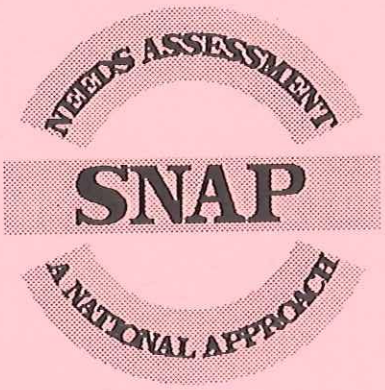
Scottish Needs Assessment Programme



Cataract

Surgery

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SCOTTISH NEEDS ASSESSMENT PROGRAMME

ACUTE SERVICES NETWORK

CATARACT SURGERY

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To undertake this study we have used the Public Health Needs Network Register and we would particularly like to thank our colleagues in Northern and North Western Regions of England for so generously donating their reports and giving additional advice and material which was so helpful in our work.

The data and reports used for the analyses presented here have been sent to each Health Board's Department of Public Health Medicine.

Copies are also available from

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EXECUTIVE SUMMARY

The Scottish Needs Assessment Programme (SNAP) was established by the Scottish Forum for Public Health Medicine in early 1992 with six networks - acute services, priority services, women's health, child health, health promotion and communicable disease/ environmental health. A seventh network - information advisory - provides advice on information and data systems and availability across the programme. SNAP started as a self-help initiative by public health medicine with the central aim of encouraging co-operation and sharing of work in needs assessment in Scottish Health Boards. The networks have the ability to consult widely and using research and needs assessment methodologies achieve a national perspective of needs for the specified priority topic. This may take the form of a consensus or of a range of options to act as guidance for health service provision in the Boards.

Cataract was chosen as a priority to examine as,

a) it is a significant cause of visual impairment and blindness in the elderly thus compromising independent living.

b) an effective treatment which is relatively inexpensive and overwhelmingly successful has been developed in the last 10 years. This is the only effective treatment for cataract.

c) there are marked variations in cataract surgery rates and waiting times indicating possible problems with supply and unmet need despite a background of increasing levels of surgery.

This needs assessment, in common with other needs assessments being carried out in the SNAP programme was comparative, using expressed demand as a proxy for need. Some information has been presented, however, examining the level of unmet need in the community.

This study reviewed only adult services, with particular reference to acquired or degenerative senile cataract in the elderly, defined as 65 years and over where it was shown there was the greatest demand currently and that this was increasing. It was assumed that younger patients with the unusual and rarer form of cataract disease were currently having their needs met, although this may require examination at a later stage.

This study showed a potential unmet need of about 11 000 cases per year in Scotland (in 1991 the total number of operations was 10 612) with variations between and within Boards of age-standardised rates of cataract surgery, unlikely to be related to differences in incidence. (Section 3 and 6)

For most Health Boards the unmet need could not be addressed immediately and they require to develop priorities and strategies for cataract surgery. This report provides methodologies and the information to enable Boards to consider local levels of activity and likely future demand based on trend information to enable more equitable access (Section 6 and 7). Introduced in the report is guidance for setting day case levels especially for the very elderly (Section 5).

Issues for purchasers and further work required that may qualify these methodologies are given in the report (Section 8 and 9).

The objective of the SNAP needs assessment reports is to provide comprehensive but manageable synthesis of available information offering practical options and solutions for health service managers. In developing our needs assessment for cataract surgery it would be helpful to have feedback on our report. We would be grateful if you could return the simple evaluation sheet included in this report.

1. INTRODUCTION

The Scottish Needs Assessment Programme (SNAP) was established by the Scottish Forum for Public Health Medicine in early 1992 with six networks - acute services, priority services, women's health, child health, health promotion and communicable disease/ environmental health. A seventh network - information advisory - provides advice on information and data systems and availability across the programme. SNAP started as a self-help initiative by public health medicine with the central aim of encouraging co-operation and sharing of work in needs assessment in Scottish Health Boards. The networks have the ability to consult widely and using research and needs assessment methodologies achieve a national perspective of needs for the specified priority topic. This may take the form of a consensus or of a range of options to act as guidance for health service provision in the Boards.

1.1 Priority For Needs Assessment

The Acute Services Network agreed that cataract surgery would be a priority project for 1992/93 because:

a) Cataract is a condition affecting mainly elderly people defined as 65 years and over which can cause visual handicap and compromise independent living. It is a significant cause of blindness in the elderly.

b) An effective treatment has been developed in the last 10 years with a good outcome, signifying an opportunity to achieve health gain for the population.

c) Cataract surgery makes the greatest demands on the hospital eye service in terms of patient numbers and beddays and this is likely to increase as cataract has been identified as a priority area for waiting list and waiting time guarantees.

d) There are significant variations in cataract surgery rates and waiting times indicating possible problems with supply and unmet need.

e) It is likely that the common attitude among elderly people is that poor sight is a natural and inevitable penalty of growing old and would result in a failure to seek help for failing vision. This is likely to result in "silent" unmet need in the population of elderly people.

1.2 Type of Needs Assessment

This needs assessment, in common with other needs assessments being carried out in the SNAP programme is comparative, using expressed demand as a proxy for need. Some information will be presented, however, which will examine the available evidence on the level of unmet need in the community and highlight the requirement for a population based epidemiological study of true need, considering amongst other things,

a) the prevalence and distribution of the condition in the population,

b) the individual's probability of benefiting from the the intervention and,

c) the individual's wish to be treated.

1.3 Exclusions

This needs assessment only reviews adult services, with particular reference to acquired or degenerative senile cataract in the elderly where it will be shown that there is the greatest and increasing demand for services. It is assumed that younger patients with the unusual and rarer forms of cataract disease are currently having their needs met, although this may require further examination at a later stage.

This report did not examine activity in the private sector which, until recently, only represented a small fraction of clinical workload in Scotland. That is changing and may continue to do so because of waiting list initiatives and so could be of importance in the future.

1.4 Eye Health

Cataract surgery has been selected because of an identified demand on services. However any consideration of eye health in the elderly should include consideration of the other three major causes of visual disability - glaucoma, macular degeneration and diabetic retinopathy. These could either be considered individually for further needs assessments, or ideally be brought into a comprehensive assessment of visual health in the elderly. These may be appropriate when the needs for cataract surgery are reviewed.

1.5 Postscript

When this report was in final draft we received copies of the Scottish Health Service Advisory Council's paper on Ophthalmology Services for the Elderly in the Community (February 1993) and the provisional version of the NHS Management Executive Needs Assessment for Cataract Surgery (December 1992). Our needs assessment covers the recommendations in the Scottish Report, and although it is not as detailed as the English Report, it covers similar ground.

1.6 Evaluation of Needs Assessment Reports

The objective of the SNAP needs assessment reports in general and this report on surgery for cataract in particular is to provide a comprehensive but manageable synthesis of information offering practical options and solutions for health service managers. In developing our Needs Assessments in Scotland it would be helpful to us to have feedback on the reports produced. We would be grateful, therefore, if you could complete the enclosed simple evaluation sheet on the cataract report and return it to Mrs Susie Stewart at Scottish Needs Assessment Programme, 69 Oakfield Avenue, Glasgow, G12 8QQ.

2 WHAT IS CATARACT?

2.1 Definition

Cataract is defined as an opacity of the lens of the eye. It can be either congenital or acquired, of which the acquired form is by far the most common. Acquired cataract is predominantly a result of degeneration of the lens fibres and as such is a disease of increasing age. Although some benefit in the early stages can be obtained by prescription of spectacles, and improved lighting, the only definitive treatment for cataract is surgical removal of the lens allied to replacement with a new, transparent, artificial lens.

2.2 Type of Cataract

The opacity of cataract can either be at the centre of the lens or on the periphery. If in the centre there is early impairment of vision, but in either case there is gradual but significant loss of the normal refractive ability of the eye, with light waves no longer focussing on the retina. The type of cataract is important in the rate at which the disease progresses and is part of the clinical decision determining when to operate.

2.3 Disability and Handicap

It is useful to consider the effect of cataract in the elderly in terms of the WHO classification of Impairments, Disabilities and Handicaps (1). Thus impairments are the physiological and structural changes which cause loss of function; disabilities are the restrictions or lack of ability to perform certain activities within the range considered normal which are as a result of the impairments; and handicaps are the disadvantages experienced by an individual (compared to other people of a similar age, sex and culture) which result from their impairments and disabilities. Thus the impairment of cataract is the reduced visual acuity, which results in the disability of being unable, for example, to read, drive, walk to the shops or dress, and thus the handicap in losing independence of living. There is evidence that the disabilities and handicaps associated with cataract are significant and are a major cause of poor quality of life in the elderly. The visual impairment from cataract is almost universally reversible for most patients with cataract disease as a result of the introduction of lens implants 10 years ago.

2.4 Caveats

While the above has described cataract and discussed its potential effects on lifestyle, there is unfortunately no one readily usable objective measure of the degree of handicap incurred. This presents difficulties in assessing the need for cataract surgery in the individual and the population in objective quantifiable terms and in assessing the overall benefits - a necessary component of any needs assessment. While visual acuity (a measurement of impairment of vision (see Appendix 1)) is used as one objective measure of visual impairment, it does not provide sufficient information to assess handicap especially in those who do not have complete lens opacity. It is but one factor in the decision making process which results in a need for cataract surgery. This is expanded in the next section.

3 FACTORS INFLUENCING THE DEMAND FOR CATARACT SURGERY

3.1 True Incidence and Prevalance of Cataract

3.1.1 Age

The incidence (number of new cases arising each year) and prevalence (number of cases existing at any moment in time) of cataract rises with increasing age. The most comprehensive population study in a comparable Caucasian population is the Framingham Eye Study (2) (see also section 6.1). This showed an increasing prevalence ratio of cataract from 1.23% in the 53-57 age group to 32.42% in the 78-82 age group. The calculated corresponding incidence rates per 1000 per annum rose from 3.24 at age 55 to 43.2 at age 75 (3). Thus the increasing numbers of people aged 75 and over is likely to significantly increase the demand for cataract surgery, and the age structure of individual Boards will be an important determinant of a Board's need for cataract surgery services.

Table 1

ESTIMATED INCIDENT CATARACT CASES PER YEAR:SCOTLAND:PERSONS

(1990 mid year population estimates)

Age Group	Population	Incidence /1000/year	Estimated Incident Cases
50-52	171 420	2.5	429
53-54	112 248	3.2	359
55-57	163 087	3.2	522
58-59	110 635	3.8	420
60-62	159 965	3.8	608
63-64	104 391	12.2	1274
65-67	147 732	12.2	1802
68-69	98 930	7.4	732
70-72	118 492	7.4	877
73-74	68 306	43.2	2951
75+	327 939	43.2	14167
TOTAL			24141

Source: Northern Regional Health Authority (4) (1991); Sperduto and Hiller (1984); (3) Leibowitz et al (1980) (2)

The above Table postulates a possible 20 529 cases in the over 65 years age group arising in Scotland each year.

In 1991 in Scotland as a whole there were 8653 operations for cataract in those over 65 years. This could suggest an unmet need each year of 11 876 cases in Scotland.

An examination by Northern Regional Health Authority (4) of the feasibility of using the Framingham data in service planning and contracting concluded that the data were not of a large enough sample for this purpose and that larger studies in this country would be required. Nevertheless the study does demonstrate reliably the clear link of increasing cataract with age.

3.1.2 Gender

The Framingham Eye Study showed that the incidence of cataract in their population was higher in women than men, except in the over 75 years age group. This has been challenged elsewhere but, as the major factors in the cause of cataract remain largely unknown, it is not possible to speculate on any reason for these possible differences.

3.1.3 Geographic Variation

International studies show a variation between countries that may be largely explained by diet, levels of exposure to light and eye infection rates. We did not locate any studies in Britain that looked at regional variation.

3.1.4 Ethnicity

There have been studies in the United Kingdom looking at the Asian and Caucasian populations in Leicester (5) which demonstrated a significantly higher incidence of cataract in Asians and that age related cataract developed earlier. A strict vegetarian diet was the major risk factor for developing cataracts in the Asians. The numbers were small in these studies but it highlights the need to consider this group.

3.1.5 Environment

Exposure to ultraviolet light increases the risk of cataract development. The erosion of the ozone layer is thus likely to lead to an increased incidence of cataract, perhaps in a younger age group but the overall effect is difficult to predict.

3.1.6 Diet

Recent work (9) has suggested that intake of vitamins A and C has a protoactive effect against the formation of cataract. As the aetiology of cataract is unknown, except when associated with specific diseases, diet may eventually prove to be an important factor in prevention.

3.1.7 Bilateral Disease

The Framingham Study showed that only 3.6% of people with cataract had unilateral disease, and this percentage decreased with increasing age. The disease in both eyes usually does not develop at the same time.

While it is desirable to obtain good vision in both eyes by operating, it is not essential. Clinically it is not considered prudent to operate on bilateral cataract as one procedure because of risks in the rare event of infection.

3.1.8 Other

Other risk factors include smoking, systemic hypertension, renal failure, diabetes and a family history of cataract.

3.1.9 Changing Incidence

It has not been possible to find any epidemological studies demonstrating a change in incidence, excluding risk factors (mainly demographic), over time because the aetiology is essentially unknown. Eye studies are expensive and difficult to undertake and any change in incidence may remain unknown for some time.

3.2 Detection of Cataract

The numbers of patients undergoing surgery is a result of a complex series of decisions by the patient and the professionals involved.

3.2.1 Patient's Perception

The factors acting on a patient coming forward with a complaint of poor eyesight or other eye symptoms due to cataract are various. Their tolerance of disability, type of lifestyle, need to drive and the presence of other illnesses are all important factors. It has been said that elderly people are now less likely to accept disability and wish to continue with an active lifestyle including driving for longer than was previously the case (6). This will change the threshold of patients presenting and lead to an increasing demand for cataract surgery.

3.2.2 Primary Care Detection

Advanced cataract disease is easy to detect if attention is sought. The increasing percentage of GPs who are vocationally trained and the existence of the new GP contract with the requirement for assessment of the over 75 years will all tend to increase detection and thus the demand for cataract surgery. There will also be an unquantified number referred after detection at a routine optician's eye test.

3.2.3 Ability to Predict

It has been shown that a patient's definition of poor vision is a poor predictor of eye disease including cataract, (7) significantly under and over-estimating disease. Also in population surveys questions on visual acuity are poor predictors and no substitute for eye testing.

3.3 Decision to Refer

3.3.1 GP Definition of Cataract Patient Likely to Benefit

As has been discussed above, the pathological diagnosis of cataract, while straightforward, may require to be modified for the purposes of a needs assessment to include some assessment of the ability to benefit from treatment. This will be modified by the perceived and actual effectiveness of available treatment methods in each individual's situation. Thus 'demand incidence' (incidence as defined by operations carried out or patients referred or listed for treatment) will be subject to this bias.

3.3.2 Supply of Services

The decision to refer by the GP and thus the demand on the hospital service is also a function of the level of supply of hospital eye services. Waiting time for outpatient appointment and for operation, geographical access to both outpatient clinic and hospital and the availability of alternatives all influence the demand made on services. A change in the level of supply from a previously restrictive level to a more plentiful one is thus likely to increase demand by itself. (see section 6)

3.4 Decision to Operate

3.4.1 Clinical Threshold

There is no uniform level of visual acuity at which operation takes place. However with the improved effectiveness of the available treatment, the threshold is likely to change (in fact it is probable that it is already changing)(6). It is necessary to monitor this threshold to estimate the effect of change on numbers of cataract operations performed.

Population based prevalence studies which have been carried out have used a clinical diagnosis of a lens opacity linked to a level of visual acuity of 6/18 or less (see Appendix 1). This level of visual acuity cannot, however be assumed to be an objective measure used by every consultant in every case.

Baxter (8)(see Appendix 4) examined the factors acting in clinical decision making and concluded that the main areas were:

1. personal style of the consultant
2. waiting time for operation
3. resource availability (including outpatient time for post operative follow-up)
4. perspective taken
5. patient circumstances
6. consultant attitude to risk

It can be seen that the decision is a complex one and includes significant subjective factors.

3.4.2 Patient Characteristics

As stated above, changing expectations and lifestyle of patients will lead to increased demand for treatment, and the clinician will be responsive to these factors. Clinical factors such as intercurrent disease (heart, lung, neurological) are part of the decision making process but in most instances are controllable with good management before surgery. In the specific case of diabetic patients, referral for cataract removal may be made to allow surveillance of retinopathy.

3.4.3 Timing of Second Operation

It is said that the optimum time for the second operation is six months, but record linkage data for Scotland indicates 10% of cases undergo a second eye operation within one year, with a further 10% in the second year.

It is expected that the gap between first and second eye operations will narrow and be a further cause of increased demand for surgery. The need for and the timing of second eye operations requires further exploration and research. RECOMMENDATION 1

3.4.4 Government Initiatives

The current charter for cataract surgery is that no patient on the true waiting list should wait longer than 51 weeks for treatment and this development is already having an effect on clinical practice and service delivery. There will be increasing patient awareness of these guarantees.

4 SCOPE FOR PREVENTION

4.1 General

A knowledge of the aetiology of cataract could well lead to effective preventive strategies but to date this remains poorly studied. The development of cataract is probably a long term process which has both biochemical and physiological components aggravated by ageing.

4.2 Specific

Some approaches under investigation may be applicable for certain groups such as diabetic patients with cataracts. To date epidemiological studies looking at the anticataractogenic effects of vitamins (9) and of aspirin (10) are inconclusive. However, they suggest that dietary carotenoids, but not necessarily B carotene, and long term vitamin C may decrease the risk of cataracts severe enough for extraction in women only. The associated benefits of cataract protection with the use of long term small dose aspirin in arterial disease prevention are as yet unproved (10).

Further evidence is awaited from the large scale prospective heart disease trials currently underway.

The development of a truly preventive or protective strategy for cataract disease would have an enormous effect but remains to be discovered. Until then modern cataract surgery is the most effective strategy for the prevention of disability and handicap due to poor visual acuity from advanced cataracts.

5 TREATMENT METHODS

5.1 Non Surgical Methods

Although early cataracts can be treated by prescribing appropriate glasses the overwhelming majority of people will come to surgery. In the early stages patients can have marked benefit from the prescription of lenses after good refraction testing.

5.2 Surgical Methods

5.2.1 Evolution of Surgery

The removal of the opaque lens (dislocation) is one of the oldest operations known to man and until recent years it has only been modified by the extraction of the lens with the supply of high magnification glasses or contact lenses. As benefit to the patient was marginal, operation was only undertaken when there was advanced disease. Development of the intraocular lens implant over 10 years ago has revolutionised the ability to improve visual acuity with most people having significant restoration of their sight.

5.2.2 Cataract Surgery

Modern cataract surgery means that virtually all patients will have a extracapsular extraction of the lens with concommitant lens implant - about two thirds will be carried out under local anaesthetic. Lenses are relatively inexpensive (around £25 - £100) and the operation is undertaken using an operating microscope. There have been no reliable studies on the costing of cataract surgery but current prices in the private sector in Scotland for inpatient treatment with general anaesthetic are about £1600.

5.2.3 Phakoemulsification

A further development has been phakoemulsification of the lens (ultrasound destruction and aspiration with lens implant). This has the advantage of a smaller incision and so causes less post-operative astigmatism (distortion of vision). The disadvantages are that only the newer kind of flexible implants can be used and there is a learning curve for its use as well as the cost of the machine (around
£30 000), and a variable cost of approximately £20 per case. It is considered that the health gains are marginal with this newer technique and to date in Scotland the SMR1 data indicates less than 1% of cataract surgery is recorded to phakoemulsification.

5.3 Type of Care and Role of Day Case Surgery

5.3.1 Routine Care

Cataract surgery is exclusively undertaken by ophthalmic surgeons, and remains largely an inpatient procedure. In the USA and the developing world on the other hand day case surgery predominates.

The maximum stay for cataract surgery has fallen significantly to about four days with only 1% day cases. While a change in this type of care is desirable both for the service and from the patients point of view, because many patients are elderly this may not always be appropriate.

5.3.2 Day Case Surgery

The recent Scottish Health Service Advisory Council Document - 'Day Case Surgery for Cataracts'(11) - recommends that 30% of cataracts should be day cases by the end of 1993 rising to 80% by 1997. The document sets a suggested protocol for identification, assessment, criteria and procedures for day case surgery. It is recommended that this is endorsed by Health Boards. It is further recommended that studies are undertaken to look at the proportion of patients under and over 75 years of age, male and female, who would be appropriate for this form of care. This would form the basis for the appropriate day case targets. This approach is already being adopted in Argyll and Clyde Health Board by its ophthalmic services at the Royal Alexandra Hospital and the protocol that was developed by its clinicians could act as a model for other Health Boards. (See Appendix 2)

RECOMMENDATION 2 and 3

5.3.3. Anaesthesia

Local anaesthesia is frequently used for all forms of eye surgery and a recent survey of cataract surgery in England and Wales (12) showed the proportion had risen to 75% with half of these patients receiving additional sedation. Medical contraindications and patient preference are the major reasons for the selection of the type of anaesthesia. General anaesthesia has some advantages because of guaranteed akinesia (movement of eye) and perioperative control of ocular physiology. New techniques in general anaesthesia are particularly advantageous but it does appear to be declining for cataract surgery. It is considered either form is suitable for day surgery. Local anaesthesia is significantly cheaper but has the additional complication of periorbital haemorrhage.

5.3.4 Patient Information

It is important that the patient is informed at an early stage about what are cataracts, the treatments available and their results. An example of an American patient information leaflet is included in Appendix 3. While the size of the print is a challenge, the concept appears worth pursuing.

RECOMMENDATION 4

5.4 Complications

5.4.1 General Complications

Recovery from cataract surgery is usually swift and only requires mild restriction on activity for a matter of days. About 10% of patients will experience some post operative complications such as infection, wound disruption, glaucoma, retinal detachment and retrobulbar haemorrhage (local anaesthetic complication). These complications are about 1-2% each and in only about 1% of cases are they severe enough to result in the loss of sight in the eye. A recent audit in Tayside (13) demonstrated that feedback of complications to clinicians has led to a positive effect on reducing complications and it is recommended that this type of feedback should continue.

RECOMMENDATION 5

5.4.2 Day Case Monitoring

Day case patients need monitoring after discharge to prevent complications and a protocol has been described in the recent Scottish Health Service Advisory Council Document. These follow-ups can be undertaken by skilled nursing staff with consultant back-up to maximise out-patient management. The development of out-reach follow-up for day case patients needs to be explored and evaluated.

