

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD

BANGOR

CATARACT SURGERY AUDIT

August 1990 - June 1992

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INTRODUCTION

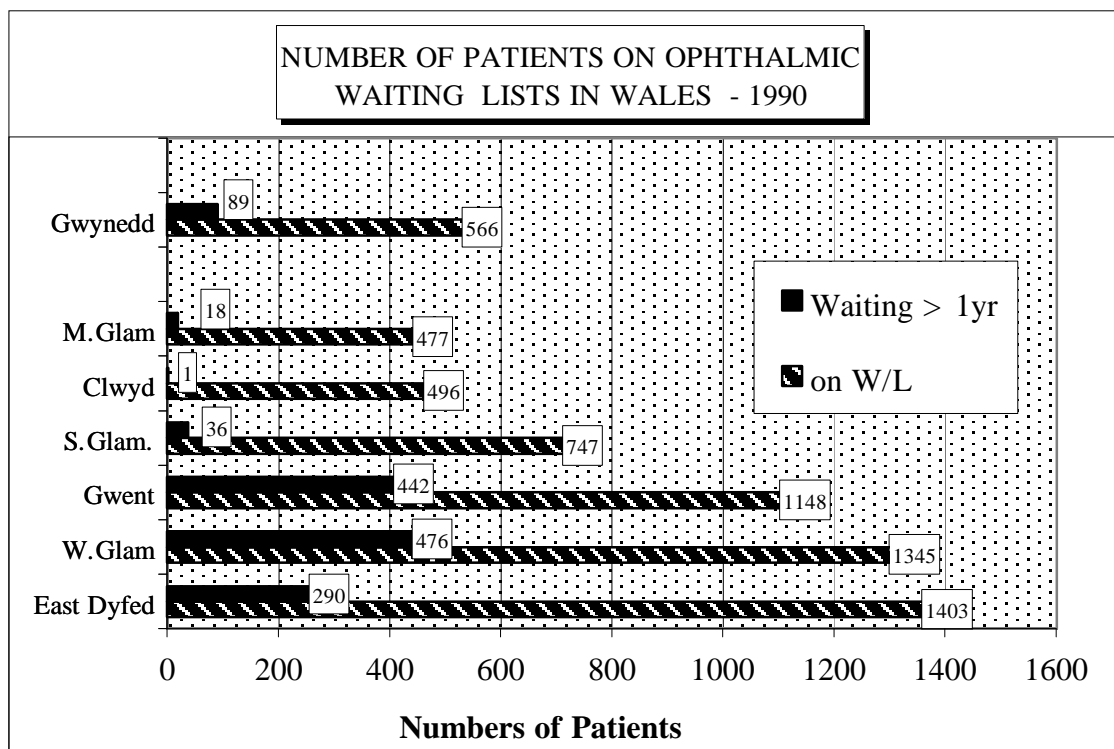
The North Wales Ophthalmic Treatment Centre was established at Ysbyty Gwynedd, Bangor in November 1990 and was one of three specialist centres approved by the Secretary of State and established in Wales to reduce waiting times for key disabling conditions, including cataract. The other conditions for which monies had been earmarked were hip and knee replacements (based at the Prince of Wales Orthopaedic Hospital, Rhydlyfar, Cardiff), and varicose veins and hernias (Bridgend General Hospital). The criteria for referral to a Treatment Centre for cataract surgery was "any patient, either resident in Wales or on the existing NHS in-patient waiting list of a hospital in Wales, who had been on a cataract surgery waiting list for more than four months". Priority was to be given to those patients longest on the waiting list.

Waiting lists ¹ for the year of the Treatment Centre opening (1990), in the regions to be served by the Ophthalmic Treatment Centre, (including Gwynedd) and the existing waiting times for all ophthalmic procedures were as follows:-

	<u>Total on Waiting List</u>	<u>Waiting > 1 year</u>
East Dyfed	1403	290
Gwent	1148	442
Mid Glamorgan	477	18
South Glamorgan	747	36
West Glamorgan	1345	476
Powys	(²)	
Clwyd	496	1
Gwynedd	566	89

¹ Waiting list statistics taken from Welsh Hospital Waiting List Bulletin 1992: No. 1

² No Ophthalmic Services were available for Powys and patients were treated by neighbouring districts.



Graph 1 -

Initial estimates were for approximately 500 additional cataract operations per annum to be undertaken at the Centre by the three consultant ophthalmologists working in the Department. The target set for the period 1.9.90 - 31.3.91 was made up as follows:

	Target	Actual	±/
Gwynedd	504	485	-19
Outside Gwynedd	53	23	-30
Total	557	508	-49

The target workload was based on the following figures:

- 1) Existing workload of 1989/90 = 504 operations per annum i.e. 42 per month (period in question being September-March = $42 \times 7 = 294$).
- 2) Additional workload target for Treatment Centre as set by Welsh Office = 263 (of these 20% were to be from outside Gwynedd i.e. 53).

Total target workload = 557.

Costing

The cost of setting up the North Wales Ophthalmic Treatment Centre was met by the Welsh Office and was estimated to be £345,134.00, which comprised additional equipment and staff costs (this included one consultant ophthalmologist (see below), one staff doctor and Treatment Centre Co-ordinator, anaesthetic sessions, orthoptic sessions, ward and out-patient nurses and a medical secretary).

At the time of its planning, Gwynedd had two consultant ophthalmologists based at Ysbyty Gwynedd and a third was to be appointed to take on the additional workload, which included a large backlog of Gwynedd patients. Part of the monies for this newly established post was to come from revenue for the Ophthalmic Treatment Centre.

The Treatment Centre

Location

The Treatment Centre was located within the Department of Ophthalmology at Ysbyty Gwynedd, Bangor, a modern, 500+ bedded District General Hospital which offered the full range of diagnostic and treatment facilities in all the major specialities. The Centre was contained within a 24-bed dedicated eye ward (Tudno Ward, named after the 6th Century Welsh saint).

Gwynedd Health Authority is geographically large in that it covers an area of approximately 1,500 square miles (half of which is occupied by the Snowdonia National Park). The sea coast of Gwynedd extends to over 400 miles. It has a predominantly rural population which is distributed either in towns of small to moderate size, situated along the coast, or in a multitude of inland villages, hamlets and farmsteads. The population densities vary from under 20 persons per square mile in the more rural parts of the hinterland, to nearly 10,000 per square mile in the confined area of Holyhead. The only communities with concentrations of populations in excess of 5,000 are:-

Blaenau Ffestiniog (5,400); Caernarfon (9,500); Holyhead (10,400); Conwy (13,000) Bangor (14,300); and Llandudno (18,900).

Transport

Road and rail communications both within Gwynedd, and to reach Gwynedd from South Wales, are very poor. Roads within Gwynedd are small, and often tortuous. In the winter period they are often impassable.

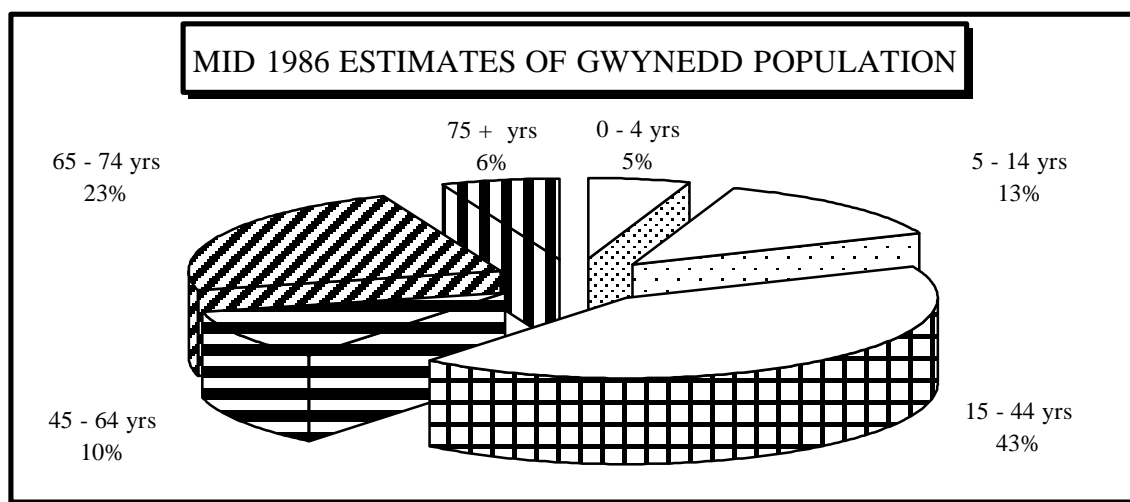
There is no motorway or major dual carriageway system linking the south to the north. In addition, train services from the south to the north are generally poor. The main monies spent on transport links within north Wales have been in joining that area to England via the A55.

Existing Consultant Staff

At the time of its inception, there was a complement of 3 consultant ophthalmologists at Ysbyty Gwynedd. These consultants were responsible for the provision of ophthalmic services to a normal resident population of 239,000 which doubled during the peak weeks of August with visitors to North Wales.

Health Care in Gwynedd

The outstanding feature of health care in Gwynedd, and in ophthalmology in particular, is the fact that the number of the population over the age of 65 years ranges from 18.7% to 22.6% (the latter figure representing the population of Aberconwy District which includes the retirement town of Llandudno).



Graph - 2 -

Population figures for Wales as a whole over the same period were of 17% over the age of 65 years (this breaks down as 7% male and 10% female). This is more in line with the figures for the UK as a whole for the same period which are 15.7% of the population over the age of 65 years (male = 6% and female = 9%)¹

There is, therefore, a noticeable difference between the age range for the population of Gwynedd and that of the remainder of Wales and the UK. This higher incidence of residents over the age of 65 years places a substantial, additional burden on the resources of the Health Authority. Prior to the appointment of the third consultant, the ratio of consultant ophthalmologists to population in Gwynedd was low at 1:120,000. However, this ratio improved with the appointment of the third consultant to 1:80,000 which was in line with the ratio recommended by the College of Ophthalmologists at the time. The appointment of the third consultant, therefore, merely gave Gwynedd the correct allocation of consultant ophthalmologists to general population (especially given the higher than usual ratio of population over the age of 65 years of age - Graph 2) before account was taken of the extra workload which would be generated by the Cataract Treatment

Centre.

Given the poor road links, and the average age of patients requiring ophthalmic treatment, a system of peripheral clinics was in place for ophthalmic patients. These were peripheral ophthalmic clinics, which were held either weekly, or fortnightly at the following locations:- Pwllheli; Blaenau Ffestiniog; Dollgellau. The Dollgellau clinic in particular was fully equipped at the instigation of the third consultant upon his appointment and also included orthoptic cover. In addition, twice weekly clinics were held at Llandudno General Hospital to serve the population of Aberconway.

