANSWERED ALL THE QUESTIONS

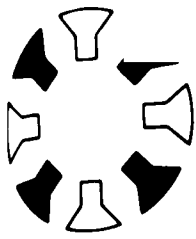
Thank you very much for helping us by filling in this questionnaire. Please place it in the envelope provided, seal the envelope and give it to the Clinic Nurse.

PLEASE RETURN TO:

P. McCree BA, MSc, DHMSA, FRSA
Department of Orthopaedic Surgery
The Horton General Hospital
Oxford Road, Banbury, Oxon OX16 9AL
Tel: Banbury (0295) 264521

SPONSORED BY

THE BANBURY ORTHOPAEDIC & REHABILITATION TRUST



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

Tel. Ext.

Your ref:

Our ref:

9 October 1990

REMINDER 1

PATIENT NAME
ADDRESS
ADDRESS
ADDRESS
ADDRESS
POSTCODE

Dear TITLE NAME,

OUT-PATIENT SURVEY

When you attended an Orthopaedic Clinic at this hospital on [DATE] September, you took away a questionnaire which you kindly agreed to complete and return.

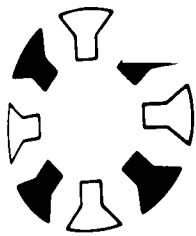
The questionnaire does not seem to have been returned and it is very important to our study that we obtain full details from as many people as possible. We would therefore be very grateful if you could please complete and return the questionnaire as soon as possible.

If for any reason, you have mislaid the questionnaire, please let me know and I will arrange for another to be sent to you. If you are unwilling to complete the questionnaire for any reason, I would be grateful if you could let me know.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery



The Horton General Hospital

Oxford Road, Banbury, Oxfordshire OX16 9AL

Telephone: Banbury (0295) 264521

Fax: (0295) 258251

Tel. Ext.

Your ref:

Our ref:

REMINDER 2

30 October 1990

PATIENT NAME

ADDRESS

ADDRESS

ADDRESS

ADDRESS

POSTCODE

Dear TITLE NAME,

OUT-PATIENT SURVEY

When you attended an Orthopaedic Clinic at this hospital on [DATE] September, you took away a questionnaire which you kindly agreed to complete and return.

The questionnaire does not seem to have been returned and it is very important to our study that we obtain full details from as many people as possible. We would therefore be very grateful if you could please complete and return the questionnaire as soon as possible.

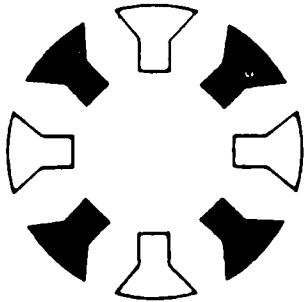
We realise that filling in a questionnaire of this type can be tedious, especially if some of the questions do not seem to be particularly relevant. If you feel that some of the questions are too personal or too intrusive, then by all means leave them blank.

If for any reason, you have mislaid the questionnaire, please let me know and I will arrange for another to be sent to you. If you are unwilling to complete the questionnaire for any reason, I would be grateful if you could let me know.

Many thanks for your co-operation.

Yours sincerely,

Peter McCree
Department of Orthopaedic Surgery



PATIENT SURNAME:
OTHER NAMES:
UNIT NUMBER:
CONSULTANT:
CLINIC:
DATE:

OFFICE USE ONLY

THE HORTON GENERAL HOSPITAL
DEPARTMENT OF ORTHOPAEDIC SURGERY
OUT-PATIENT ASSESSMENT

A. DISABILITY / PHYSICAL MOBILITY

- 0 No disability ☐
- 1 Difficulty (unaided) ☐
- 2 Aided (appliance) ☐
- 3 Dependent (on assistant) ☐
- 4 Completely disabled/immobile ☐

B. PAIN / DISTRESS

- 0 No distress ☐
- 1 Mild ☐
- 2 Moderate ☐
- 3 Severe ☐

C. OUTLOOK / PROBABLE OUTCOME OF TREATMENT

- 0 Deterioration/treatment contraindicated/unnecessary ☐
- 1 No change/chronic condition ☐
- 2 Stabilisation (ie would deteriorate if untreated) ☐
- 2 Improvement ☐
- 3 Significant improvement (patient's independence threatened if untreated) ☐
- 3 Significant improvement (clinically) ☐
- 4 Complete recovery ☐