RECOMMENDATION 6

5.4.3 Lens Implants

SMR1 data from 1989 (OPCS 4) demonstrates there have only been 50 revisions of lens implants and 20 removals in Scotland for each of the last three years. These data are not adequate for clinical purposes but give an indication that this does not appear to be a major complication with over 10 000 lens inserts a year.

5.4.4 Intercurrent Eye Disease

Although not a complication per se, cataracts can mask other eye disorders, most notably macular degeneration which is the major cause of blindness, after diabetes, in Britain. There is no effective medical or surgical treatment for this condition. Cataract surgery therefore would not restore sight in these cases although may give some improvement. The Framingham study showed that 16% of the population with cataracts had other ocular pathology.

5.5 Evaluation

5.5.1 Technological Evaluation

While there are clinical series on results of cataract surgery it has not been possible to find an evaluation of the intraocular lens implant in the early stages of its introduction. It would not be possible now to undertake such a trial but evaluation of phakoemulsification compared with conventional surgery, type of care and anaesthesia may be worthwhile considering before widespread adoption of this technology. RECOMMENDATION 7

5.5.2 Clinical Evaluation

A recent large scale survey (12) of eye surgeons in England and Wales had a 86% response rate (376 surgeons) and confirmed that intraocular lens implants are used in 99% of operations but that some surgeons still use intracapsular extraction. Only 2% were undertaken by phakoemulsification. There were no outcome measures and the choice of anaesthesia, although mainly under local, was not governed by specific protocols.

5.5.3 Economic Evaluation

Drummond (14) looked at the economic aspects of cataract using a cost utility method and compared it with a number of other health interventions. Using existing work he assessed the utility gain from blindness relieved by cataract surgery to be from 0.4 to 1.0. The cost per quality adjusted life year (QALY) was £485 and compares favourably to hip replacement (£750) and coronary artery bypass grafting (£1040 to £12 600 depending on severity of disease) at 1983 prices. The highest cost per QALY was hospital haemodialysis at £14 000.

6 POTENTIAL DEMAND FOR CATARACT SURGERY

6.1 Epidemiological data

6.1.1 Prevalence of Cataract

The most quoted and referred to prevalence study is the Framingham Eye Study which looked at the prevalence of the four principal causes of ocular pathology (cataract, glaucoma, diabetic retinopathy and macular degeneration) in America in 1973-75 in a 2600 population sample from the Framingham Heart Study follow-up. The caveats for using this data are: its response rate (67%); the size of the sample; and statistical difficulties in using the age specific prevalence estimates. Table 2 shows the effect of using the Framingham prevalence ratios on Scotland's population.

The study included those who had already had an operation and there was no assessment of potential benefit from treatment. Thus prevalence does not necessarily mean intention to treat.

Despite this study being nearly 20 years old it remains the most methodologically exact epidemiological study of eye disease to date.

Table 2

ESTIMATED PREVALENT CASES OF CATARACT FOR SCOTLAND - 1990 MID YEAR ESTIMATES FROM FRAMINGHAM EYE STUDY

AGE GROUP	POPULATION	PREVALENCE RATIO %	ESTIMATED NUMBER
53 - 57	275335	1.23	3387
58 - 62	270600	2.83	7658
63 - 67	252123	4.69	11825
68 - 72	217422	10.48	22786
73 - 77	169806	13.8	23433
78 - 82	125773	32.42	40776
TOTAL	1311059		109864

Source: From 'Assessing the Need for Cataract Surgery' Northern Regional Health Authority 1991 (4)

6.1.2 Incidence of Cataract

Cataract is a progressive disease and it is therefore difficult to assess incidence. The Framingham data have however been modified by Leibowitz (1990)(2) and Sperduto & Hiller (1984)(3) to provide "incidence" rates for the estimation of new cataract cases in a population.

Using these data as modified by the Northern Region, (4) it is possible to estimate the number of cataracts occurring each year at about 25 000 in Scotland. (see Table 1 section 3.1).

These estimates, with their limitations, do confirm what is no more than a public health and clinical impression that the current number of operations being undertaken in Scotland is at least half to a third of what is possibly required.

6.1.3 Other Cross Sectional Prevalence Studies

There are few such studies in the world literature, including Britain, that could be used for this needs assessment. This may be because of the expense and methodological difficulties in carrying out such studies (7).

6.1.4 Visual Impairment

The Public Health Research and Resource Centre (7) undertook a review of the literature on visual impairment and disability among older people in Britain as a case study in epidemiologically based needs assessment. This comprehensive report contains invaluable information on the social needs of visually handicapped elderly people. It includes some prevalence information on the major eye disorders.

Table 3

THE RELATIVE IMPORTANCE OF THE DIFFERENT CAUSES OF VISUAL IMPAIRMENT IN THE INNER CITY EYE SURVEY	
Cause	%
Cataract	54.7
Age related macular degeneration	17.0
Myopic degeneration	9.4
Corneal	5.7
Others	13.2
N=	55

Source: (7)
These data were not used in this study but the findings are recommended for the study of visual handicap needs assessment in the elderly.

6.2 Scottish Inpatient Data

6.2.1 General

SMR1 data has been collected since 1961 and contains patient characteristics including diagnostic details and up to two operations as well as some administrative details. Details by operation have been used extensively for this study from 1980. This includes a change in operation classification (1989) which allows a dual classification so that the type of operation and whether a lens implant was used can be recorded. While the changes in the classification have been significant, the codes for operations on lenses have remained relatively reliable across this change.

6.2.2 Cataract Surgery Numbers and Rates

There has been a steady and continuously increasing trend in the number of operations within Scotland with just over 5000 recorded in principal position in 1980 and 11 000 in 1991 (Fig 1). The number and rates by age and sex (Fig 2) have increased most in the 75-84 and 85+ age ranges. There are higher rates for females than for males except in the 0-44 group where the levels have been constant in this 12 year period, (this possibly indicates that all needs are met).

This is further emphasised by the crude three year operation rates 1980-82 abd 1989-91 (see Figure 3) which has more than doubled over the decade.

6.2.3 Variation by Area

Trends of crude discharge rates compared to Scotland for each Health Board can be seen in Fig 4. Each Board follows approximately the same rising trend as Scotland, although there are differences in rates between Boards.

The recent high rate for Borders is possibly because a new service was established with the opening of the Borders District General Hospital in 1989. The five year age standardised rate for Borders (see Appendix Table(i)) do not show these high rates that occur in the later years of the trend.

Age standardised rates (Fig 5 and Appendix Table (i)) confirm these variation in rate by area. The trends in age specific rates are shown in Fig 6 and show the rising rates with increasing age, the highest rates being expressed in the over 85 year olds.

Of the mainland boards, Lanarkshire and Lothian have the lowest rates at about 150 per 100 000 population age standardised (5 year aggregate), compared to 250 in Tayside. Using discharge rates by local government area there is marked variation within Health Boards, indicating a variation in demand and possibly an expression of unmet need (see Appendix Table (i)).

6.2.4 Operation Details

SMR1 has also been extensively used to look at type of operation, and reoperation rates within one and two years. Briefly, these data confirm the results as discussed in early sections of this report and data are available on application.

6.2.5 Workload

In the Day Case Review SMR1 data were used to examine cataracts as a proportion of total workload in ophthalmology and per consultant. The data can be analysed for length of stay and beds used although not undertaken for this study.

Table 4

CATARACTS AS A PERCENTAGE OF ALL DISCHARGES FROM OPHTHALMOLOGY SCOTLAND 1986 - 91

YEAR	CATARACTS AS % OF ALL CONDITIONS
1986	41
1987	42
1988	48
1989	49
1990	52
1991	51

Source: ISD, from "Day Case Surgery for Cataract" Management Executive/Scottish Health Service Advisory Council

6.3 Other Sources

6.3.1 Sources Examined

To examine the thesis of significant unmet need because of resource and performance factors, other patient based information schemes have been examined - SMR0 (outpatient consultation), and SMR3 (waiting list census) which includes cataracts as the tracer condition for ophthalmology. Lastly routine ISD(S)1 statistics were used part of which are available in the SCOTPIP3 module to look at performance indicators.

6.3.2 Outpatient Referral

SMR0 data have only been available since 1991 and from them it is possible to determine population based outpatient data relating, currently, to the clinical specialties only. Diagnosis is a future development. These data indicate that again there is significant variation in rates both between and within Health Boards (Fig 7). There is a correlation of lower referral patterns and operation rates from these data (Fig 8).

6.3.3 Waiting Time

SMR3 data, which is a census of patients waiting for inpatient treatment, has only been available this year from the September census. There may be a small problem with diagnostic accuracy for cataracts in one Health Board, but it is considered the December and March data will provide more reliable information on the numbers waiting both in ophthalmology and for cataract surgery.

These data are available down to hospital level with the distribution of waiting time (appendix table ii) and cross border flow for those waiting as at September 1992 (appendix table iii and iv). Only 3.8% (136) persons on the true waiting list for cataract surgery waited more than a year (target) in this census.

For the next censuses undoubtedly there will be the effect of major waiting list initiatives but it is felt that these data give an indication again of between Health Board variation in performance.

Table 5

PATIENTS ON OPHTHALMOLOGY WAITING LISTS FOR CATARACT BY HEALTH BOARD OF RESIDENCE AS AT SEPTEMBER 1992

BOARD OF RESIDENCE	NUMBERS WAITING	CRUDE RATE PER 1000 POPULATION OVER 65 YEARS
Argyll & Clyde	300	4.6
Ayrshire & Arran	726	12.3
Borders	33	1.7
Dumfries & Galloway	246	9.6
Fife	279	5.2
Forth Valley	-	- *
Grampian	193	2.7
Greater Glasgow	390	2.7
Highland	-	- *
Lanarkshire	413	5.8
Lothian	789	7.1
Tayside	193	2.9
Orkney	7	3.2
Shetland	11	3.5
Western Isles	1	0.2
Not Known	5	-
Scotland Total	3589	4.7

Source: ISD, SM3 Data

*NB: No data are available for Forth Valley or Highland as an SM3 procedure code was not available at Stirling Royal Infirmary or Raigmore Hospital.

6.3.4 Performance Indicators

For this report, ISD(S)1 data have been used through the SCOTPIP module to examine factors in performance that may explain these variations in operation rates and wait to operation. These data confirm, for the specialty of ophthalmology, that differences in performance between the Boards by and large persist. SMR1 indicates that now over 50% of ophthalmology workload is for cataract surgery, so examining ophthalmology in some instances can be used as a proxy for cataract. Looking at the indicators for length of stay, occupancy, throughput and turnover interval it does appear that there is a problem with effective utilisation of beds both for Scotland and the Health Boards.

Table 6

OPHTHALMOLOGY PERFORMANCE INDICATORS SCOTLAND (1992)	
Indicator	Value
Bed Occupancy Throughput per bed Turnover Interval	58.8% 52.3% (incl day cases) 3.0 days

Source: SCOTPIP3 ISD(S)1 March 31st 1992

Other indicator data from SCOTPIP3 confirms the problems with outpatient and inpatient waits.

Table 7

OPHTHALMOLOGY PERFORMANCE INDICATORS SCOTLAND (1992)	
Indicator	Value
Mean Wait for OPD Mean Wait for Cataract Surgery % Waiting > 6 months % Waiting > 12 months	45.0 days 129.8 days 27% 7.5%

Source: SCOTPIP3/SMR1

These data give no indication of staffing and operating theatre availability which are probably the most relevant factors for explaining the variation in performance between Health Boards. SCOTPIP also includes operation rates for cataract surgery over 65 years and waiting time which are useful monitoring tools. All these data are available down to Health Board level and are enhanced with SMR1 data to provide age, sex and case mix standardisation of length of stay and throughput.

6.3.5 Resources

There are other government statistical schemes for resources such as beds and manpower, but these were not analysed extensively as part of this needs assessment. Table 8 shows discharges per whole time equivalent consultant and available staffed beds in ophthalmology for each Board. This shows marked variations, the reasons for which have to be explored locally.

Table 8

DISCHARGE RATES PER CONSULTANT AND PER AVAILABLE STAFFED BED
BY HEALTH BOARD OF TREATMENT - OPHTHALMOLOGY

HEALTH BOARD OF TREATMENT	DISCHARGES PER WTE CONSULTANT	DISCHARGES PER AVERAGE AVAILABLE STAFFED BED
Argyll & Clyde	182.3	32.2
Ayrshire & Arran	205.7	19.9
Borders	332.0	47.4
Dumfries & Galloway	130.5	29.0
Fife	194.8	27.8
Forth Valley	125.5	29.5
Grampian	138.0	20.7
Greater Glasgow	124.5	19.2
Highland	154.3	17.1
Lanarkshire	122.2	22.6
Lothian	190.3	27.9
Orkney	N/A	N/A
Shetland	N/A	N/A
Tayside	278.4	36.6
Western Isles	N/A	N/A
Scotland	162.4	24.5

Source: SMR1; ISD(S)1

There is no doubt that resources have not been increased in ophthalmology in proportion to the rise in demand for cataract surgery. The effect of demographic changes and of the availability of new technology with its health gain potential have been generally unrecognised. Increasing public expectation will also be, as discussed before, a significant factor in future years for increasing demand. It is strongly recommended that a study on the resource requirements to undertake cataract surgery, with a more accurate assessment of the level of day case work feasible in this elderly group, be undertaken.

RECOMMENDATION 8

7 TARGET DEVELOPMENT

7.1 Assumptions

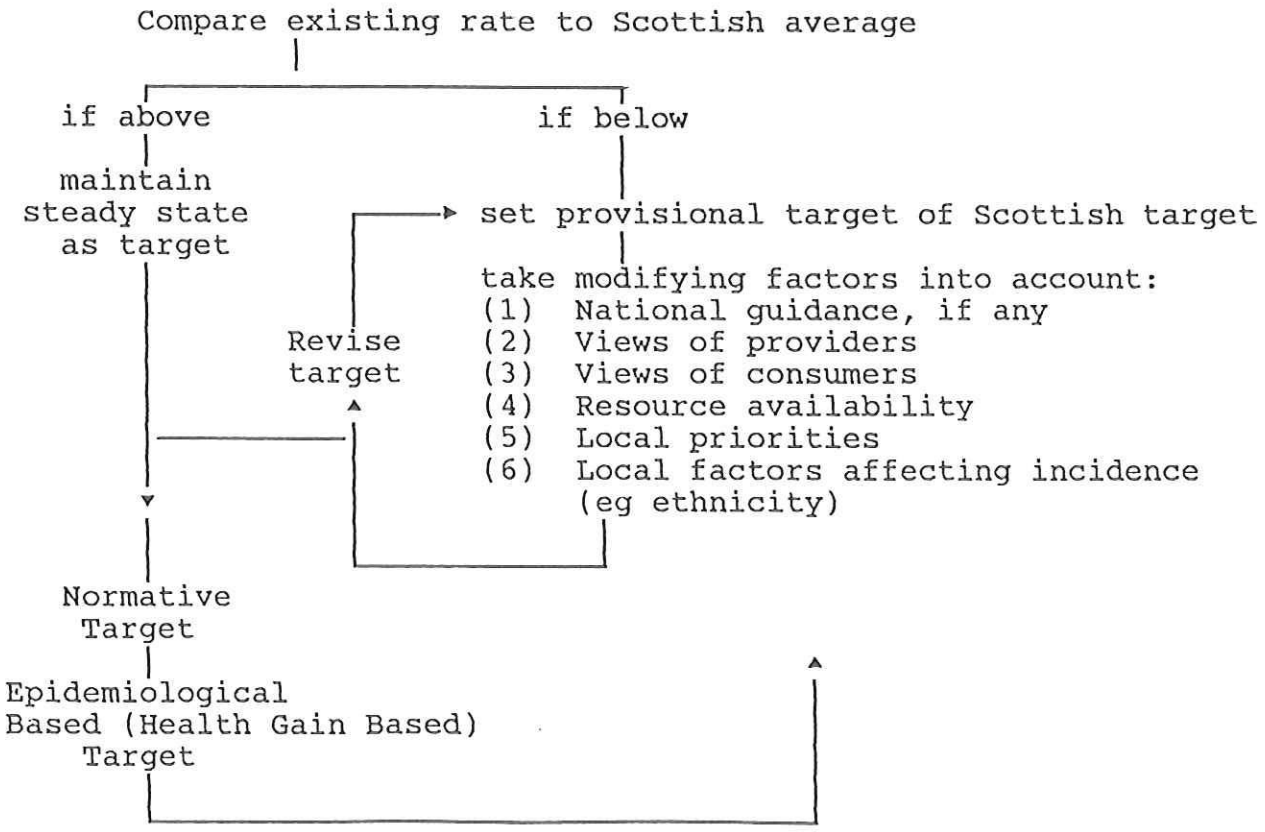
For the purposes of stating a target it is assumed that:

a) there is no geographical variation in incidence;
b) that need is greater than demand (epidemological evidence);
c) that demand is greater than supply (performance indicator evidence);
d) that there is negligible inappropriate supply;
e) that there is a high benefit ratio from surgery.
f) that treatment in the private sector is at a low level.

7.2 Equity and Model for Target Development

The principle behind needs assessment is that need, demand and supply are to be matched to provide equity of access to appropriate services and that there will be a health gain. It is considered that this study demonstrates that equity of access is not the case for cataract disease in Scotland. Need has proved to be extensive, unmatched to supply and resources. Additional more effective and efficient allocation of resources for cataract treatment in most areas of Scotland is required.

To meet these needs the model below is proposed to help Boards develop and meet targets.



7.3 Comparative Target

It is suggested that initially a target of the all Scotland age standardised rate should be used. Appendix Table (ii) summarises the five year aggregated age standardised rates by Health Board. It indicates observed numbers of operations done compared to the expected numbers if each Health Board was subject to the all Scotland rate. The effect of this per year is shown in appendix table (v).

Table 9

Target setting (1) : applying Scotland age standardised rate to each Health Board (mainland only)

Health Board	Estimated additional operations/year	Estimated number in excess of target
Argyll & Clyde	-	148
Ayrshire & Arran	89	-
Borders	22	-
Dumfries & Galloway	46	-
Fife	-	146
Forth Valley	17	-
Grampian	-	71
Greater Glasgow	55	-
Highland	30	-
Lanarkshire	198	-
Lothian	263	-
Tayside	-	275
TOTALS	720	640

Source: see Appendix Table (vi).

Those already exceeding this rate should re-examine their target locally applying the factors in section 3, and taking local priorities, resources, and professional and public consultation into account.

7.4 Normative Target

There are currently no normative (set) or clinical targets for cataract surgery in Scotland and it is suggested here that the medium term target for all Boards should be that of the highest achieving Board, which for some time has been Tayside. The effect of this per year is shown in Table 10 below. In England and Wales a target of based on national averages has been used.

Table 10

TARGET SETTING (2) : APPLYING TAYSIDE AGE SPECIFIC RATES TO EACH HEALTH BOARD'S AGE SPECIFIC POPULATIONS

HEALTH BOARD	ESTIMATED ADDITIONAL OPERATIONS/YEAR
Argyll & Clyde	39
Ayrshire & Arran	332
Borders	-3
Dumfries & Galloway	221
Fife	111
Forth Valley	245
Grampian	417
Greater Glasgow	826
Highland	187
Lanarkshire	543
Lothian	939
TAYSIDE	-
Orkney Islands	26
Shetland Islands	22
Western Isles	22
TOTAL	3927

Source: see Appendix Table (iii)

7.5 Epidemiological Target

It is suggested that a longer term target should be epidemologically based, using an agreed definition including ability to benefit, with benefit being defined as reduction in handicap due to visual disability.

In this target setting section, although the epidemiological and statistical information are available by age and sex, we have deliberately not provided target levels by these parameters. These measures may be relevant in a sophisticated epidemiological model but for the current target setting they may be misleading. This is because age specific targets could alter clinical priorities which we believe should always be set at the hospital level where the patients ability to benefit sets the priority.

7.6 Waiting Lists and Clinical Decision Making

Baxter (8) in the Northern Region in England examined this comprehensively as part of a MSc in Health Economics (York). This thesis is worthy of study and it is recommended that Health Boards might usefully consider its findings when determining purchasing policy to encourage improved performance not only in cataract surgery, but within ophthalmology and throughout all acute specialties. RECOMMENDATION 9

7.7 Demographic Changes and Projections

In this needs assessment there were no projections of the trend data taking into account the demographic structure in Scotland and the Health Boards. As cataract surgery is particularly relevant to the elderly and very elderly population where there are significant increases and inter Board variation, it is recommended that this be taken into account in the planning of future services for cataract surgery. RECOMMENDATION 10

Below are given the population changes in the elderly in Scotland for 1989-2006:

SCOTLAND POPULATION PROJECTIONS (1989 BASE)

Number	1989	1991	1996	2001	2006	
65-	434.7	436.5	441.9	433.9	432.9	
75-	260.7	259.2	256.7	268.0	275.8	
85+	65.2	69.1	82.1	90.2	95.1	
65+	760.6	764.8	780.7	792.1	803.8	
All Ages	5090.7	5067.8	5050.5	5025.7	4972.9	
Percentage						% change
65-	8.5	8.6	8.7	8.6	8.7	+2%
75	5.1	5.1	5.1	5.3	5.5	+2%
85+	1.3	1.4	1.6	1.8	1.9	+46%
65+	14.9	15.1	15.4	15.7	16.1	+8%

Source: GRO(s) 1989 Estimates (Published 1992)

7.8 Costing of Cataract Surgery

The decision to undertake this needs assessment study was the result of priority setting and it is, therefore, implicit that decisions may have to be made to increase or reduce resources in the particular service. Our findings certainly suggest a requirement for increased funding for ophthalmology with costed options of day case or inpatient management.

The Scottish Document on Day case Surgery and the English Needs Assessment for Cataract Surgery examined the resource implications with the estimated prices in England at £1087 for inpatient and £514 per day case (the Scottish document gave no specific cost but estimated gross annual savings at 1991 prices with 80% day case work). As stated earlier, the quote from the private health sector in Scotland for inpatient treatment was £1600 (England £1385-£1935 or BUPA £1300).

Costs per case based on 'Blue Book' costs uplifted to 1992/93 prices have been calculated for Scotland. This is based on five outpatient attendances per case, an inpatient cost based on the average length of stay for ophthalmology and a day case cost based on the all specialties average cost. This gives a total cost per case of £1251 for an inpatient stay and £271 for a day case.

A comparison between 'Blue Book' costs and those shown in the English Needs Assessment Document shows:

	'Blue Book'	English Costs
	£	£
OP Attendance	26	73
Inpatient Cost	1121	1087
Day Case	271	514

We would suggest that the financial aspects are complex and that a standard costing methodology should be sought.