The Dollgellau clinic had, in fact, been under the care of Wrexham Hospital until the appointment of the third consultant ophthalmologist at Bangor when it reverted to the Gwynedd Health Authority. The availability of clinic facilities at Dollgellau eased much of the burden for Ophthalmic Treatment Centre patients travelling from South Wales as it is placed conveniently mid-way between South Wales and Bangor. Those patients, therefore, who had been admitted under the care of the third consultant, were able to take advantage of this peripheral facility and, geographically more suitable, clinic. Some patients for whom the facility was not available, and who found the journey back for post-operative reviews, were lost to follow-up. This accounts for the lack of complete information in some records, particularly the final visual outcome.

¹ Information on population ratios obtained from the Office of Population and Census for 1990.

Patient Referral Arrangements

At the time of its planning, it was intended that referrals would be accepted from June 1990 onwards and would, normally, be on a consultant-to-consultant basis with direct referrals by general practitioners not being accepted until the Centre had been reviewed after several months' working. The Policy for Referral was drawn up in January 1990 and was set out as follows:-

Policy for Referral

Referrals from within Gwynedd would continue in the normal way but with Gwynedd residents eligible for referral to the Treatment Centre being subject to the selection criteria contained within the policy.

For qualifying patients who were resident in Wales but who were on cataract waiting lists of hospitals outside Wales, it was anticipated that the referring District Health Authority would negotiate the agreement between the patient's general practitioner and consultant ophthalmologist for referral to the Treatment Centre.

It was the duty of the Treatment Centre Administrative Co-ordinator (based within the Ophthalmic Department) to monitor eligibility criteria, assisting and advising consultants, patients and relatives concerning the use of the Centre organisation and advise on pre-admission and discharge arrangements, including travel and accommodation, and the follow-up of post-operative care with referring Authorities. The pre-operative referral requirements were as follows:-

- i) Referring Authorities and referring Consultants should establish the eligibility of patients by reference to their permanent place of residence, the name and address of their general practitioner, the name of the hospital on whose list they appear and the length of time they have been on the hospital's waiting list for cataract.
- ii) The Centre Co-ordinator will be able to advise referring consultants about the likelihood and timing of admission based on the lengths of time a particular patient has been on a cataract waiting list.
- iii) The patient's family doctor should be notified by the referring Authority and asked to provide the referring consultant with written confirmation that the patient is fit and well, wishes to have cataract surgery, has no medical contra-indications and is prepared to travel to the Treatment Centre. Additional information will also need to be supplied by the referring consultant.

- iv) For patients travelling long distances (eg from Mid- or South Wales), the operation will normally require a 3-4 night stay at the Centre, and patients will be expected to make their own arrangements for travel to, and transport from the Centre. Patients will naturally not be fit to drive themselves on discharge after an eye operation.
- v) All referrals will be acknowledged by the Centre Co-ordinator who will enter them on the list of one of the Treatment Centre Consultants.
- vi) All patients referred to and accepted by the Centre will be sent a booklet about the Treatment Centre, its staff, the general hospital facilities and the arrangements they need to make before and after their operation. At least two weeks' notice of the date of admission will be given.
- vii) Medical Records casenotes will be required at the Treatment Centre at least 10 working days prior to admission. These will need to be confidentially mailed in the usual way and clearly addressed to the Treatment Centre Co-ordinator, Eye Department, Ysbyty Gwynedd, Bangor, North Wales.
- viii) Pre-operative assessment will be undertaken on the first day of admission, and where patients are considered medically suitable for surgery the operation will take place on the second day. (Some local cataract operations are undertaken on a day basis, but this would not apply to patients who live a long way from the Centre).
- ix) It is important that visiting patients are made aware in advance that surgery will only be performed where pre-operative assessment on arrival at the Centre indicates medical fitness for the operation. Where a patient is not considered medically fit he/she will be formally referred back to his/her GP, with a copy of the letter sent to the referring consultant, and another admission can be arranged at a later date if fitness for surgery improves.
- x) A reserve list of eligible patients, able to be admitted to the Centre at short notice, will be maintained to compensate for cancellations or withdrawals following pre-operative assessment, ensuring that the Centre operates to full capacity.

Pre-Operative Medical Assessment

On the day of admission patients will be clerked by a junior member of the ophthalmic medical staff in the usual way and the necessary pre-operative tests will be carried out.

Examination by an Anaesthetist also forms part of the pre-operative assessment procedure.

Nursing Care

Nurse staffing levels at the Treatment Centre will be geared to the particular needs, age and mix of patients admitted. The nursing staff work closely with the medical staff and will provide patients and relatives with advice and support both prior to and after surgery.

Pre-operative and post-operative nursing care programmes based on individual assessment of each patient's needs will be prepared and discussed with patients and their relatives. Details of requirements for support and aftercare following discharge will also be given to the Centre Co-ordinator who will make the necessary administrative arrangements for the patient's needs to be met when he or she arrives back home.

Post-operative Care, Discharge and Follow-up Arrangements

The total length of stay at the Centre for routine cataract operations will normally be between 2-4 days depending on the patient's place of residence. For patients living long distances from the Centre, discharge will normally be on the 3rd or 4th day.

Patients normally receive 4-5 hours' notice of discharge, but special arrangements will be made where this is impracticable or would cause difficulties due to the distance to be travelled by the patient and his/her relatives.

The patient's family doctor and appropriate relative or carer will be notified by the Centre Co-ordinator both by telephone, and in writing, when discharge has been arranged, and each patient will be supplied with up to 4 weeks' supply of medication from the Treatment Centre.

Prior to discharge, patients will also be given an information leaflet containing advice on cataract surgery after-care.

Patients will normally be required to re-attend the Treatment Centre for follow-up examination by the operating surgeon on 2 occasions:

- a) 1 week after the operation
- b) 6 weeks after the operation

These particular follow-up examinations would not normally be undertaken by anyone other than the Treatment Centre surgeons, and it is not feasible that this to be done locally. It is important that this is clearly explained to, and understood by patients and their relatives prior to consenting to treatment at the Centre in view of the travelling commitment.

Complications Arising From Surgical Work Undertaken at the Centre

In the event of any complication arising from the surgical procedure undertaken, which only becomes apparent after discharge, re-admission for assessment and treatment to the Centre will normally be arranged unless the patient and his/her GP, in consultation with both the operating and the referring consultant, agree that follow-up closer to the patient's home is in the patient's best interests.

Complications unrelated to the surgical procedure undertaken at the Treatment Centre should be treated within the referring Authority.

Quality of Care Provided

The Director of Nursing Services at the Hospital carries overall responsibility for monitoring the quality of patient services and this responsibility will be extended to cover the work of the Treatment Centre.

This will include surveys of patient satisfaction, involving also the views of relatives, carers, the patient's family doctor and referring consultants.

Record of Work Undertaken

The Administrative Co-ordinator will maintain a detailed record of all work undertaken at the Centre and will provide information to the Welsh Office at regular intervals.

AUDIT OF OPHTHALMIC TREATMENT CENTRE

The audit was started in March 1992 and was aimed at assessing the benefits and success, or otherwise, of reducing waiting lists by offering cataract surgery to those on waiting lists throughout Wales, earlier than might otherwise be the case, at a specifically designated centre which was geographically distant from the patient's own health authority.

To assess the clinical success of such an experiment, a comprehensive cataract auditing program was developed by Mr T Williams, Computer & Statistics Department, University of North Wales, Bangor. This was in the form of a data base program on to which information was stored on Ophthalmic Treatment Centre patients by an audit clerk (working part-time) between March 1992 and March 1993.

The information entered was intended to enable the storage and retrieval of detailed clinical, surgical, demographic and social data including patient satisfaction. Clinical information included existing medical and ocular conditions both prior to surgery and post-surgery. It also included full surgical information including the type of disposables used.

The period encompassed by the audit was August 1990 to June 1992. During this period, 199 referrals were received (111 females and 88 males) from 7 health authorities in South and Mid Wales and including two (males) who were living in Wales but on the Hereford waiting list.

Of these, 124 underwent cataract surgery (72 females, 52 males) of which 105 (65 females, 40 males) were first eyes (ie it was their first operation for cataract in any centre); 19 (7 females, 12 males) were second eyes, (i.e. these patients had already undergone cataract surgery on their first eye in their own district and were awaiting surgery for their second eye). In addition, 21 of the 105 patients having surgery for the first time, elected to return to the Ophthalmic Treatment Centre at Ysbyty Gwynedd for surgery to their second eye.

One patient returned for a secondary lens implant after it had not proved possible for technical reasons to insert a lens at the first operation.

In all, a total of 145 cataract procedures were performed on patients from outside Gwynedd from a total of

124 non-Gwynedd patients.

The audit itself comprised the information taken from the casenotes of 115 of the 124 Ophthalmic Treatment Centre patients from outside Gwynedd (9 casenotes were not available for audit). The 115 patients audited represented 137 procedures.

To form a comparison, information was also entered for a control group of Gwynedd patients who attended for cataract surgery during the same period. The total number of entries recorded were as follows:-

Total Series

Total number of surgical procedures recorded	210
Number of patients returning to have second cataract operation	39

Non-Gwynedd

Total number of OTC patients (Non Gwynedd) entered	115
Number returning for second cataract operation (Non-Gwynedd)	21
Patient returning for a secondary lens implant from the original 115 patients in whom it had not been possible to insert a lens at the first operation	<u>1</u>
Procedures Subtotal	137

Gwynedd

Total number of Gwynedd patients entered	52
Number returning for second cataract operation	18
Number having secondary lens implants (including 1 patient having cataract extraction with a secondary lens implant in a previously operated eye at the same time)	<u>3</u>
Procedures Subtotal	73

TOTAL PROCEDURES AUDITED 210

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD

PATTERN AND SOURCE OF REFERRALS

AUGUST 1990 - JUNE 1992

PATTERN OF REFERRALS

The majority of referrals came from Dyfed and West Glamorgan (equal proportions accounting for 63% of all referrals). Gwent and Powys came next (equal proportions giving a combined total of 25.4%). Mid and South Glamorgan referred lower numbers and Clwyd was the lowest referring authority at 0.5%.

Whilst Clwyd's overall waiting list was similar to that of Mid Glamorgan and Gwynedd, they had only one patient waiting for longer than one year as opposed to 18 for Mid Glamorgan and 89 for Gwynedd. In addition, the low referral rates from Clwyd reflected the following factors:-

1. The borders between Clwyd and Gwynedd had traditionally been very fluid in terms of medical care. The added presence of two Gwynedd consultant-led ophthalmic clinics per week at Llandudno added to this state of affairs in that some Clwyd patients, referred directly to these Llandudno clinics by their general practitioners, from neighbouring places (especially Colwyn Bay) were treated as Gwynedd patients in terms of surgery.
2. It had been thought at the time of planning the Ophthalmic Treatment Centre that there would be a sizeable number of Clwyd patients referred officially to the Centre for cataract surgery. However, at the same time as the third consultant was appointed for Gwynedd, Clwyd also appointed a third consultant ophthalmologist and this had a very obvious affect on the number of referrals received.

The referrals from Dyfed and West Glamorgan reflected the high numbers on their waiting lists (see page 1) and especially the numbers waiting longer than one year for surgery. However, figures for Gwent were equally high but they referred less than half the numbers referred by Dyfed and West Glamorgan.