D. APPARENT MOTIVATION

- 1 Negative or hostile ☐
- 1 Passive, afraid, insecure (needing much support) ☐
- 1 Poorly, unrealistically motivated ☐
- 2 Good emotional strengths, motivated with support ☐
- 3 Independent, confident, highly motivated ☐

APPROVED BY THE NORTH OXFORDSHIRE ETHICS COMMITTEE

APPENDIX E

APPENDIX E

CONTENTS

The McCree IDH Scale Validation Study Protocol

Questionnaire Day 4

Questionnaire Day 11

**A NEW MEASURE OF
IMPAIRMENT, DISABILITY AND HANDICAP
IN ORTHOPAEDICS**

- A VALIDATION STUDY

**S.J. BURROUGH FRCS
P.McCREE MSc**

**REVISED
OCTOBER 1992**

CONTENTS

1. OBJECTIVES
2. BACKGROUND
3. METHOD
4. STUDY PLAN
5. PATIENT NUMBERS
6. PATIENT SELECTION
7. CONDUCT OF STUDY
8. ADVERSE EVENTS

1. OBJECTIVES

- 1.1 To validate the McCree Scale of Impairment, Disability and Handicap (IDH) against a combination of two established scales:

The Barthel ADL Index

The Frenchay Activities Index

- 1.2 To demonstrate the reliability of the McCree IDH Scale in orthopaedic practice and the ability of the scale to detect discreet changes in disability status over time.

2. BACKGROUND

The McCree IDH Scale represents a reconstruction of the WHO concept of IDH into a rating scale that is both simple to administer and specific to orthopaedics. The scale incorporates a section on pain, a dimension notably absent from most other scales. A visual analogue scale is included within this section as a simple means of recording subjective estimates of pain intensity. Visual analogue scales have been widely used in measuring pain and have demonstrated reliable results.

Early results indicate that this new scale has inherent content validity and is sensitive enough to reflect small but significant changes in patients' disability status. It is suggested that this ability to detect discreet changes makes the McCree IDH Scale an appropriate instrument for measuring and comparing the efficacy of different treatment regimes.

3. METHOD

Both the Barthel ADL Index and the Frenchay Activities Index are established, well-validated instruments. Normative data are available for

each of these scales. The Barthel ADL Index and the Frenchay Activities Index were both designed originally for use with stroke patients. The Barthel Index, although more relevant to the assessment of severe disability, has been recommended as the disability "gold standard" and is widely used in a rehabilitation context.

Both the new scale and the established instruments will be administered to a suitable patient sample and the results compared using an appropriate correlation statistic.

3.1 **Self-Assessment**

All three scales have been designed or converted for self-completion by the patient.

Each patient will complete a questionnaire comprising all three scales.

Questionnaires to be completed twice, on specified dates.

3.2 **Clinical Assessment**

Routine clinical examination at Phase I.

4. **STUDY PLAN**

Phase I	Clinical assessment and selection of patients.
Phase II	Two week study period. Questionnaires completed twice.
Phase III	Computer analysis of results. Statistical correlation.

5. PATIENT NUMBERS

30 patients.

6. PATIENT SELECTION

Patients routinely referred for a consultant orthopaedic opinion, presenting with any condition for which the prescription of a non-steroidal anti-inflammatory drug (NSAID) is the treatment of choice.

Age limits: 18-65 years.

7. CONDUCT OF STUDY

7.1 History, physical examination, patient selection.

7.2 Selected patients prescribed a 7-day course of Lederfen 450 *b.d.*

7.3 Completion of questionnaires explained. Patients advised to complete questionnaire on the 4th Day, stop medication on the 7th Day, complete questionnaire again on the 11th Day. Patient to then contact own doctor for repeat prescription as appropriate.