Costings and cost options are local purchaser and provider issues. We believe, however, the resource implications of this report are of such significance that they warrant a full economic cost benefit analysis of day and inpatient treatment, including anaesthetic choice, as an expert study. RECOMMENDATION 11

8 ISSUES FOR PURCHASING

1 Cataract is predominantly a disease of older people and Boards should consider the implications of total and within Board demography when setting targets.

2 Boards should work with providers to assess local treatment thresholds and develop referral protocols with general practitioners.

3 Board targets should first adopt the Scottish average age standardised rate as a target. This should be modified according to local priorities, resources, other factors affecting demand (see section 3) and consultation with hospital clinicians, general practitioners and the public.

4 Boards, as appropriate, should then examine the normative target (para 7.3) and its implication for their own population.

5 The recent drive to increasing levels of day case surgery requires careful consideration. In particular the number of elderly people who are suitable and the impact on outpatient clinics and community services will have to be addressed before the substantial shift to day case work envisaged by the recent Health Service Advisory Council document takes place.

6 There is a good opportunity within purchasing to specify and monitor good standards of care. An example would be good patient literature, the development of agreed protocols for day surgery and for referral by general practitioners. In addition audit of type of operation, operative thresholds, and complication rates should take place.

7 The introduction of phakoemulsification must take into account the heavy costs in equipment and the retraining of surgeons necessary to achieve good outcomes.

8 Boards need to assess the resources required to meet the level of need for cataract surgery identified for their population.

9 The overall aim of the service should be to achieve health gain by the improvement of eye health and the reduction of handicap caused by a visual disability. This outcome measure should be used both in the development of an epidemiologically derived target and to measure the true outcome for the patient.

9 RECOMMENDATIONS

1 That the need and timing of the second operation be researched. (Para 3.4.3, Page 18)

2 That Boards adopt protocols for Day Case Surgery as laid out in the Advisory Council Document, 'Day Case Surgery for cataracts'. (Para 5.3.2, Page 21)

3 That studies are undertaken to look at the proportion of patients under and over 75 years of age, male and female, who would be appropriate for day case surgery. Local targets should reflect this patient based assessment. (Para 5.3.2, Page 21)

4 That appropriate patient information leaflets should be available. (Para 5.3.4, Page 22)

5 That systematic audit of complications should take place. (Para 5.4.1, Page 22)

6 That outreach follow-up of day case patients be explored and evaluated. (Para 5.4.2, Page 22)

7 That the introduction of new techniques such as phakoemulsification should be subject to evaluation before widespread introduction. (Para 5.5.1, Page 23)

8 That there should be a study outlining resource requirements for cataract surgery, accurately assessing the level of day case work based on the needs of this elderly group of patients. (Para 6.3.5, Page 31)

9 That Boards consider the role of clinical decision making as outlined by Baxter(8) in looking at performance in ophthalmology. (Para 7.6, Page 34)

10 That cataract surgery trend data be projected to look at its potential increases in each Health Board. (Para 7.7, Page 35)

11 That more detailed costing of cataract surgery and the cost options between day and inpatient case surgery, with possible reference to form of anaesthesia, be undertaken. (Para 7.8, Page 36)

REFERENCES

REFERENCES

Note: Obviously in a project such as this an attempt has been made, within the time and resource constraints, to seek both relevant 'grey' literature and clinical literature. At the same time, some articles which were consulted and proved valuable in understanding the clinical details have not been referenced because they yielded little for a needs assessment.

To facilitate further qualification of details in this report, which has by necessity aimed to be a brief summary yet indicating the complexity of the subject, we have listed the most pertinent articles and reports.

The references marked with an asterisk (*) are regarded as key documents and have been lodged with Susie Stewart of the Public Health Forum at the Department of Public Health, University of Glasgow.

1 World Health Organisation (1980).
International Classification of Impairments, Disabilities and Handicaps (ICIDH) Geneva: WHO

2* Leibowitz, HM., Krueger, DE., Maunder, LR., et al (1980).
The Framingham Eye Study Monograph
Survey of Ophthalmology : 336-610

3 Sperduto, RD and Hiller, R (1984)
The Prevalence of Nuclear, Cortical and Posterior Subcapsular Cataract in a General Population Sample.
Ophthalmology 1984; 91: 815-818.

4* Northern Regional Health Authority (1991)
Assessment of Health Care Needs Division,
Assessing the Need for Cataract Surgery
Northern Regional Health Authority, 1991.

5 Das, B., Thompson, JR., et al (1990)
The Prevalence of Age Related Cataract in the Asian Community in Leicester : A Community based Study.
Eye (1990); 4: 723-726.

6 Jay, JL and Devlin, M
The Increasing Frequency of Surgery for Cataract
Eye (1990); 4: 127-131.

7* Public Health Research and Resource Centre (1992)
A Review of the Literature on Visual Impairment and Disability among older people in Britain : A Case Study in epidemiologically based needs assessment.
Salford, 1992.

8* Baxter, C (1991)
Waiting Lists and Clinical Decision Making : A Study of Treatment Thresholds for Cataract Operations.
University of York MSc Dissertation
York, 1991.

9 Hankinson, SE., Stampfe, MJ., et al (1992)
Nutrient Intake and Cataract Extraction in Women : A Prospective Study
BMJ, 1992; 305 : 335-9.

10 Seddon, JM., Christen, WG., Manson, JG., et al (1991)
Low Dose Aspirin and Risks of Cataract in a Randomised Trial of US Physicians
Arch Ophthalmol, 109: 252-255.

11* Scottish Health Service Advisory Council (1992)
Day Case Surgery for Cataract

12 Hodgkins, PR., et al (1992)
Current Practice of Cataract Extraction and Anaesthesia
British Journal of Ophthalmology (1992), 16: 323-326.

13 Hanna, IT., (1991)
An Audit of Cataract Surgery
CRAG Occasional Paper No 1
Scottish Office

14 Drummond, MF., (1988)
Economic Aspects of Cataract
Ophthalmology (1988); 95 : 8 : 1147-1153

DATA SOURCES

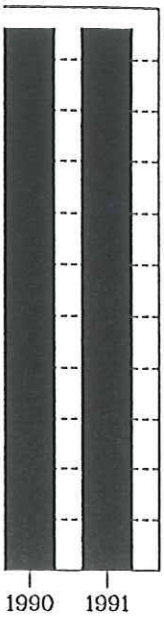
DATA SOURCES:

SMR 1:	Age and sex specific rates 1980-1991 by Health Board and Local Government Area of Residence.
SMR 1:	1989-1991 OPCS Operation pair trends.
SMR 1:	Record Linkage (1982-1990). Numbers of first and second operation within one and two years for 1984-1988 by age, sex and Health Board of Residence.
SMR 0:	1990 New Outpatient referrals for Ophthalmology by Health Board of Residence.
SMR 3:	Number and wait on true waiting list for Cataract Surgery by hospital of treatment and Health Board of Residence.
Public Health Common Data Set:	Cataract Surgery by Health Board and Local Government Area of Residence.
SCOTPIP 3:	Hospital Utilisation Data

These data are available to Health Boards either in paper or magnetic medium from Susie Stewart etc. It has been noted that there is some variation in computer software in Health Boards and the data has been prepared for Lotus 123. Other formats can be provided from Dr John Clark at Information and Statistics Division, Trinity Park House, Edinburgh.

FIGURES

PAL POSITION)
ALS



CATARACT SURGERY (Principal Operation)

Time Trend 1980-1991 Scotland

Age Specific Rate (crude) 1991 by Health Board of Residence

a) 65-74 years
b) 75-84 years
c) 85 years and over

Comparison three year Average Rate (crude) 1980-1982 and 1989-1991 by Health Board of Residence

Time Trend by Health Board of Residence 1980-1991

a) Argyll & Clyde
b) Ayrshire & Arran
c) Borders
d) Dumfries & Galloway
e) Fife
f) Forth Valley
g) Glasgow
h) Greater Glasgow
i) Highland
j) Lanarkshire
k) Lothian
l) Tayside
m) Orkney
n) Shetland
o) Western Isles

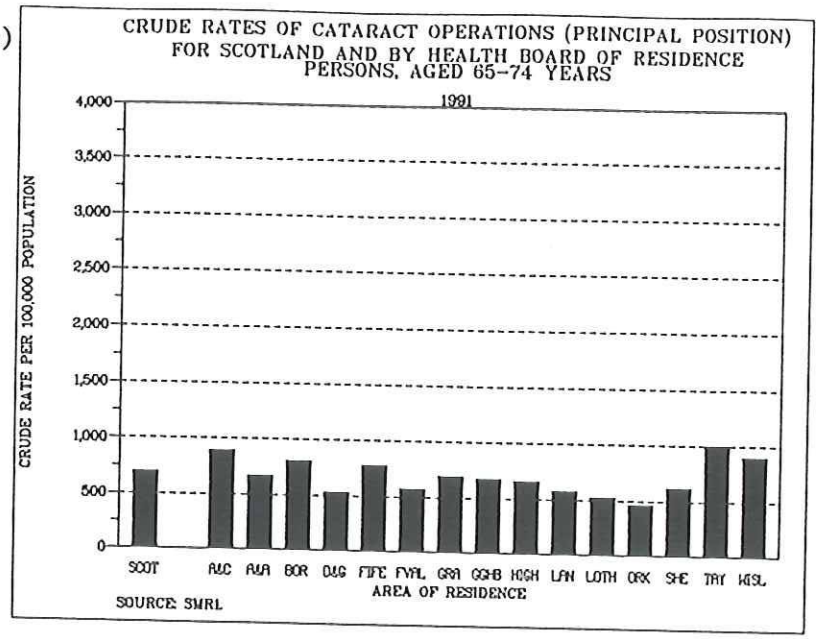
Age Standardised Rates by Health Board of Residence. Annual means for five year period 1987-1991

Age Specific Time Trends (person) by Health Board of Residence 1980-1991
Health Boards as above (including Scotland)

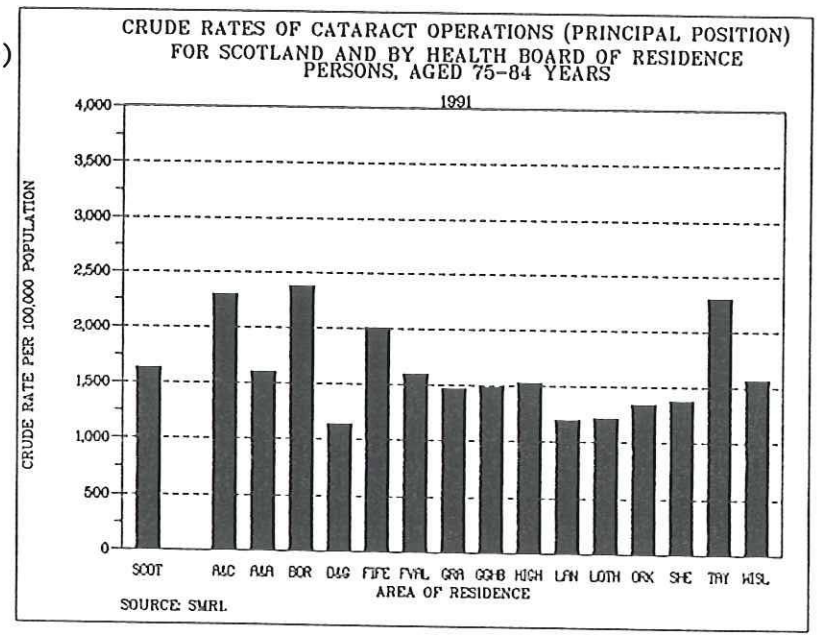
Rate of New Outpatient referrals for Ophthalmology (crude) per 100 000 1991

Correlation Rates for New Outpatients by Cataract Operation 1991

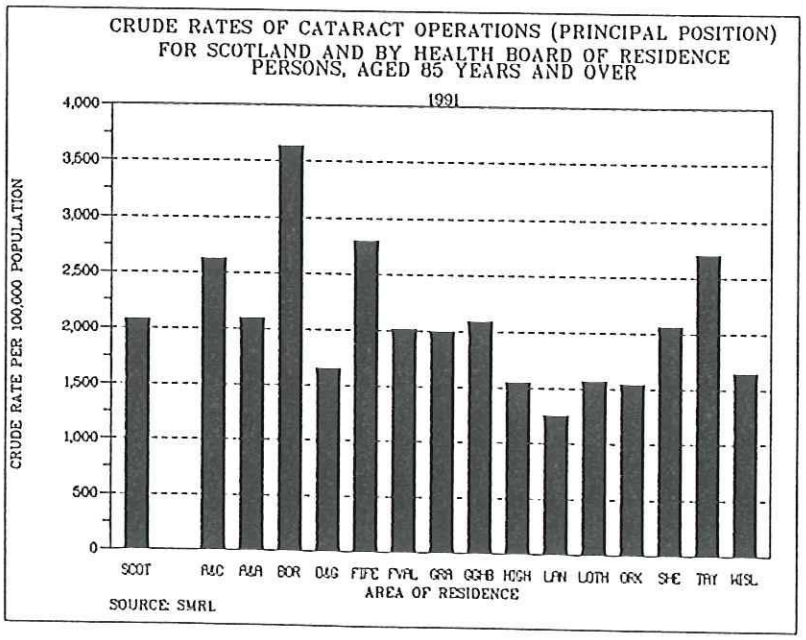
(a)

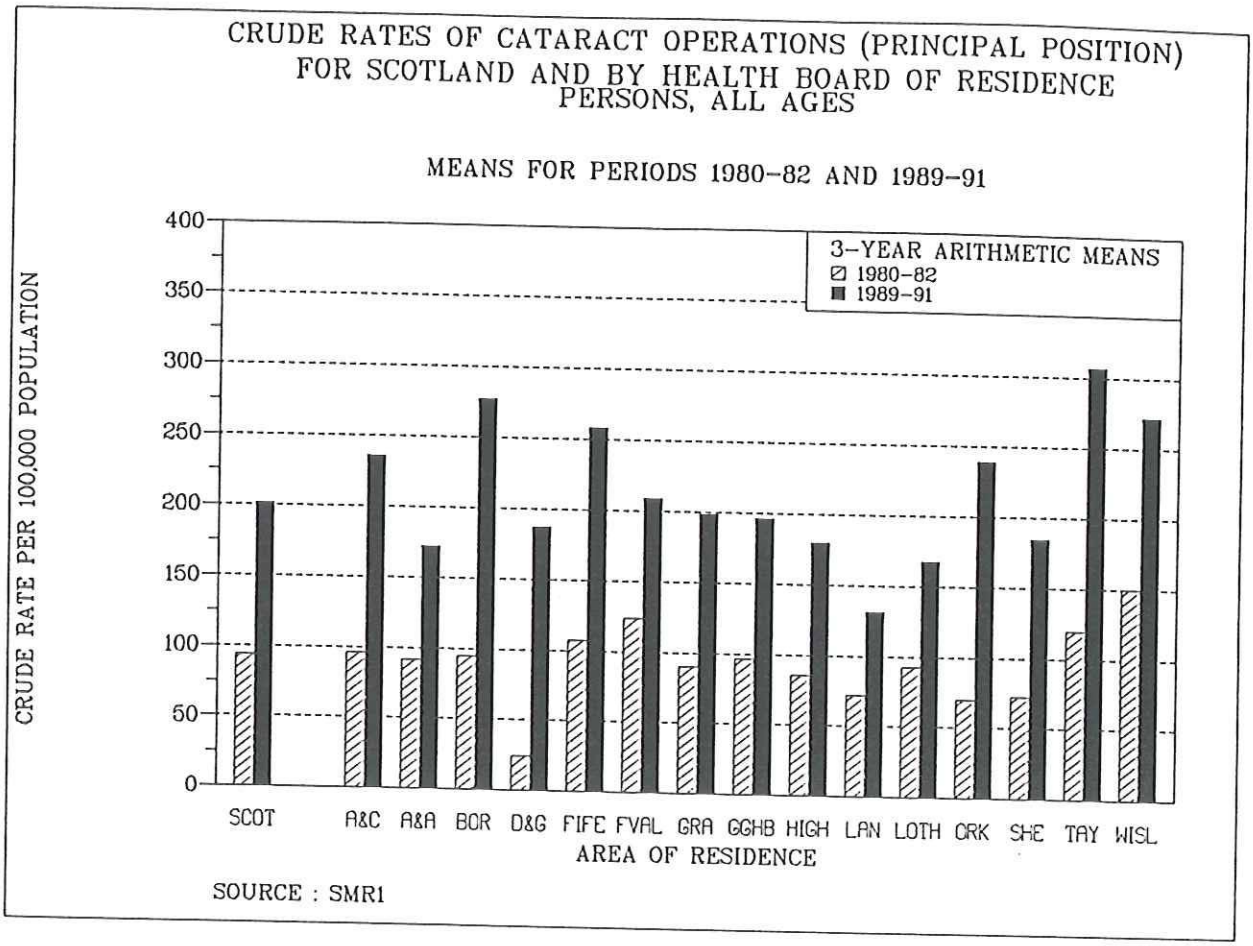

CRUDE RATES OF CATARACT OPERATIONS (PRINCIPAL POSITION)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
PERSONS, AGED 65–74 YEARS
1991
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
SCOT
AUC AUA BOR DUG FIFE FVAL GRA GGHB HIGH LAN LOTH ORK SHE TAY WISL
AREA OF RESIDENCE
SOURCE: SMRL

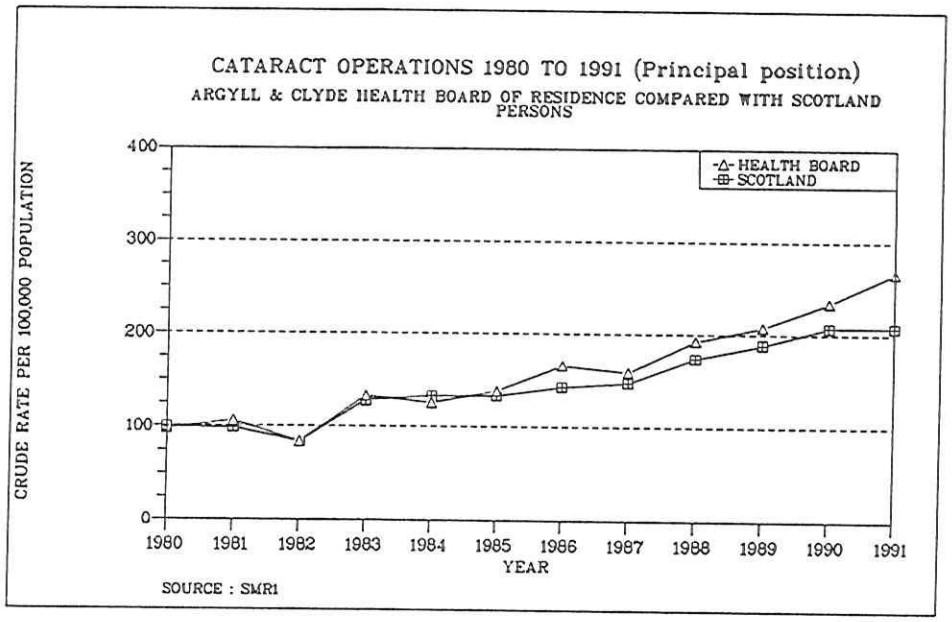
(b)

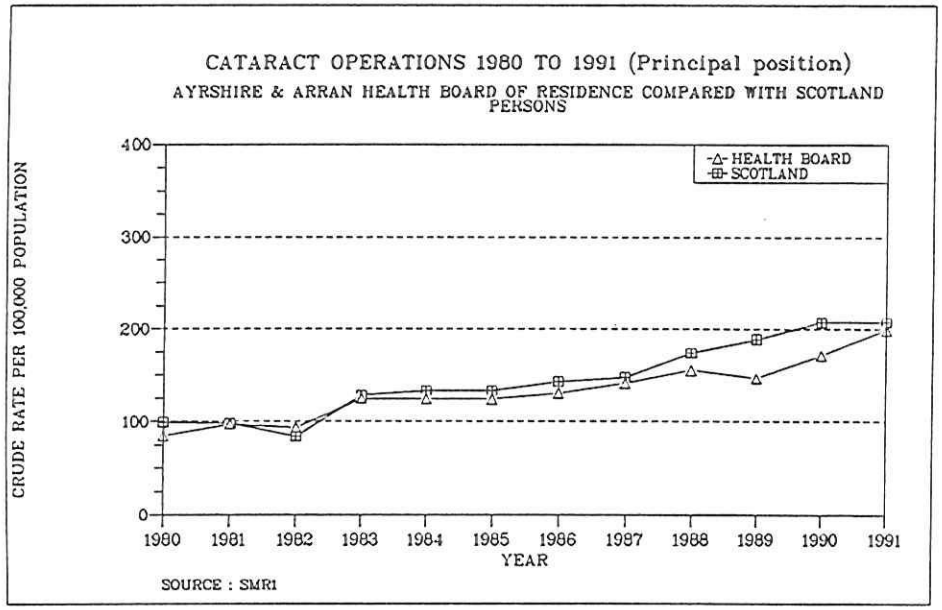

CRUDE RATES OF CATARACT OPERATIONS (PRINCIPAL POSITION)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
PERSONS, AGED 75–84 YEARS
1991
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
SCOT
AUC AUA BOR DUG FIFE FVAL GRA GGHB HIGH LAN LOTH ORK SHE TAY WISL
AREA OF RESIDENCE
SOURCE: SMRL

(c)


CRUDE RATES OF CATARACT OPERATIONS (PRINCIPAL POSITION)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
PERSONS, AGED 85 YEARS AND OVER
1991
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
SCOT
AUC AUA BOR DUG FIFE FVAL GRA GGHB HIGH LAN LOTH ORK SHE TAY WISL
AREA OF RESIDENCE
SOURCE: SMRL


CRUDE RATES OF CATARACT OPERATIONS (PRINCIPAL POSITION)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
PERSONS, ALL AGES
MEANS FOR PERIODS 1980-82 AND 1989-91
CRUDE RATE PER 100,000 POPULATION
400
350
300
250
200
150
100
50
0
3-YEAR ARITHMETIC MEANS
1980-82
1989-91
SCOT
A&C
A&A
BOR
D&G
FIFE
FVAL
GRA
GGHB
HIGH
LAN
LOTH
ORK
SHE
TAY
WISL
AREA OF RESIDENCE
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
ARGYLL & CLYDE HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
AYRSHIRE & ARRAN HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1

