Review of Eyecare Services in Scotland

INTERIM REPORT

October 2005

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Context

In March 2004 the Deputy Minister for Health and Community Care announced a review of eyecare services in Scotland. A group was established to review arrangements for the provision of eyecare services in the community in Scotland, and to provide recommendations on good practice for effective models of care. The aim is to encourage the development of integrated eyecare services to ensure patients receive a good quality and efficient service, in a convenient setting without undue wait. Services can be available in community or hospital settings, depending of the geography of the area. The first point of contact should be able to give the patient access to the appropriate service.

The review takes into account a number of important changes which have an impact on services to tackle vision related problems in Scotland:

- The emphasis on local planning and delivery of health care (increasingly through CHPs)
- The proposed expansion in the role of the optometrist
- The development of local integrated eyecare networks
- The Government's policy on closer co-operation between health and social care (eg Joint Future)
- The review of certification and registration (a working group has been reconvened to complete a review of the system in tandem with the eyecare review (Annex A)).

In addition, the review has taken into account a study of low vision/visual impairment eyecare in three localities in Scotland. These studies are focusing on early intervention for patients threatened with loss of sight, the provision of accurate information at every stage in the patient journey and the quality of local inter-agency co-operation (Annex B).

In parallel, the Centre for Change and Innovation (CCI), a unit within the Scottish Executive Health Department, has developed patient pathways of care for most specialties, including pathways for a range of eye conditions. These pathways complement the aims of, and are closely linked with, this review (Annex C).

The review has been informed by a number of existing community-based, multi-disciplinary shared or co-management schemes that are already established, or are being piloted, including the Glasgow Integrated Eyecare Service (GIES), the Lothian Optometry Cataract Initiative (LOCI) and the Grampian glaucoma scheme (Annex D).

A discrete piece of work is also being undertaken by a working group to look in more detail at the co-ordination of support services for blind children and their families (Annex E).

The review group explored how to make the best use of all professionals with training, audit and clinical governance to improve the service available to patients in the community and to make the most appropriate use of specialist services and maximising the use of available expertise. The group were of the view that services should be redesigned to meet the needs of the patient, enabling access to services in their local communities and avoiding unnecessary hospital appointments. It was acknowledged that there would be implications for General Ophthalmic Services from any service redesign and that the Partnership Agreement commitment of the introduction of free eye checks for all by 2007 would have to be addressed as part of the changes.

This initial report is intended to set the general direction of eyecare services in Scotland, but at the same time acknowledges that parts of the system that are working well do not need to be changed. It does, however, focus on specific areas where action can take place, with a recognition that work on others needs to follow.

Background

Traditionally, within the NHS, the first point of contact for most patients with an eye problem is their General Practitioner. This has limited the level of care being provided for many people as many GPs do not have the necessary equipment, expertise or experience to adequately diagnose and manage more complex eye conditions. Hospital eye departments have been used to manage the latter, the diagnosis and management of ophthalmic conditions being undertaken by ophthalmologists. Demands on the hospital eye service and an acknowledgement that some patients currently attending the hospital eye departments could be dealt with in the community has led to a need to review how eyecare services are designed and provided.

Crucial to this is the need for cost-effective care, avoiding the unnecessary duplication of tasks. It is acknowledged that better use could be made of a number of professionals (optometrists, orthoptists and ophthalmic nurses as well as rehabilitation and social workers) to deliver care in settings more appropriate and convenient to the patient.

Given their numbers and geographical spread, optometrists are a key group of clinicians in the primary care sector that are considerably underutilised although there is a growing number of informal co management arrangements with local GPs and NHS Boards across the country. There are several schemes that have been established that have tapped into the optometric resource to improve services such as the GIES scheme in Glasgow, the glaucoma scheme in Grampian, the LOCI scheme in Lothian, the community optometry networks in Fife and Edinburgh and the WECI/PEARS schemes in Wales.

Optometrists will soon be granted supplementary prescribing rights with independent prescribing rights to follow later. This will enhance their capability to manage anterior segment disease, and chronic eye diseases such as glaucoma, in the community or hospital settings.

Other shared care schemes involve orthoptists and ophthalmic nurses such as the shared care glaucoma services in south Glasgow, Tayside and Inverness.

Any clinician involved in the delivery of such services must be competent to do so. Minimum competency standards need to be established that can be tailored to suit local needs and all stakeholders. The competencies themselves must be defined in terms of current best practice.

Drivers for Change

(a) Demographics

The following table describes the changing demographics within the Scottish population from 2002 to 2020:

Age	2002	2020
0-4	268,468	243,688
5-9	299,159	241,734
10-39	2,033,647	1,713,269
40-49	730,914	588,418
50-59	647,906	744,317
60-64	261,827	336,851
65-69	239,445	287,948
70-74	209,142	274,780
75+	364,292	488,817

In the year 2000 the Scottish population was 5,120,000. 25% of the population was over age 60 and 345,000 were over age 75. It is estimated that 80% of the population who have serious eye problems are over 65, and 1 in 5 of the over 75 population is registerable as blind or partially sighted. By 2020 the birth rate will have fallen and the population will be in decline, but the number of people over 60 will increase by 1,388,396 and 488,817 people will be over age 75. By 2036, 690,163 will be over age 75 (DOH Statistics Office). There is an exponential increase in all age-related eye disease after the age of 75. Methods for calculating the prevalence of blindness are currently under review.

At present there is a considerable unmet need for many eye conditions (Unseen, RNIB 2004). The current service is unable to keep up with demand, and there are long waiting times for hospital appointments.

By 2020 it is anticipated that the incidence will increase by 40-80% for most eye problems such as anterior eye disease, cataract, age-related macular degeneration (AMD), glaucoma and diabetes. There is not capacity within the service as presently configured to match supply to the increasing demand. Information on the epidemiology of common eye disease is attached at Annex F.

One way of addressing the increasing demand is to establish and extend eyecare networks to introduce comprehensive preventative eyecare services in every community to allow the early detection of sight threatening disease and other eye disorders so that the condition can be managed appropriately. There will also be a need to increase the provision of low vision services for those with irreversible visual loss.

The importance of maintaining good/optimal vision in older people to enable an independent and fulfilling life is fundamental. Timely access to glaucoma diagnosis and treatment, cataract removal and support with low vision aids is part of a holistic approach to keeping people out of hospital (eg due to falls or accidents), and supported at home.

There are considerable differences between the eyecare needs of children and adults and this has been recognised during the review process. The need for early, appropriate screening for early visual disorders such as strabismus (squint), ametropia, pathology and other causes of visual loss has been recognised. In many cases the risk of permanent visual loss in children can be avoided if the condition is detected early.

The vast majority of children who are referred with squint have access to an orthoptist within 12 weeks and all but a few are seen within 24 weeks. There has been a drop in the birth rate in Scotland for several years, and the incidence of childhood squint has also decreased. As a result orthoptic services for children will not see the dramatic increases predicted for other eye problems.

A separate piece of work is being done on the co-ordination of support services for blind children and their families and a report of this work will form part of the conclusions of the eyecare review. Information on the particular issues in relation to childhood blindness is attached at Annex E.

(b) Workforce

The following table provides an approximate estimate of the comparative NHS and social care workforce resource available to deliver eyecare services in Scotland:

Profession	WTE numbers	Place of Practice
Career grade ophthalmologists	85	Hospital
Senior house officers	40	Hospital
Registrars	28	Hospital
Optometrists	850	Hospital & Community
Orthoptists	69	Hospital
Ophthalmic nurses*	200	Hospital
OMPs	15	Community
Dispensing opticians	200	Community
Specialist social workers	33	Community & Hospital
Rehabilitation workers	58	Community & Hospital

*Of the 200 ophthalmic nurses working in Scotland, 41% have a recognised ophthalmic nursing qualification.

There are currently over 800 optometry practices in Scotland, one in nearly every community, compared with less than 30 hospital eye units. There are 1,020 optometrists registered to provide General Ophthalmic Services in Scotland, an approximate WTE optometric workforce of 850 in both the primary and secondary care sectors. This resource will increase by approximately 4% per annum for the foreseeable future.

The ophthalmologist workforce is growing slowly but not enough to meet patient demand. The European Working Time Directive (EWTD) is impacting on the availability of doctors in training to support consultants in hospitals, as will Modernising Medical Careers. In addition the new consultant contract has changed the hours these doctors will work. There are now very few ophthalmic medical practitioners (OMPs) working in the community.

There are ongoing problems with the recruitment of specialist ophthalmic nurses because of a lack of national training facilities for the past number of years.

There are 100 orthoptists (69 WTE as some are part time) currently employed within NHS Scotland (BIOS Workforce Survey 2003).

The new contract for General Practice provides significant opportunities and drivers for change in working collaboratively. It enables service redesign through the provision of enhanced services by health professionals working together in primary care and the community. This is in addition to the essential services that these professionals already provide to the population they serve.

In addition to the medical staff involved in the detection, diagnosis and treatment of blindness, there are also specialist staff (health and social care) who offer support throughout the patient journey.

Further details of aspects of the workforce can be found in Annex G.

(c) Changing Technology

There have been a number of new and innovative technological improvements over recent years. Professionals in both primary and secondary care have seen the increased use of digital imaging and automated computerised visual field screening. Other less elaborate developments have seen the growing trend of indirect slit lamp biomicroscopy, a technique that is finding favour with an ever-increasing number of optometrists. All this has provided improved care for a large number of patients, and facilitated effective communication and the potential for referral refinement between the primary and secondary sectors.

Technology has also had an impact on patients and RNIB is active in promoting technological change to reduce social isolation. Specialist software has enabled blind people to use IT and access the internet. A new mobile phone gives the option of texting and there is an increasing use of audio description in the cinema and on television. The first specialist radio station in Europe for blind people has opened in Glasgow. Rehabilitation workers also play an important role in assisting visually impaired people to select and use appropriate technology.