7.4 Questionnaires colour-coded and clearly labelled to aid patient compliance. Self-assessments to be completed twice on specific days. Completed questionnaires to be mailed using stamped addressed envelope supplied. Two completed questionnaires per patient should be available for analysis at completion of study.

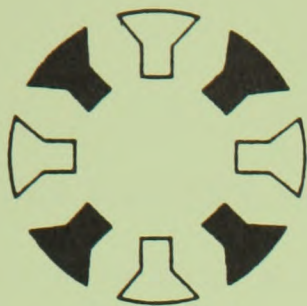
8. ADVERSE EVENTS

Volunteered adverse events will be elicited by use of non-leading questions. Adverse events are defined as: new or adverse changes in,

clinically significant adverse symptoms, or adverse laboratory results, physical abnormalities, injuries, toxicity, sensitivity reactions, illness, surgery or accidents occurring during the study whether related to study medication or not.

In addition to the nature of the adverse event, details of the severity will be recorded, together with the date of onset, duration, outcome and relationship to therapy. The categories for the relationship of the adverse event to the study therapy are definitely related, probably related, possibly related, remotely related, definitely not related and relationship unknown.

Serious events and any experiences that can be described as: life threatening or fatal, permanently or severely disabling, resulting in, or prolonging hospitalisation, a congenital anomaly, a cancer, a result of overdose (whether accidental or deliberate), any other condition which in the investigator's opinion suggests a significant hazard, contraindication, side effect or precaution. The investigator will carry out any necessary long term follow-up of patients with serious adverse events.



STRICTLY CONFIDENTIAL

UNIT NUMBER:

CONSULTANT:

CLINIC:

DATE:

OFFICE USE ONLY

THE HORTON GENERAL HOSPITAL
DEPARTMENT OF ORTHOPAEDIC SURGERY
PATIENT QUESTIONNAIRE

TO BE COMPLETED ON DAY 4

Thank you for agreeing to take part in this study. We are trying to find out how orthopaedic problems affect people's daily life, family life, social life and work. We are also trying to establish what difference medication makes.

It is important that both questionnaires are completed on specific days in accordance with the following timetable:

DAY 1	Start Medication
DAY 4	Complete First Questionnaire (Green Copy)
DAY 7	Finish Medication
DAY 11	Complete Second Questionnaire (Yellow Copy)

This information is for research purposes only and will not be recorded in your hospital notes. Your own doctor is aware of the study, but will not have access to any of the data.

Your replies to this questionnaire will be treated in strict confidence. The results will be presented only in aggregated form so that the identification of individuals will not be possible.

Most of the questions can be answered by putting a tick in the appropriate box. Please make sure that you answer all the questions.

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THE BARTHEL ADL INDEX

In this section we are interested in learning how your orthopaedic problem has affected your ability to perform a number of everyday tasks. Read each item and place a firm tick in the box opposite the reply that best describes your usual situation or abilities over the past week.

Please tick only one box in each section.

i) **Feeding**

Can you feed yourself a meal from a tray or table when someone puts it within your reach?

Yes, independently, at reasonable speed ☐ 2
 Yes, but need help with cutting, spreading ☐ 1
 No, unable to do so, even with help ☐ 0

ii) **Bed/Chair Transfer**

Can you move from a chair (or wheelchair) to a bed, sit up in bed and return to a chair?

Yes, independently ☐ 3
 Yes, but need (minimal) help or supervision ☐ 2
 Able to sit, but need major help ☐ 1
 No, unable. Have to be lifted bodily ☐ 0

iii) **Personal Care**

Can you wash your hands and face, comb your hair, clean your teeth and shave/put on your own make-up?

Yes, face, hair, teeth, shave/make-up, all alone ☐ 1
 No, dependent on others ☐ 0

iv) **Managing Toilet**

Can you use the toilet without help? (includes getting on/off toilet, adjusting clothes, cleaning yourself).

Yes, independently ☐ 2
 Yes, but need help ☐ 1
 No, unable ☐ 0

v) **Bathing**

Can you take a bath or shower without anyone's help? (includes sponge bath).