Referrals started relatively modestly with a peak in November 1990 when the Treatment Centre opened. Referrals from December 1990 to March 1991 were very patchy, but were followed by a fairly strong resurgence of interest, possibly due to the publicity campaign undertaken by the Centre. However, from November 1991, after the opening of the Bridgend Centre in October 1991, there was a marked decrease in the number of referrals reflecting the greater ease of access for patients from South Wales to this centre.

Throughout the period, there was also a noticeable difference between the numbers referred and those enrolled (i.e. only 124 patients enrolled from a total of 199 referred). The majority of this difference was made up of self-cancellations. The largest number of cancellations came from West Glamorgan (37.1%), see Referrals and Cancellations.

The majority of cancellations were made during the active period of the Treatment Centre, perhaps reflecting the perceived difficulties of travelling out of area for treatment, or alternatively the difficulties and inconvenience of follow-up appointments from a distance. Many patients, whilst expressing their willingness to travel for earlier surgery, were reluctant to travel back for review, and indeed, some were lost to review because of this, making the final outcome of some cases unknown. The opportunity for review of some patients at Dollgellau Hospital (roughly mid-way between North and South Wales) was welcome.

The opening of the Bridgend Ophthalmic Treatment Centre was reflected almost immediately in the referrals, there being a sharp and sustained decline in referrals from November 1991 and it can be assumed that many patients who might have been referred were treated at Bridgend.

SOURCE OF REFERRAL FOR NON-GWYNEDD PATIENTS

Whilst it had been thought that referrals would be on a consultant to consultant basis, it soon became clear that this approach was not practicable. Referrals were in the main from general practitioners and permission was sought from the consultant in charge of the case. It was only in the case of the two Welsh patients on the Hereford waiting list where there was a protest from the Hereford consultant.

From The Audited Group:

115 patients = 4 direct referrals from consultant ophthalmologists
111 from general practitioners

NON-GWYNEDD REFERRALS AND CANCELLATIONS

Of the 199 patients referred, 70 were cancelled (see the table below):

Non-Gwynedd Referrals and Cancellations Per District

August 90 - June 92

<u>Authority</u>	<u>No. Referred</u>	<u>No. Cancelled</u>	<u>% Cancelled</u>
Dyfed	62	18	29%
Gwent	25	10	40%
Mid Glamorgan	15	6	40%
Powys	25	7	28%
South Glamorgan	7	3	42%
West Glamorgan	62	26	42%
Hereford	2	0	0%
Clwyd	1	0	0%
<u>TOTAL</u>	<u>199</u>	<u>70</u>	<u>35%</u>

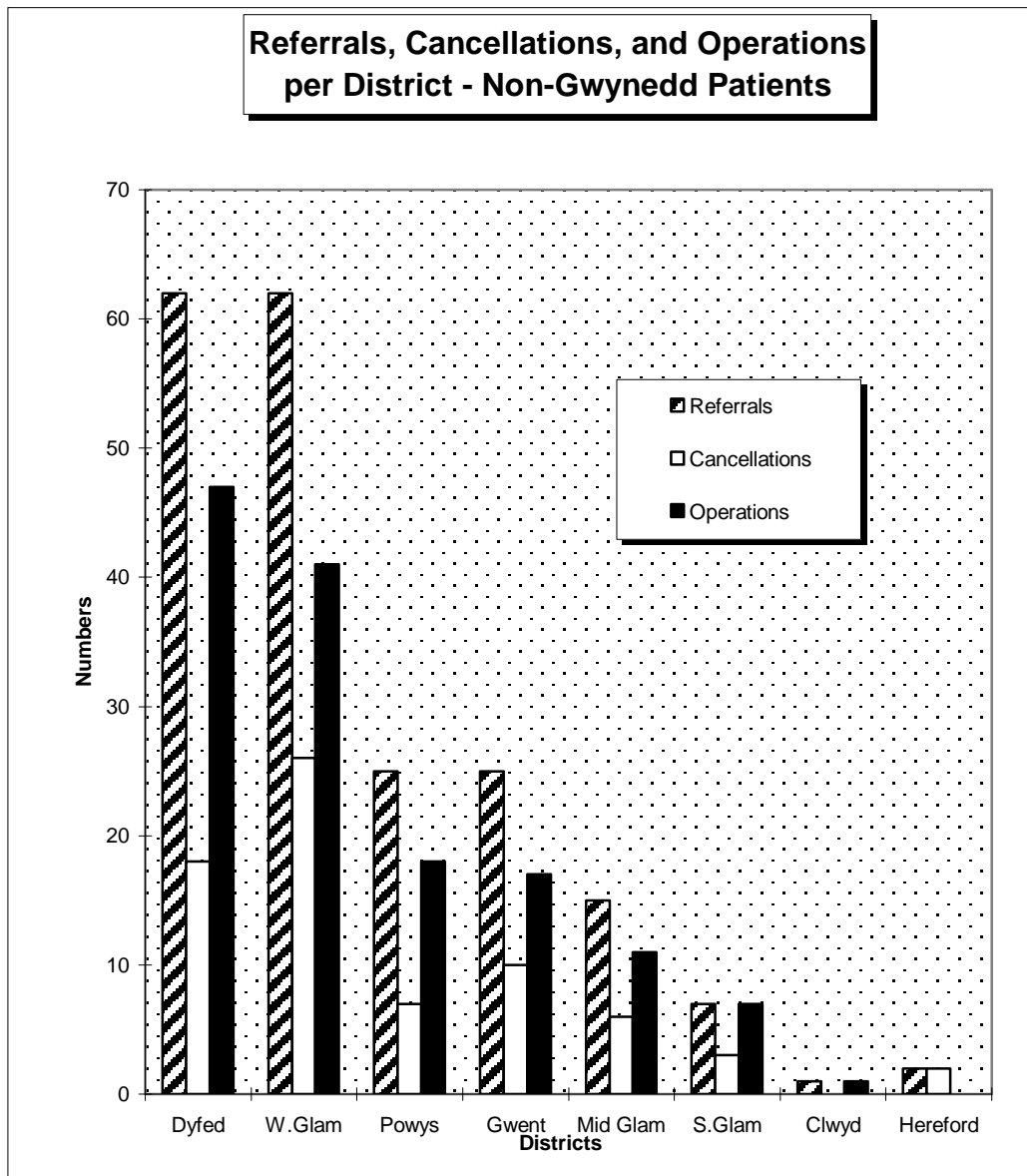
An additional 5 of the 199 patients referred were cancelled but we do not have a record of the health authorities involved. Of the 70 patients who did not proceed to surgery, there was a relatively higher ratio of male cancellations than female (54% of male cancellations as opposed to 46% of female cancellations).

REFERRALS AND CANCELLATIONS PER MONTH

<u>Month</u>	<u>Nos. Referred</u>	<u>Nos. Cancelled</u>	<u>% Cancelled</u>
Aug 90	5	1	20%
Sept. 90	4	3	75%
Oct. 90	7	4	57%
Nov 90	18	7	39%
Dec 90	6	3	50%
Jan 91	7	1	14%
Feb 91	8	2	25%
Mar 91	2	1	50%
Apr 91	13	2	15%
May 91	19	4	21%
June 91	23	9	39%
July 91	16	3	19%
Aug 91	13	5	38%
Sep 91	21	9	43%
Oct 91	19	10	53%
Nov 91	7	2	29%
Dec 91	3	2	66%
Jan 92	1	0	0%
Feb 92	1	1	100%
Mar 91	1	0	0%
Apr 91	1	0	0%
May 91	1	0	0%
June 91	3	0	0%
Undetermined	-	1	
<u>TOTAL</u>	<u>199</u>	<u>70</u>	<u>35%</u>

OPHTHALMIC TREATMENT CENTRE

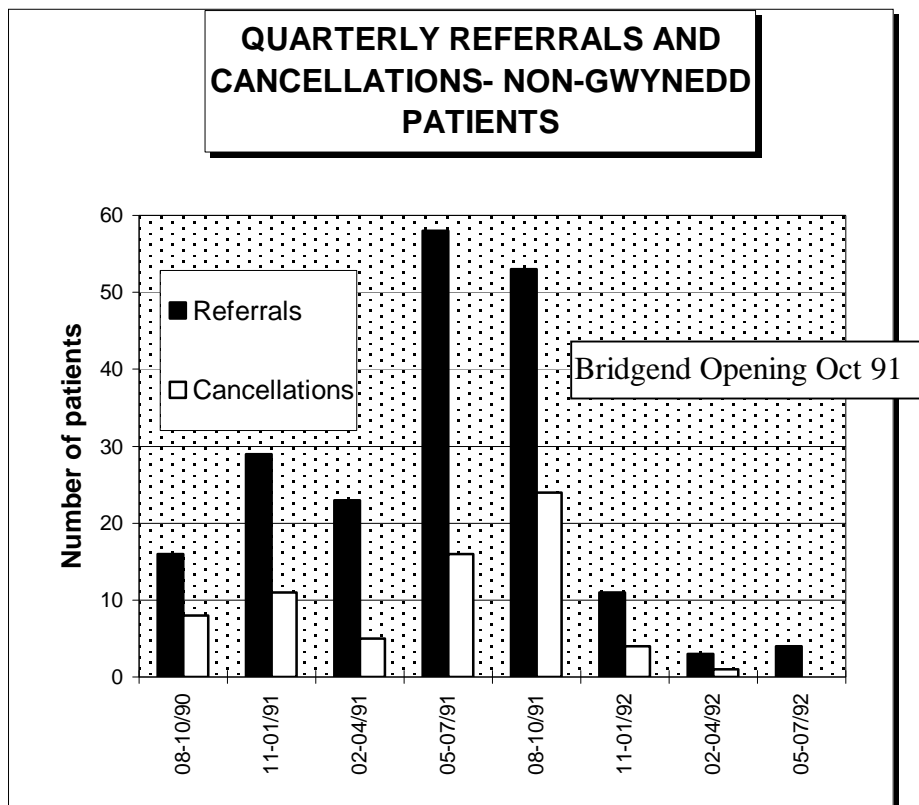
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Graph - 3

This graph shows the higher percentage of cancellations following initial referrals or prior to surgery - in some cases the number cancelled is equal to the number of operation performed. It perhaps reflects an initial enthusiasm for the idea which wanes when the practicalities are considered.

OPHTHALMIC TREATMENT CENTRE
YSBYTY GWYNEDD - BANGOR



Graph - 3a

Referrals to Ophthalmic Treatment Centre, Bangor, dropped significantly following the opening of a similar centre in Bridgend, South Wales.