(d) Waiting Times

Waiting times and waiting lists for hospital clinics for eyecare problems are considerable throughout Scotland with patients waiting a significant time for an initial assessment by a clinician. Delays can lead to the risk of a late

diagnosis and treatment of a serious sight or life threatening condition. Providing better access to an increasing level of diagnostic services in the community would enable more minor conditions to be treated more quickly with referrals to the hospital only when necessary.

Some work is underway to reduce waiting times by closer inter-agency co-operation and earlier intervention, making contact with patients while they are on the waiting list. This early intervention could help improve prioritisation of the referral or even provide the opportunity for many common conditions to be managed appropriately in the community.

The National Waiting Times Unit and the Centre for Change and Innovation are currently examining the need for a redesign of services, specifically to meet the new waiting times target for cataract surgery announced in “Fair to All, Personal to Each”. Whilst by necessity this review is focusing on access to cataract surgery, it is acknowledged that any service redesign will need to be set in the context of the broader clinical and operational considerations in the delivery of eye care services.

There is generally greater ease of access to other professionals dealing with eyecare problems.

Service Principles

It is suggested that the following principles should underpin any redesigned services:

(a) Access to Services

There should be a good geographical range of community settings where patients can seek help and an extension of entry points into the system. Easy, convenient access to eyecare services should encourage people living in challenging circumstances to attend community based practices and present earlier, enabling many common conditions to be dealt with rapidly. Other serious conditions can also be diagnosed promptly reducing the risk of permanent visual loss.

Recent research by Guide Dogs (“Enhancing Care Provision for Blind and Partially Sighted People in GP Surgeries – Guidelines for Best Practice 2005”) has emphasised the importance of making services and premises accessible and welcoming to visually impaired patients. This will encourage and enable individuals to seek help when they first experience problems.

The population at large should be able to access or be referred to an optometrist for full examination (including refraction if necessary) followed by onward referral to specialist services depending on the preliminary diagnosis. Optometry practices are well placed to offer accessible services for the general population and for the examination, diagnosis and treatment of common eye disorders, onward referral to ophthalmology for more serious eye disease.

There is evidence that sight loss often goes undetected, particularly among older people (Unseen, RNIB 2004) A local network involving primary care, secondary care, community optometry and social care will help individual patients to get appropriate help without undue delay. The network should be able to respond both to initial sight loss and to the longer-term impact of living with impaired vision.

(b) Communication

Communication is a vital component of any service. First and foremost is effective communication with patients, but also between various professional groups, the NHS, other agencies and stakeholders. An important element of improved communications will be the introduction of direct referral by optometrists to hospital eye departments, with GPs being kept informed of all referrals and subsequent correspondence.

Research by RNIB and by others ("Patients Talking" RNIB 2001) has shown that the quality of the information which patients receive can have a significant impact on their experience of blindness or partial sight. At all stages of the patient journey, it is important that accurate and accessible information about the nature and effect of the eye condition is made available to the patient in the appropriate format.

There is a need for frontline staff to be more sensitive to the communication needs of all patients. This is particularly important when dealing with people living with disability, including the visually impaired. For example, although the optimum would be to have a braillist and a BSL interpreter available in every setting, a more realistic aspiration might be to ensure that all front line staff have basic sensory awareness training. Ensuring that information is available to service users in an accessible format means producing publications in a range of formats and having the capacity to meet individual needs.

(c) A Multi-disciplinary Approach

No single agency or professional group can respond to all of the challenges that present when managing visual problems. The development of co-ordinated multi-disciplinary professional groups will ensure that individuals receive the care they need from the most appropriate professional irrespective of where they are in their care journey. For example, the current system for linking health and social care, certification and registration, is archaic and inefficient which is outlined in Annex A. The system is under review but it is apparent that the shortcomings of any registration system can be overcome if the relevant agencies work together.

It is vital that joint work takes place on a locality basis, and is focused on the needs of the individual patient. There are already examples of good joint working in several localities in Scotland.

(d) Equity

While this review of eye health care looks at the position across Scotland, the impact on the patient will be determined by local arrangements devised to meet local circumstances. It is therefore important that, while the principles of good practice set out in the review apply across Scotland, so that there is equitable access to high quality services, geographical differences will mean that different approaches have to be taken to meet local needs.

Service Redesign and Development – Work in Progress

Several pieces of work in relation to service redesign and development are either underway, or being progressed as part of this review:

(a) English Developments

In England the Department of Health (DoH) has produced several Eyecare Pathways to offer some practical advice and functional support to improve eyecare services. The one element that is missing from the DoH proposals is any method of initial assessment so that patients can be offered an initial differential diagnosis with effective "signposting" that would allow them to engage with one of the pathways. Robust planning and the establishment of effective and efficient initial assessment are essential to the successful implementation of any set of care pathways or care network.

(b) Established Work in Scotland

A number of co-management/delegated care schemes have been established in Scotland over the last few years. Some examples are given below:

Cataract

Several areas in Scotland have redesigned their referrals for cataract surgery involving optometrists in the process. These include schemes in Ayrshire and Arran, Forth Valley, Grampian and Lothian. Further information on the schemes in Ayrshire and Arran and Lothian is at Annex D.

Glaucoma

In Glasgow optometrists are involved in the co-management of glaucoma patients. In Grampian, a delegated care scheme allows the referral of all patients suspected of having glaucoma through a coordinator to an accredited optometrist for further assessment, a confirmation or diagnosis or discharge. The optometrists work in the community within an agreed set of criteria (Annex D).

Diabetic Screening

Optometrists have been participating in diabetic retinopathy screening for a number of years. Across Scotland there are examples of collaborative working between optometrists, ophthalmologists, GPs, diabetologists and

other carers. However, arrangements are under review with the implementation of the new HTBS requirements for diabetic screening.

Glasgow Integrated Eye Service (GIES)

GIES is a wide-ranging scheme for the management of all eye conditions by community optometrists. It allows GPs to refer eye problems to an accredited optometrist for management, treatment and ongoing referral to the secondary sector as appropriate. This service has been established for several years and approximately 70% of cases seen by the accredited optometrists have been managed successfully within the community without referral to hospital. The service has been well received by patients, GPs and the local hospital eye departments (Annex D).

(c) A Study of Visual Impairment Care in Three Localities

One of the principle aims of the review has been to maintain a patient-centred focus, while examining the clinical details of the system for detecting and treating sight loss. To help develop such a holistic approach, studies have been set up to examine good practice in three demonstration sites: Edinburgh, Fife and Forth Valley. Each site has a management group which brings together the representatives of the key organisations in health and social care.

Based on research by RNIB and others, three aspects of effective patient care have been identified: early access to help and advice, good quality information at every stage in the patient journey and strong links between the helping agencies at a locality level. The quality of existing services has been audited in each of the three areas and it will be reviewed at the end of a six-month study. The audit has included a survey of patient's views. Further detail can be found at Annex B.

(d) CCI Patient Pathways

The CCI Outpatients' Programme was initiated in response to the White Paper "Partnership for Care" (February 2003), to support NHS Boards in meeting the target that by December 2005, no-one should have to wait longer than six months for a first outpatient appointment.

Several projects have now been established as part of the Outpatients Programme to help improve the interface between primary and secondary care. The Patient Pathways Project is one of these. Evidence-based methodology has been used to develop pathways of care for the following conditions: Strabismus, Glaucoma, Flashes and Floaters, External Eye

Disease, Diplopia, Cataract and Age Related Macular Degeneration. All are available from the CCI website: www.cci.scot.nhs.uk (via patient pathways project) and at Annex C.

These pathways will enhance the patient's journey of care, reducing the number of steps in the traditional pathway and facilitating close collaboration between primary and secondary care and effective teamwork by all members of the eyecare team. They have been developed by multi-professional groups, including ophthalmologists, optometrists, general practitioners, orthoptists, ophthalmic nurses and patient representatives. One principal aim has been to optimise the expertise available in the community, particularly in optometry. Widespread consultation on the draft pathways has been conducted prior to publication in June 2005.

The pathways which have been developed have been dependent on the best available evidence and consensus opinion. It is important that the pathways are piloted and audited to determine their effectiveness. It is expected the pathways will stimulate redesign of services locally. The pathways should not be seen as prescriptive but as templates which can be used by the professionals charged with the delivery of care in consultation with patients.

(e) Screening of Children

Guidance for screening all 4-year-old children has been set out in the Hall 4 report "Health for all Children" recommending that it be carried out by orthoptists. A screening cohort of all 4 year olds has been established and protocols for testing have been agreed nationally. Equipment requirements have been identified and costed, and referral criteria have already been agreed nationally. It would be possible for referral/care pathways to be varied depending on local circumstances and present screening programmes could be easily transferred to new models. Orthoptists are fully qualified, without additional training, to implement the screening and most orthoptic units are actively involved for implementation of the new arrangements. Some regions have identified interim arrangements to allow smooth transfer of screening responsibilities to orthoptists from school nursing services, which have historically screened all new school entrants.

However, other professionals might also be in a position to deliver screening functions. The screening should be competency based and an appropriate professional should conduct the screening.

At stage 3 of the Smoking, Health and Social Care Bill an amendment was lodged to place a specific requirement on Scottish Ministers to provide

vision screening for children at primary 1 and secondary 1, and to provide for any treatment required as a consequence. An amendment was accepted and a provision included at what is now section 8A of the Act to provide for the detection of vision problems in children to such an extent to meet all reasonable requirements. A commitment was made to undertake further research as to what might be appropriate in terms of school-age vision screening. In the meantime, the Executive is progressing with the implementation of orthoptist-led vision screening as above.

Future Services

(a) From the work already undertaken, it is suggested that services in the future need to be:

- Accessible for patients in community settings with quick access to a competent professional who can diagnose and discharge, treat or refer as required
- Patient-centred, with an improvement to the patient experience and good quality information at every stage of the patient journey
- Integrated between community, hospital, social work and general practice
- Focused towards the best use of skills
- Responsive to demographic change

The initial work of the Review group has identified areas where specific improvements could be made to the current service that would help to reduce waiting times, improve care and make better use of all available resources.