Yes, independently ☐ 1
 No, unable without someone else ☐ 0

- vi) **Mobility**
Can you walk (or manoeuvre a wheelchair) on a level surface for at least 50 yards without help or supervision? (with any aid except a rollator/walking frame)
- Yes, may use aid ☐ 3
Yes, but with help of another person
(verbal or physical) ☐ 2
Yes, but only in wheelchair ☐ 1
No, unable (immobile) ☐ 0
- vii) **Stairs**
Can you go safely up and down stairs without help or supervision? (using rails, sticks or crutches, if necessary)
- Yes, without help or supervision ☐ 2
Yes, but need help or supervision ☐ 1
No, unable ☐ 0
- viii) **Dressing**
Can you dress and undress yourself, including doing up zips, buttons and your shoelaces without help?
- Yes, independently ☐ 2
Yes, but need help (can do at least half the
work myself) ☐ 1
No, unable ☐ 0
- ix) **Bowels**
Can you control your bowels and avoid having accidents?
- Yes, no accidents ☐ 2
Yes, but have occasional accidents or need help ☐ 1
No, unable (incontinent of bowels) ☐ 0
- x) **Bladder**
Can you control your bladder day and night?
- Yes, no accidents (includes managing catheter alone) ☐ 2
Yes, occasional accidents (or need help with
catheter etc) ☐ 1
No, unable (incontinent of bladder) ☐ 0

TOTAL BARTHEL SCORE

THE FRENCHAY ACTIVITIES INDEX

We are also very interested in learning how your orthopaedic problem has affected your social and domestic life.

Please tick only one box in each section.

In the last 3/6 months how often have you...

- | | | |
|------|---|----------------------------|
| i) | Prepared main meals? | |
| | Never..... | ☐ 1 |
| | Under once weekly..... | ☐ 2 |
| | 1-2 times a week | ☐ 3 |
| | Most days | ☐ 4 |
| ii) | Done the washing up? | |
| | Never..... | ☐ 1 |
| | Under once weekly..... | ☐ 2 |
| | 1-2 times a week | ☐ 3 |
| | Most days | ☐ 4 |
| iii) | Done the washing of clothes? | |
| | Never..... | ☐ 1 |
| | Under once weekly..... | ☐ 2 |
| | 3-12 times in 3 months | ☐ 3 |
| | At least weekly | ☐ 4 |
| iv) | Done light housework? (eg dusting) | |
| | Never..... | ☐ 1 |
| | 1-2 times in 3 months | ☐ 2 |
| | 3-12 times in 3 months | ☐ 3 |
| | At least weekly | ☐ 4 |
| v) | Done heavy housework? (eg wash floors) | |
| | Never..... | ☐ 1 |
| | 1-2 times in 3 months | ☐ 2 |
| | 3-12 times in 3 months | ☐ 3 |
| | At least weekly | ☐ 4 |
| vi) | Done local shopping? | |
| | Never..... | ☐ 1 |
| | 1-2 times in 3 months | ☐ 2 |
| | 3-12 times in 3 months | ☐ 3 |
| | At least weekly | ☐ 4 |
| vii) | Gone out socially? | |
| | Never..... | ☐ 1 |
| | 1-2 times in 3 months | ☐ 2 |
| | 3-12 times in 3 months | ☐ 3 |
| | At least weekly | ☐ 4 |

- viii) **Walked outdoors for over 15 minutes?**
- Never..... ☐ 1
- 1-2 times in 3 months..... ☐ 2
- 3-12 times in 3 months..... ☐ 3
- At least weekly..... ☐ 4
- ix) **Taken an active interest in a hobby?**
- Never..... ☐ 1
- 1-2 times in 3 months..... ☐ 2
- 3-12 times in 3 months..... ☐ 3
- At least weekly..... ☐ 4
- x) **Driven a car or travelled on public transport?**
- Never..... ☐ 1
- 1-2 times in 3 months..... ☐ 2
- 3-12 times in 3 months..... ☐ 3
- At least weekly..... ☐ 4
- xi) **Gone on outings? (e.g. car rides)**
- Never..... ☐ 1
- 1-2 times in 3 months..... ☐ 2
- 3-12 times in 3 months..... ☐ 3
- At least weekly..... ☐ 4
- xii) **Done some gardening?**
- None..... ☐ 1
- Light (e.g. greenhouse)..... ☐ 2
- Moderate (e.g. electric mower)..... ☐ 3
- All necessary (heavy digging)..... ☐ 4
- xiii) **Done household and/or car maintenance?**
- None..... ☐ 1
- Light..... ☐ 2
- Moderate..... ☐ 3
- All necessary..... ☐ 4
- xiv) **Read books?**
- None..... ☐ 1
- 1 in 6 months..... ☐ 2
- Less than 1 a fortnight..... ☐ 3
- Over 1 a fortnight..... ☐ 4
- xv) **Gainfully worked? (i.e. paid)**
- Not at all..... ☐ 1
- Up to 10 hours a week..... ☐ 2
- 10-30 hours a week..... ☐ 3
- Over 30 hours a week..... ☐ 4