OPHTHALMIC TREATMENT CENTRE - BANGOR

REASONS FOR CANCELLATIONS

Non-Gwynedd Patients

<u>Reason</u>	<u>Number</u>
Operation done locally	17
Patient wished to wait to have surgery locally	
Transferred to Bridgend Treatment Centre waiting list	14
Unwilling to travel to Bangor	3
Patient went as private patient locally	3
Medically unsuitable	12
GP complained that questionnaire was "too detailed" (copy of questionnaire attached - Addendum A)	1
Patient died	2
Patient found not to have significant cataract	1
Patient transferred to Moorfields	1
Patient had not been seen locally	1
Patient having other, non-ophthalmic surgery	1
Cancelled at request of patient for personal reasons	2
<u>TOTAL</u>	<u>70</u>

NB We have no record of why the remaining 5 patients making up the 199 originally referred cancelled.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

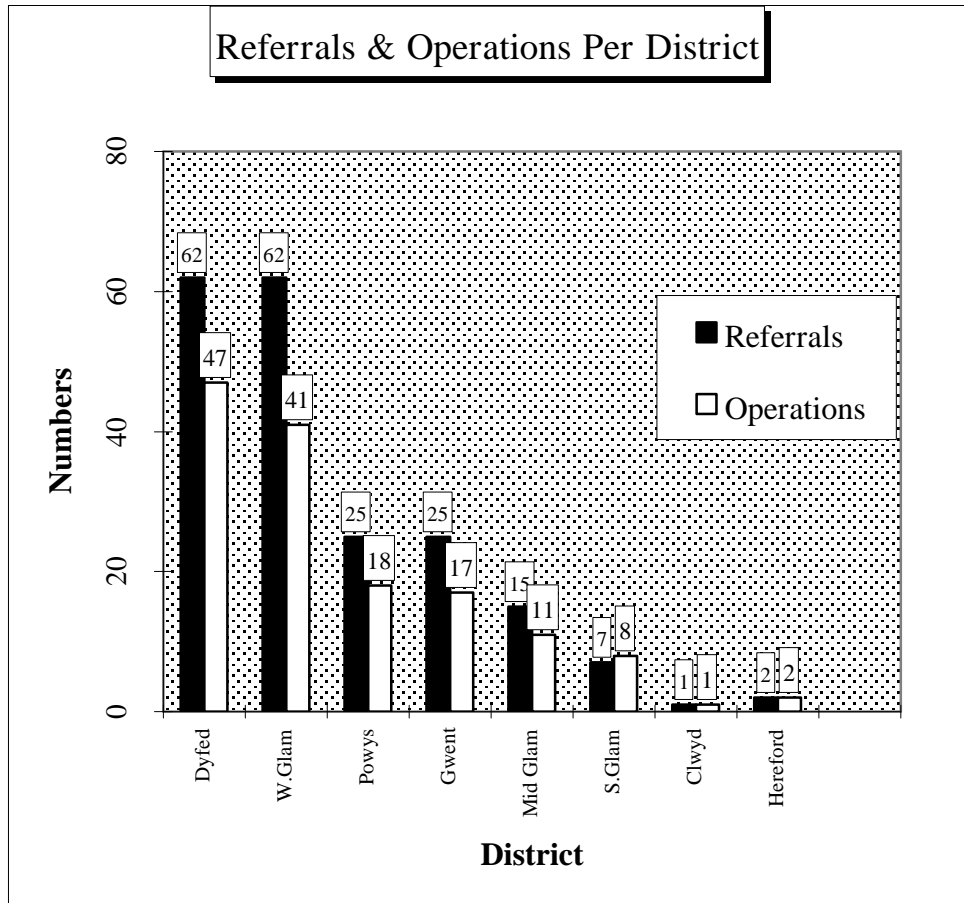
Non-Gwynedd Referrals and Operations - August 1990 - June 1992

<u>Authority</u>	<u>Referrals</u>	<u>Operations</u>
-		
Dyfed	62	47
Gwent	25	17
Mid Glam.	15	11
Powys	25	18
South Glam.	7	8 ¹
West Glam.	62	41
Clwyd	1	1
Hereford	2	2
<u>TOTAL</u>	<u>199</u>	<u>145</u>

¹ Reflects patients having more than one surgical procedure at the Treatment Centre

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR



Graph - 4

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

NUMBER OF NON-GWYNEDD OPERATIONS PER CONSULTANT

<u>Consultant</u>	<u>Number of patients</u>	<u>No. of Eyes</u>	<u>% of Total</u>	<u>Age Group</u> <u>Min-Max (Avg)</u>
JALILI¹	87	108	76.5	38 - 92 (72)
TOLIA	26	28	22	28 - 89 (68)
MEHTA	2	2	1.5	68 - 85 (76)
TOTAL	115	137	100%	28 - 92 (71)

¹ The reason for the larger number performed by Mr Jalili is that he had the least waiting list having been recently appointed as the third consultant and had the advantage of having a peripheral clinic at Dolgellau which proved an attractive option for patients being followed-up post-operatively.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

Comparison of Waiting Times Between Gwynedd and Non-Gwynedd Patients From Referral to Surgery

<u>Time on Waiting Lists</u>		
<u>On Local Waiting List</u>	<u>On OTC Waiting List</u>	<u>Gwynedd Patients</u>
<u>(Non-Gwynedd Patients)</u>		
<u>(sample size 108)</u>	<u>(sample size 115)</u>	<u>(sample size 52)</u>
Minimum 7 weeks	3 weeks	2.5 weeks ¹
Maximum 198 weeks	30 ² weeks	76 weeks
Average 46 weeks	12 weeks	29 weeks

¹ This reflects the gap between early referrals sent to the OTC following its announcement, and its actual opening several months later, which resulted from delays encountered in recruiting anaesthetists and nursing staff. The first patient underwent surgery in November 1990, yet the newly appointed third consultant had commenced work in May 1990.

² This reflects the gap between early referrals sent following the announcement of the OTC, and its actual opening several months later, which resulted from delays encountered in recruiting anaesthetists and nursing staff. The first patient underwent surgery in Nov 1990, yet the newly appointed third consultant had commenced work in May 1990.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

PERSONAL DETAILS OF PATIENTS REFERRED

AUGUST 1990 - JUNE 1992

OPHTHALMIC TREATMENT CENTRE - BANGOR

Age/Marital/Employment Status of Patients Operated Upon

<u>Non-Gwynedd Patients</u>		<u>Gwynedd Patients</u>	
<u>Males (50)</u>		<u>Males (24)</u>	
Min 38 - Max 92 (70)	<u>Age (in years)</u>	Min 19 - Max 85 (72)	
	<u>Employment</u>		
12	employed	2	
36	retired	21	
1	houseperson	-	
1	unreported	1	
	<u>Marital Status</u>		
41	married	18	
3	widowed	3	
1	divorced	-	
-	single	-	
6	unreported	1	
<u>Female (65)</u>		<u>Females (28)</u>	
52 - 92 (77)	<u>Age (in years)</u>	28 - 90 (71)	
	<u>Employment</u>		
6	employed	2	
17	retired	17	
42	houseperson	9	
	<u>Marital Status</u>		
29	married	11	
14	widowed	12	
1	divorced	-	
1	single	1	
20	unreported	4	

OPHTHALMIC TREATMENT CENTRE - BANGOR

Age Group and Employment Status According to Marital Status

Non-Gwynedd Patients

	<u>Marital Status</u>	<u>Age</u>	<u>Employment Status</u>
<u>Male</u>	41 (Married)	38 - 89 (69)	11 employed
	3 (widowed)	77 - 92 (83)	3 (all) retired
<u>Female</u>	29 (married)	28 - 85 (66)	5 employed
	14 (widowed)	64 - 88 (77)	14 (all) retired

OPHTHALMIC TREATMENT CENTRE - BANGOR
AGE/SEX RATIO PER DISTRICT - NON-GWYNEDD PATIENTS

<u>DISTRICT</u>	<u>NOS</u>	<u>AGE</u>	<u>MALE-FEMALE</u>
Gwent	15	28 - 78 (66)	3 males / 12 females
Mid-Glam.	7	30 - 82 (69)	2 males / 5 females
Powys	18	53 - 90 (74)	7 males / 11 females
South-Glam.	5	64 - 79 (72)	2 males / 3 females
West-Glam.	28	52 - 92 (73)	12 males / 16 females
Dyfed	39	38 - 89 (70)	22 males / 17 females
Clwyd ¹	1	68	- / 1 female
Hereford	2	60 - 70 (65)	2 males
TOTAL	115	28 - 92 (71)	Male : Female Ratio 1:1.3

¹ It is not possible to estimate the true number of patients from Clwyd who were operated upon in the ophthalmic treatment centre. These are usually referred directly from their general practitioners to the Gwynedd consultant at their Llandudno clinic (Jalili/Tolia) and therefore dealt with as Gwynedd patients.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

Medical Problems Encountered in Patients

Condition

Hypertension	28	(Males 7, females 20, 1 unreported)
in addition to	3	with angina
	1	who had previous myocardial infarction
	7	who had diabetes
	1	who had previous mastectomy
	1	with history of alcohol abuse, depression and neurological symptoms
Diabetes	5	
Respiratory disease	2	(including chronic respiratory airway disease)
Angina	8	
Thyroidectomy	1	
History of anaphylactic reaction	1	

There was a total of 45 patients with medical problems, 13 of whom had additional medical disease

Medical Problems Found on Admission

Previously Unrecognised/Unreported

Hypertension	4	(1 with angina)
Bilateral inguinal hernia	1	
Hiatus hernia	1	
Arthritis	1	
Arrhythmia	1	
Ischaemic heart disease	1	
Obstructive airway disease	1	
Too frail with extrasystole	1	
Heartburn	1	
Constipation	3	
Osteoporosis	1	
Haemorrhoids	1	
Allergies (penicillin, phenylbutazone, home dust	1	
Pulmonary TB	1	
Recurrent dislocation of the shoulder	1	
Bronchopneumonia 3 years previously	1	
History of previous surgery (hysterectomy, oophorectomy, cholecystectomy)	3	

Summary

Reported by GP/Found on Admission - Total

Hypertension	28	(17%)	4	(2.4%)	32	(19.4%)
Other cardiovascular disorders	12	(7.2%)	3	(1.8%)	15	(9%)
<u>Total Cardiovascular disorders</u>	<u>40</u>	<u>(24.2%)</u>	<u>7</u>	<u>(4.2%)</u>	<u>47</u>	<u>(28.4%)</u>
Respiratory	2	(1.2%)	1	(0.6%)	3	(1.8%)
Others	4	(2.4%)	9	(5.4%)	13	(7.8%)

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

New Post-Operative Findings/Complaints

Asthma made worse by topical betablockers	1
Sore toes following surgery	1
Severe pain right leg from groin to lower calf	1
Cough and cold	1
Vomiting	1
Fits - 2 days post-operatively	1