(b) In particular, this initial report considers the establishment of community-based services focused on optometric practices that will allow rapid access to the right professional in the first instance. The services would enable preliminary diagnosis and treatment/management by the professional seeing the patient initially, referral on to another professional in the community (eg general practitioner) or a prioritised direct referral on to the acute sector as necessary. Co-management schemes across the country have already demonstrated the competency of optometrists to fulfil such a role as being the first point of contact for the provision of eyecare services.

(c) A Partnership for a Better Scotland: Partnership Agreement made a high level commitment to systematically introduce free eye checks for all before 2007. It was subsequently agreed that the current sight test be replaced by a new eye examination.

The purpose of the current NHS sight test is to determine whether the patient requires glasses or contact lenses. To this end the NHS sight test has to include a refraction (a test to determine whether or not the patient needs to wear or use an optical appliance).

The new eye examination is intended to move away from the current emphasis of a sight test with refraction to address broader health aspects. All patients will be entitled to a free, more extensive NHS eye examination;

this will include a sight test (refraction) where required. However, for some patients, to offer the most effective pattern of care, the optometrist may only need to provide a more comprehensive eye "health" examination. This is described as "level 1" in the proposals summarised in Annex H.

(d) There is also a range of models of additional community-based assessment being tested in Scotland, with different combinations of health and social care professionals but again with optometrists playing a pivotal role. This is described as "level 2" in Annex H. One well tried example is the GIES scheme in Glasgow which has refined the interface between GPs, high street optometrists and ophthalmologists.

(e) Community-based care can thus be segmented into separate levels depending on the nature of involvement, clinical competency, training and patient management as summarised in Annex H. The initial assessment may lead to treatment there and then or may enable the patient to be treated by other specialties and follow relevant care pathways. Based on experience in parts of the UK and Scotland there are opportunities for a core model to be developed which includes both health and social care professionals. The precise model of management of community-based care will depend on the nature of the local scheme.

(f) It should be noted, however, that the starting point for care pathways may not always be through primary care or optometry. Effective communication between health, social care and the voluntary sector can help improve signposting for patients to whatever element of the sector that they need.

The community-based sensory impairment centres or visual impairment centres, have demonstrated that a high level of co-operation between professionals improves signposting and may prevent patients, particularly older people, from slipping through the net (Unseen, RNIB 2004). In a multi-disciplinary setting there needs to be clear protocols on the initial diagnosis, assessment and treatment of sight problems.

In any redesigned system, additional training should be available to all relevant professionals to allow patients to be managed more effectively and efficiently in a community setting. This will provide the platform for the early and rapid diagnosis of any eye problem, effective and rapid communication of the results or outcomes to the patient, prioritised referral to secondary care if necessary and/or ongoing safe management of the patient in the community.

(g) The development of Community Health Partnerships gives the opportunity for additional impetus to co-ordinated eyecare based in localities and using the expertise of a range of professionals and agencies. A representative of optometrists will be a full member of a CHP committee which has a central role in co-ordinating, planning and delivering integrated care for people living in their communities.

Implementation

(a) Legislation

Changes to GOS and the introduction of a more comprehensive "eye examination" are included in the Smoking, Health and Social Care Act, and could be introduced by 2006. This ties in with the Partnership Agreement commitment to introduce free "eye checks" before 2007. There also requires to be a change to the GOS regulations to allow direct referral from optometrists to the hospital eye service. Other changes do not need legislation and can be introduced when revised systems and resources are available.

(b) Training and Competencies

Specific areas which have been identified and need to be addressed include:

- The competencies needed for the primary eyecare practitioner/ optometrist to participate in community-based assessment as described above would include the basic competencies already defined by the GOC for optometric registration and some additional competencies to meet the requirements laid down in Level 2 (and any future expansion when independent prescribing rights are made available to optometrists). The prescribing competencies for optometrists have been defined by the GOC and the National Prescribing Centre. The Medicines and Healthcare products Regulatory Agency (MHRA) has agreed to supplementary prescribing for optometrists and this should be introduced in 2005. The MHRA has also agreed that all ophthalmic "P" medicines be made available to optometrists for sale or supply and an additional antibiotic – Fusidic Acid – has been added to the current optometrists formulary. All this would need to be underpinned by CPD, annual appraisal, and accreditation.

- Orthoptists play a key role in the screening of pre-school children and in a range of adult services, but there are supply limitations at present. A report to the DOH (England) in March 2003 recognised the need to increase the number of undergraduate places to sustain the profession. This has begun to be addressed by increasing this year's intake at Liverpool University. There is no longer any undergraduate course in Scotland. A separate report has been sent to the Scottish Executive which addresses this issue (and also that of ophthalmic nurses). This suggests that in order to sustain the current level of activity and develop

and utilise the skills of orthoptists to their full potential there needs to be support to increase the recruitment of Scottish students to the two existing courses in England.

- Due to the lack of an appropriate nursing course in ophthalmology, there is a concern that succession planning will be difficult for those currently in nurse specialist posts. The quality of patient care will be affected by a shortage of ophthalmic nurses. There is a need for accredited courses to be run in Scotland that provide training for core competencies. NHS Education for Scotland is aware of this situation and is making some progress in taking this forward.

- Rehabilitation workers play a key role in assisting patients to adjust to living with sight loss. Their work can be divided into three main areas: orientation and mobility, independent living skills and communication skills (Braille, use of computers, etc.). The training of rehabilitation workers in Scotland is currently under review.

(c) Equipment

Any optometric practice providing primary eyecare assessment would be expected to have the appropriate equipment available to deliver the service. This would vary depending on the particular clinical activity involved and would include apparatus necessary to assess visual function, examine the external eye, examine the internal eye, test visual fields and accurately measure intra ocular pressure, eg refraction equipment, slit lamp, condensing lens, automated visual field apparatus, ophthalmoscope, applanation tonometer, diagnostic agents.

(d) Quality/Standards and Governance

As stated above, the core competencies required for optometric registration would allow optometrists to participate in all level 1 activities. Additional training would be required to comply with some of CCI care pathways and to participate in some of the more advanced aspects of co-management schemes such as the GIES model. It is important that practitioners should only deliver aspects of a service once they are fully trained, competent and experienced to do so. For example a minimum requirement for an optometrist would be to comply with the College of Optometrists Code of Ethics and Clinical Guidance.

In addition to establishing core competencies for professionals, it will be important to set standards that will define the patient's experience of health and social care services. One of the outcomes of the study in the three localities will be a survey of patient satisfaction. A parallel exercise on service standards is being done as part of the Sensory Impairment Action Plan.

Relationships with the governance structures of NHS Boards (including clinical, staff and corporate governance), NHS QIS and Care Commission need to be explicit.

(e) Infrastructure

Experience from the various shared care schemes and the visual impairment pilots would demonstrate the importance of ensuring patients can gain local access to services. For example, the GIES model has clearly demonstrated the benefit of properly utilising community optometrists to improve local "screening" for eye disorders, effective prioritised referral as necessary and the safe management of many common eye conditions in the community.

The visual impairment pilots have demonstrated that the co-location of services in a range of accessible settings such as those being used in the three demonstration sites in Edinburgh, Fife and Forth Valley, and equivalents across Scotland is an essential component in a responsive service.

The definition of what can be described as an acceptable and accessible setting will vary across the country. But this approach has the potential to enhance the attendance rates for patients with conditions such as diabetes that require multiple appointments from various healthcare professionals to monitor their disease and any complications.

Expected Outcomes and Evaluation

Redesigned services need to be defined in terms of improved outcomes and they need to be evaluated. Issues to be addressed include:

- Improved patient access to services, for acute and chronic disease management
- Improved quality of community eyecare service
- Reduced waiting times for assessment, diagnosis and treatment of common eye complaints
- Improved integration of eyecare using the skills of many different groups and professions
- Enhanced community preventative care to increase the detection of sight-threatening disease
- Shortened patient journey from symptoms to treatment and discharge
- Improved patient satisfaction
- Improved patient outcomes by early diagnosis and treatment
- Improved access to low vision support at an early stage
- Setting and maintaining national standards that can be adapted and implemented locally

Conclusion

In summary, the group recommends that a patient-centred, multidisciplinary approach be taken to all eyecare. This needs to have an emphasis on a preventive approach, but must also include the treatment and support of blind and partially sighted adults and children. From the patient's perspective, there should be ready access to a range of professionals, so that their condition can be managed effectively and efficiently. This would result in a positive outcome for many people with a treatable condition and help other deal with the impact of sight loss whenever it occurs.

This review describes some models that offer early clinical intervention linked to personal support. It stresses the importance of equity of access to services, which should be tailored to patient need and to the configuration of local services.

Selecting the most appropriate best model will be a matter for local stakeholders. Service users need to be consulted both at the point of service redesign and on a regular basis. The emerging evidence from the three locality studies and the experience gained in other shared care schemes is that models which involve health, social work and the independent sector are more likely to offer a holistic service than more limited partnerships. Whatever model is chosen, it should be capable of delivering local services that meet national standards.

Interim Recommendations

The review group proposes the following interim recommendations:

- That an integrated, patient-centred approach is taken to the design of eyecare services
- That extended use is made of the optometry network to deliver a new type of (level 1) assessment service, incorporating an extended "eye examination"
- That local areas should consider the development of level 2 schemes based on the models already being implemented in a number of parts of Scotland
- That the GOS regulations should be amended to enable direct referrals from optometrists to the hospital eye service
- That there should be local testing out of the patient pathways developed through the CCI work
- That the review of the three local integrated visual impairment care schemes in Fife, Edinburgh and Forth Valley should provide lessons learned in order that these further models of care can be adapted for use in other parts of Scotland
- That further work is needed to address the specific eyecare needs of children
- That the work on updating the registration and certification processes should take into account the integrated care approaches being proposed for other aspects of eyecare
- That the workforce implications of the redesigned services should be kept under review
- That CHPs should be encouraged to address the potential for service redesign of local eyecare services, including support for local care networks

ANNEX A

Certification and Registration of the Blind and Partially Sighted

Context

The system for certifying and registering people as blind or partially sighted dates back to the 1948 National Assistance Act. The definition of certifiable blindness, which is still in use in Scotland, is that: “a person is considered blind if they cannot do any work for which eyesight is essential”. There was no definition of partial sight in the 1948 Act. Subsequently it has been determined that people can be certified as partially sighted if they are:

“substantially and permanently handicapped by defective vision caused by congenital defects or illness or injury”.