TOTAL FRENCHAY SCORE

THE McCREE IDH SCALE

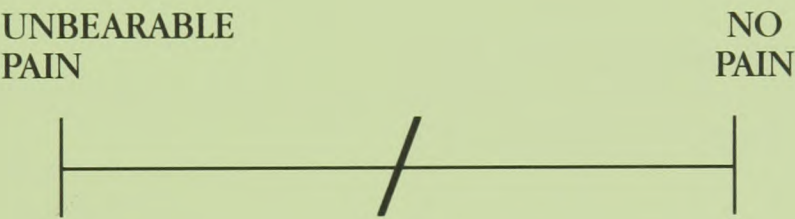
In the final part of this questionnaire, we are interested in the amount of pain and distress that you attribute to your orthopaedic problem. We are also interested in the effect that this orthopaedic problem has on some aspects of your personal life. **Please confine your answers to the effects of the orthopaedic problem for which you have recently attended hospital.**

i) **Pain**
Please describe the amount of pain that you attribute to your orthopaedic condition:

- No pain ☐ 4
- Slight discomfort ☐ 3
- Moderate pain ☐ 2
- Severe pain ☐ 1
- Unbearable pain ☐ 0

ii) **Pain Rating**
Please complete this visual analogue scale by marking with a single line at a point that indicates your opinion of the severity of your pain.

EXAMPLE:



How severe is your pain?



iii) **Pain Frequency**
How frequent is this pain?

- No pain at any time ☐ 2
- Pain at certain times (eg at night),
in certain positions (eg when sitting)
or in certain circumstances (eg when walking) ☐ 1
- Constant pain ☐ 0

iv)

Sleep

How does your orthopaedic problem affect your sleeping habits?

- Sleep well ☐ 4
 Have less than 8 hours sleep ☐ 3
 Have less than 6 hours sleep ☐ 2
 Have less than 4 hours sleep ☐ 1
 Have less than 2 hours sleep ☐ 0

v)

Mobility

Does your orthopaedic problem impose any restriction on your mobility?

- No restriction ☐ 4
 Some restriction ☐ 3
 Confined to home except for escorted outings ☐ 2
 Confined to chair or wheelchair or able to move around
 house only with support from an assistant ☐ 1
 Confined to bed ☐ 0

vi)

Employment/Availability for Work

How does your orthopaedic problem affect your work (or your availability for work if unemployed)?

- Not applicable/retired ☐ 4
 No problems at work ☐ 4
 Impaired performance at work ☐ 3
 Performance at work severely limited ☐ 2
 Unable to undertake existing work ☐ 1
 Unable to undertake any paid employment ☐ 0

vii)

Financial dependents

Does your partner and/or your family depend on you for financial support?

- Not at all/not applicable ☐ 3
 Partly ☐ 2
 Mostly ☐ 1
 Completely ☐ 0

viii) **Physical dependents**

Does your partner (or close relative) depend on you for physical support (ie is he/she disabled or infirm)?

Not at all/not applicable ☐ 3
 Partly ☐ 2
 Mostly ☐ 1
 Completely ☐ 0

ix) **Self Care / Mobility / Social Life**

We are only interested here in the restrictions imposed by your orthopaedic condition on your normal activities. If the activity concerned would not apply to you, whether or not you had an orthopaedic problem, please tick "Not applicable".