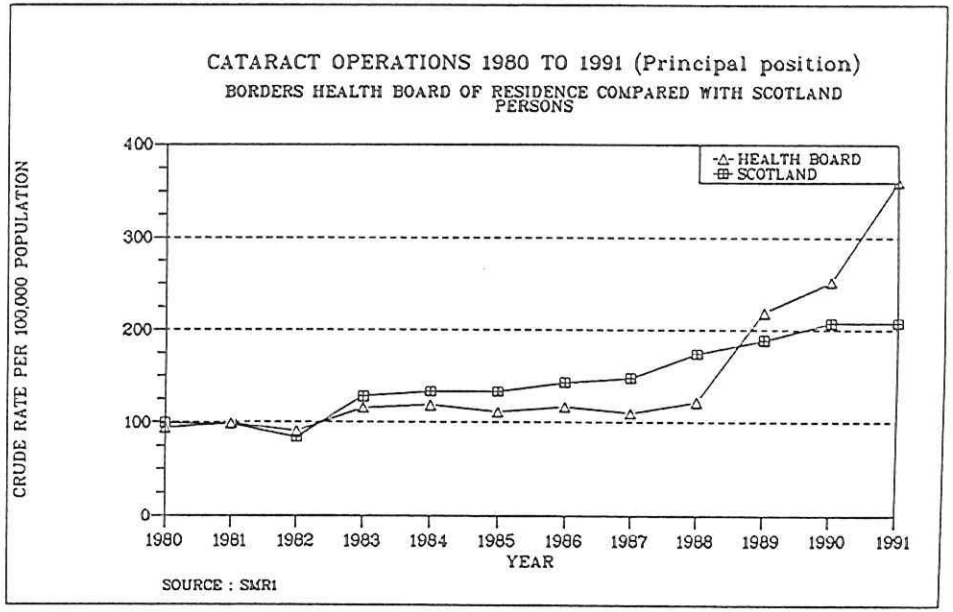
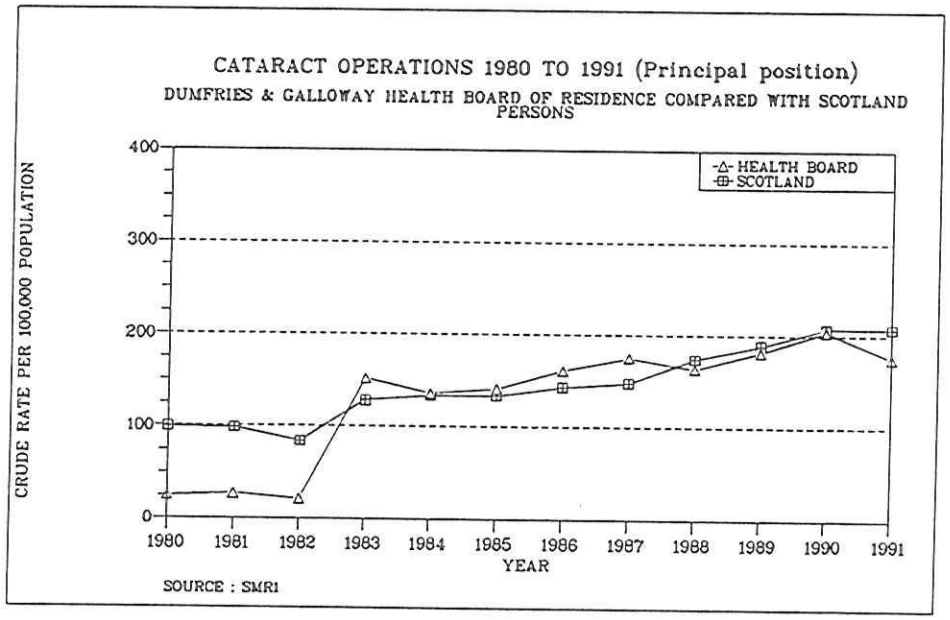
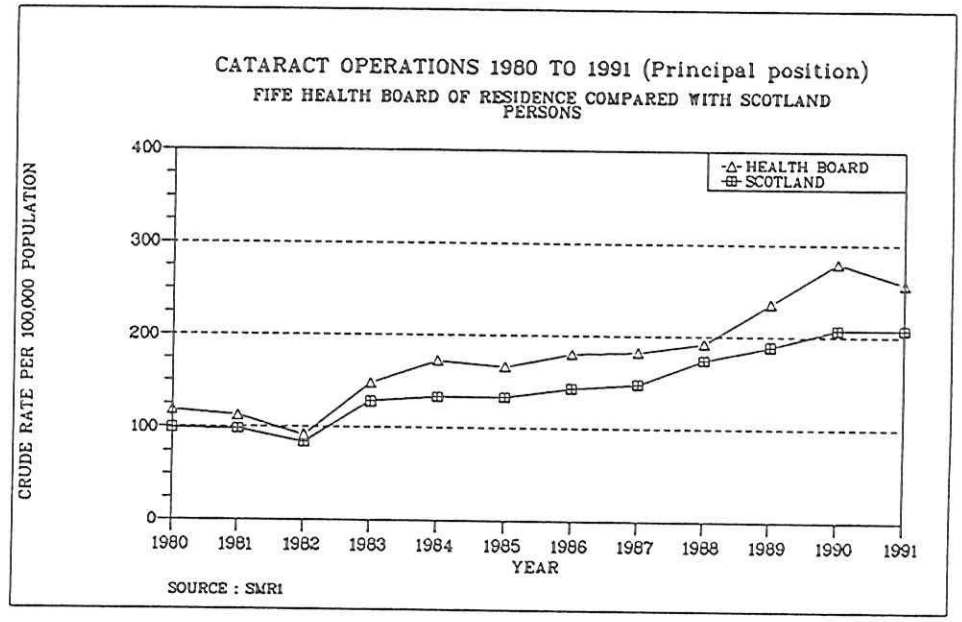
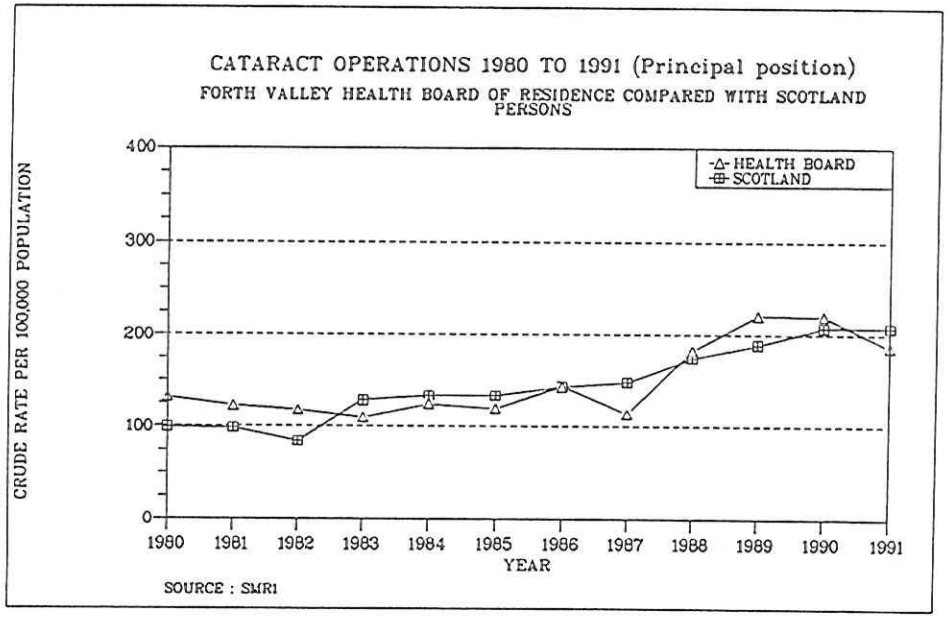

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
BORDERS HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1

FIGURE 4


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
DUMFRIES & GALLOWAY HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
FIFE HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
FORTH VALLEY HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1

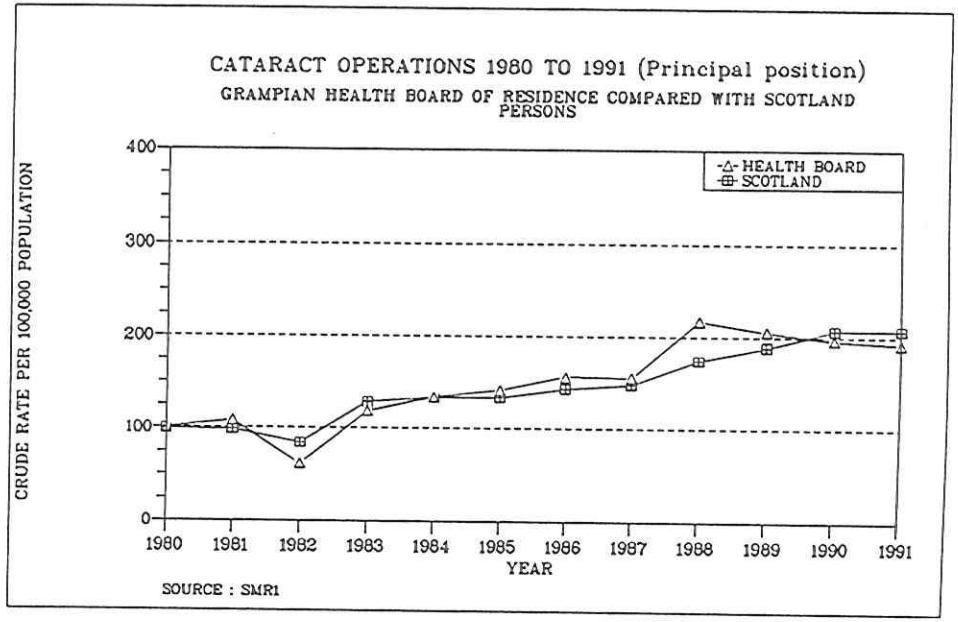
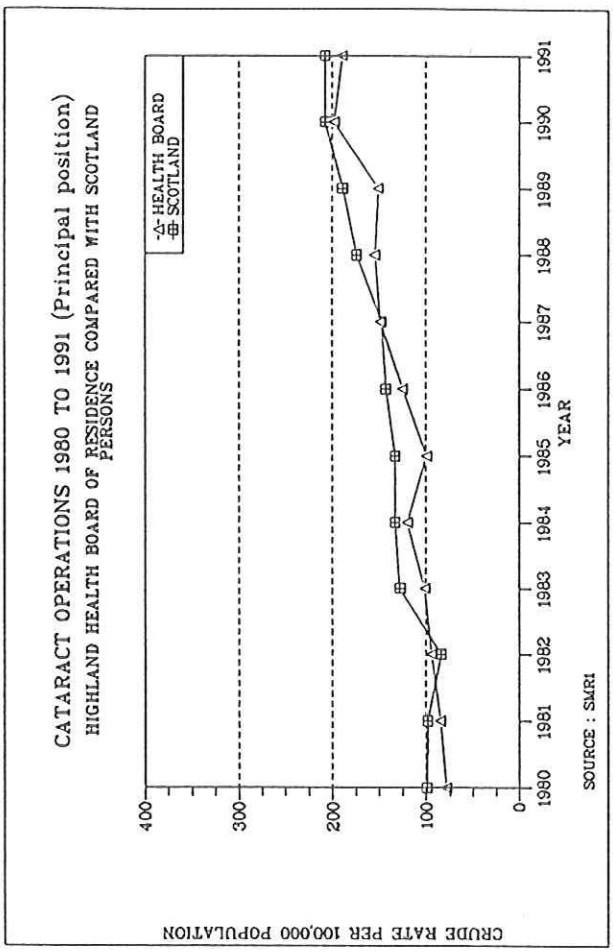
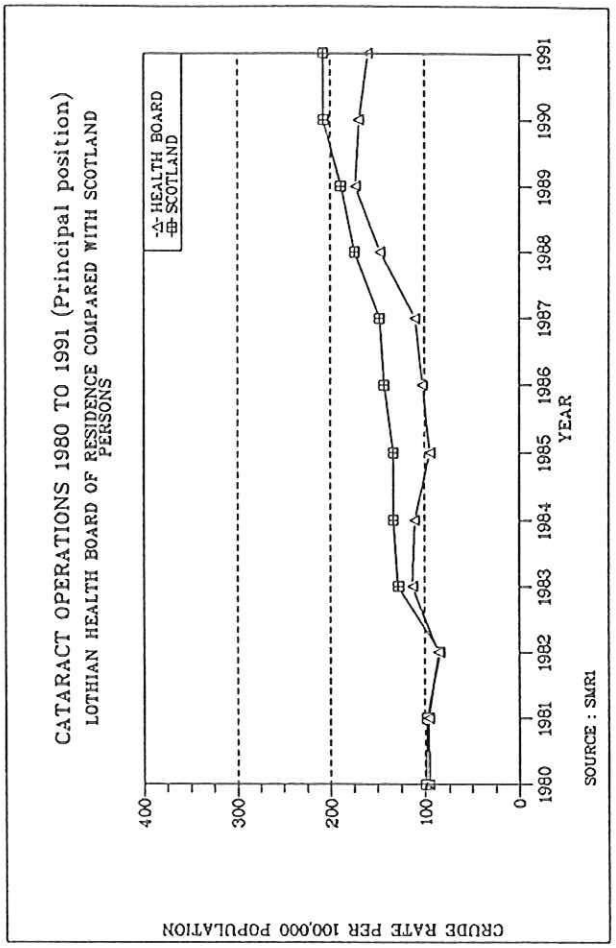
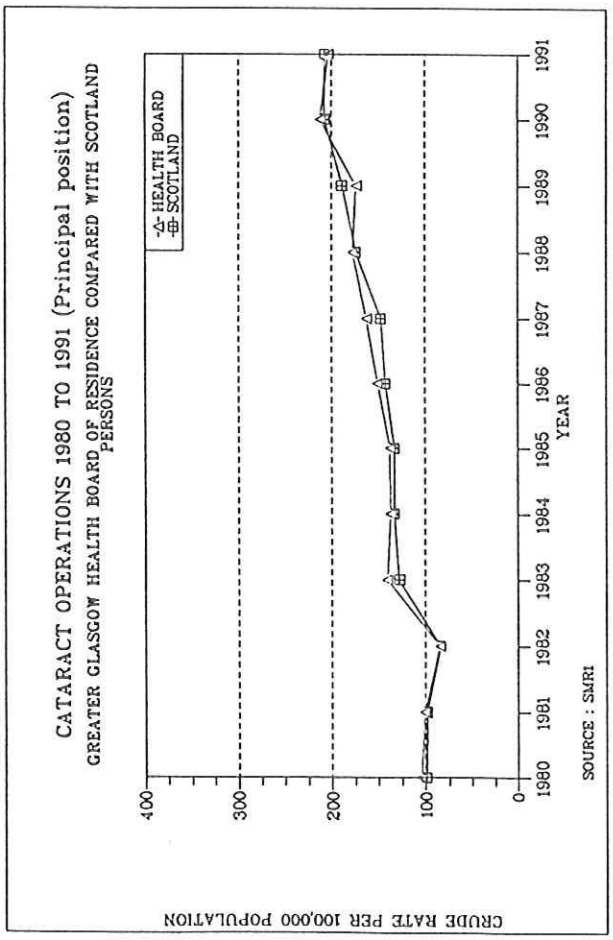

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
GRAMPIAN HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
CRUDE RATE PER 100,000 POPULATION
HEALTH BOARD
SCOTLAND
400
300
200
100
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE : SMR1

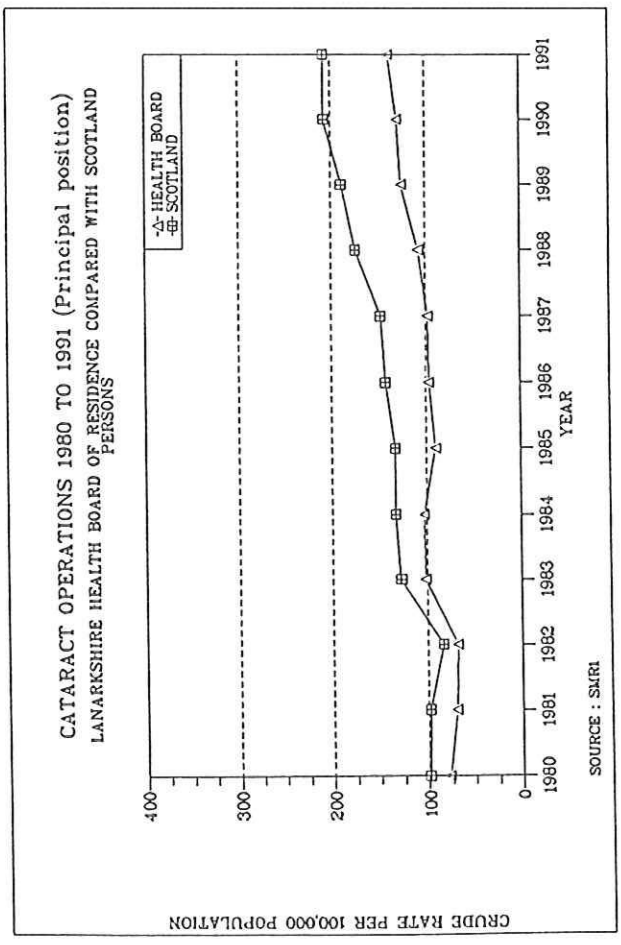
FIGURE 4

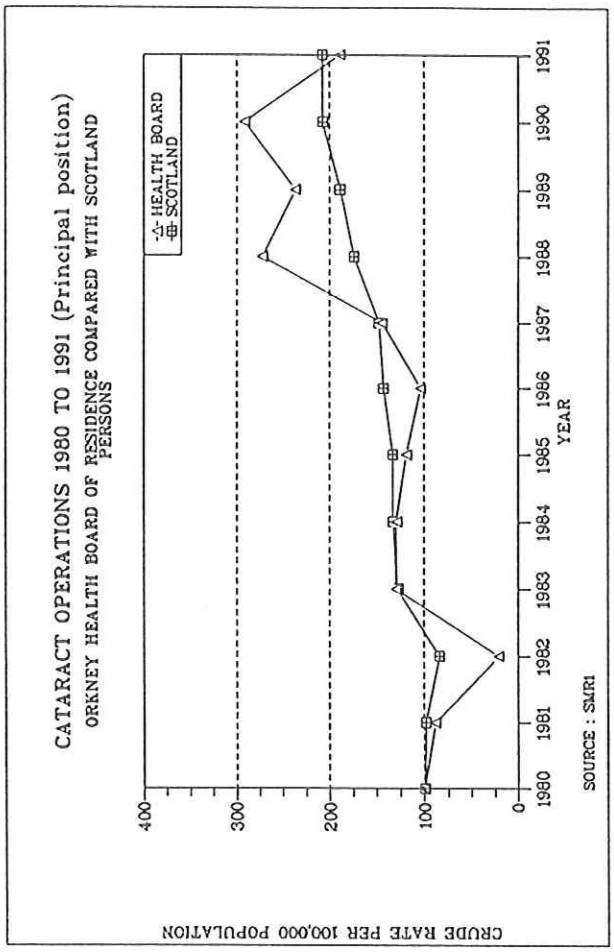
FIGURE 4

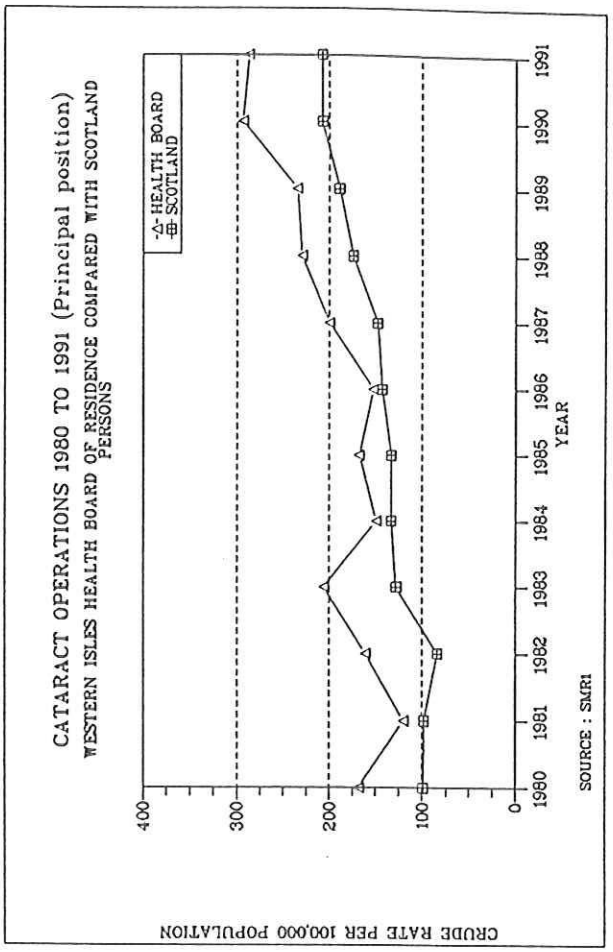

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
HIGHLAND HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1

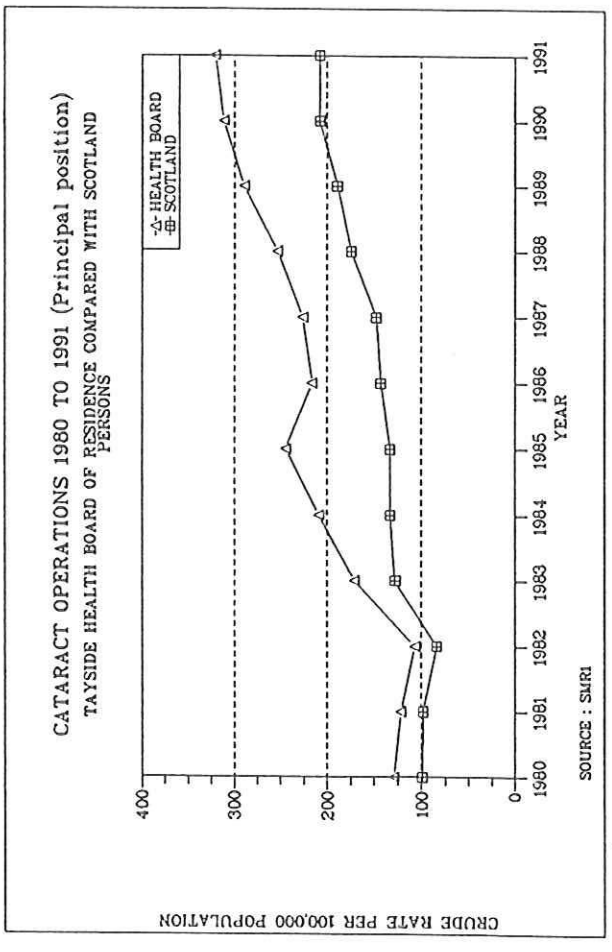

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
LOTHIAN HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1