The Consultant Ophthalmologist who makes the diagnosis can send information to the holder of the local blind and partially sighted register, if the patient gives consent. The register holder is usually the local authority social work department, some Scottish local authorities have contracted out this task to local societies for the blind. The duty to hold a register was abolished when some sections of the 1948 National Assistance were superseded by the 1968 Social Work (Scotland) Act, but local authorities retained the power to hold registers, and all Scottish Councils have continued to do so.

Shortcomings of the Registration System

The certification and registration system is widely regarded as archaic and inefficient for the following reasons:

- The definitions used, particularly the definition of registerable blindness, are so limited as to be irrelevant to the majority of the blind and partially sighted population.

- Certification is based on tests of visual acuity and visual field. While these are essential measures of sight loss, the criteria should be expanded to cover the impact of sight loss on the individual’s ability to function.

- There are wide variations in the rates of registration. Registration is voluntary and research suggests that patients are not always well informed about the benefits of becoming registered. There may be variations in the way in which clinicians interpret the criteria for certification.

- The registration system is the main mechanism that links health and social care. In theory registration should be the gateway to a range of financial benefits and it should give access to social care, where appropriate. In practice there are wide variations in the efficiency of the mechanism, both in terms of the speed of response and range and quality of the services offered. A major criticism of the system is that registration comes too late for many patients who have spent long periods on waiting lists to see a Consultant Ophthalmologist.

- The register is regarded as an important source of epidemiological data on sight loss. The quality of the data is limited by several factors: the voluntary nature of registration, variations in the interpretation of certification criteria and the likelihood that many potential patients, particularly in the older population, cope with failing sight without seeking assistance.

- It is argued that the current certification and registration system is particularly inappropriate for blind and partially sighted children and young people. There are significant differences between loss of sight in childhood and in adult life, which require a different response.

Work of the Certification and Registration Working Group

As part of the wider Eyecare review, a working group has been considering the modernisation of the certification and registration system in Scotland. The group has the benefit of access to a report published by the Scottish Executive in 2001. The certification and registration system in England was reformed in 2004, and the group has been kept informed of both the nature of the changes and the way in which they have been implemented.

The working group has received comments on the current system of certification and registration in Scotland from a wide range of stakeholders. A service user's panel has been established to offer comment on the work of the group.

The group has received proposals on the reform of certification and registration from the Scottish Paediatric Ophthalmology Group. These proposals will be considered in detail and comments will be sought from other relevant groups.

The working group expects to produce a report, and proposals for change, as part of the wider eyecare review.

ANNEX B

Work in progress – three demonstration sites

Progress to date in the three pilot areas is as follows:

Fife

The Fife study took place between 1 November 2004 and 30 April 2005. Fife has a strong tradition of interagency work, based on the Fife Sensory Impairment Centre. The local society for the blind provides social work and rehabilitation on behalf of Fife Council, as well as a range of charitable services. Low Vision clinics are held in the centre, with input from ophthalmologists and ophthalmic nurses. Local optometrists are involved in a community optometry network. The study has measured both developments in established services and in new initiatives to improve links with primary care and to improve the quality of information for patients. Fife is the first pilot area to be evaluated. The preliminary results are promising, but they are still subject to more detailed evaluation and discussion with the participants. There appears to be evidence of the benefits of close co-operation between eyecare professionals.

Edinburgh

The Edinburgh site was selected to monitor recent changes in patient support within the Princess Alexandra Eye Pavilion. A vision support centre has been created, staffed by a social worker, a rehabilitation worker, an information officer and an income maintenance worker. All four staff are employed by the local society for the blind, which provides social work and rehabilitation on behalf of Edinburgh City Council. Heriot-Watt University has set up a research project on site, to study the impact of different forms of lighting. A community optometry network has been established. The six-month eyecare review study began on 1 March 2005.

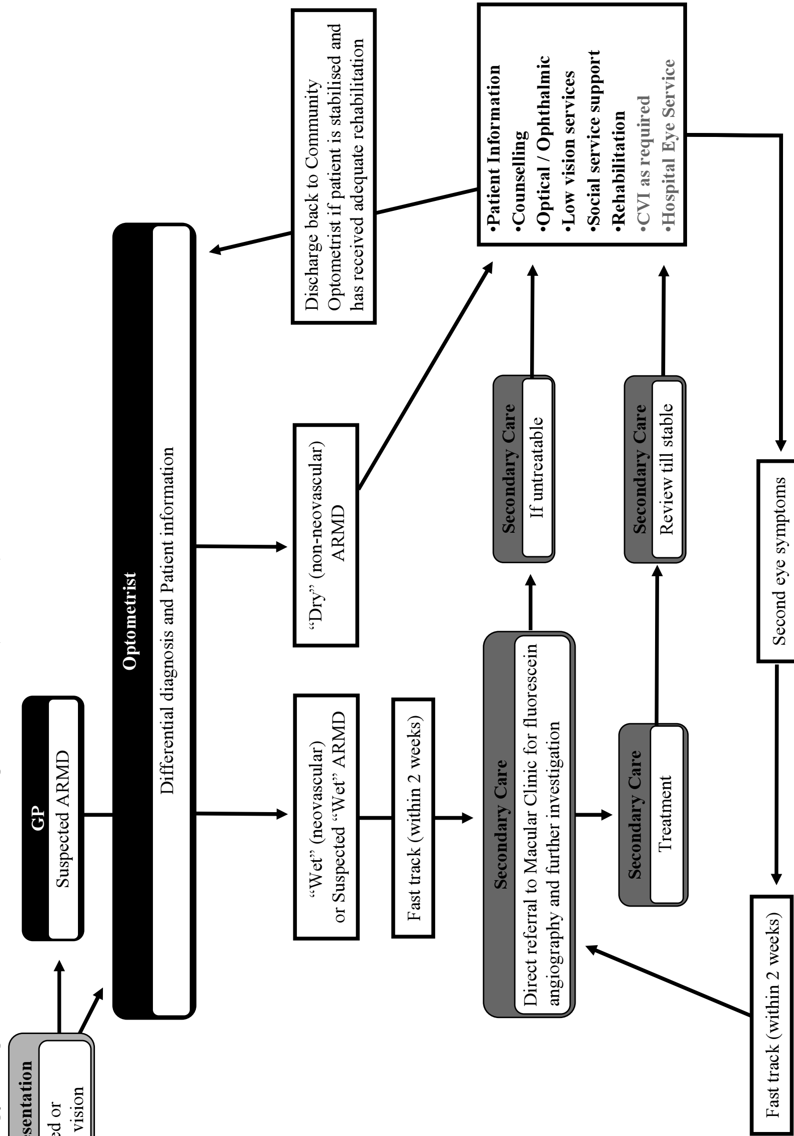
Forth Valley

The Forth Valley project is more complex than the other two. It brings together three local authorities, NHS Forth Valley and partners in the voluntary sector. The partners have been working in a consortium to build and run a new sensory impairment centre, which opened in the summer of 2005. There has been an unusually high level of patient involvement in the planning of the new centre. This will continue in the longer term, as the centre will be managed by a company limited by guarantee, with reserved places on the board for local service users. Unlike the others, there is no

local society for the blind, so social work and rehabilitation are provided directly by the three local authorities. Optometry input to the consortium will come from hospital-based optometrists. The six-month study began on 1 March 2005, and covers the periods both prior to, and after the opening of, the new sensory impairment centre.

There are innovations in practice in other parts of Scotland. The importance of the study is that it brings together the key local agencies in three diverse localities, so that the lessons learned should be applicable throughout Scotland. This is not the first attempt to improve the quality and consistency of support for blind and partially sighted people in Scotland. The failure earlier initiatives have been a source of disappointment to many visually impaired people. The inclusion of the study in a more broadly based review of eyecare services in Scotland has raised expectations that real progress can be made.

ANNEX C



Ophthalmology – Cataract Patient Pathway July 2005

Patient Presentation
Suspected Cataract

GP
Suspected Cataract

Optometrist
Eye Examination, Co-Morbidity, Standard Referral Form,
Patient Information Leaflet, Risks + Benefits, Desire for Surgery

Optometric Examination
- History & Symptoms
- Refraction & Visual Acuity & Pupils
- Slit Lamp – anterior segment Tonometry & Visual Field
- Fundus exam – dilated slit lamp biomicroscopy
- Discuss risks & benefits of surgery with patient
- Issue information leaflet to patient
- Agree desire for surgery with patient
- Refer on standardised referral form as per local protocol.

Cataract Assessment Clinic

Cataract Co-ordinator: Sets pre-operative assessment and collects audit from post operative best corrected visual acuity and refractive error.

•Pre-assessment done by nurse and others: Risk factors, Medical & Social History, biometry to assist intraocular lens calculation, other examination, patient education, transport, consent form.
•Ophthalmologist assessment.

If cataract surgery not indicated: discharge or refer as appropriate

Hospital Eye Service (HES)
Day of the surgery

Optometrist or HES
Post operative follow up (as per local protocol.
Critical incident reporting.