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

ADMISSIONS AND SURGICAL ACTIVITIES

OPHTHALMIC TREATMENT CENTRE

Breakdown of Treatment Centre Operations by Month

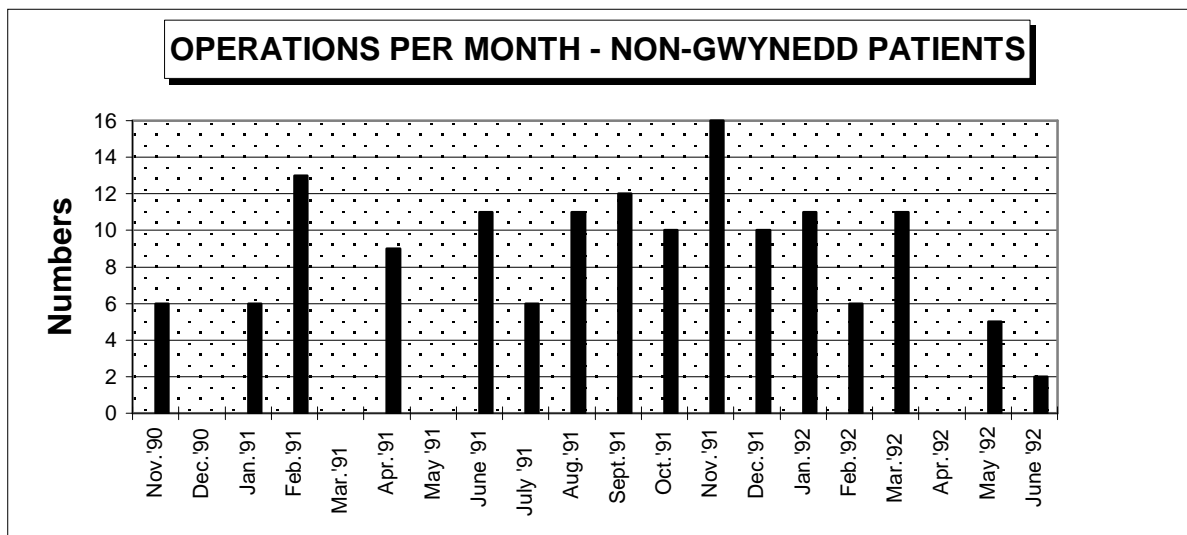
November 1990 - June 1992

Month	Powys	Dyfed	W.Gl.	M.Gl.	Gwent	S.Gl.	Clwyd	H'ford	Total
Nov.'90	3	-	1	1	1	-	-	-	6
Dec.'90	-	-	-	-	-	-	-	-	0
Jan.'91	-	-	-	6	-	-	-	-	6
Feb.'91	6	-	2	1	1	1	-	2	13
Mar.'91	-	-	-	-	-	-	-	-	0
Apr.'91	-	4	3	1	1	-	-	-	9
May '91	-	-	-	-	-	-	-	-	0
June '91	1	6	-	1	3	-	-	-	11
July '91	-	4	1	1	-	-	-	-	6
Aug.'91	-	2	9	-	-	-	-	-	11
Sept.'91	-	3	5	-	3	1	-	-	12
Oct.'91	2	1	5	-	1	1	-	-	10
Nov.'91	2	6	5	-	3	-	-	-	16
Dec.'91	-	5	1	-	1	2	1	-	10
Jan.'92	2	4	4	-	1	-	-	-	11
Feb.'92	-	5	1	-	-	-	-	-	6
Mar.'92	-	5	4	-	1	1	-	-	11
Apr.'92	-	-	-	-	-	-	-	-	0
May '92	1	1	-	-	1	2	-	-	5
June '92	1	1	-	-	-	-	-	-	2
TOTAL	18	47	41	11	17	8	1	2	145

NB M.Gl. = Mid Glamorgan
W.Gl. = West Glamorgan
S.Gl. = South Glamorgan
H'Ford = Hereford

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR



Graph - 5

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

SURGERY

TYPES OF SURGICAL PROCEDURES

Extra Capsular Cataract Extraction	198 (including 4 endocapsular version)
Phacoemulsification	8
Secondary Lens Implant	4

OTHER PROCEDURES

Correction of lower lid entropion	1 (on the other side)
-----------------------------------	-----------------------

PERIOPERATIVE COMPLICATIONS

	<u>Nos.</u>	<u>% of Total</u>	<u>National Figures¹ in %</u>
Capsular Rupture	6	2.9%	2.97 - 5.3 (3.9%)
Capsular Rupture with Vitreous Loss	3	1.4%	0.56 - 1.96 (1.1%)
Choroidal haemorrhage	1	0.47%	

IMMEDIATE POST-OPERATIVE COMPLICATIONS

Endophthalmitis	1 (Final Visual outcome 6/5)
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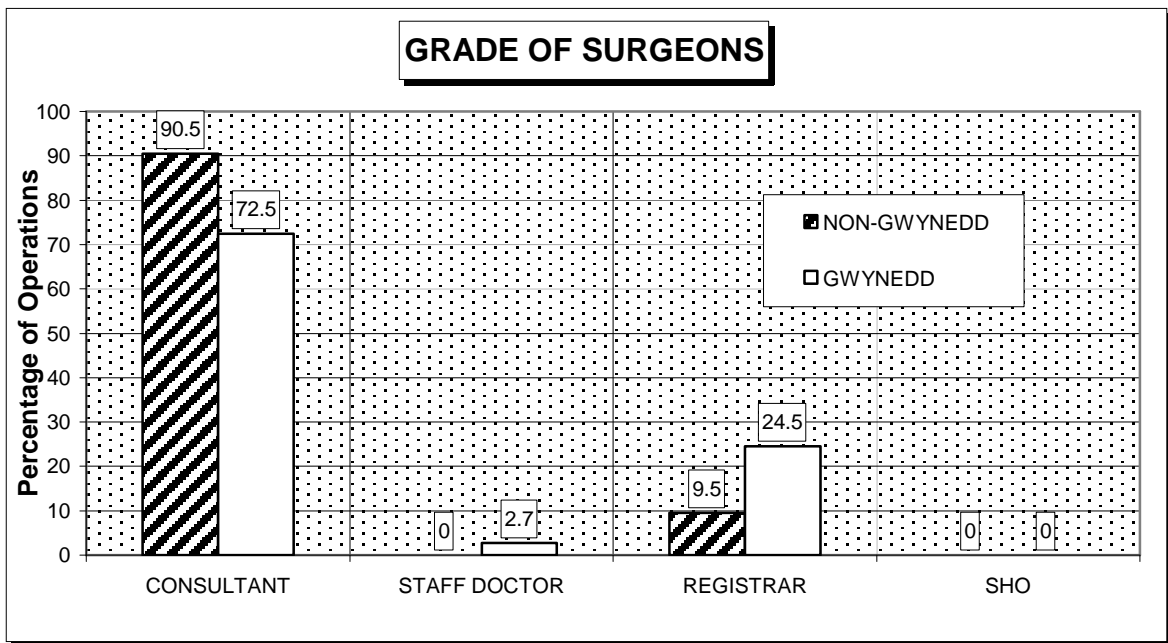
¹ National cataract Surgery Survey, Eye (1993) 7,489-494

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

Grade of Surgeon:

	Non-Gwynedd	Gwynedd
Consultant	124 (90.5%)	53 (72.5%)
Registrar	13 (9.5%)	18 (24.5%)
Staff Doctor	0 (0%)	2 (2.75%)
SHO	0 (0%)	0
Total	137	73



Graph - 6

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

ANAESTHESIA

<u>Type of Anaesthesia Used</u>	<u>Non-Gwynedd Patients</u>	<u>Gwynedd Patients</u>
General Anaesthesia	133	72
Local Anaesthesia	4	1

LENGTH OF STAY (in days)

Admission to Surgery **Admission to Discharge** **Post-operative**

NON-GWYNEDD

Clwyd	1	3	1
Dyfed	1.6	5.8	3.2
Gwent	1.4	4.3	1.9
Mid. Glamorgan	1	5.4	3.4
Powys	1.6	5.5	2.9
South Glamorgan	1.3	5.1	2.8
West Glamorgan	1.4	5.5	3.1
<u>Total Non-Gwynedd</u>	<u>1.4</u>	<u>5.3</u>	<u>2.9</u>
<u>GWYNEDD</u>	<u>1.5</u>	<u>4.7</u>	<u>2.2</u>

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

CAUSES FOR DELAYS IN DISCHARGE

	<u>Non-Gwynedd</u>			<u>Gwynedd</u>		
	<u>Nos.</u>	<u>%Causes</u>	<u>%Total Series</u>	<u>Nos.</u>	<u>%Causes</u>	<u>%Total Series</u>
Medical	6	19%	4.4%	1	14%	1.4%
Ophthalmic	13	41%	9%	4	57%	5%
Transport	12	37%	9%	2	29%	3%
Social	1	3%	<1%	0	0%	0%
<u>TOTAL</u>	<u>32</u>	<u>100%</u>	<u>23%</u>	<u>7</u>	<u>100%</u>	<u>9.5%</u>

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD

VISUAL OUTCOME

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

Best-Corrected Visual Acuities Achieved Following Surgery

<u>Visual Acuity</u>	<u>Nos</u>	<u>Non-Gwynedd</u>	<u>Gwynedd</u>
6/4	2	2	0
6/5	19	15	4
6/6	91	56	35
6/7.5	6	4	2
6/9	42	33	9
6/12	16	9	7
¹ Subtotal %	85%	90.5%	82%
6/18	7	3	4
6/24	9 ²	2	6
6/36	3	2	1
6/60	3	2	1
CF	0	0	0
HM	1	1	0
PL	1	0	1
N/A	11	8	2
No. of Eyes	210	137	73

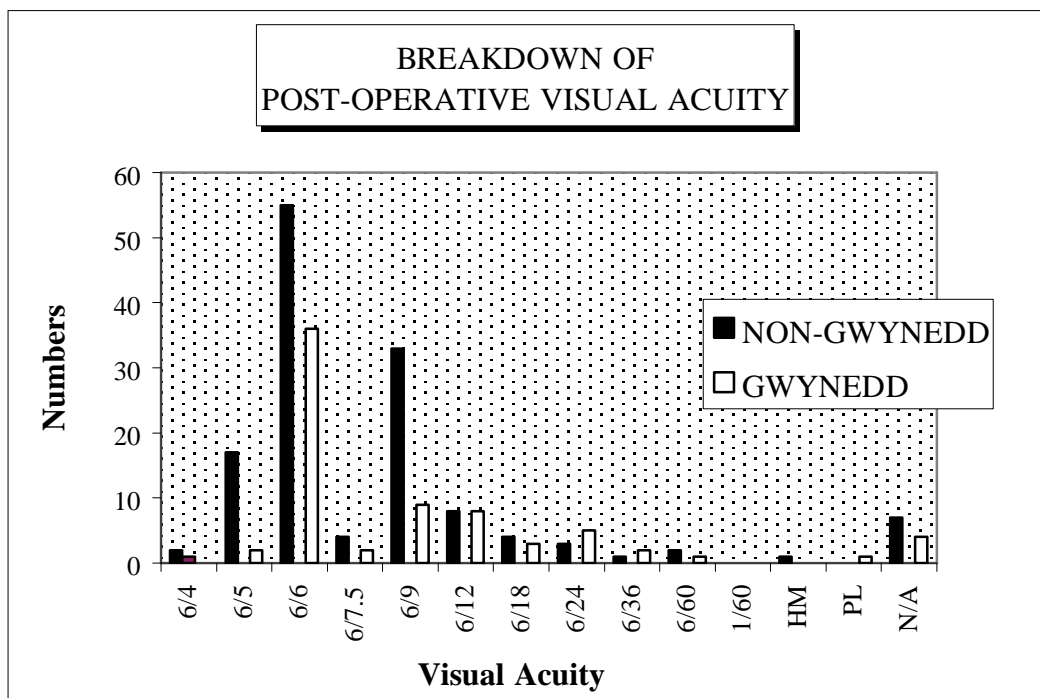
Some of the patients had been on waiting lists for a long period of time and therefore many presented with more advanced cataract and other ocular pathologies than at the time of listing. Some patients were also given very guarded prognoses because of pre-existing ocular pathologies, eg age related macular degeneration, retinitis pigmentosa etc.