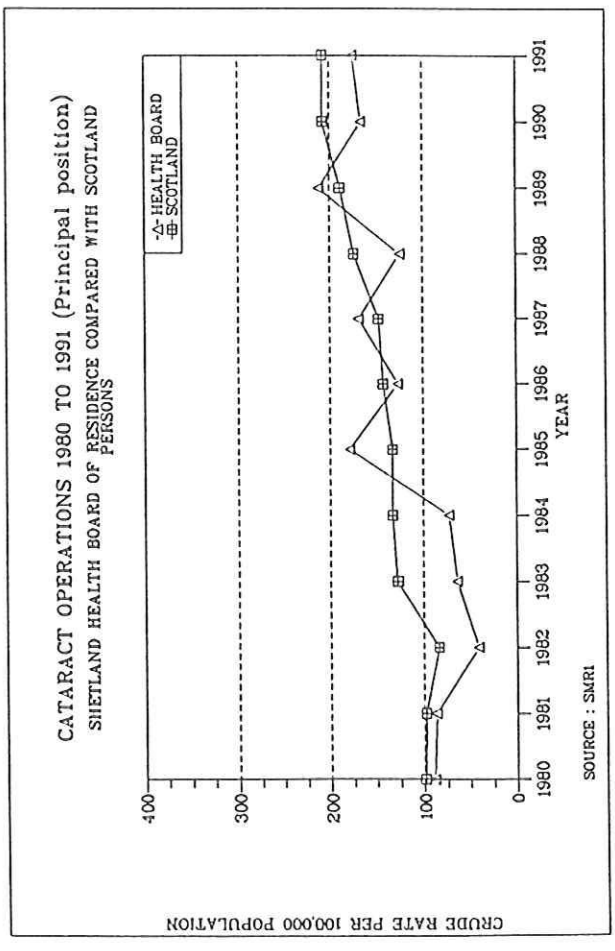

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
GREATER GLASGOW HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
LANARKSHIRE HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
ORKNEY HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1

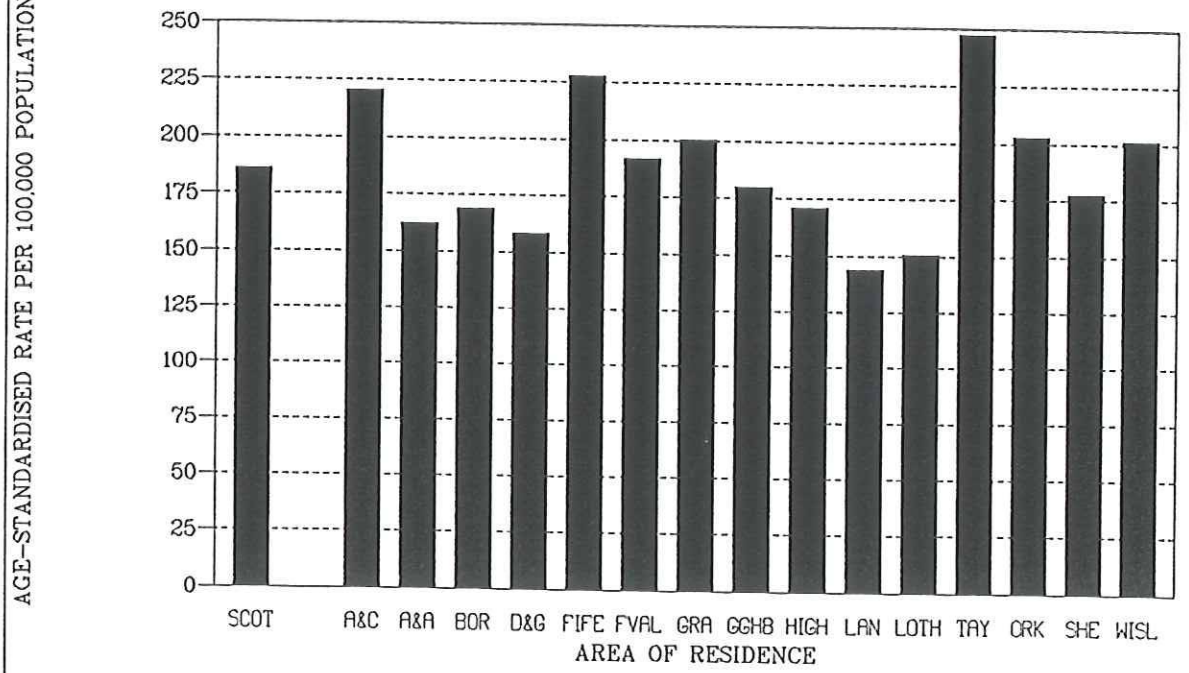

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
WESTERN ISLES HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1


CATARACT OPERATIONS 1980 TO 1991 (Principal position)
TAYSIDE HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1

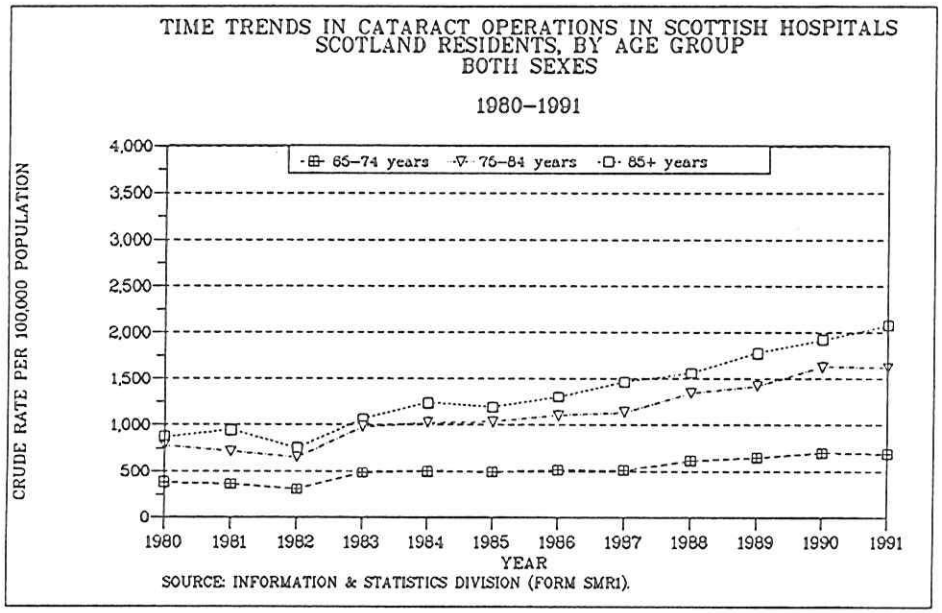

CATARACT OPERATIONS 1980 TO 1991 (Principal position)
SHETLAND HEALTH BOARD OF RESIDENCE COMPARED WITH SCOTLAND
PERSONS
HEALTH BOARD
SCOTLAND
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE : SMR1

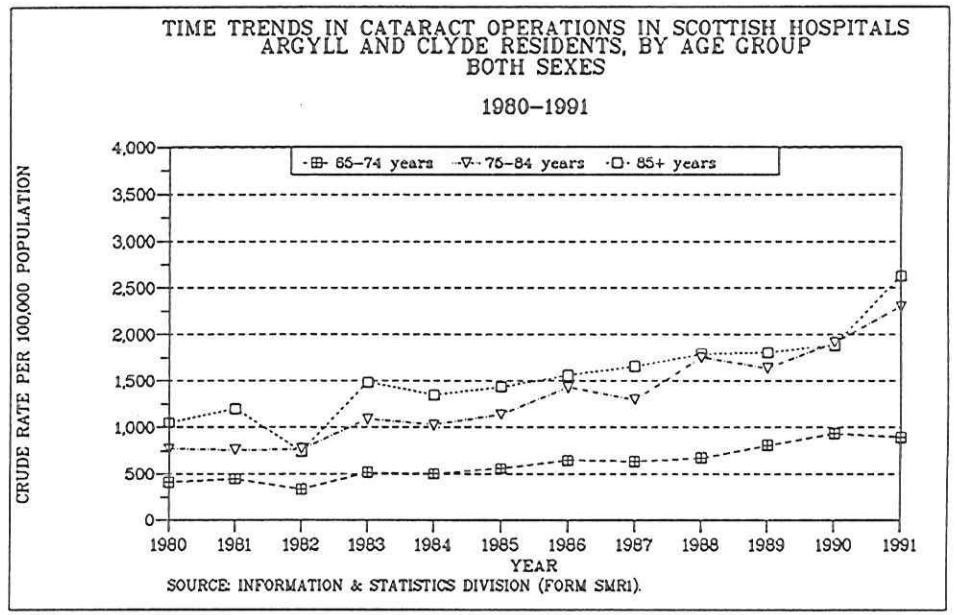
AGE–STANDARDISED RATES FOR CATARACT OPERATIONS (PRINCIPAL POSITION)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
PERSONS, ALL AGES

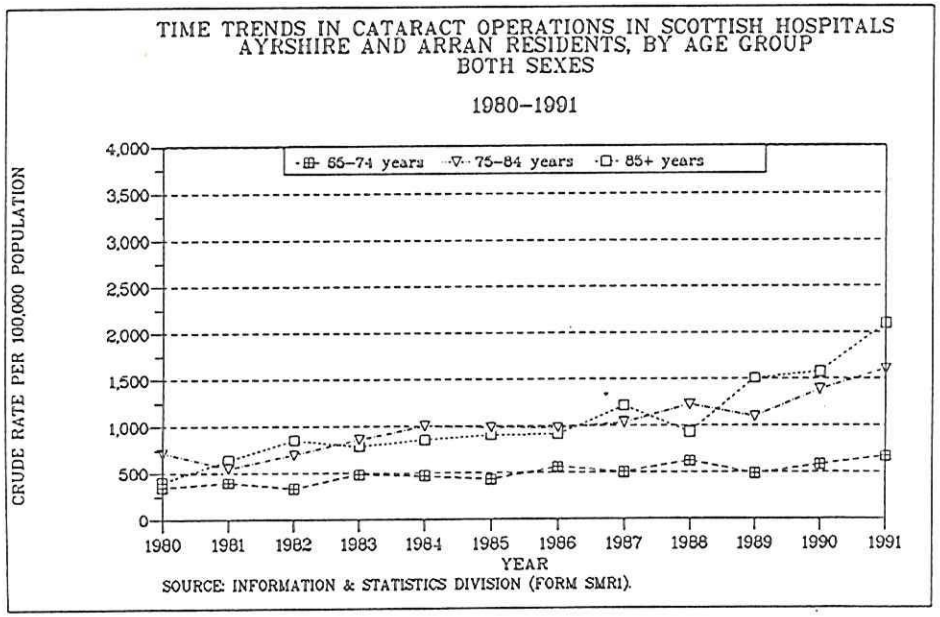
ANNUAL MEANS FOR 5–YEAR PERIOD 1987–1991



SOURCE: PUBLIC HEALTH COMMON DATA SET FOR SCOTLAND 1991 (SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
SCOTLAND RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
ARGYLL AND CLYDE RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
AYRSHIRE AND ARRAN RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

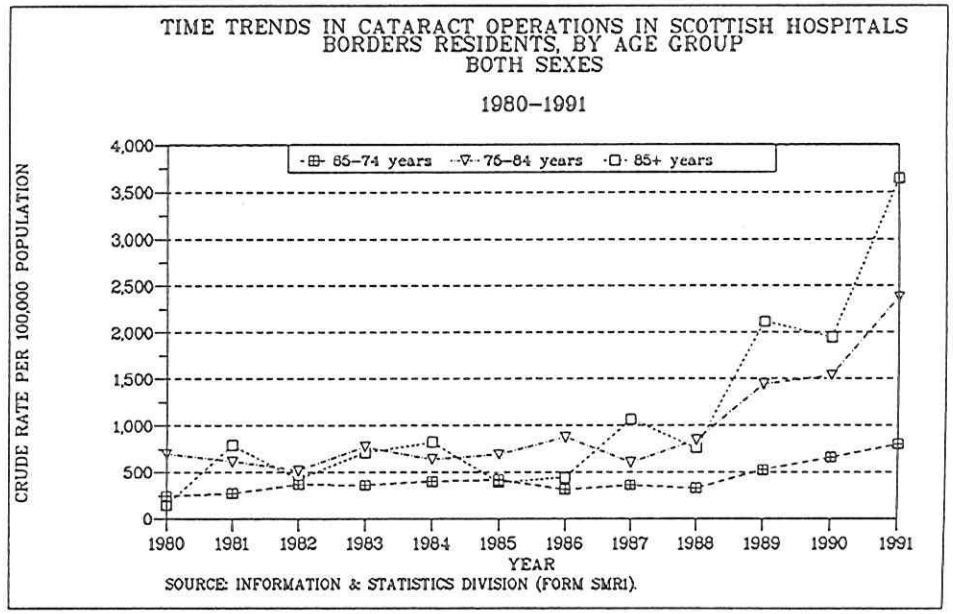
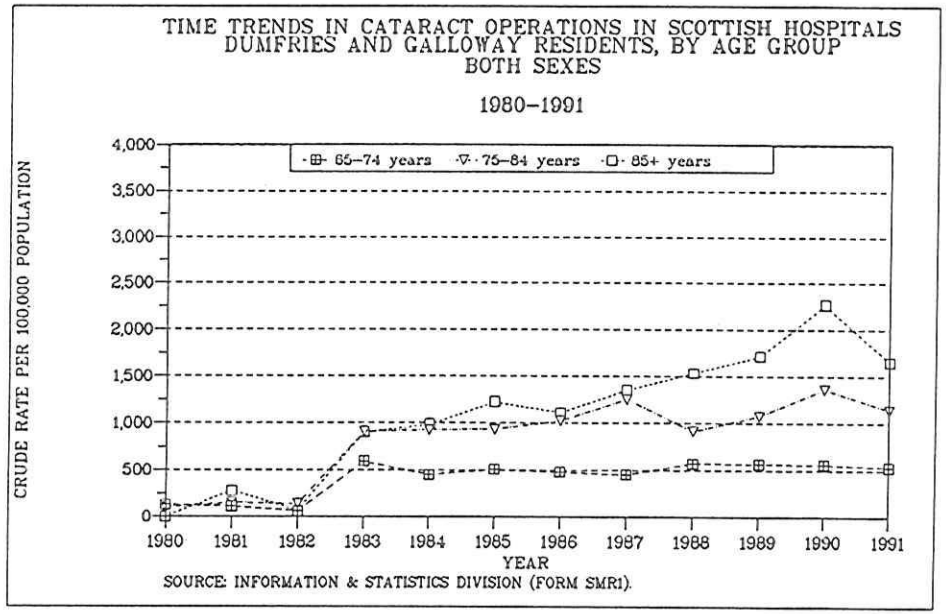
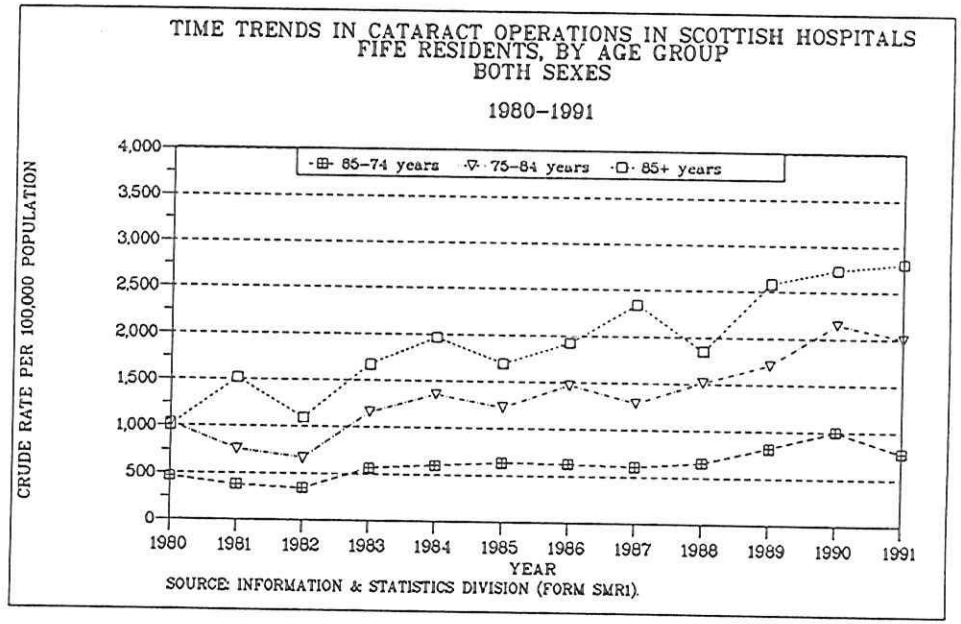
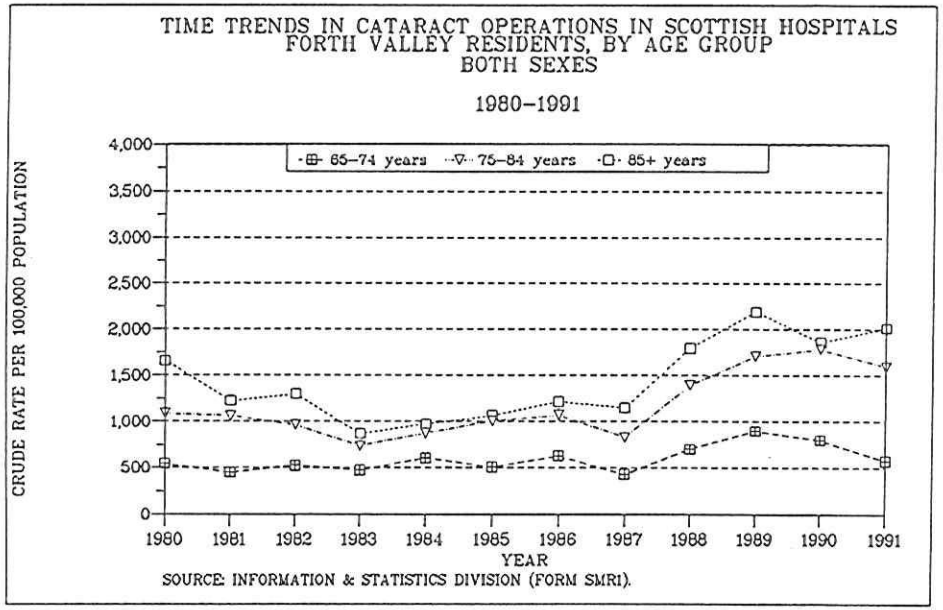

TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
BORDERS RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

FIGURE 6


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
DUMFRIES AND GALLOWAY RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
FIFE RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
FORTH VALLEY RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

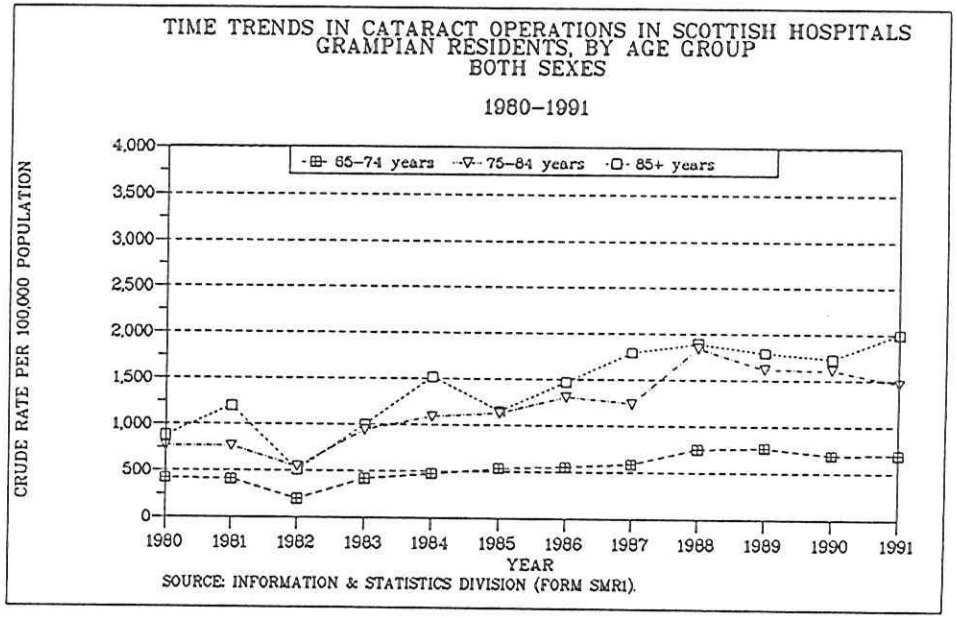
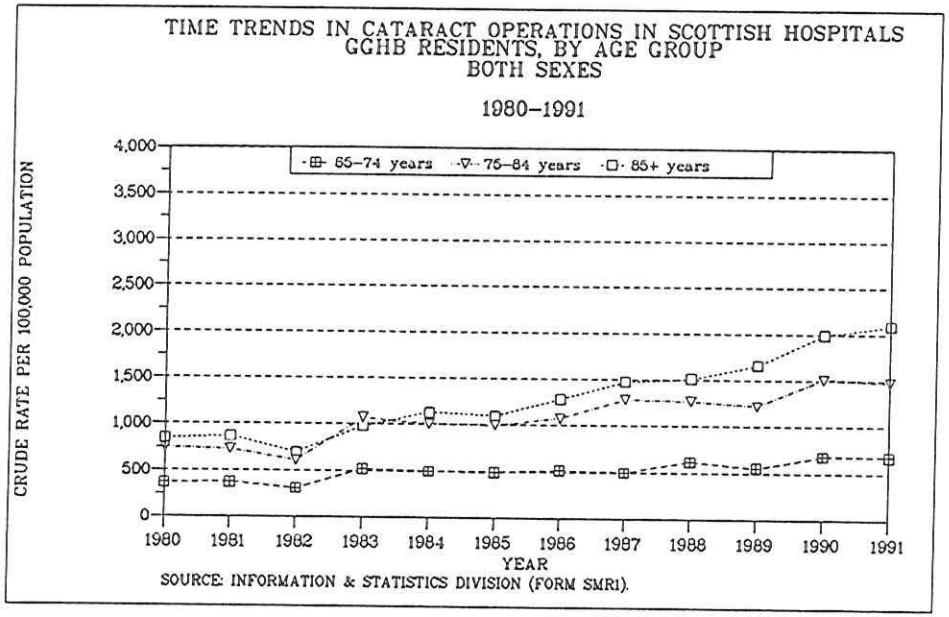
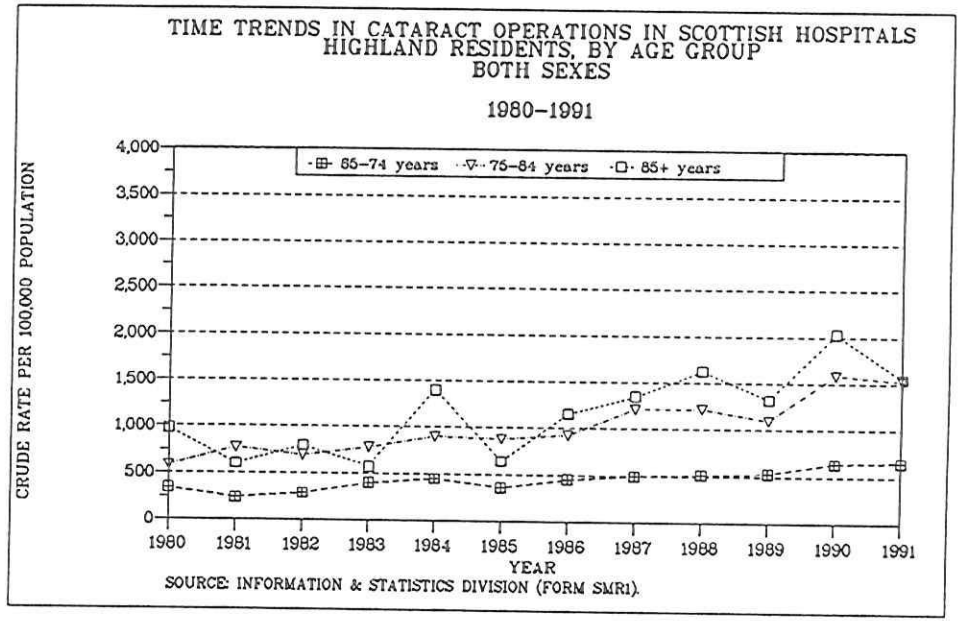
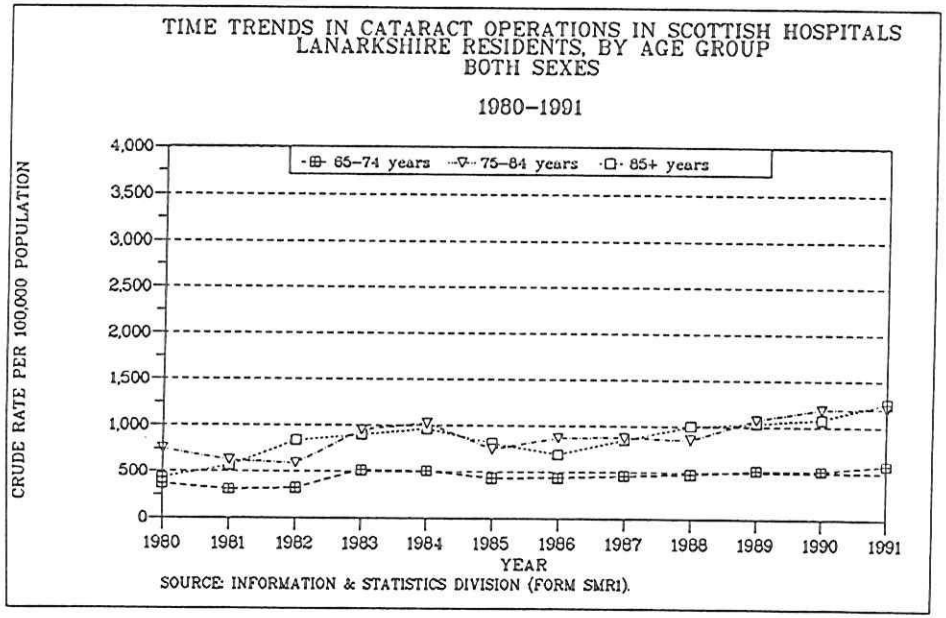

TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
GRAMPIAN RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

FIGURE 6


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
GGHB RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
HIGHLAND RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
LANARKSHIRE RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

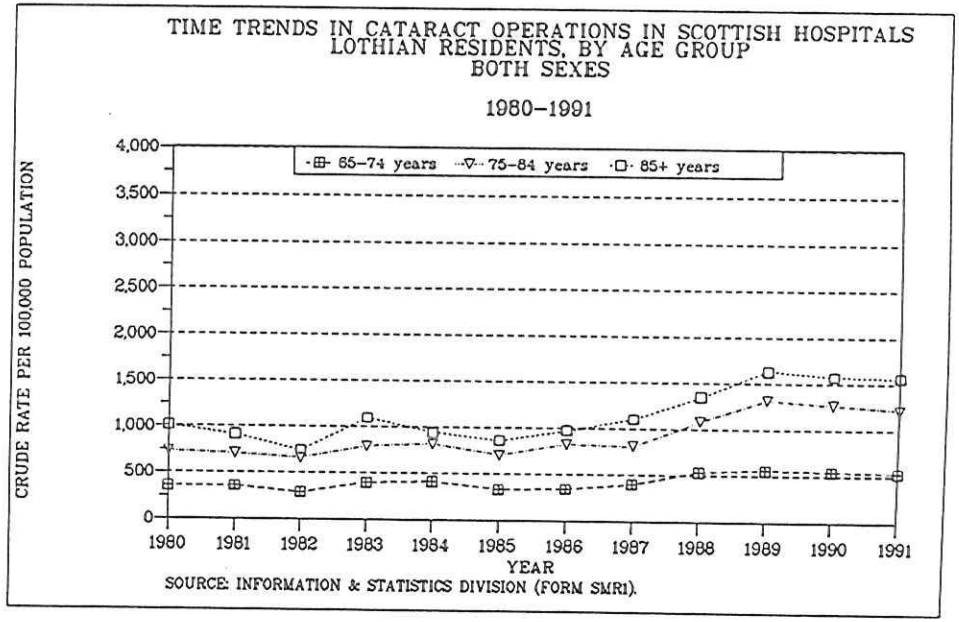
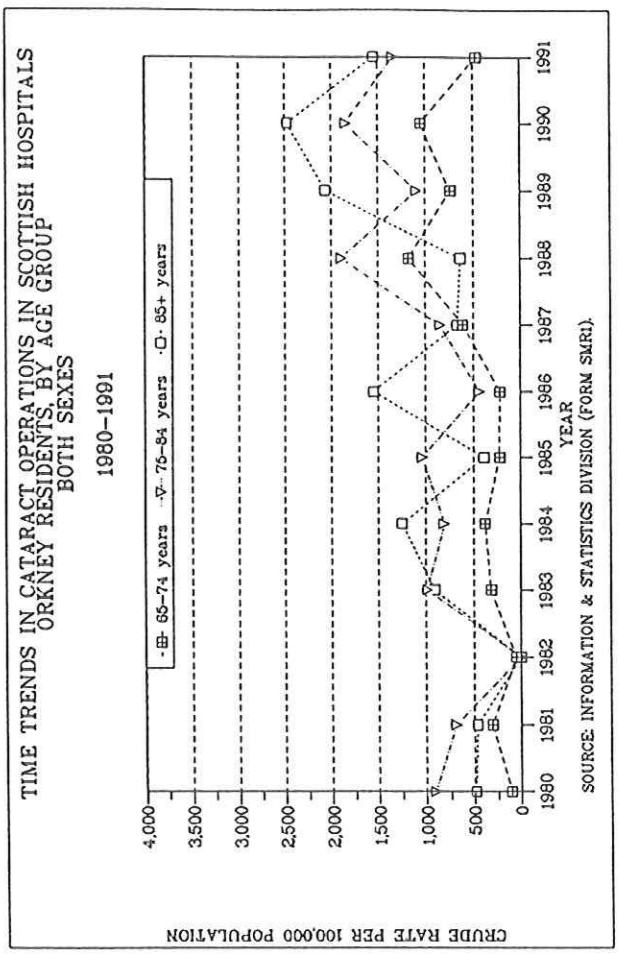
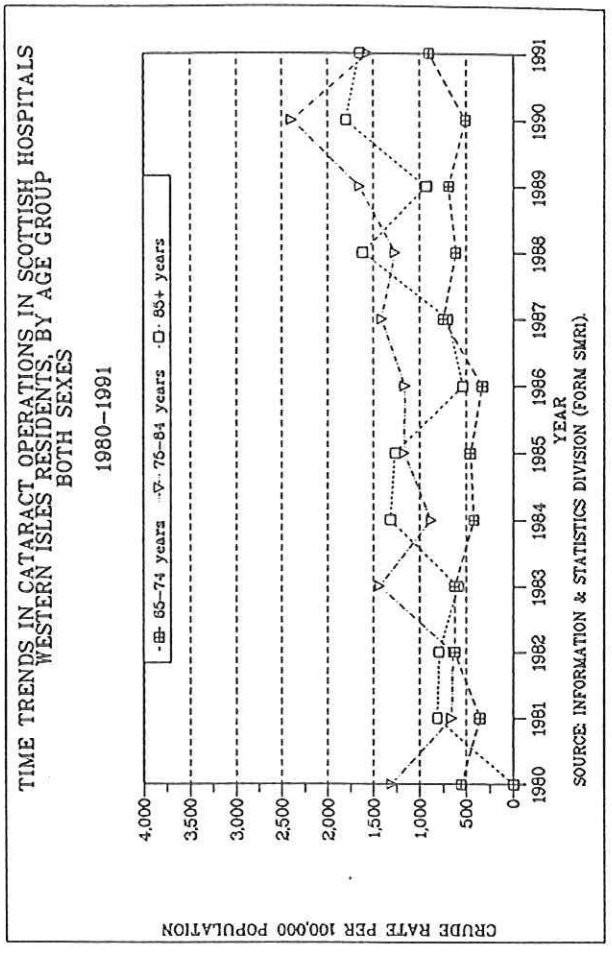
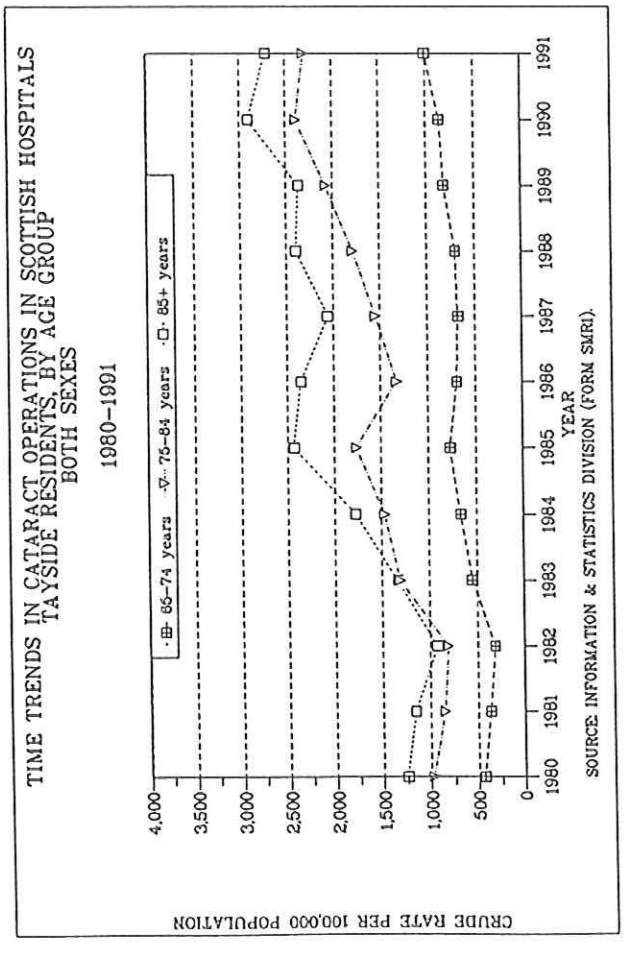
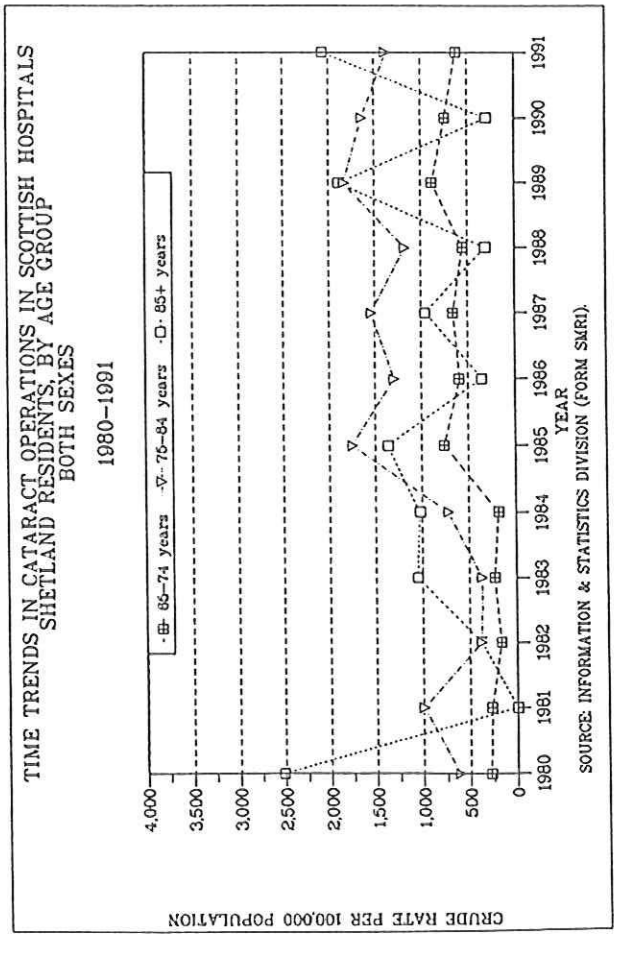

TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
LOTHIAN RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

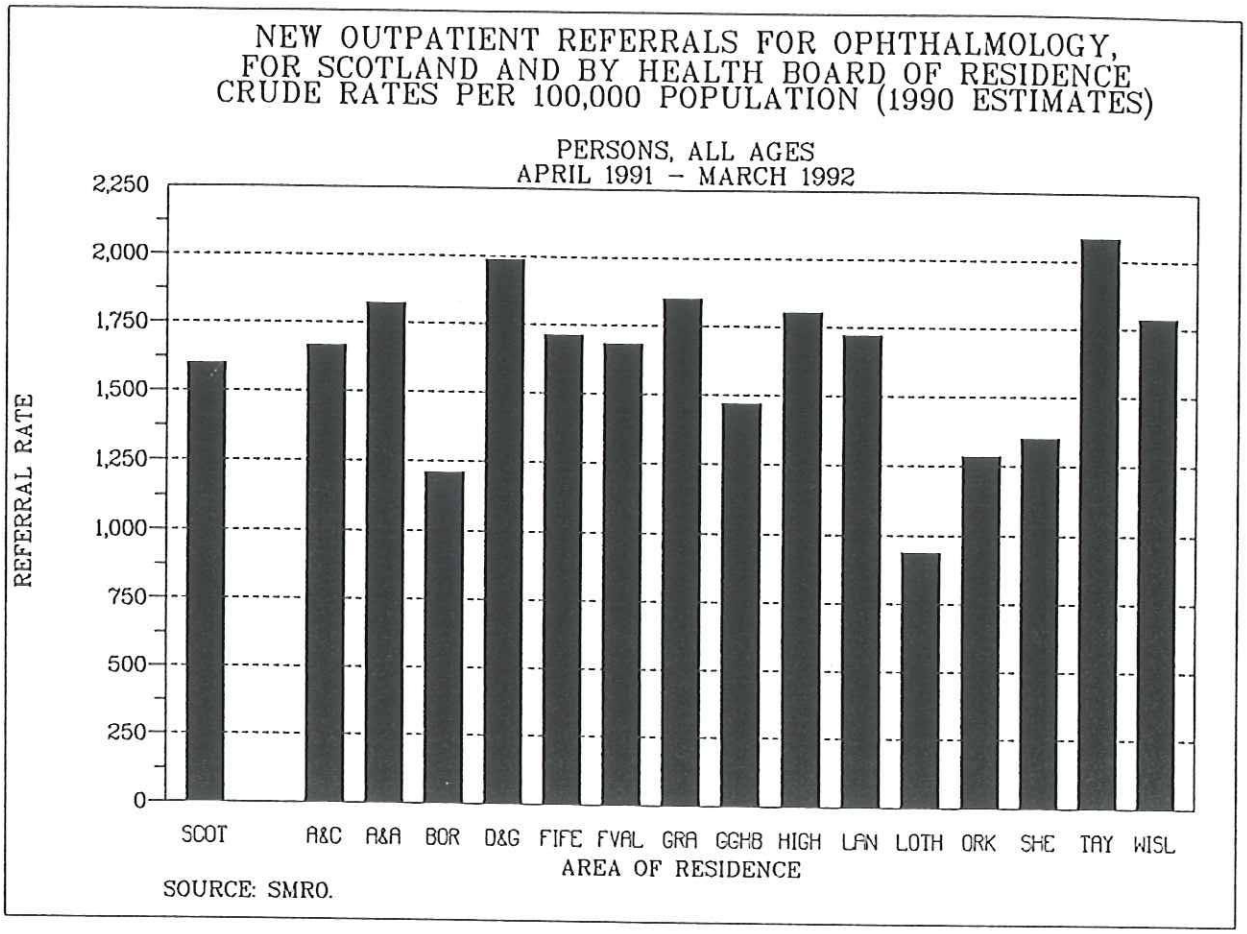
FIGURE 6


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
ORKNEY RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
WESTERN ISLES RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).

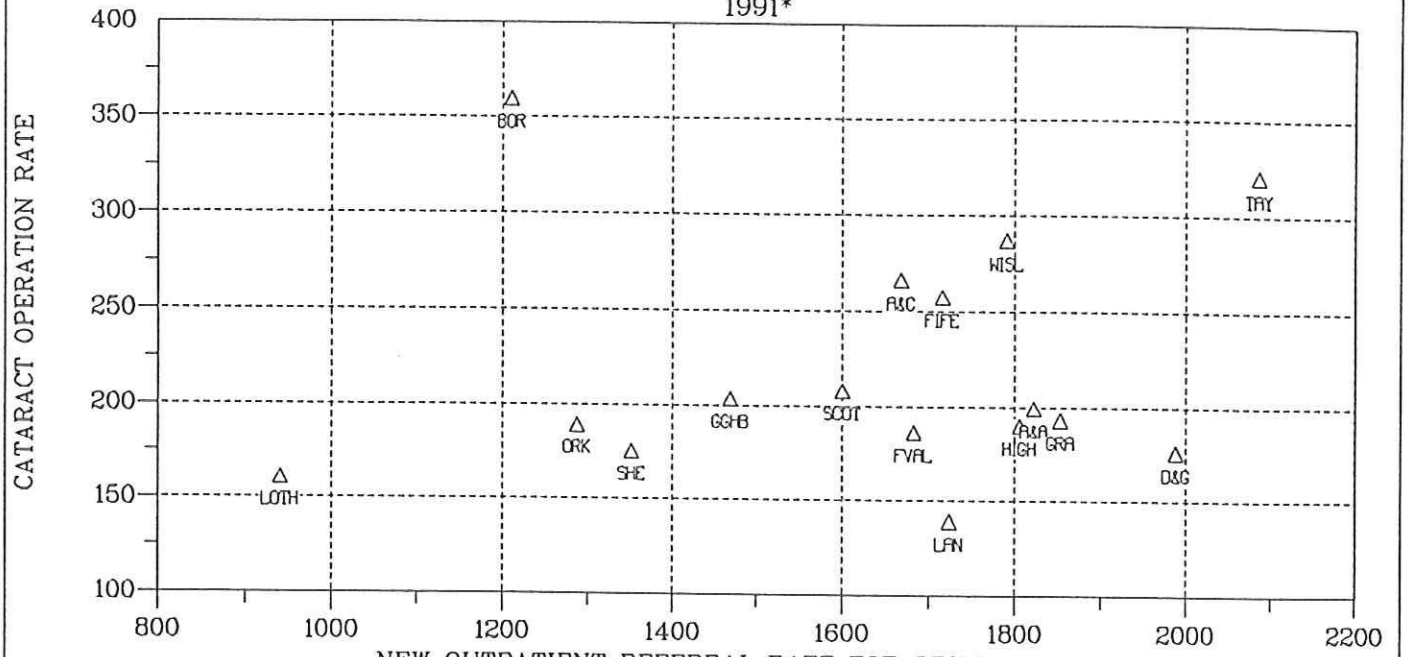

TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
TAYSIDE RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


TIME TRENDS IN CATARACT OPERATIONS IN SCOTTISH HOSPITALS
SHETLAND RESIDENTS, BY AGE GROUP
BOTH SEXES
1980–1991
65–74 years
75–84 years
85+ years
CRUDE RATE PER 100,000 POPULATION
YEAR
SOURCE: INFORMATION & STATISTICS DIVISION (FORM SMR1).


NEW OUTPATIENT REFERRALS FOR OPHTHALMOLOGY,
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE
CRUDE RATES PER 100,000 POPULATION (1990 ESTIMATES)
PERSONS, ALL AGES
APRIL 1991 – MARCH 1992
REFERRAL RATE
2,250
2,000
1,750
1,500
1,250
1,000
750
500
250
0
SCOT
A&C
A&A
BOR
D&G
FIFE
FVAL
GRA
GGHB
HIGH
LAN
LOTH
ORK
SHE
TAY
WISL
AREA OF RESIDENCE
SOURCE: SMRO.

NEW OUTPATIENT REFERRALS FOR OPHTHALMOLOGY, AND CATARACT OPERATIONS
CRUDE RATES PER 100,000 POPULATION (1990 ESTIMATES)
FOR SCOTLAND AND BY HEALTH BOARD OF RESIDENCE

PERSONS, ALL AGES
1991*



* REFERRALS APRIL 1991 – MARCH 1992; OPERATIONS FOR CALENDAR YEAR 1991.
SOURCES: SMR0 (OUTPATIENTS); SMR1 (OPERATIONS).

APPENDIX TABLES

Table i	Numbers and Age Standardised Rates for Cataract Operations (five year total) by 15 Health Board Areas and 53 Local Government Districts, by sex.
Table ii	Observed and Expected Age Standardised Procedure Rates by Health Board of Residence. (Scotland 1987-1991 five year base).
Table iii	Observed and "Required" Cataract Operation by Health Board of Residence 1991. (Tayside 1991 Age Standardised base).
Table iv	Number and Time spent on true Waiting List for Cataract Surgery by Health Board and Hospital of Treatment. September 1992.
Table v	Cross border flow by Hospital of Treatment and Health Board of Residence. September 1992.
Table vi	As above for Ophthalmology.