Listing for second eye surgery

Optometrist or HES
Discharge letter

Routine review by community optometrist

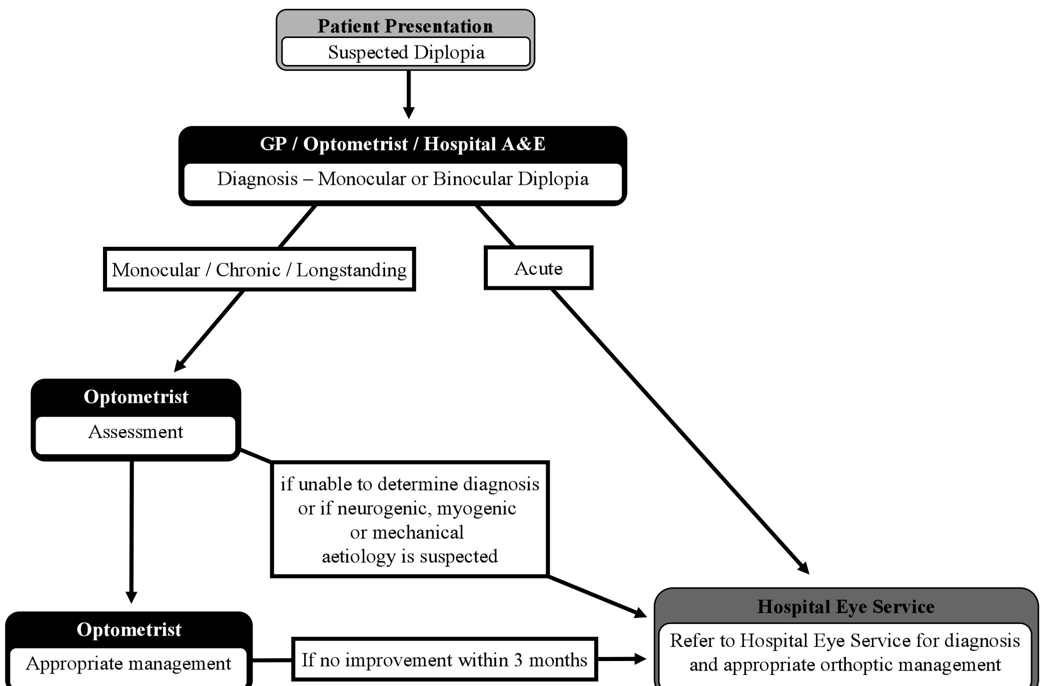
'Posterior capsule opacification (PCO) is the commonest complication of cataract surgery. It is caused by the proliferation of lens epithelial cells left behind following cataract surgery. The cells migrate behind the intraocular lens implant (IOL) to obscure the visual axis and reduce the patient's visual function similar to that experienced with the original cataract. If PCO occurs vision may be restored by a laser capsulotomy. As patients are discharged soon after cataract surgery it is essential that they are warned of the potential problem of PCO and advised to seek attention if they feel their vision deteriorates. Regular optometry review will ensure that PCO is detected and further referral to the HES may be organised as necessary'.

Useful Information for Patients
NHS24: 08454 24 24 24
www.nhs.uk
www.doctoronline.nhs.uk
www.patient.co.uk

Patient **Primary Care** **Secondary Care**

www.cci.scot.nhs.uk

Ophthalmology – Diplopia Patient Pathway June 2005



Guidance Notes

PRESENTATION:

- **Acute** or sudden onset diplopia, whether constant or intermittent, presenting within the last month.
- **Chronic** or longstanding diplopia, most likely to be intermittent and present for longer than one month.

COMMUNICATION:

- Promote open communication between Hospital Eye Service orthoptists & community optometrists.

Useful Information for Patients

NHS24: 08454 24 24 24
www.nhs.uk
www.doctoronline.nhs.uk
www.patient.co.uk

Patient **Primary Care** **Secondary Care**

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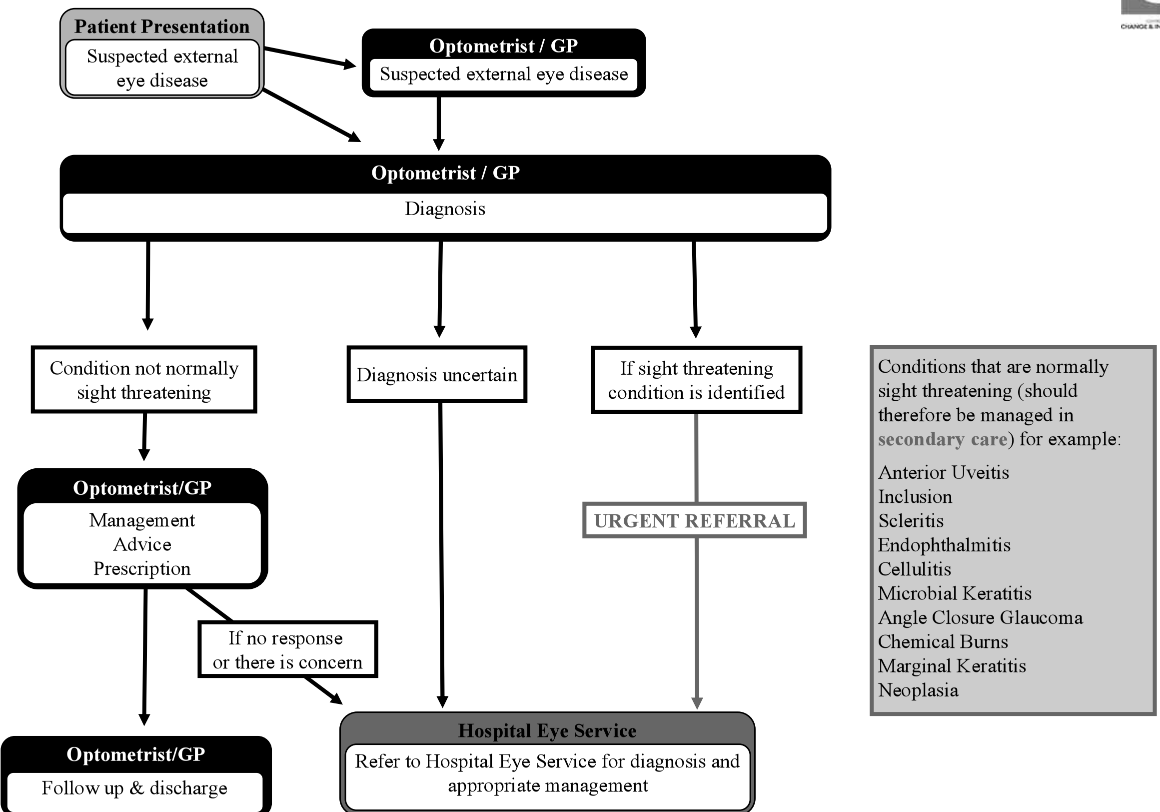
Ophthalmology – External Eye Disease Patient Pathway June 2005



Common conditions that are **not** normally sight threatening (can therefore be managed in the community) for example:

Dry Eye
Corneal Abrasion
Foreign bodies
Blepharitis
Episcleritis
Bacterial conjunctivitis
Conjunctival haemorrhage
Hordeola
Allergic, Toxic or Viral external eye conditions

Conditions that are normally sight threatening (should therefore be managed in **secondary care**) for example:

Anterior Uveitis
Inclusion
Scleritis
Endophthalmitis
Cellulitis
Microbial Keratitis
Angle Closure Glaucoma
Chemical Burns
Marginal Keratitis
Neoplasia

Useful Information for Patients

NHS24: 08454 24 24 24
www.nhs.uk
www.doctoronline.nhs.uk
www.patient.co.uk

Standard optometric examination of an eye:
History & Symptoms: Protocol
External – slit lamp - anterior eye examination
Diagnostic agents: pinhole Visual Acuity, Intra-Ocular Pressure, Dilation

Patient **Primary Care** **Secondary Care**

www.cci.scot.nhs.uk

Ophthalmology – Flashes and Floaters Patient Pathway June 2005

Patient Presentation
Presentation of flashes and floaters

GP or other Clinician
Presentation of flashes and floaters

Optometrist
History & Symptoms
Refraction
Intraocular Pressure
Visual Fields
Best corrected visual acuity
Dilated Fundus Biomicroscopy (Condensing Lens)
Head Set Indirect
Contact Lens Technique

Optometrist
Clinically significant SYMPTOMS
- Recent onset
- Increasing flashes and floaters
- Increasing dots
- Permanent symptoms
- Less than 6 weeks
- Progressive visual loss
- Visual field loss
- Veil / Cloak / Cloud

Optometrist
SYMPTOMS of less concern
- Stable flashes and floaters
- symptoms >2 months
- Good vision
- Normal subj. fields

Optometrist
POSITIVE SIGNS
- Posterior Vitreous Detachment with positive signs
- Tobacco Dust (proliferative vitreoretinophy)
- Vitreo – retinal hge.
- Pre retinal blood
- Lattice degeneration
- Retinal hole / tear
- Operculum
- Retinal detachment

Optometrist
NEGATIVE SIGNS
- Posterior Vitreous Detachment with no positive signs
- Normal vision
- Normal fields

URGENT REFERRAL

Hospital Eye Service
Refer to Vitreo Retinal Specialist

Optometrist
Ongoing Community Optometric Review as per protocol

Useful Information for Patients
NHS24: 08454 24 24 24
www.doctoronline.nhs.uk
www.patient.co.uk

Patient **Primary Care** **Secondary Care**

www.cci.scot.nhs.uk

Ophthalmology – Glaucoma Patient Pathway June 2005

Patient Presentation
Suspected glaucoma

Community Optometrist / GP
Suspected Glaucoma

Glaucoma Practitioner: Optometrist / Orthoptist / Nurse led Glaucoma Clinic

Perform full glaucoma assessment:

Visual Acuity | **Intra-Ocular Pressure** | **A/C Depth (S/L)** | **Disc assessment** | **History** | **Screening Visual Field x2**