Although quantitative measurements are used (e.g. Snellen's chart) to quantify visual function and

¹ A post-operative corrected visual acuity of 6/12 or better is considered by the Royal College of Ophthalmologists as a successful visual acuity and, therefore, has been used in this audit as a parameter.

² This includes one patient who had an uncorrected post-operative vision of 6/24 but failed to return

hence visual outcome, it is not the only parameter with which to determine success of surgery. Subjective improvement as judged by improved navigation and performance due to improvement in peripheral fields, brightness and colour perception etc., are of significant importance in assessing the final success of surgery. These, however, are purely subjective and there is no method as such of quantifying them. Ophthalmic Treatment Centre results are above those published by the Royal College of Ophthalmologist's National Audit Survey¹ and this probably reflects the younger age group and selection of patients, in addition to patient's motivation to travel (usually the fitter patient with less complications). Gwynedd patients (although the series is smaller) have a success rate equal to the National Figures which is to be applauded given the older age group resident in Gwynedd with the inevitable increase of age related blinding conditions such as age related macular degeneration.



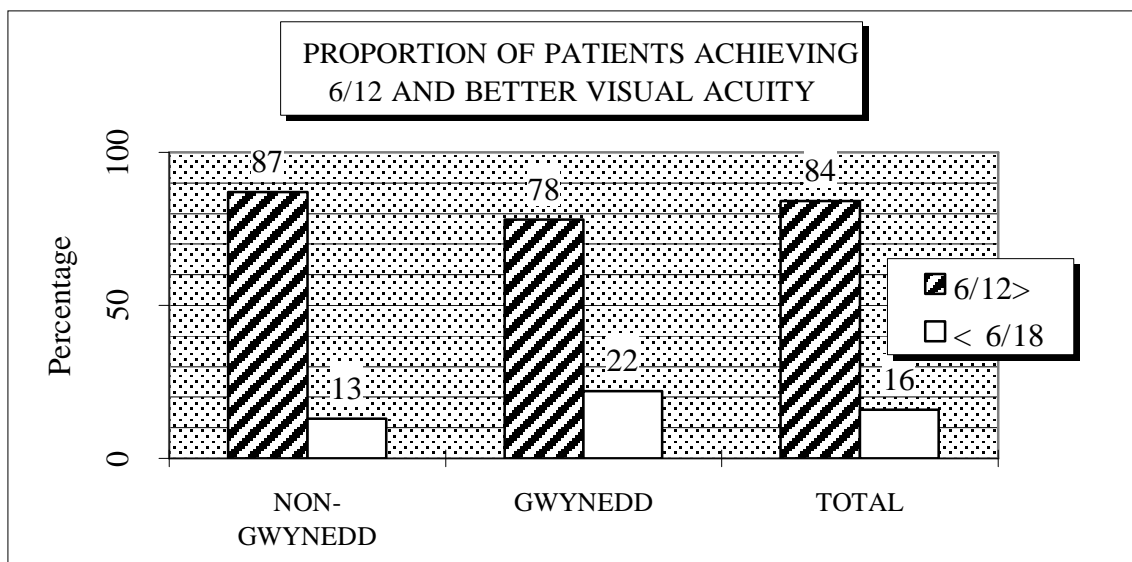
Graph - 7

for follow up and we therefore do not know the final visual outcome.

¹ The National Cataract Surgery Survey (Eye (1993), Vol. 7, Part 5).

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR



Graph - 8

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

OCULAR PATHOLOGIES IN THE OPERATED EYE OF PATIENTS

POST-OPERATIVE VISUAL ACUITY OF 6/18 AND LESS

(Including Causes in Immediate Postoperative Period)

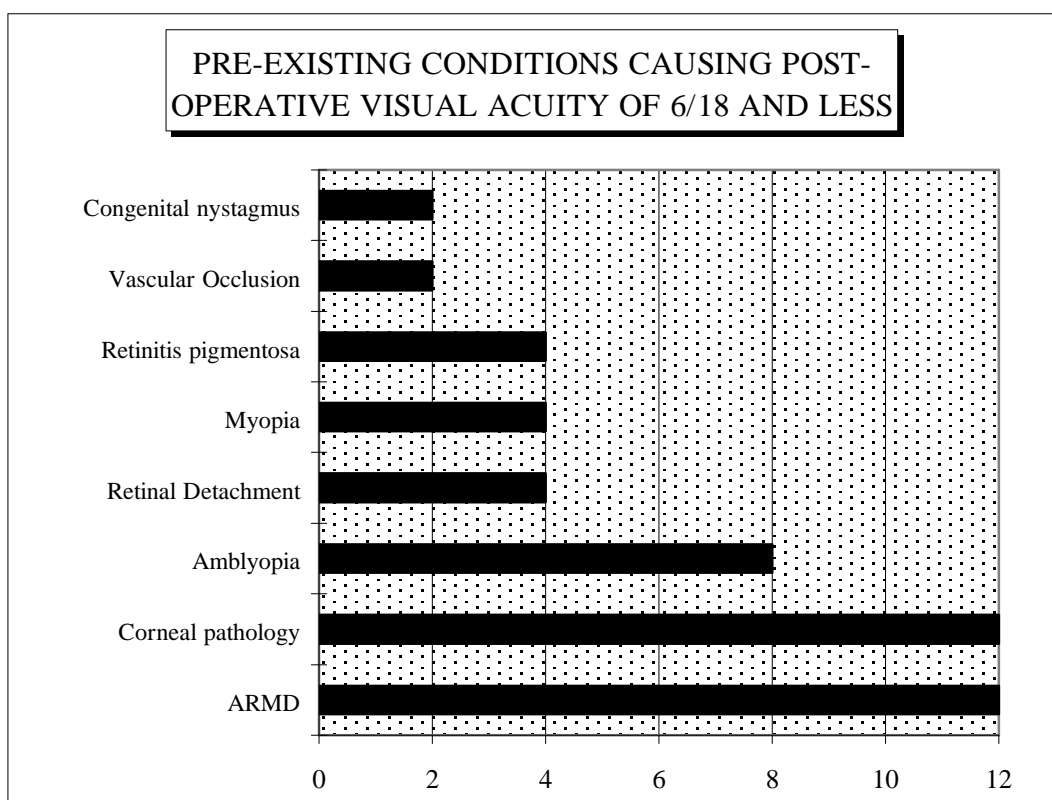
<u>Vision</u>	<u>No.</u>	<u>Cause</u>
6/18 (7 cases)	2	Age related macular degeneration (ARMD)
	1	Retinal Detachment
	1	Pseudo-exfoliation syndrome, severe dry eye, corneal epithelial changes
	1	* Primary open angle glaucoma, myopia, giant cells on lens, unable to attend follow up, died of other causes
	1	Congenital nystagmus ¹
6/24 (9 cases)	1	Myopia and aphakia - no lens implant
	1	Retinal detachment
	3	Amblyopia
	1	² Corneal scarring, did not come for follow-up
	1	Pre-existing corneal pathology and amblyopia
	1	Corneal scarring
	2	Age related macular degeneration (ARMD)
6/36 (3 cases)	1	Myopia & amblyopia
	1	Old central retinal vein occlusion and advanced glaucoma
	1	Fuch's corneal endothelial dystrophy
6/60 (3 cases)	2	Age related macular degeneration (ARMD)
	1	Long standing corneal vascularisation
HM (1 case)	1	Advanced retinitis pigmentosa ¹
PL (1 case)	1	Advanced retinitis pigmentosa ¹

¹ Reflects a high incidence of genetic disorders in this series.

² Visual acuity measured in the immediate postoperative period, final (6 weeks and above) visual

**CLINICAL OPHTHALMIC CONDITIONS CAUSING
VISUAL OUTCOME OF 6/18 OR LESS**

Patients who achieved visual acuity of 6/18 and less suffered from the following conditions which contributed to the final visual outcome. The majority of these patients presented at admission with significantly impaired vision. (Tables pages 50-52).



Graph - 9

ARMD = Age Related Macular Degeneration

Vascular occlusion = retinal Vascular occlusion

Myopia = Degenerative myopia

acuity is unavailable as they failed to attend for further follow ups.

**COMPARISON OF RESULTS BETWEEN THE OPHTHALMIC TREATMENT CENTRE
AND THE NATIONAL CATARACT SURGERY SURVEY¹**

The Royal College of Ophthalmologists undertook a survey on a sample of patients undergoing cataract surgery throughout the UK in 1990. As in our audit, co-existing ocular pathology was identified as a risk factor for both poor visual outcome and occurrence of complications.

Success of surgery was judged by a visual outcome of 6/12 and better. In these terms the Ophthalmic Treatment Centre results were very good. Graphs 11 and 12 demonstrate this by showing comparison with the National Cataract Surgery Survey. Post-operative visual acuities of 6/4 and 6/5 were achieved in 24 OTC patients, and when this is combined with those achieving 6/6, the figure is well above those with 6/6 post-operative visual acuity in the National Cataract Surgery Survey.