Numbers and Age-standardised Rates* for Cataract Operations (Principal Position)
(Prior to 1989, OPCS3 170-178; from 1989 onwards, OPCS4 C71-C75)
Residents of Scotland, its 15 Health Board Areas and 53 Local Government Districts
All Ages, by Sex
5-year Period 1987-1991

Area of residence	Numbers of operations (5-year totals)			Mean annual age-standardised rates per 100,000 population		
	Males	Females	Persons	Males	Females	Persons
SCOTLAND	17361	30059	47420	140.8	228.1	185.9
C0 Argyll & Clyde	1578	3101	4679	154.8	281.4	220.6
A0 Ayrshire & Arran	1182	1871	3053	130.3	192.4	162.4
B0 Borders	401	694	1095	127.5	208.5	169.2
Y0 Dumfries & Galloway	540	791	1331	127.6	187.8	158.5
F0 Fife	1483	2481	3964	173.3	278.8	227.7
V0 Forth Valley	945	1566	2511	145.0	236.8	192.1
N0 Grampian	1832	3054	4886	151.7	246.2	200.4
G0 Greater Glasgow	3151	5548	8699	140.6	217.1	180.2
H0 Highland	627	1084	1711	125.1	215.0	171.2
L0 Lanarkshire	1336	2045	3381	112.8	172.8	143.8
S0 Lothian	2123	3558	5681	119.5	180.4	151.0
T0 Tayside	1829	3683	5512	171.7	319.3	247.7
R0 Orkney Islands	77	144	221	136.3	272.2	203.1
Z0 Shetland Islands	65	124	189	117.3	233.1	177.9
W0 Western Isles	131	252	383	144.8	255.6	201.2
E0 Outwith Scotland/Health Board area not known	61	63	124			
C1 Argyll & Bute	254	503	757	145.0	249.6	199.3
C2 Dumbarton	147	242	389	83.5	130.6	107.9
C3 Inverclyde	456	980	1436	207.0	399.0	307.1
C4 Renfrew	721	1376	2097	161.6	292.1	229.3
A1 Cumnock & Doon Valley	104	151	255	96.9	146.7	122.3
A2 Cunninghame	453	759	1212	149.4	228.9	190.5
A3 Kilmarnock & Loudoun	252	371	623	128.3	180.2	155.3
A4 Kyle & Carrick	373	590	963	122.9	176.7	150.8
B1 Berwickshire	62	78	140	101.2	129.0	116.1
B2 Ettrick & Lauderdale	137	233	370	140.0	217.2	179.5
B3 Roxburgh	142	266	408	135.7	233.1	186.0
B4 Tweeddale	60	117	177	120.3	239.2	181.4
Y1 Annandale & Eskdale	102	158	260	88.8	145.7	118.0
Y2 Nithsdale	180	285	465	117.2	181.0	150.1
Y3 Stewartry	124	159	283	168.8	213.8	192.2
Y4 Wigtown	134	189	323	160.1	233.0	196.9
F1 Dunfermline	440	760	1200	147.7	256.6	203.6
F2 Kirkcaldy	707	1132	1839	195.1	303.1	250.6
F3 North East Fife	336	589	925	171.8	269.8	222.3
V1 Clackmannan	156	290	446	147.3	268.0	209.8
V2 Falkirk	482	774	1256	138.8	219.6	180.3
V3 Stirling	307	502	809	154.5	249.6	203.3
N1 Aberdeen City	799	1436	2235	153.5	245.0	200.9
N2 Banff & Buchan	285	498	783	137.6	249.5	194.7
N3 Gordon	218	331	549	136.6	228.1	183.0
N4 Kincardine & Deeside	175	273	448	153.1	256.3	205.2
N5 Moray	355	516	871	175.5	252.4	215.2
G1 Bearsden & Milngavie	123	196	319	131.0	200.3	166.0
G2 Clydebank	156	277	433	155.3	241.4	196.7
G3 Eastwood	174	252	426	121.3	175.2	149.3
G4 Glasgow City	2472	4461	6933	144.0	219.7	183.2
G5 Strathkelvin	226	362	588	136.6	228.5	183.8
H1 Badenoch & Strathspey	40	75	115	137.7	251.6	197.6
H2 Caithness	65	104	169	101.1	165.5	134.0
H3 Inverness	195	375	570	134.6	246.6	191.9
H4 Lochaber	48	87	135	111.1	193.6	153.4
H5 Nairn	43	64	107	162.8	258.6	213.4
H6 Ross & Cromarty	144	216	360	125.5	200.7	164.0
H7 Skye & Lochalsh	33	60	93	98.0	165.8	131.9
H8 Sutherland	59	103	162	133.0	247.2	192.0
L1 Clydesdale	138	224	362	102.4	165.3	134.0
L2 Cumbernauld & Kilsyth	142	185	327	162.0	200.3	180.0
L3 East Kilbride	189	275	464	112.1	173.2	143.3
L4 Hamilton	245	417	662	109.1	190.5	150.6
L5 Monklands	237	383	620	108.0	171.0	140.5
L6 Motherwell	385	561	946	114.3	160.9	138.3
S1 East Lothian	283	413	696	127.8	183.8	156.7
S2 Edinburgh City	1299	2412	3711	116.3	180.1	149.4
S3 Midlothian	227	299	526	127.8	190.9	159.7
S4 West Lothian	314	434	748	117.8	171.6	145.4
T1 Angus	397	767	1164	153.5	281.9	219.4
T2 Dundee City	874	1716	2590	194.8	337.3	268.4
T3 Perth & Kinross	558	1200	1758	156.4	322.1	241.2

* Age-standardised to Scotland (direct method).
NB Rates for persons were not also standardised for sex.

Source: Public Health Common Data Set for Scotland 1991 (SMR1).

APPENDIX TABLE (ii)

Observed and Expected Numbers, Age-standardised Rates and Standardised Procedure Ratios for Cataract Operations (Principal Position)
(Prior to 1989, OPCS3 170-178; from 1989 onwards, OPCS4 C71-C75)
Residents of Scotland and its 15 Health Board Areas
Persons, All Ages
5-year Period 1987-1991

Area of residence	OBS Observed number of operations (5-yr total)	EXP Expected number of operations (5-yr total)	OBS-EXP	ASR* Mean annual age-standardised rate per 100,000 population	SPRLL SPR lower 95% confidence limit	SPR** Standardised procedure ratio	SPRUL SPR upper 95% confidence limit	SIG Statistical significance (zI test)
SCOTLAND	47420			185.9		100.0		
Argyll & Clyde	4679	3943	736	220.6	115.4	118.7	122.1	< 0.2%
Ayrshire & Arran	3053	3495	-442	162.4	84.4	87.4	90.5	< 0.2%
Borders	1095	1203	-108	169.2	85.8	91.0	96.6	< 0.2%
Dumfries & Galloway	1331	1561	-230	158.5	80.8	85.3	90.0	< 0.2%
Fife	3964	3236	728	227.7	118.8	122.5	126.4	< 0.2%
Forth Valley	2511	2430	81	192.1	99.4	103.3	107.5	n.s.
Grampian	4886	4532	354	200.4	104.9	107.8	110.9	< 0.2%
Greater Glasgow	8699	8974	-275	180.2	95.0	96.9	99.0	< 1%
Highland	1711	1858	-147	171.2	87.9	92.1	96.6	< 0.2%
Lanarkshire	3381	4371	-990	143.8	74.8	77.4	80.0	< 0.2%
Lothian	5681	6994	-1313	151.0	79.2	81.2	83.4	< 0.2%
Tayside	5512	4137	1375	247.7	129.8	133.2	136.8	< 0.2%
Orkney Islands	221	202	19	203.1	95.4	109.3	124.8	n.s.
Shetland Islands	189	197	-8	177.9	82.7	95.7	110.6	n.s.
Western Isles	383	354	29	201.2	97.6	108.2	119.6	n.s.

* ASR for each Health Board area = (OBS/EXP) X SCOTTISH ASR.
** SPR for each Health Board area = (OBS/EXP) X 100.
NB Expected numbers obtained by back-calculation and therefore may be subject to rounding errors.
Data were age-standardised to Scotland using the direct method, and were not also standardised for sex.

Source: Observed numbers and ASRs from Public Health Common Data Set for Scotland 1991 (SMR1).

Observed Numbers for Cataract Operations (Principal Position) (OPCS4 C71-C75) and 'Required Numbers' Determined by Applying Tayside* Age-specific Rates to Populations (1990 Estimates) for Other Areas
Residents of Scotland and its 15 Health Board Areas
Persons, All Ages
1991

Area of residence	OBS Observed number of operations	REQ 'Required number' of operations	REQ-OBS
SCOTLAND	10612	14539	3927
Argyll & Clyde	1172	1211	39
Ayrshire & Arran	748	1080	332
Borders	372	369	-3
Dumfries & Galloway	261	482	221
Fife	890	1001	111
Forth Valley	506	751	245
Grampian	977	1394	417
Greater Glasgow	1887	2713	826
Highland	388	575	187
Lanarkshire	781	1324	543
Lothian	1203	2142	939
TAYSIDE *	1263	1263	0
Orkney Islands	37	63	26
Shetland Islands	39	61	22
Western Isles	88	110	22

* Tayside is the normative target.

Source: SMR1.

APPENDIX TABLE(IV)

NHSiS-number and time spent on cataracts inpatient waiting list[1] : by health board of treatment[2]: as at 30 September 1992

Health Board area of treatment	Cataracts												
	Waiting List[4]	Time spent on waiting list (months)						Percentage time spent on waiting list (months)					
	Total	Under 3	3-6	6-12	12-18	18-24	Over 24	Under 3	3-6	6-12	12-18	18-24	Over 24
SCOTLAND[3]	3589	1795	960	697	93	22	21	50.0	26.8	19.4	2.6	0.6	0.6
ARGYLL & CLYDE	271	200	68	3	-	-	-	73.8	25.1	1.1	-	-	-
Inverclyde Royal Hospital	160	99	58	3	-	-	-	61.9	36.2	1.9	-	-	-
Royal Alexandra Hospital	111	101	10	-	-	-	-	91.0	9.0	-	-	-	-
AYRSHIRE & ARRAN	686	181	158	278	57	9	3	26.4	23.0	40.5	8.3	1.3	0.4
Ayr Hospital	686	181	158	278	57	9	3	26.4	23.0	40.5	8.3	1.3	0.4
BORDERS	26	12	10	3	1	-	-	46.2	38.5	11.5	3.8	-	-
Borders General Hospital	26	12	10	3	1	-	-	46.2	38.5	11.5	3.8	-	-
DUMFRIES & GALLOWAY	247	106	82	59	-	-	-	42.9	33.2	23.9	-	-	-
Dumfries & Galloway Royal Infi	247	106	82	59	-	-	-	42.9	33.2	23.9	-	-	-
FORTH VALLEY	..	..	..	..	..	..	..	..	..	..	..	..	..
Stirling Royal Infirmary	..	..	..	..	..	..	..	..	..	..	..	..	..
FIFE	251	207	43	1	-	-	-	82.5	17.1	0.4	-	-	-
Victoria Hospital	251	207	43	1	-	-	-	82.5	17.1	0.4	-	-	-
GRAMPIAN	201	173	28	-	-	-	-	86.1	13.9	-	-	-	-
Aberdeen Royal Infirmary	181	158	23	-	-	-	-	87.3	12.7	-	-	-	-
Dr Grays Hospital	20	15	5	-	-	-	-	75.0	25.0	-	-	-	-
GREATER GLASGOW	505	238	112	137	15	2	1	47.1	22.2	27.1	3.0	0.4	0.2
Southern General	..	..	..	..	..	..	..	..	..	..	..	..	..
Gartnavel General Hospital	66	60	4	2	-	-	-	90.9	6.1	3.0	-	-	-
Glasgow Royal Infirmary	123	29	25	58	11	-	-	23.6	20.3	47.2	8.9	-	-
Glasgow Western Infirmary	109	77	29	3	-	-	-	70.6	26.6	2.8	-	-	-
Stobhill Hospital	207	72	54	74	4	2	1	34.8	26.1	35.7	1.9	1.0	0.5
HIGHLAND	..	..	..	..	..	..	..	..	..	..	..	..	..
Raigmore Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..
LANARKSHIRE	364	153	115	85	9	1	-	42.1	31.7	23.4	2.5	0.3	-
Stonehouse Hospital	364	153	115	85	9	1	-	42.1	31.7	23.4	2.5	0.3	-
LOTHIAN	809	325	316	130	11	10	17	40.2	39.1	16.1	1.4	1.2	2.1
Royal Infirmary	795	325	316	127	11	5	11	40.9	39.7	16.0	1.4	0.6	1.4
St Johns Hospital at Howden	14	-	-	3	-	5	6	-	-	21.4	-	35.7	42.9
SHETLAND	8	8	-	-	-	-	-	100.0	-	-	-	-	-
Gilbert Bain Hospital	8	8	-	-	-	-	-	100.0	-	-	-	-	-
TAYSIDE	221	192	28	1	-	-	-	86.9	12.7	0.5	-	-	-
Ninewells Hospital	221	192	28	1	-	-	-	86.9	12.7	0.5	-	-	-

1 Inpatient true waiting list. All the figures exclude patients waiting for treatment outwith Scotland.

2 Southern General, Raigmore and Stirling Royal Infirmary did not record the operation/procedure code for any patients waiting for cataract surgery. Any patients waiting at those hospitals are therefore excluded from the analysis.

3 Excludes patients waiting at Southern General, Raigmore and Stirling Royal Infirmary

4 Includes cases where time spent on waiting list was not known.

.. Not available

Source: SMR3

REF: ISD5/9312613

APPENDIX TABLE(v)

NHSiS - Cataract waiting list[1] by health board of residence and hospital of treatment[2]: as at 30 September 1992

Hospital of treatment	Health Board of residence																
	Scotland	Argyll & Clyde	Ayrshire & Arran	Borders	Dumfries Galloway	Fife	Forth Valley	Grampian	Greater Glasgow	Highland	Lanark -shire	Lothian	Orkney	Shetland	Tayside	Western Isles	Others/ not known
ALL HOSPITALS[3]	3589	300	726	33	246	279	..	193	390	..	413	789	7	11	193	1	5
INVERCLYDE ROYAL	160	125	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROYAL ALEXANDRA HOSP	111	104	3	-	-	-	-	-	3	-	-	-	-	-	-	-	1
AYR HOSPITAL	686	-	685	-	1	-	-	-	-	-	-	-	-	-	-	-	-
BORDERS GENERAL HOSP	26	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	1
DUMFRIES & GALLOWAY RI	247	-	-	-	245	-	-	-	-	-	1	-	-	-	-	-	1
VICTORIA HOSPITAL	251	-	-	-	-	249	-	-	1	-	-	1	-	-	-	-	-
STIRLING RI	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ABERDEEN ROYAL INF	181	-	-	-	-	-	-	169	-	1	-	-	7	3	-	-	1
DR GRAYS HOSPITAL	20	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
GLASGOW ROYAL INF	123	55	-	-	-	-	-	-	61	-	7	-	-	-	-	-	-
STOBHILL HOSPITAL	207	2	-	-	-	-	-	-	183	-	22	-	-	-	-	-	-
GARTNAVEL GENERAL	66	5	1	-	-	-	-	-	51	-	7	-	-	-	-	1	1
GLASGOW WESTERN INF	109	9	2	-	-	-	1	-	91	-	5	-	-	-	1	-	-
SOUTHERN GENERAL	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
STONEHOUSE HOSPITAL	364	-	-	-	-	-	-	-	-	-	364	-	-	-	-	-	-
ROYAL INFIRMARY,EDIN	795	-	-	8	-	4	-	1	-	-	6	775	-	-	1	-	-
ST JOHNS HOSPITAL	14	-	-	-	-	-	-	-	-	-	1	13	-	-	-	-	-
RAIGMORE HOSP	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
GILBERT BAIN	8	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-
NINEWELLS HOSPITAL	221	-	-	-	-	26	1	3	-	-	-	-	-	-	191	-	-

.. Not available

1 Inpatient true waiting list. All the figures exclude patients waiting for treatment outwith Scotland.

2 Southern General, Raigmore and Stirling Royal Infirmary did not record the operation/procedure code for any patients waiting for cataract surgery. Any patients waiting at those hospitals are therefore excluded from the analysis.

3 Excludes Southern General, Raigmore and Stirling Royal Infirmary.

Source: SMR3

Reference: ISD8\93126C

APPENDIX TABLE (VI)

NHSiS- Ophthalmology waiting list[1] by health board of residence and hospital of treatment: cataract: as at 30 Sept 1992

Hospital of treatment	Health Board of residence																
	Scotland	Argyll & Clyde	Ayrshire & Arran	Borders	Dumfries Galloway	Fife	Forth Valley	Grampian	Greater Glasgow	Highland	Lanark -shire	Lothian	Orkney	Shetland	Tayside	Western Isles	Others/ not known
ALL HOSPITALS	6684	497	955	137	286	342	173	309	1273	191	547	1552	10	12	271	65	64
INVERCLYDE ROYAL	236	192	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROYAL ALEXANDRA HOSP	153	143	3	-	-	-	-	-	5	-	-	1	-	-	-	-	1
AYR HOSPITAL	909	1	901	-	2	-	1	-	2	-	-	-	-	-	2	-	-
BORDERS GENERAL HOSP	116	-	-	115	-	-	-	-	-	-	-	-	-	-	-	-	1
DUMFRIES & GALLOWAY RI	283	-	-	-	281	-	-	-	-	-	1	-	-	-	-	-	1
VICTORIA HOSPITAL	299	-	-	-	-	297	-	-	1	-	-	1	-	-	-	-	-
STIRLING ROYAL INF	210	-	-	-	-	1	163	-	-	-	-	-	-	-	1	-	45
ABERDEEN ROYAL INF	256	-	-	-	-	1	-	241	-	1	-	-	8	4	-	-	1
ROYAL ABERDEEN CHILD'S	32	-	-	-	-	-	-	30	-	-	-	-	2	-	-	-	-
DR GRAYS HOSPITAL	34	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
GLASGOW ROYAL INF	147	66	-	-	-	-	-	-	73	-	8	-	-	-	-	-	-
STOBHILL HOSPITAL	255	2	-	-	-	-	-	-	230	-	23	-	-	-	-	-	-
SOUTHERN GENERAL HOSP	681	41	1	-	-	-	1	-	623	-	12	-	-	-	-	-	3
GARTNAVEL GENERAL HOS	198	30	2	-	2	-	-	-	140	-	21	-	-	-	-	1	2
RHSC, YORKHILL	68	1	1	-	-	1	1	-	56	-	3	1	-	-	-	-	4
GLASGOW WESTERN INF	182	19	2	-	1	2	5	-	142	-	7	1	-	-	1	-	2
RAIGMORE HOSPITAL	253	1	-	-	-	-	-	-	-	189	-	-	-	-	-	63	-
STONEHOUSE HOSPITAL	451	-	-	-	-	-	-	-	-	-	451	-	-	-	-	-	-
ROYAL INFIRMARY	1557	1	1	22	-	7	-	1	-	-	20	1498	-	-	2	1	4
ST JOHNS HOSPITAL	51	-	-	-	-	-	-	-	-	-	1	50	-	-	-	-	-
GILBERT BAIN	8	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-
NINEWELLS HOSPITAL	305	-	-	-	-	33	2	3	1	1	-	-	-	-	265	-	-

1 Inpatient true waiting list
Source: SMR3
Reference: ISD8\93126D

APPENDICES

MEASURES OF VISUAL ACUITY

6/6 - patient reads the smallest letters at 6m away

6/9 - patient reads letters at 6m away that a normal eye should read at 9m away

6/12, 6/18, 6/24, 6/36, 6/60 - similarly scaled print, gradually increasing in size

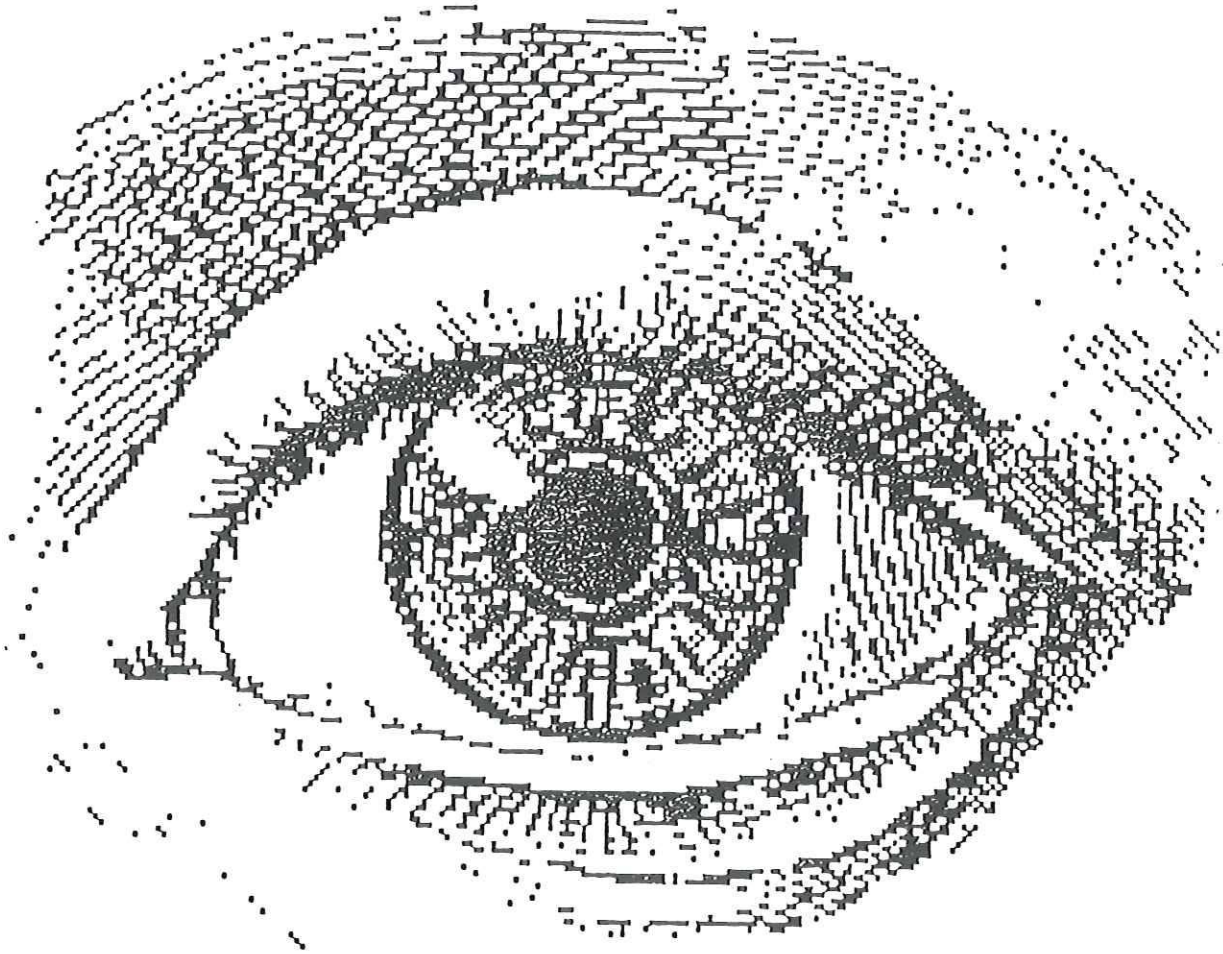
3/60 - able to read the 6/60 print at 3m away

CF - patient only able to count the fingers of the examiner, ie cannot read any of the print

HM - patient can only depict movements of the examiners hand

PL - patient perceives light but sees nothing else

NOTE: There are other scales of visual acuity which give scales based on non-metric measures (eg 20/20)



HEAD & NECK DIRECTORATE

OPHTHALMOLOGY

DAY-CARE SURGERY

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FOREWORD

The aims of the Unit Management Team is to maintain the position of the Royal Alexandra Hospital at the forefront of innovation, efficiency and above all quality patient care.