	3 Not applicable	3 No difficulty with	2 Some difficulty but can manage	1 Receive help with	0 Completely unable to do
Getting in / out of bed	☐	☐	☐	☐	☐
Dressing	☐	☐	☐	☐	☐
Bathing / washing	☐	☐	☐	☐	☐
Getting to / using toilet	☐	☐	☐	☐	☐
Preparing / cooking meals	☐	☐	☐	☐	☐
Washing dishes	☐	☐	☐	☐	☐
Washing clothes	☐	☐	☐	☐	☐
Dusting / vacuum cleaning	☐	☐	☐	☐	☐
Cleaning house	☐	☐	☐	☐	☐
DIY / car maintenance	☐	☐	☐	☐	☐
Gardening	☐	☐	☐	☐	☐
Pursuing active interest or hobby	☐	☐	☐	☐	☐
Playing sport	☐	☐	☐	☐	☐
Moving around house	☐	☐	☐	☐	☐
Going up and down stairs	☐	☐	☐	☐	☐
Kneeling / bending	☐	☐	☐	☐	☐
Getting outside house	☐	☐	☐	☐	☐
Crossing road	☐	☐	☐	☐	☐
Local shopping	☐	☐	☐	☐	☐
Visiting friends / eating out	☐	☐	☐	☐	☐
Travelling by bus / train	☐	☐	☐	☐	☐
Driving a car	☐	☐	☐	☐	☐
Going on holiday	☐	☐	☐	☐	☐

TOTAL McCREE SCORE

NOW, PLEASE CHECK THAT YOU HAVE ANSWERED ALL THE QUESTIONS

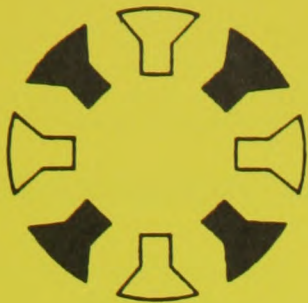
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PLEASE RETURN TO:

P. McCree BA, MSc, DHMSA, FRSA
Department of Orthopaedic Surgery
The Horton General Hospital
Oxford Road, Banbury, Oxon OX16 9AL
Tel: Banbury (0295) 275500

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UNIT NUMBER:

CONSULTANT:

CLINIC:

DATE:

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THE HORTON GENERAL HOSPITAL
DEPARTMENT OF ORTHOPAEDIC SURGERY
PATIENT QUESTIONNAIRE

TO BE COMPLETED ON DAY 11

Thank you for agreeing to take part in this study. We are trying to find out how orthopaedic problems affect people's daily life, family life, social life and work. We are also trying to establish what difference medication makes.

It is important that both questionnaires are completed on specific days in accordance with the following timetable:

DAY 1	Start Medication
DAY 4	Complete First Questionnaire (Green Copy)
DAY 7	Finish Medication
DAY 11	Complete Second Questionnaire (Yellow Copy)

This information is for research purposes only and will not be recorded in your hospital notes. Your own doctor is aware of the study, but will not have access to any of the data.

Your replies to this questionnaire will be treated in strict confidence. The results will be presented only in aggregated form so that the identification of individuals will not be possible.

Most of the questions can be answered by putting a tick in the appropriate box. Please make sure that you answer all the questions.

APPROVED BY THE NORTH OXFORDSHIRE ETHICS COMMITTEE

THE BARTHEL ADL INDEX

In this section we are interested in learning how your orthopaedic problem has affected your ability to perform a number of everyday tasks. Read each item and place a firm tick in the box opposite the reply that best describes your usual situation or abilities over the past week.

Please tick only one box in each section.

i) **Feeding**

Can you feed yourself a meal from a tray or table when someone puts it within your reach?

- Yes, independently, at reasonable speed ☐ 2
 Yes, but need help with cutting, spreading ☐ 1
 No, unable to do so, even with help ☐ 0

ii) **Bed/Chair Transfer**

Can you move from a chair (or wheelchair) to a bed, sit up in bed and return to a chair?