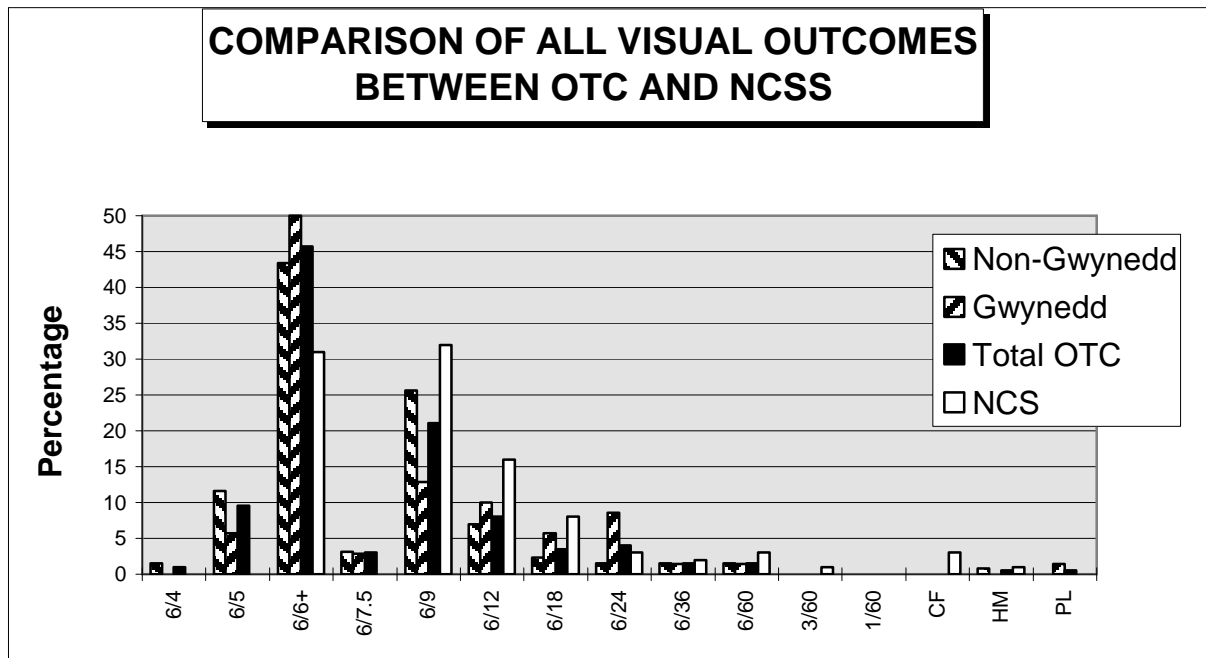
The percentage of patients achieving 6/12 and better for the UK was 79% which compared almost equally with the 78% achieved in the small sample of Gwynedd patients audited. By comparison, the percentage of Non-Gwynedd OTC patients achieving 6/12 and better was 87%, significantly higher than both Gwynedd and National figures. This perhaps reflects the selection of patients treated at the OTC as those with less guarded prognosis decided to opt out for treatment outside their areas.

In terms of pre-operative visual acuities, it should be noted that at the time of admission, a high proportion of patients had fallen within the category of partially sighted and blind in the poorer eye. The figures for this were higher in both groups audited (i.e. Gwynedd and Non-Gwynedd) than in the National Cataract Surgery Survey.

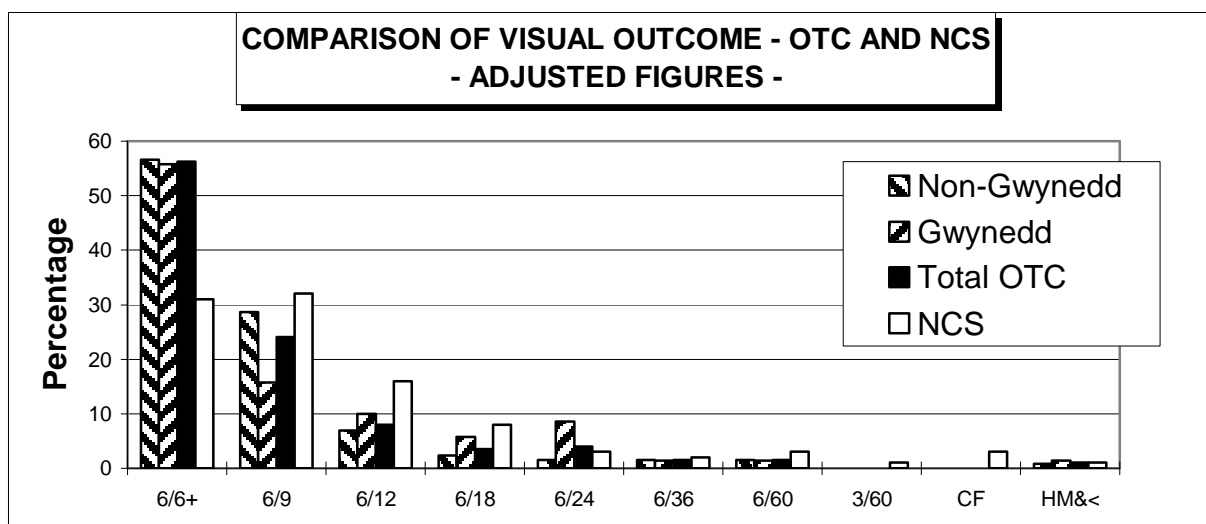
¹ Eye (1993) 7, 489-494.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR



Graph - 10



Graph - 11

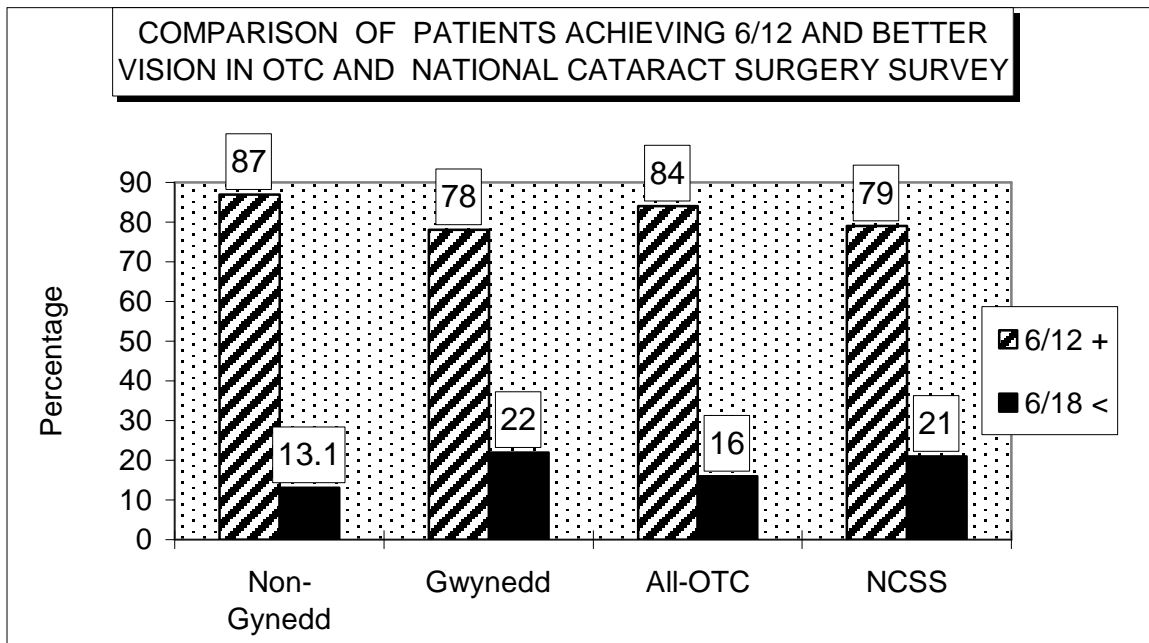
(6/6 and better , HM and PL are grouped together)

OTC = Ophthalmic Treatment Centre, Bangor

NCS, NCSS = National Cataract Surgery Survey

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR



Graph - 12

(Visual outcome of 6/12 and better was achieved in 87% of the Non-Gwynedd patients, 78% of Gwynedd patients with an average of 84% of the whole series. This compares favourably with National figures. The better outcome of Non-Gwynedd patients is interesting and reflects that patients with better visual prognosis perhaps were more enthusiastic to travel for their treatment).

OTC = All patients operated upon in the Ophthalmic Treatment Centre in Bangor.

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD

SOME CLINICAL DETAILS

- A. Types of Cataract
- B. Visual Acuity on Admission
- C. Comparison Between Visual Acuities on Admission in This Series and National Cataract Surgery Survey.

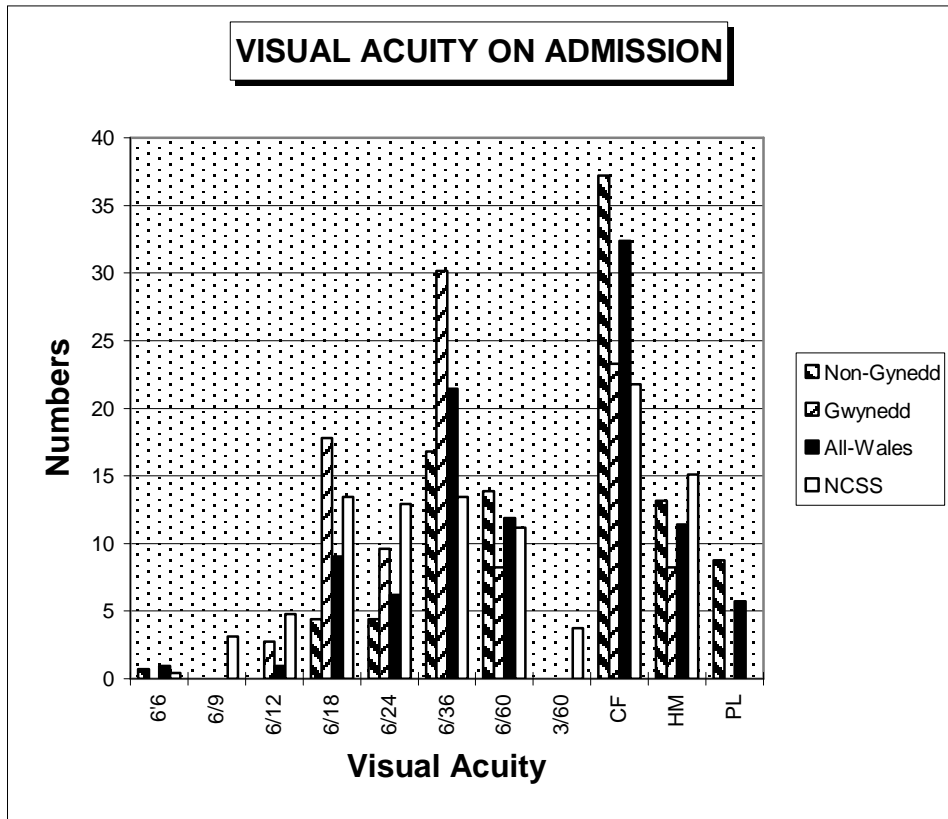
TYPES OF CATARACT

Types of cataract was analysed in 166 patients and the findings are as follows. The additional 39 would fall within the same categories, being those patients who returned for surgery for their second eye.

Clinical Types			Aetiological Types	
Type	Nos.	%	Type	Nos.
Mixed	36	19%	Senile	147 ¹
PSCO	32	20%	Syndromatic	1
Nuclear Cataract	31	20%	Familial	1
Cortical	18	11%	Traumatic	2
Other	5	3%	Secondary	4
Mature	35	22%	Diabetic	1
			Myopathic	1
			Pre-senile	1
			Undetermined	8
<u>Total Reported</u>	<u>157</u>		<u>Total Reported</u>	<u>166</u>
Unreported	14			
 <u>Mixed Cataract</u>				
PSCO + Nuclear	19			
PSCO + cortical	3			
PSCO + Others	4			
Cortical + Nuclear	4	(including 1 nuclear sclerosis)		
Others	3			

¹ Including 8 with pseudo-exfoliation syndrome.