In accordance with the Specifications of the Service Agreement with the Health Board, we are required to do at least 20% Day Surgery in 1993 - gradually increasing thereafter.

Day Surgery is the surgery of the future and the process of its implementation will allow optimum use of our existing resources. The potential increased throughput of patients, reduction in waiting time and cost effectiveness will be the ultimate result. Indeed, squint surgery is already being done on a day basis and 2 consultant colleagues; Dr S Murray and Dr L Esakowitz are doing cataract day surgery. We are confident that ultimately all the consultant and non consultant staff will be actively involved in day care surgery on a volume basis.

OPHTHALMOLOGY

DAY CARE SURGERY GROUP

Dr Max Nanjiani: Consultant Ophthalmologist

Dr Jag Chawla: Consultant Ophthalmologist/Clinical Director

Dr Stephen Murray: Consultant Ophthalmologist

Dr Leonard Esakowitz: Consultant Ophthalmologist

Mrs V Cathcart: Service Manager, Head and Neck Directorate

Sister A Ross: Ward 20

Sister J Cheah: Ward 20

Sister N Elliot: Ward 17

Sister S Stevenson: Eye Out-patient Department

OPHTHALMOLOGY

DAY CARE SURGERY

INTRODUCTION

The Ophthalmology Department provides treatment on an in-patient and out-patient basis for both children and adults, covering a variety of conditions and causes. Most of the adult conditions are associated with ageing. The shift in demographic trends indicates current growth in the the demand for this service will continue into the next century (Table 1). As the national trend indicates the need for cataract operations is making the greatest demand on the service.

TABLE 1

DISCHARGES AND BED DAYS, CATARACTS AND ALL CONDITIONS, OPHTHALMOLOGY - SCOTLAND 1986-91

	DISCHARGES			BED DAYS		
	Cataract	All Conditions	Cataracts as 0% of all conditions	Cataract	All Conditions	Cataracts as 0% of all conditions
1986 -	7,627	18,404	41	56,888	117,786	48
1987 -	7,765	18,700	42	54,843	114,070	48
1988 -	9,167	19,094	48	58,536	110,745	53
1989 -	9,980	20,482	49	56,558	112,651	50
1990 -	10,919	20,894	52	56,306	106,559	53
1991 -	11,026	21,724	51	49,716	102,103	49

The Royal Alexandra Hospital Ophthalmology Department currently has a 4-7 week waiting time for new patient's appointments and a 2 - 3 month waiting time for cataract surgery. The introduction of the Phaco Emulsification procedure, and the changes in practice have reduced the average waiting time as follows:

1991 - Average stay 4-5 days

1992 - Average stay 3 days

To further improve the efficiency of this department, it was agreed by the clinical team and the directorate management to work towards a general increase in the day surgery throughput. A certain amount of success has already been achieved in the paediatric ward and to a limited degree also in the adult area. The proposal by the clinical team to increase the day surgery for cataracts throughput, will create facilities necessary to undertake additional commitments from both locally and further afield. The availability of experienced ophthalmic trained nurses, besides being essential is ideally suited to this situation and ensures the efficient use of the existing resources.

TYPES OF PROCEDURES TO BE DEALT WITH IN TREATMENT ROOM

At present there are several procedures in the day surgery category being carried out in the out-patients theatre which are more ideally suited to a treatment room situation such as the one available in Ward 20. This would free the theatre facilities for procedures which can only be undertaken in a theatre environment and at the same time afford a greater degree of flexibility in the amount of patients in this category that can be treated. The following is a list of procedures which can be undertaken in a treatment room.

- Excision of Chalazion
- Biopsy of Conjunctival Lesion
- Tarsorraphy
- Entropion
- Ectropion
- Removal of Cyst
- Excision of Pterygium
- Excision and/or Cautery of Molluscum
- 3 Snip Operation
- Retropunctal Cautery
- Removal of Papilloma
- Temporal Artery Biopsy
- Trichiasis by Cautery - (Electrolysis)

ADVANTAGES OF USING WARD 20

The Consultants have agreed to utilise a least half a day of their current theatre commitment for the sole purpose of undertaking major surgical procedures on a day surgery basis.

1. Expertise of the nursing staff, both in qualification and experience, especially in dealing with major cases and the ability to undertake a variety of procedures on their own initiative.

2. Well-equipped treatment room

3. Several procedures which are currently carried out in the out-patient theatre do not require a theatre but are categorised as day surgery. There is also a limitation of a maximum of 8 beds in Ward 30 as compared to Ward 20 where a greater number of day surgery procedures can be undertaken.

4. Easy Access to theatres

5. Facility to retain patients overnight, if required - due to medical reason.

Whilst day care surgery is an efficient way of utilising the resources it should be remembered that the age groups being catered for and the geographical spread from which these patients come from could pose problems such as:-

1. The need for further medical attention and observation leading to overnight stay.

2. The anxiety factor, which tends to be greater in this age group.

3. The inability to accept the pace of day care surgery.

4. The continuity of care for major eye surgery from counselling through to final assessment at first dressing. It also allows 24 hour contact point for the patients.

CATARACT DAY CARE SURGERY: PROTOCOL FOR HOSPITAL ACTIVITY

a) **Consultant appointment**

Preliminary assessment for day care surgery
Patient listed for surgery
Letter to General Practitioner
If diary system, date for operation arranged

b) **Pre-operative visit to Ward 20**

Explanation of pre-op and post-op care by ward nurse and consultant.

Assessment: suitability

Information Document

c) **Letter to patient,** notifying or confirming date of admission

d) **Surgery**

Letter to General Practitioner

e) **First post-operative visit:** following day

f) **Second post-operative visit:** 2 weeks after surgery

Letter to General Practitioner

g) **Third post-operative visit:** 6 weeks after operation

Letter to General Practitioner

Start procedure as a (a) for second eye, or refer patient to optometrist.

DAY CARE

PROTOCOL FOR IDENTIFICATION, ASSESSMENT, CRITERIA AND PROCEDURES

IDENTIFICATION

The patient is identified by the Consultant or his deputy, in the out-patients department, as requiring surgery.

Before a date for surgery is given an assessment is undertaken by an Ophthalmic Trained Nurse and Consultant to ascertain the type of surgery to be offered to the patient and the choice of day care or in-patient facilities are explained to the patient.

DAY CARE PRE-OPERATIVE ASSESSMENT

This is carried out in the ward area where patients are assessed as per checklist (see page 6). If for any reason the nurse feels that the patient does not fulfill the criteria this will be made known immediately to the Consultant involved.

DAY CASE CRITERIA

- The patient must be in reasonable health and not confused.
- The patient should have relative/friend who is able to provide support in first 24 hours.
- The patient must have transport to attend hospital on day of surgery and first post-operative day.
- The patient must be able to instil eye drops or have a friend/ district nurse who can perform this service.
- Patient must be able to lie flat for up to one hour without becoming breathless.
- Patient must have good hearing with appropriate hearing aid if necessary.
- Patient must be able to understand simple instructions.
- For General Anaesthetic - Patient must be fit and aged less than 70 years. However, for Local Anaesthetic older age group will be considered.

Based on the suitability of a patient for Day Care Surgery a date for surgery is arranged and the appropriate information is given to the patient.

DAY OF SURGERY

- Patient arrives at ward according to pre-arranged time fasted or not according to type of anaesthesia. Documentation is checked by the nurse and patient is then prepared for surgery.

- Following surgery the patient's condition is assessed by nursing staff and documentated appropriately. The patient is discharged with verbal and written instructions to patient and carer.

- If there are any doubts regarding patient's physical condition, surgeon or anaesthetist should be contacted.

- There is a facility for the patient to be retained if any deterioration in condition occurs.

- Contact telephone number given to patients in case there are any problems arising overnight.

FIRST POST-OPERATIVE VISIT

- The patient returns to hospital and is seen by nurse and doctor.

- Post-operative eye drops, medication are given and the nurse will re-check patient's ability to instill eye drops.

LETTER WILL BE SENT TO GENERAL PRACTITIONER

- Further out-patient appointment will be given.

- Patient education re-enforced and discharge instruction re-iterated. Contact telephone number given to patient and/or patient.

DAY-CARE PRE-OP ASSESSMENT CHECKLIST

Name.....Address.....

C/S No.....DOB.....Tel No.....

Next of Kin.....

SOCIAL

	Yes	No
Does patient have transport?		
Is escort available?		
Is there someone at home?		
Home circumstances?		
Is patient able to cope with drops?		
Does patient appreciate the importance of drops?		
Is district nurse required?		
Does patient understand counselling of pre and post-op care for day-care surgery?		
Date of operation?		
Preferred time of admission?		
Time of return to ward for first dressing?		

MEDICAL

Patients' general health problems?		
Current drugs?		
Allergies?		
Previous anaesthetics and problems?		
Biometry?		
Pre-op drops?		
Consent?		
Blood pressure.....Pulse.....Urine.....		
Is this patient fit for day-case surgery?		

Nurse's signature.....Date.....

Consultant's Signature.....Date.....

Short-stay Ward — Nursing Record

B.P. .....

Temp. .....

Pulse .....

L.M.P. .....

Consultant .....

Ward .....

OUT PATIENT

Name .....

Address .....

.....

D. of B. .....

N. of K. .....

Tel. No. .....

(RECOVERY)

B.P.			
Pulse			
Staining			
Elimination			
Diet			
Mobility			

FURTHER REQUIREMENTS

Packing

Catheter

Suture Line

O. P. APPOINTMENTS

DAY-CARE CATARACT SURGERY

INFORMATION SHEET

FOR PATIENTS OF DRS NANJIANI, CHAWLA AND MURRAY

ADVANTAGES?

1. No need to stay overnight in hospital.
2. Waiting time may be shorter.
3. It may be possible to get a definite date for operation when placed on the waiting list.
4. Results are as good as for in-patient treatment.
5. Patients who have had one eye done as inpatient and one as day-care usually say they preferred day-care.

LIMITATIONS?

1. You will need someone to bring you to and from the RAH on each of three days (the day of operation, the day before and the day after).
2. There is a chance of 1 in 25 that in-patient treatment will be needed anyway.

WHAT DOES IT INVOLVE?

The day before operation - you attend the ward for tests, from 11 am to about 1 pm.

Day of operation: Local anaesthetic - take light breakfast
General anaesthetic - nothing to eat or drink from midnight

Report to admissions RAH at time given. Home 5 - 6 pm.

The day after - you attend for change of dressing and examinatior at Ward 20 at an arranged time.

IF YOU REQUIRE ADVICE ONCE YOU ARE HOME AFTER THE OPERATION

'PHONE WARD 20 - 041-887-9111 EXT 4520

DAY-CARE CATARACT SURGERY

INFORMATION SHEET

FOR PATIENTS OF DR ESAKOWITZ

ADVANTAGES

1. There is no need for you to stay in hospital

LIMITATIONS

1. You will need transport and an escort to bring you to and from the RAH on the day of operation and the following day

2. A bed will be available if needed in Ward 20

WHAT DOES IT INVOLVE?

1. Meeting the nursing staff on the ward who will explain the procedure and answer questions.

2. The day of your operation you will;-

   Report to Admission Suite at RAH at time given
   Go to Ward 20 after being admitted
   Have your operation done
   Go home about 5pm/6pm

3. The day after your operation you should return to Ward 20 at 10am

IF YOU REQUIRE ANY ADVICE ONCE YOU ARE HOME AFTER THE OPERATION, PLEASE PHONE WARD 20, RAH

041 887 9111 EXTENSION 4520

DAY CARE PATIENTS

DISCHARGE ADVICE

After your operation and before you leave the ward, nursing staff will give you an appointment for the following day.

When you get home please rest and take it easy for the remainder of the day: Do not remove Eye Pad
Do not rub Eye

When you come back the next day, please go directly to Ward 20 at your appointment time.

Nurse will remove pad and clean eye - you will also be seen by a doctor.

You will be given eye drops with information as to their use.

A return appointment for the clinic will be arranged - this will normally be in about 2 weeks time - date and time will be sent to your home address.

A letter will be sent to your General Practitioner about your operation and treatment.

PLEASE ATTEND WARD 20 FOR:

EYE DRESSING

DATE .....

TIME .....

IN THE EVENT OF ANY EYE PROBLEMS PLEASE CONTACT WARD 20

TELEPHONE NO. 041-887 9111 EXTENSION 4520

PAEDIATRICS

DAY SURGERY - OPHTHALMOLOGY

CORRECTION OF STRABISMUS

EXCISION OF CHALAZION OR OTHER BENIGN LESIONS

EXAMINATION UNDER ANAESTHESIA

TEAR DUCT PROBING

1. The paediatric staff in Ward 17 will see children and their parents prior to day of surgery:

   a) To assess the child's (and family's) suitability for day surgery.

   b) To allow the child to be shown the area.

   c) To advise the child and family of what would be involved (advice sheet).

2. In the future it is hoped that a date for day surgery can be given at this pre-admission counselling session and children would be seen by both doctor anaesthetist.

3. On the day of surgery the child comes to the children's ward where they will be cared for by specially designated paediatric nurses (named nurse) in a separate area from in-patients already in the ward.

4. The special area for day surgery will be homely and the opportunity for play and other activities for children and young people will be met.

5. Once the child is fit for discharge, written instructions will be given and parents advised who to contact in the event of any problems arising.

6. Should the child be unfit for discharge they will be able to remain in the area being cared for by nurses with whom they are familiar.

7. Possible future plans might include the building of a mini theatre alongside the children's ward to cover the day surgery. This area could also be utilised by medical day admissions.

ADVANTAGES IN USING WARD 17 FOR CHILDREN'S DAY SURGERY

1. We have a child centred philosophy.

2. Ward 17 is designed for children.

3. Children for day surgery can be nursed in a specially designated area, rather than mixed with in-patients.

4. Close proximity to theatres.

5. The parent's facilities can be used.

6. If the child is not fit for discharge, they will not be moved to another area (the need for overnight stay is a rare occurrence).

7. The availability of paediatric trained nurses to care only for day surgery patients.

8. Play staff are also available.

9. If concerned, families can telephone the ward after discharge.

As yet no disadvantages have been found.

ROYAL ALEXANDRA HOSPITAL

Short Stay Nursing Record

DATE: TIME: NAME:

BP: WEIGHT: ALLERGIES: DOB:

TEMP: URINE: U/N:

PULSE: CONSENT: CONSULTANT:

RESPS: I.D. BRACELET: FASTED FROM:

NEXT OF KIN: TEL NO: LOOSE TEETH:

SCHOOL:

	Yes	No	Remarks
1. Will this be your child's first operation?			
2. Had your child had any serious illnesses?			
3. Has your child had any problems with anaesthetics?			
4. Has any of your family had problems with anaesthetics?			
5. Has your child got a cough or cold?			
6. Does your child have bronchitis, asthma or other chest problem?			
7. Has your child had heart disease or rheumatic fever.			
8. Has your child ever had a convulsion or fit?			
9. Does your child faint easily?			
10. Does your child have anaemia or other blood problem?			
11. Does your child bruise or bleed excessively?			
12. Does your child have any allergies or reactions to medicines?			
13. Is your child on any medicines now (tablets, capsules, inhalers, creams or ointments)?			
14. Has your child ever been jaundiced?			
15. Has your child ever had any urinary or kidney trouble?			
16. Has your child ever had diabetes or sugar in the urine?			
Do you and your child understand the nature of the operation?			
Are you staying with your child today?			

Nurse Signature _____

ROYAL ALEXANDRA HOSPITAL

DAY SURGERY

ADVICE TO PARENTS

Ward 17

041-887 9111
Ext. 4317

1. Please give your child something to eat and drink late evening and from 12 midnight your child must have nothing to eat or drink.

2. Please attend the ward at 8.00 a.m. on morning of surgery. Go to admissions office before going to ward.

3. A parent or legal guardian must accompany child so that consent for surgery can be given.

4. It is advisable for the parent/guardian to remain with the child all day. Canteen facilities are available for parents.

5. If you have other children, please arrange for them to be looked after for the day, including any who may be returning from school.

6. Your child will remain in the ward until fit for discharge and seen by Doctor.

7. Your child will be kept overnight if there is any bleeding, vomiting or if very sleepy.

8. It is inadvisable to use public transport on discharge. Alternative transport should be arranged.

9. After discharge your child should be taken home. Supervised play is permitted.

10. If your child feels well they may return to school the following day unless instructed otherwise. Specific instructions will be given for your child on discharge.

11. If you have any problems or worries, please 'phone the ward.

Appendix
Patient Education Brochure

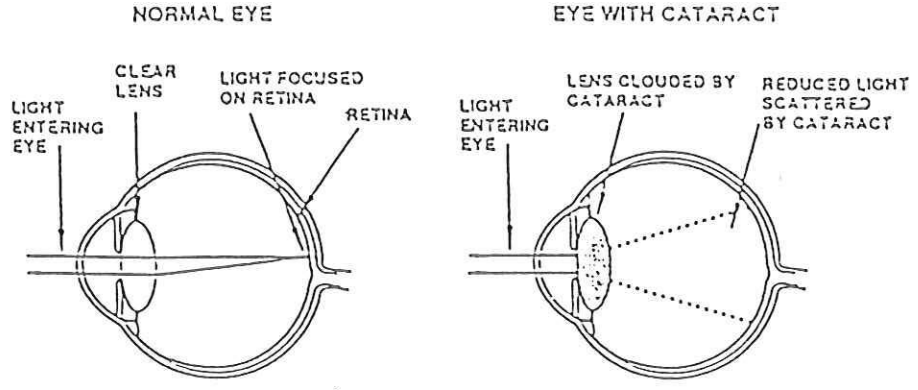
UNDERSTANDING AGE-RELATED CATARACT

You have been found to have a cataract, which is the most common eye disease a fecting vision. Although cataracts can be caused in newborns by illnesses that affect a expectant mother or developing fetus, in children and adults by injuries to the eye, and i all persons by certain medications, the most common type of cataract is found in older adult and is referred to as age-related cataract. The cause of age-related cataract is not full understood, but it is known that there are special risk factors, such as chronic exposure t certain types of light and smoking, that are related to the development of cataract.

A cataract is not a growth on the eye. Rather, it is a change in the clarity of the lens which is located inside the eye just past the iris. (See the diagrams below.) The eye i arranged much like a camera: light enters through the pupil, passes through the lens, an is projected onto the retina. If the lens is cloudy, a blurred image is created, just as a dirt camera lens produces a blurry picture. The lens is clear at birth, but with the passage c time it can become progressively cloudy, resulting in vision that is blurred, less able t appreciate colors, and subject to glare, which is often first apparent when looking at th headlights of approaching cars at night. In the early stages of the cataract these problem may be barely noticeable, but with time they become more evident, because age-relate cataract is a progressive disease.

As the cataract progresses, it may be possible to improve the sharpness of your visio by changing the prescription of your spectacles or contact lenses. Or the cataract ma decrease distance vision while making near tasks such as reading possible without the nee for spectacles. Your doctor will inform you of any loss of the sharpness of your visio because many tasks—reading, driving a vehicle, and operating machinery to name a few- require a certain sharpness of vision to be done well. You will have to consider how muc the cataract affects your ability to perform these and other tasks and discuss any problem you experience with your doctor.

In every state there are vision requirements that must be satisfied before a citizen i qualified to operate a motor vehicle. You should be sure that your vision meets these leg requirements. Do not forget that as vision worsens greater care must be exercised whi



driving, especially during hours of darkness. Your doctor will discuss with you how the cataract affects your ability to drive a vehicle and the conditions under which driving should be avoided.

Because age-related cataracts continue to progress as one grows older, your doctor will need to examine you periodically—usually once a year—to determine how much of an effect on your vision the cataract has had. It is difficult to predict how long it will take for a cataract to greatly affect vision, for it may range from a matter of months to a number of years. During this time your doctor will measure your vision and prescribe eyewear as necessary to allow you to enjoy the best vision possible. Do not forget that the cataract will make it impossible to restore your vision to complete sharpness, however, and that in time the only effective remedy available to improve vision will be surgery.

The decision to undergo cataract surgery must be made by you, based upon the effects of the cataract on your enjoyment of life and your doctor's advice about the timeliness of surgery. This decision is often reached at different times by different people, depending upon the person's vision, occupation, and lifestyle. You should feel free to talk to your doctor about the need for surgery and when referral to a surgeon will be necessary. Your doctor will be pleased to recommend a surgeon to you.

Cataract surgery does not usually require hospitalization. It is a remarkably safe and effective procedure, requiring less than an hour to complete, and is performed under a local anesthetic. In the great majority of cases vision is restored through the use of an intraocular lens, which is a plastic substitute for the natural lens that has become clouded by the cataract. The surgical techniques used today minimize the size of the incision needed to remove and replace the lens, the pain and discomfort of surgery, and the recovery period. Eye drops are taken for a few weeks after the operation to prevent infection and to reduce inflammation. Progress after surgery is monitored by both the surgeon and your doctor, who work together to ensure that the healing process is without complication.

During the weeks following surgery you will be required to return for several followup examinations, at which time the sharpness of your vision will be assessed. Post-surgical distance vision often requires no correction with spectacles or contact lenses, and spectacles are usually necessary only for reading or other near tasks. About 8 to 12 weeks is usually required for healing to occur and for vision to become stable, but patients with "one stitch" or "no stitch" surgery may be able to obtain spectacles in less time. Your doctor will advise you at each followup visit of the progress of healing and when you can expect to receive your spectacles or contact lenses.

If you have questions about cataract—what it is, its effects on your vision, or when surgery is necessary—please discuss them with your doctor before leaving today.

Your next appointment is _____.

If you have any questions about your vision or there are changes in your vision that occur before your next appointment, please call us at 123-4567.

CATARACT REFERRAL CHAIN.