ON + IOP + Field + → **Primary Open-Angle Glaucoma** → Treat → Secondary Care

ON - IOP + Field + → **Primary Open-Angle Glaucoma** → Treat → Secondary Care

ON + IOP - Field + → **Normal Tension Glaucoma** → Secondary Care

ON - IOP+ Field - → **Ocular Hypertension**

ON + IOP + Field - → **Ocular Hypertension**

Ocular Hypertension → If IOP >30, treat → Secondary Care

Ocular Hypertension → If IOP <30 → Repeat field/ IOP in 6 months

Secondary Care
Shared care protocol with Hospital Eye Service

ON - IOP - Field + → Reliable field → Secondary Care

ON - IOP - Field + → Low reliability → Optometrist

ON + IOP - Field - → If Concern → Secondary Care

ON + IOP - Field - → Confident with diagnosis → Optometrist

ON - IOP - Field - → Optometrist

Secondary Care
Refer to Hospital Eye Service

Optometrist
Refer to Community Optometrist

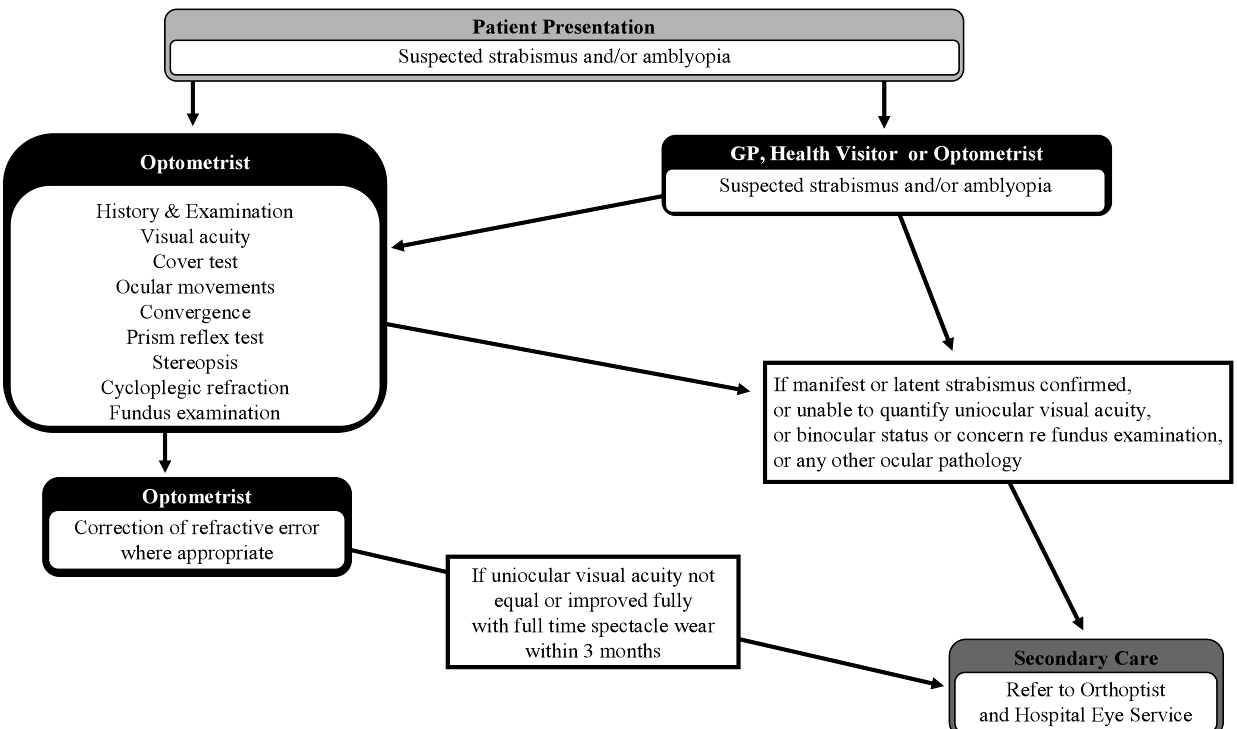
Useful Information for Patients
NHS24: 08454 24 24 24
www.nhs.uk
www.doctoronline.nhs.uk
www.patient.co.uk

Patient | **Primary Care** | **Secondary Care**

www.cci.scot.nhs.uk

ON: optic nerve
IOP: Intra-Ocular Pressure

Ophthalmology – Strabismus and/or Amblyopia Patient Pathway June 2005



Screening at 4-5 years of age by Orthoptists (Hall) National Protocols

GUIDANCE NOTES

1. It is recommended that an optometrist undertaking examination and treatment of children should have appropriate training. All participants should work to agreed local protocols.
2. In order to improve communication between practitioners, it is recommended that a three-part form be developed locally. One copy to be returned to GP, or the referrer, one to be retained by optometrist, and one to be sent to orthoptic service to allow tracking of these children pre and post four and a half year screening.
3. Referral for definite strabismus requires early assessment to exclude rare possibility of underlying retinoblastoma.

Useful Information for Patients

NHS24: 08454 24 24 24
www.nhs.uk
www.doctoronline.nhs.uk
www.patient.co.uk

Patient **Primary Care** **Secondary Care** **www.cci.scot.nhs.uk**

ANNEX D

Shared and Delegated Care Schemes

The Glasgow Integrated Eyecare Service

Background

The Glasgow NHS Board established the Glasgow Integrated Eyecare Service (GIES) in January 2002, providing a wide-ranging scheme for the management of many eye conditions by community optometrists.

This followed concern among GPs about the long waiting times for ophthalmology out patient appointments. Most GPs do not have the necessary equipment to examine eyes comprehensively, but it was recognised that optometrists do. In addition, optometrists have the appropriate training to make a more accurate diagnosis in most cases.

GIES allows GPs to refer eye problems to an accredited optometrist for management, treatment and ongoing referral to the secondary sector as appropriate. All local optometrists were invited to join the scheme and a number underwent a period of training and accreditation before being placed on the scheme. The accreditation process included a mixture of lectures, clinical workshops and sessions with the ophthalmologists in hospital clinics. All practices were visited and audited to ensure the necessary apparatus was available. All participating optometrists attend monthly CPD peer review sessions, six-monthly training days and ongoing attendance at the ophthalmology outpatient departments.

Results

The results to date have been very encouraging and the scheme has been adopted in several other areas of the UK as far apart as Devon and the Highlands.

The Glasgow NHS Board has audited various aspects of the scheme several times and published findings include:

- 77% of patients are retained and managed safely in primary care
- All referrals to GIES are seen within two weeks, 90% within four days
- There has been an 80% reduction in topical antibiotic prescribing
- The introduction of effective direct referral
- A significant reduction of inappropriate referrals to hospital out-patient eye clinics.

- That all referrals to the secondary sector were considered appropriate by the receiving ophthalmologist.
- That GIES has provided prompt, precise differential diagnosis for patients
- Reduced waiting times for many patients to a competent eye health professional
- The delivery of a high quality community eyecare service
- A high patient and professional satisfaction rating has been reported

Patient Satisfaction Survey (May 2004)

GIES has been well received by patients, and of those who quantified the level of service (99%):

- 77% said that the service was excellent
- 19% said it was good
- 4% said it was average
- less than 0.5% said the service was below average or poor (1 respondee)

This is consistent with the 2003 patient satisfaction response, which produced a corresponding percentage split of 76:22:2:0 split against the above categories and maintains the high patient satisfaction with the service.

Information:

- 98% said they stated that the optometrist had given them sufficiently understandable information about their eye/ condition (92% in 2003)

Access:

Of those who quantified quality of access:

- 99.3% of patients thought they had been seen quickly enough
- 97% found it easy to get to the optometrists' premises
- 79% were given a list of different optometrist by their GP

This represents a consistent level of satisfaction from patients, suggesting that a high level of care is being maintained and that patients are generally satisfied with the service overall and that there is added value in a local, convenient service delivered in optometric premises.

General Practitioner Survey (2003)

The local GPs using the service were asked their opinion and the following results were recorded:

- 92% stated they found the service easy to use
- 92% stated that the patient report was received in a reasonable time
- 100% stated that patients were seen within a reasonable time (all patients seen within a week)
- 100% stated that sufficient detail was contained in the report from the GIES optometrist
- 100% were happy with the care their patient received
- 100% would use the scheme again

Ophthalmology Audit

The lead ophthalmologist at the Southern General Hospital, Glasgow was invited to review a random sample of anonymised GIES patient records and reports. He was asked to comment on the clinical performance of the GIES optometrists and the quality of care provided. He was asked to comment on the diagnosis, the appropriateness of the treatment/management, the appropriateness of referral and to provide an overall concurrence rate. The results from the 104 randomly sampled records were as were as follows:

A. Do you agree with the diagnosis?

Yes	94
No	1
N/A	9

B. Do you agree with the management/treatment provided for this patient?

Yes	98
No	2
N/A	4

C. Should this patient have been referred to the Hospital Eye Service?

Yes	3
No	101

(Subsequent analysis proved that the three patients were actually referred)

D. Overall, on a scale of 1-5 (5 excellent, 4 very good, 3 good, 2 average, 1 poor) how would you rate the management/treatment of this patient?

1	0
2	0
3	4
4	31
5	68
N/A	1

Overall Professional Experience

The view of professional staff at the South Glasgow Acute Division is that the GIES scheme is a positive service development, which has provided improvements in service for patients and other stakeholders in the service.

The GIES project has taken a large number of patients who would have otherwise been referred to the hospital outpatient department and assessed, treated and discharged, or referred on again as appropriate to each individual. Approximately 77% of the patients do not require to be referred on to outpatients. The referrals received at hospital are more appropriate, relevant and presented in a way to assist the determination of patient priorities. Referrals received from GIES provide relevant ophthalmic facts, which are objective and evidence based. This removes subjectivity and emotion from the referral process and allows hospital clinicians to make a more rapid and accurate decision.

The provision of supporting clinical information and outcomes of clinical investigations such as visual field tests also speeds up the decision-making process – much of which can be carried out at the first visit.

There are fewer concerns raised by primary care colleagues regarding delays in seeing patients and GPs now have an effective alternative to hospital referral. This means that patients are seen earlier and can receive treatment more readily. Additionally, there is a reduced risk of inappropriate interventions occurring in the primary care setting.