- Yes, independently ☐ 3
 Yes, but need (minimal) help or supervision ☐ 2
 Able to sit, but need major help ☐ 1
 No, unable. Have to be lifted bodily ☐ 0

iii) **Personal Care**

Can you wash your hands and face, comb your hair, clean your teeth and shave/put on your own make-up?

- Yes, face, hair, teeth, shave/make-up, all alone ☐ 1
 No, dependent on others ☐ 0

iv) **Managing Toilet**

Can you use the toilet without help? (includes getting on/off toilet, adjusting clothes, cleaning yourself).

- Yes, independently ☐ 2
 Yes, but need help ☐ 1
 No, unable ☐ 0

v) **Bathing**

Can you take a bath or shower without anyone's help? (includes sponge bath).

- Yes, independently ☐ 1
 No, unable without someone else ☐ 0

- vi) **Mobility**
Can you walk (or manoeuvre a wheelchair) on a level surface for at least 50 yards without help or supervision? (with any aid except a rollator/walking frame)
- Yes, may use aid ☐ 3
Yes, but with help of another person
(verbal or physical) ☐ 2
Yes, but only in wheelchair ☐ 1
No, unable (immobile) ☐ 0
- vii) **Stairs**
Can you go safely up and down stairs without help or supervision?
(using rails, sticks or crutches, if necessary)
- Yes, without help or supervision ☐ 2
Yes, but need help or supervision ☐ 1
No, unable ☐ 0
- viii) **Dressing**
Can you dress and undress yourself, including doing up zips, buttons and your shoelaces without help?
- Yes, independently ☐ 2
Yes, but need help (can do at least half the
work myself) ☐ 1
No, unable ☐ 0
- ix) **Bowels**
Can you control your bowels and avoid having accidents?
- Yes, no accidents ☐ 2
Yes, but have occasional accidents or need help ☐ 1
No, unable (incontinent of bowels) ☐ 0
- x) **Bladder**
Can you control your bladder day and night?
- Yes, no accidents (includes managing catheter alone) ☐ 2
Yes, occasional accidents (or need help with
catheter etc) ☐ 1
No, unable (incontinent of bladder) ☐ 0

TOTAL BARTHEL SCORE

THE FRENCHAY ACTIVITIES INDEX

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Please tick only one box in each section.

In the last 3/6 months how often have you...

- | | | |
|------|---|----------------------------|
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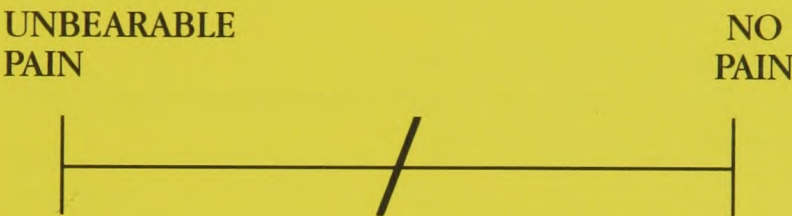
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viii)

Physical dependents

Does your partner (or close relative) depend on you for physical support (ie is he/she disabled or infirm)?

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Partly

Mostly

Completely

3

2

1

0

ix)

Self Care / Mobility / Social Life

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Washing clothes	☐	☐	☐	☐	☐
Dusting / vacuum cleaning	☐	☐	☐	☐	☐
Cleaning house	☐	☐	☐	☐	☐
DIY / car maintenance	☐	☐	☐	☐	☐
Gardening	☐	☐	☐	☐	☐
Pursuing active interest or hobby	☐	☐	☐	☐	☐
Playing sport	☐	☐	☐	☐	☐
Moving around house	☐	☐	☐	☐	☐
Going up and down stairs	☐	☐	☐	☐	☐
Kneeling / bending	☐	☐	☐	☐	☐
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Local shopping	☐	☐	☐	☐	☐
Visiting friends / eating out	☐	☐	☐	☐	☐
Travelling by bus / train	☐	☐	☐	☐	☐
Driving a car	☐	☐	☐	☐	☐
Going on holiday	☐	☐	☐	☐	☐

TOTAL McCREE SCORE

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