OPHTHALMIC TREATMENT CENTRE
YSBYTY GWYNEDD - BANGOR



Graph - 13

PRE-OPERATIVE VISUAL ACUITY (ON ADMISSION) AND THE VISUAL OUTCOME OF EACH GROUP

NON-GWYNEDD PATIENTS

(Adapted from the National Cataract Surgery Survey, Eye (1993) 7, 489-494)

<u>Visual Acuity</u>															
<u>Admission</u>	<u>Post-Operative Visual Acuity</u>														
Nos.	YA	6/4	6/5	6/6	6/7.5	6/9	6/12	6/18	6/24	6/36	6/60	CF	HM	PL	N/A
1	6/6 % 6/9 % 6/12 %	1 100%													
6	6/18 %	1 16%		4 67%			1 16%								
6	6/24 %			4 67%		1 16%		1 16%							
23	6/36 %	1 4%	2 9%	12 52%	1 4%	5 22%		1 4%							1 4%
19	6/60 %		3 16%	8 42%		5 26%	1 5%	1 5%							1 5%
51	CF %		8 15%	15 29%	2 4%	16 31%	4 8%	1 2%	3 6%		1 2%				1 2%
18	HM %		1 6%	11 61%	1 6%	3 18%	1 6%				1 6%				
12	PL %		2 17%	3 25%		3 17%	1 8%						1 8%		2 17%
1	N/A %														1 100%
137	Total	3	16	57	4	33	8	4	3	0	2	0	1	0	6

**PRE-OPERATIVE VISUAL ACUITY (ON ADMISSION) AND THE VISUAL
OUTCOME OF EACH GROUP**

GWYNEDD PATIENTS

(Adapted from the National Cataract Surgery Survey, Eye (1993) 7, 489-494)

Visual Acuity

Nos.	Admission VA	Post-Operative Visual Acuity														
		6/4	6/5	6/6	6/7.5	6/9	6/12	6/18	6/24	6/36	6/60	CF	HM	PL	N/A	
	6/6															
	%															
	6/9															
	%															
2	6/12			1					1							
	%			50%					50%							
13	6/18			9	1	2			1							
	%			69%	7%	15%			7%							
7	6/24		1	6												
	%		14%	86%												
22	6/36		2	9		4	3	3						1		
	%		9%	41%		18%	14%	14%						6%		
6	6/60			4		1		1								
	%			66%		17%		17%								
17	CF		1	4	2	2	3	1	2	1						1
	%		6%	24%	12%	12%	18%	6%	12%	6%						6%
6	HM		1	2			1		1		1					
	%		17%	33			17%		17%		17%					
	PL															
	%															
	N/A															
	%															
73	Total	0	5	35	3	9	7	5	5	1	1	0	0	1	1	

PRE-OPERATIVE VISUAL ACUITY (ON ADMISSION) AND THE VISUAL OUTCOME OF EACH GROUP

ALL OTC PATIENTS

(Adapted from the National Cataract Surgery Survey, Eye (1993) 7, 489-494)

Visual Acuity															
Admission	Post-Operative Visual Acuity														
Nos.	VA	6/4	6/5	6/6	6/7.5	6/9	6/12	6/18	6/24	6/36	6/60	CF	HM	PL	N/A
1	6/6 %	1 100%													
2	6/9 %			1 50%					1 50%						
19	6/12 %	1 5%		13 69%	1 5%	2 11%	1 5%		1 5%						
13	6/18 %		1 8%	10 76%		1 8%		1 8%							
45	6/24 %	1 2%	4 9%	21 47%	1 2%	9 20%	3 7%	4 9%						1 2%	1 2%
25	6/36 %		3 12%	12 48%		6 24%	1 4%	2 8%							1 4%
68	6/60 %		9 13%	19 28%	4 6%	18 26%	7 10%	2 3%	5 7%	1 1.5%	1 1.5%				2 3%
24	CF %		2 8%	13 54%	1 4%	3 12.5%	2 8.5%		1 4%		2 8.5%				
12	HM %		2 16.5%	3 25%		3 25%	1 8%						1 8%		2 16.5%
1	PL %														1 100%
210	N/A %														1 100%
	Total	3	21	92	7	42	15	9	8	1	3	0	1	1	7

OPHTHALMIC TREATMENT CENTRE

YSBYTY GWYNEDD - BANGOR

POST-OPERATIVE VISITS

Non-Gwynedd patients made a total number of 326 post-operative visits for 137 procedures, whilst Gwynedd patients made 282 visits for 73 procedures during the audit period.

The average number of visits for Non-Gwynedd and Gwynedd patients are as follows:

Non-Gwynedd patients	2.4 ¹ (2-3 post-operative visits)
Gwynedd	4 visits

The reason for this difference was that some Gwynedd patients had more chronic conditions (such as glaucoma) necessitating long follow-ups in contrast to the Non-Gwynedd patients who were chosen more selectively.

¹ The National Cataract Surgery Survey (EYE, Vol 7, Part 5, Page 669, 1993), revealed a similar mean number of visits i.e. 2.87.

NURSING PROBLEMS ENCOUNTERED

Nursing problems highlighted in a study undertaken by the ophthalmic nursing sister (Sister Mitton) revealed the following difficulties and misconceptions:-

1. Neither relatives nor patients knew about the necessity of instilling drops post-operatively. They were under the impression that a District Nurse would be undertaking this (unaware that a district nurse could not visit more than twice daily). In addition, patients thought that the drops would be used for one week only. Total length of stay did not always allow for adequate teaching of how to instil drops.
2. Some patients expected ambulance transportation to their home from the Treatment Centre despite the presence of visiting relatives. In addition, some patients had to remain in hospital over a weekend if they were unable to be discharged on the Friday owing to the lack of weekend transport. Some discharges were further delayed until mid-week where transportation was required as three days notice was required.
3. Many patients expressed surprise when told of post-operative visit arrangements, claiming that they had not been aware that they would be required to return for two post-operative visits to Gwynedd.
4. Some difficulties were experienced in respect of investigations for patients undergoing surgery under general anaesthesia. Patients arriving a day prior to surgery did not arrive until 4.00 p.m. Given that all departments closed at 5.00 p.m. this did not allow adequate time for relevant investigations.
5. In respect of medication for existing conditions - some patients were told not to bring their medications. This caused some problems in incorrect prescribing.
6. Some patients requiring pre-operative physiotherapy were brought in on Fridays for admission. This created problems in that there were only limited weekend physiotherapy facilities. Patients should really have been brought in one week before.
7. Poor compliance was encountered where patients were not capable of using medication correctly. Autodrops were given in some instances.

PATIENT SATISFACTION

Patient satisfaction questionnaires returned by non Gwynedd patients, revealed a high level of satisfaction with the Ophthalmic Treatment Centre (OTC). This covered all aspects such as management and care (including administrative arrangement, medical and nursing care).

The only drawback to the OTC, as confirmed by the patients in the questionnaire, was that of the distances involved, especially amongst patients travelling from South Wales. Whilst this is accepted for the purpose of surgery, it did not extend to travelling for post operative reviews which proved to be the main area of concern.

Several patients did not return for follow up, and hence the lack of complete data in, for example, final visual outcome. The problem of distance was solved in the main by providing post-operative reviews at the Dolgellau Clinic which was approximately 60 miles less distant than Bangor through a tortuous route which is very crowded especially in the Summer months, and frequently closed due to bad weather conditions.

The consensus of opinion amongst patients was, that whilst they are grateful for the opportunity of having surgery earlier than would have been possible in their own areas, they would have preferred to have their surgery done locally, had the waiting time been shorter, or the centre was nearer to their home. This accounted for a drop off in patients as soon as the Bridgend Treatment Centre was open.

All patients who were followed by the Author of this report expressed high rates of satisfaction (Addendum C) especially those seen in Dolgellau in view of its relative proximity from South Wales. They, however, expressed their comment on the distance they had to travel and that they would have preferred to have the surgery locally.

There were also problems experienced in ambulance transportation in respect of responsibility or such transportation. This caused some delays in discharging patients.

CONCLUSION

The concept of centralised treatment centres taking patients from wide geographical areas as a method of easing surgical waiting times is a noble one. This is especially the case in those instances where pain and disability reduce both the quality of life and the ability to live, and cope, alone in older members of the population as is the case with patients awaiting hip replacements and cataract surgery. The very positive response elicited from the patient questionnaires demonstrates the success in terms of patient satisfaction. The opportunity of early surgery was unanimously welcomed. However, where surgery requires a long stay in hospital, it may be more difficult for older patients to be away from their families and familiar environment.

For such centres to be more successful, several factors must be in place.

1. Access to Centres

Treatment centres must be accessible with ease and within a reasonable travelling time. In the case of the Bangor centre, the lack of a good road/rail link between south and north Wales was a considerable drawback, especially given the average age of the patients requiring cataract surgery. Cataract surgery, in addition, carries the additional element that closely spaced post-operative visits are necessary to monitor the success of surgery unlike those required for hip replacement surgery.

The presence of motorway/dual carriageway or direct rail link between Bangor and South Wales would have greatly enhanced the overall success of the Treatment Centre at Ysbyty Gwynedd. This is reflected in the reduction in referrals following the opening of the Bridgend Cataract Treatment Centre.

Problems of travel were compounded by bad weather causing travelling difficulties during the winter period and problems associated with ambulance transport, with some uncertainty regarding who was responsible and who paid for ambulance transport.

2. Adequate Planning/Staffing

Where such centres are initiated, all arrangements for additional staff and theatre sessions must be agreed and in place before the centre is open. There was a delay in these

arrangements at the Bangor Ophthalmic Treatment Centre in that no provision had been made for anaesthetic cover and it was difficult to recruit trained theatre nursing staff because the correct grade was not offered initially. These delays led to a delay in treating patients referred initially and hence the longer than anticipated maximum waiting times on the Treatment Centre (30.3 weeks). In addition, there was also a large backlog of Gwynedd patients waiting.

3. Admissions/Delays in Discharge

Given the geographical distance of the Bangor Treatment Centre, it was not possible to admit non-Gwynedd patients for day-case surgery. Neither was it possible to admit Gwynedd patients on this basis given the large geographical spread of Gwynedd. In addition, the fact that it was not possible to arrange immediate post-operative reviews in local areas, meant that it was necessary to keep patients in hospital for longer than might have otherwise have been the case. This proved essential however in order to monitor their progress and, in one case, a case of endophthalmitis in the immediate post-operative period in a non-Gwynedd patient was treated speedily thus averting a major complication and possible loss of vision. This did, however, require an extended stay of 10 days in hospital.

4. Waiting Times

The presence of such treatment centres works well in reducing overlong waiting times at specific centres. However, they do not address the basic problem of an imbalance in staffing levels in different health districts which, if corrected, would abolish the disparity in waiting lists.

In conclusion, the introduction of the Cataract Treatment Centre at Bangor, acted as a stimulus for other areas to imitate in establishing similar centres (i.e. Bridgend). Its success from the patient's satisfaction point of view was proven. However, it also served to question the reasons behind the variation in waiting lists in different areas and these have not, as yet, been satisfactorily addressed.

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