Overall, the GIES has led to an improvement in the working relationship between primary and secondary care. Optometrists are using effective intervention with patients and referring appropriate patients to Secondary Care services.

Next Steps

The next phase of GIES will:

- Consider methods for tackling the large ophthalmology waiting lists in Glasgow
- Develop protocols for managing patients with chronic eye disease, for example by discharging stable glaucoma and age-related macular degeneration patients into the community for ongoing monitoring by GIES optometrists
- The NHS Board is also considering how to utilise the GIES optometrists within a fast track cataract scheme
- All participating GIES optometrists have been given a NHS net email address to help develop an electronic patient management and referral network

CATARACT SCHEMES

There are a number of cataract referral schemes across the country with slightly differing protocols utilising direct referral from optometrists.

Ayrshire and Arran – One-Stop Cataract Service

This novel cataract scheme was set up several years ago to reduce the waiting times for patients requiring uncomplicated cataract surgery.

Local optometrists were invited to participate in the scheme that allows for direct referral of patients with cataract to a hospital where they will be able to book patients in for surgery on a specified date if there is no complication or co-morbidity. If there is another condition present or the potential for complications, the patient is referred to an out patient clinic for further assessment.

The accredited optometrists carry out a detailed examination of a prospective patient to exclude other ocular morbidity working to a specific protocol for referral. This includes dilated slit lamp biomicroscopy, a detailed retinal examination, IOP measurement, refraction and a report. The optometrist also reviews the patients post operatively and has final discharge responsibility.

All referrals for surgery made by optometrists to date has been considered appropriate, accepted by the consultant surgeon and received their surgery as planned.

[Ayrshire and Arran NHS Board. Fast Track Cataract Service. 2000]

Lothian Cataract Initiative (LOCI)

Prior to the introduction LOCI scheme some 33% of all referrals to hospital for cataract surgery decided, or were advised, not to go ahead. Often the risk of surgery was the pivot upon which marginal cases declined to go ahead. This was a wasteful method of sifting the referrals. A smaller number had other eye disease accounting for the reduced VA.

All practices in Lothian were invited to participate in a community based triage system for these patients and eventually 12 practices in Edinburgh went through a 6 session training scheme and this list of accredited optometrists was circulated to all GPs and Optometrists in Edinburgh and the Lothians.

The essentials of the LOCI scheme are as follows:

- The examination includes assessment of cataract type, whether this is the only reason for reduced vision and whether this is affecting the patient's daily function. Discussion includes an explanation of the risks and complications.
- Initial findings show the numbers who now pass to the hospital and do not go ahead with the operation has dropped from 33% to 2%, demonstrating a dramatic reduction in inappropriate referrals, and a similar reduction in wasted clinical time at hospital.

[Lothian NHS Board. Lothian Cataract Initiative. 2001]

GLAUCOMA SHARED CARE

Grampian Glaucoma Referral Refinement and Monitoring Scheme

This delegated care scheme was developed from the Manchester model.

In this scheme all patients suspected of having glaucoma are referred via a co-ordinator to an accredited optometrist for further assessment and confirmation, diagnosis or discharge.

The accredited optometrists are based in the community and work within an agreed set of criteria. The examination involves applanation tonometry, corneal pachymetry, optic disc examination by slit lamp biomicroscopy and supra threshold visual field testing – repeating procedures as necessary to confirm findings.

Patients are then categorised as normal and discharged, as ocular hypertensive or confirmed cases of glaucoma.

The accredited optometrist in accordance with the protocol for all confirmed cases and some ocular hypertensives commences treatment. The confirmed cases of glaucoma are referred on to the OPD to be assessed by the consultant ophthalmologist.

The ocular hypertensive cases are retained and managed in the community by the optometrist.

A total of 900 patients will enter the scheme in the first year, a random sample will be asked to attend the ophthalmology clinic as part of the quality assurance.

It is expected that this scheme will have appositive impact on the patient journey, improve quality of care for many people and reduce the number of inappropriate referrals to eye clinics.

[Azuaro-Blanco A, MacKenzie F, McPherson S, Burr J. Glaucoma referral refinement and monitoring scheme. Poster March 2004]

ANNEX E

Issues for Blind and Partially-Sighted Children

As part of the Eyecare Review a group has met to begin to map out the issues for blind and partially-sighted children and their families. There are a wide range of issues to be covered, and although there are some examples of excellence, there is no consistency in the range and quality of support offered to children and their families:

- The nature of sight loss in children: most children who are born blind, or who lose their sight in the first year of life do so because of damage to the brain or to the optic nerve. By contrast, almost all sight loss among adults is associated with ocular problems. There is a high level of multiple disability among blind children.

- The registration system is particularly inappropriate for visually impaired children. Some parents resist the label "blind", and can become isolated and cut off from support networks. This makes it difficult for them to contribute to or influence the nature of support services.

- Because of the relatively low incidence of childhood blindness, support networks are often sparse. Parents complain of poor information and ill-trained staff.

- The social isolation of blind children can lead to serious problems in adolescence and young adulthood.

However, there are examples of good practice. The outstanding example in Scotland is the CVISTA scheme in Tayside. A Consultant Paediatrician was given funding to map out the support networks for blind children and their families, initially in Dundee, but with the intention of extending to cover Tayside. The starting point was to identify all of the professionals a family might encounter in health, social work and education. The list ran to 30 in some cases. The Consultant then established that there was a low level of mutual understanding between agencies, so parents were not receiving accurate information about the range of help available. The agencies were brought together and have begun to make some practical decisions about rationalising support to families. For example, the local society for the blind, which holds the register of blind and partially sighted people in Dundee, has agreed not to automatically contact families on registration. Support for the families starts in hospital and the Consultant acts as a coordinator, referring the family to the most appropriate source of assistance. The scheme has

improved the quality of the support network by ensuring that parents are well informed and can influence the shape of services. The network is now more sensitive to issues like ethnic diversity.

The way ahead. The implementation of the Additional Support for Learning Act should underpin the holistic approach taken in Dundee, although there are some concerns about the detail of the legislation.

There are some clear differences about the nature of childhood blindness. Some of the issues, such as better information and more effective coordination of services, are common to all ages, but there are enough differences to justify a distinctive approach. The working group on childrens' services is some way behind the main review, but the aim is to produce a document that sets out the problems and suggests some solutions within the same timescale.

ANNEX F

Epidemiology of Common Eye Disease

Glaucoma

Chronic glaucoma is a potentially blinding disorder requiring lifelong care once the diagnosis is made. The prevalence of glaucoma rises from 1-2% of the over 40s, to 5% of the over 75s. It is expected that the prevalence of glaucoma will increase by 40% by 2020.

Glaucoma affects approximately 1-2.5% within the white Caucasian population in Scotland; something in the region of 80,000 people living with this lifelong, sight threatening condition. The incidence within African Caribbean groups is significantly higher. The prevalence of ocular hypertension is around 5% of the over 50 age group.

At present glaucoma care accounts for approximately 30-40% of all outpatient visits in ophthalmology departments. Some 15-20% of new referrals are glaucoma related. Of this group 33% are confirmed of having the disease, 33% are considered suspicious and require further follow up and 33% are found to be negative. Therefore 66% could be described as inappropriate referrals and these patients could be effectively managed in the community.

Transferring the management of chronic glaucoma to the community would free up a substantial number of valuable out patient visits.

The triage/filtering of glaucoma referrals and the transfer of stable glaucoma patients to the community for ongoing management is one of the areas being considered by the CCI Eyecare Pathway working group.

Cataract

Cataract is a common ocular condition and affects the vast majority of people with age. Approximately 80% of people over the age of 65 will have some form of visual disturbance due to cataract.

Cataract is usually managed in the early stage of the condition by community optometrists observing the development of the condition and offering counselling and advice to patients. Often early cataract will result in significant changes in refractive error and appropriate advice and alterations to spectacle prescription will suffice at this stage. Ultimately most

patients are referred for cataract surgery and modern surgical techniques have a remarkably high success rate.

Approximately 3.2% of the population over 65 years of age would benefit from cataract surgery at any one time – some 26,016 people in Scotland. It is estimated that the demand for cataract surgery will increase by 70-80% by 2020.

Studies have indicated that approximately 80% of people with cataract are not in contact with an eyecare practitioner and often suffering the consequences of visual impairment unnecessarily.

AMD/ARMD

Age-related macular degeneration is a common finding particularly in older people and is the most common cause of irremediable serious visual loss in people over 65 years of age. Macular degeneration also accounts for 14% of new partial sight and blind registrations for the working population (aged 16-64).

In 2002 813,000 people were over 65 in Scotland; approximately 400,000 had some form of visual impairment in one eye, 20% of who have visual impairment in both eyes. ARMD is the commonest cause of permanent visual loss in people over 65. The condition has resulted in visual impairment to approximately 90,000 Scots this year.

It is expected that the incidence of ARMD will increase by 40-50% by the year 2020.

ARMD is the leading cause of blind and partial sighted registration in people over 65 – approximately 50% due to ARMD. In addition RNIB estimates suggest that under certification is as high as 64% for blind and 74% for partial sighted registration.

Diabetes

Diabetes affects over 3% of the population in Scotland there are approximately 190,000 people living with the disease, and this number is increasing (Diabetes UK). Estimates suggest that some 40% of diabetics remain undiagnosed at any one time.

Approximately 6% of diabetics have sight threatening eye disease. Diabetes is the commonest cause of visual impairment in people of working

age. In addition maculopathy is more common within the diabetic population and cataract tends to present approximately ten years earlier in patients with diabetes.

It is expected that the incidence of diabetes will increase by about 300% by the year 2020.

Vision and Falls

There is a growing body of evidence indicating a correlation between visual impairment and falls. NICE have recently produced advice and guidance relating to falls in older people and have established the link of impaired vision and falls. The NICE advice indicates that an assessment of visual function should be an integral component within the multifactorial assessment programme for someone who has fallen or it at risk of falling. Most of the studies thus far seem to have limited their concern to loss of central vision; more work needs to be done on loss of peripheral vision and the consequent risk of falls.

The association between falls and poor vision exposes just one of the hidden costs of visual impairment.

A RNIB study estimated that £25m spent on rehabilitation and mobility training for older blind and partially sighted people would save £220m in the social and healthcare costs of falls.

ANNEX G

Workforce

Ophthalmic Nurses

In 1988 the Ophthalmic Nursing Board was disbanded and with it the qualification of Ophthalmic Nursing Diploma or Ophthalmic Nursing Certificate. Various courses have attempted to match the old qualification, which ensured that nurses could work in any department within ophthalmology with appropriate competencies but none, so far have been able to provide the learner with all that he/she needs to practice ophthalmic nursing.

In England, Schools of Nursing within universities have amalgamated with various Departments of Ophthalmology and provide appropriate learning environments and support to gain an ophthalmic qualification but Scotland has been slow to follow. Currently there is a short course in Ophthalmic Nursing run by Robert Gordons University's Virtual Campus. However the course has no practical element in it and has been set up to provide insights to learning as opposed to ophthalmology. A short course at Queen Margaret University College is underway, involving one study day per week for a six-month period. Any more substantial ophthalmic training undertaken by a nurse requires a move south of the border.

Despite this, within Departments of Ophthalmology, nurse specialists are utilised to run clinics in primary care, ocular hypertension and glaucoma. There are also many nurse led activities without which many departments could not function e.g. nurse led minor surgery service, nurse-led pre-admission assessment, and nurse led casualty service. Numbers of patient episodes are not recorded.

This has been possible because ophthalmologists in individual departments have provided the appropriate training and education for nurses to obtain the required competencies and thus extend their role, usually for protocol driven tasks.

Orthoptists

Orthoptists are Allied Health professionals primarily working within the NHS. Although most orthoptists are employed by the acute sector their clinical services span both primary and acute care.

The orthoptist's role is to assess, diagnose and manage all binocular vision defects and disorders of eye movements, this includes childhood strabismus (squint) and amblyopia (reduced visual acuity), but also a broad spectrum of acquired adult eye conditions resulting from health problems such as thyroid dysfunction, neurological disease, trauma, stroke, multiple sclerosis and diabetes.

Due to the broad nature of orthoptists' education in vision sciences new graduates now have the skills to do visual field assessment and glaucoma shared care, low vision aid services, stroke rehabilitation and biometry.

Vision screening is a primary care service in which orthoptists have been involved since 1976. The recent document "Health for all Children" by Professor David Hall has recognised orthoptists' expertise in vision screening and has recommended that all children in Scotland, should be screened by orthoptists at age 4 years for vision defects.

Rehabilitation Workers

There are currently sixty rehabilitation workers employed in Scotland. The standard qualification for rehabilitation workers is the Certificate in Education in Rehabilitation Studies. The three main tasks of the rehabilitation are: independent living, communication skills and orientation and mobility. Most are employed by local authority social work departments or by voluntary organisations which work under contract to them. The role and training of rehabilitation workers is currently under review. The aim is to transfer the only training course in Scotland from the Guide Dogs School of Rehabilitation to a university campus.

Social Workers

Some social workers specialise in the area of blindness and partial sight. They have a similar role to their colleagues in local authority community care teams: assessing individual need and arranging, purchasing or commissioning services to meet that need. They are often called upon to offer emotional and practical support at the point of registration and they can have a longer-term role in supporting individuals and families. Increasingly visual impairment social workers' caseloads involve the management of complex cases, where blindness or partial sight is linked to other chronic disabilities.

Ophthalmologists

Ophthalmologists are medically qualified doctors who have specialised in the management of diseases of the eye and disorders of vision, and practice ophthalmic surgery. In general ophthalmologists work in hospital practice with the support of nursing staff, orthoptists and optometrists.

Optometrists

Optometrists are eyecare professionals who are trained to detect and correct refractive errors, to carry out comprehensive eye examinations, screen for eye disorders and to prescribe treatment and/or manage a wide range of common eye conditions. Optometrists work in both the community and hospital settings. Optometrists examine and screen for eye disorders in people of all ages, from pre-school screening to managing age-related conditions such as glaucoma, cataract and macular degeneration.

Increasingly optometrists are involved in multi-disciplinary co-managed schemes for cataract, glaucoma, ocular hypertension, and diabetes. These are set up between primary and secondary care, to provide convenient and rapid access to care for many patients. These improve the quality of care for many people, with the added benefit of reduced waiting list times. Further details on some of these schemes are included in Annex D.

Specialist areas of optometric practice are; low vision management, dyslexia investigation, contact lens work, dry eye management, red eye management, managing patients with specific learning difficulty and examinations for those with learning disability, pre- and post-operative ocular examinations and triaging eye conditions in the community.

Optometrists will soon be granted supplementary and independent prescribing rights that will assist with the management of external eye disease and chronic eye conditions such as glaucoma.

ANNEX H

Community Optometry Model for the Future

Two levels of community-based care are proposed depending on the nature of involvement, clinical competency, training, and patient management. Initial assessment may lead to treatment there and then, or may enable the patient to be treated by other specialties and follow the relevant care pathways.

There are principles that would be common to any optometry based service such as:

- Wide and easy access for most patients (optometry practices are near to where people live)
- Delivery in community optometric practices or other appropriate setting, e.g. residential home, personal home
- Flexible and convenient appointment systems
- Rapid access to an eyecare professional - within one week for most patients
- Flexible capacity for repeat procedures as required
- Accurate and effective differential diagnosis in a community setting
- Communication of findings to the patient with the opportunity to advise and counsel as required
- Effective channels of communication between all stakeholders GPs, hospital ophthalmology and social care – preferably by NHS Net
- Direct, prioritised referral to the acute/secondary sector by optometrists as required

Level 1

This would extend what happens within current General Ophthalmic Services, would be available across Scotland and forms the basis of the New NHS Eye Examination, of which the key components are:

- An eye health check
- External examination of the eyes by slit lamp biomicroscopy
- Internal examination with slit-lamp biomicroscopy (with dilation and condensing lens where necessary)
- Assessment of pupil reflexes and extra ocular motor function
- Supplementary tests as required to ensure an accurate diagnosis (repeat/additional procedures)
- Diagnosis and treatment of commonly occurring eye conditions up to referral to level 2 management or a care pathway

- Measuring intra-ocular pressure when clinically necessary by applanation tonometry
- Automated perimetry when clinically necessary
- Refraction and muscle balance tests
- Prescribing of optical aids
- Direct referral for ophthalmological or orthoptic assessment
- Maintenance of appropriate clinical records including a full data set of findings

This level of initial assessment would identify the general nature of an eye condition; it's probable aetiology and describes the appropriate patient journey. It would also help reduce inappropriate referrals to the acute sector and provide a facility to prioritise those that need to be referred to hospital.

Level 2

This would involve some additional training and would be delivered in the community, in audited practices by accredited optometrists. This is a similar service to the GIES system currently operating in south Glasgow and the HIES system in Highland.

This could include the following **key components**:

- The capacity for the primary management and treatment of many common eye conditions by Optometrists within their scope of practice
- The safe management of a wide range of **<u>external/anterior</u>** eye conditions
- The co-management of chronic eye disease such as glaucoma, cataract, diabetes, macular degeneration, and dry eye disease.
- The development of community Low Vision networks
- Accurate and effective diagnosis and ongoing treatment of children with strabismus
- Option as an entry point for access into Eyecare pathways

This level of initial assessment will provide a more sophisticated analysis of the condition. It will provide more detailed understanding of the condition that will allow treatment, management and counselling within primary care, and ensure appropriate prioritised referral for those that need to be sent onto an Ophthalmology department.

This would provide an improvement in eyecare delivery for a large number of patients with moderate additional training/ accreditation for most Optometrists.

ANNEX I

Membership

Dr Gareth Davies, Medical Director, NHS Forth Valley Primary Care Operating Division (Chair)

Mike Cairns, SWSI/RNIB

Donald Cameron, Optometry Scotland

Irene Fleming, Scottish Branch Chair, British and Irish Orthoptic Society

Eva Frigola, Centre for Change and Innovation, SEHD

John Heaton, Patient Representative

Dr Jeffrey Jay, Consultant Ophthalmologist

Fiona MacKenzie, Joint Ophthalmology Services Manager, Grampian

Charles Mackinnon, Optometry Scotland

Kath McCormac, Forth Valley NHS Board

Alison McNeillage, Dental and Ophthalmic Branch, SEHD

Lynne Morrison, Dental and Ophthalmic Branch, SEHD

Frank Munro, Optometry Scotland

Hal Rollason, Optometry Scotland

Dr Stuart Roxburgh, Consultant Ophthalmologist

Dr Helen Seward, Consultant Ophthalmologist

Steve Whittaker, Optometric Adviser, SEHD

Dr Hamish Wilson, Head of Primary Care Division, SEHD

ANNEX J

Glossary

AHP	Allied Healthcare Professional
AMD	Age related macular degeneration
BIOS	British and Irish Orthoptic Society
CCI	Centre for Change and Innovation
CHP	Community Health Partnership
DoH	Department of Health
EWTD	European Working Time Directive
GIES	lasgow Integrated Eye Service
GOC	General Optical Council
GOS	General Ophthalmic Services
GP	General Practitioner
HTBS	Health Technology Board for Scotland
LOCI	Lothian Optometry Cataract Initiative
MHRA	Medicines and Healthcare Products Regulatory Agency
OMP	Ophthalmic Medical Practitioner
PEARS	Primary Eyecare Acute Referral Service
QIS	Quality Improvement Scotland
RNIB	Royal National Institute for the Blind
SEHD	Scottish Executive Health Department
SWSI	Social Work Services Inspectorate
WECI	Welsh Eyecare Initiative
WTE	Whole time equivalent

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