

Liberating the NHS: Eye Care

Making a Reality of Equity and Excellence



Professor Nick Bosanquet

December 2010

**Imperial College
London**

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Executive Summary

Introduction

This report demonstrates how community optometry has been at the forefront of delivering high quality, patient centred and cost effective healthcare in accessible community settings over the past twenty years; and how it can do much more in delivering the Coalition Government's objectives for more care, better outcomes, and better quality within increasingly restricted resources.

Being a market-driven system, optometry works in partnership with the NHS rather than under its control. As a result the optical sector has expanded significantly in the past twenty years to deliver clinical quality, access, choice and high quality health care to all, in every high-street and community across the UK. Uniquely within the NHS, private and NHS patients both enjoy the same standards of care. They both have the same value to a practice, market entry is open (subject to quality standards) and practices and professionals compete to provide the highest quality service to all comers.

In this NHS market, patients can and do 'vote with their feet' and money genuinely follows the patient. Practices that fail to deliver are not protected, supported by NHS recovery plans or any other form of state-funded support. They simply cease to trade and others, who can deliver the service, enter the market to meet consumers' needs in their place.

NHS Contract

The Coalition Government is to be applauded for keeping a national, market-driven eye testing service outside local bureaucratic arrangements. The challenge now for the new Public Health Service is to encourage regular sight tests, particularly working age adults who fund their own care, to help to prevent longer term visual impairment, blindness and burdens on the public purse.

Since 2008, the commissioning system for NHS general ophthalmic services in the community has become bureaucratic and unwieldy and PCT processes have added significant bureaucratic burdens with no demonstrable gain for patients or the public. An opportunity now exists to sweep away much of this bureaucracy and to return to the more efficient status quo before 2008. There is also an opportunity to centralise payments and streamline costs in the Business Services Authority, rather than have upwards of 80 payments agencies, as part of the Arms Length Body Review and to introduce electronic claims and payments in place of the current paper/postage-based systems.

Avoidable Blindness

Visual impairment and blindness are increasing in the UK because of the ageing population. However the UK Vision Strategy, Royal National Institute of Blind People (RNIB) and other visual impairment charities estimate that around 50 per cent of this reduced vision is preventable through regular sight testing.

At the same time new technologies, e.g. for age-related macular degeneration (AMD), have transformed the services and interventions which hospitals can provide - now preserving sight where blindness was once inevitable.

As a result conditions such as diabetic retinopathy, cataract and wet AMD that in the past have raised the spectre of blindness, are now largely treatable when detected early.

The challenge is how to bring these services to the expanding populations who need them at acceptable cost.

Pressure on NHS

The NHS is a workforce dependent institution. Inevitably the supply of qualified doctors – and hence hospital ophthalmologists and other staff – is constrained and ophthalmology has had to fight over the years for a relatively small share of the available NHS workforce.

Even on best predictions, over the next twenty years the ophthalmology workforce is going to remain limited, whilst at the same time taking on ever-increasing possibilities for treatment, plus the burdens of medical and other training, and the requirements of working hours legislation.

The evidence produced by the Royal College of Ophthalmologists and in this report clearly demonstrates that, whilst demand is set to increase, much of the current workload consists of repeat outpatient appointments for routine check-ups.

Fortunately, both for the hospital sector and the nation, much of this work can now be carried out in the community optometric sector. Most optometrists are skilled to perform routine monitoring (which many patients prefer because they see the same person who is familiar with their condition at each visit) whilst optometrists and opticians with additional qualifications, skills, experience and accreditation (supported by clinical governance) can provide more specialist care. This includes an increasing number of optometrists who are now qualifying as independent prescribers of medicines.

The community optometric workforce has never been, and is not now, subject to the limitations or exigencies of state funding or central planning. It is a market-driven system and the optical departments of universities, College of Optometrists and Association of British Dispensing Opticians can adjust both intake and throughput to respond flexibly and over relatively short timescales to the needs of the sector. If the work is there, the workforce can respond in a flexible and cost-effective way.

Way Forward

This paper proposes that community eye care is a model service which already exemplifies the ambitions of the White Paper *Equity and Excellence - Liberating the NHS*. But it can also do much more to relieve pressure on other NHS services, save money and prevent more downstream expenditure by blindness prevention.

We congratulate the Government on its plans to preserve a national sight testing service available to the whole population (on a fee paying basis but with free NHS care for those on benefits and with particular health needs).

We urge the NHS Commissioning Board to commend to GP commissioning consortia the early adoption of the LOC Support Unit Glaucoma Referral Refinement and Ocular Hypertension Monitoring Pathways (which have been hailed as ‘flawless’ by NICE, and have been endorsed by the Joint Committee of the Royal College of Ophthalmologists and the College of Optometrists).

A number of PCTs have already commissioned these or similar pathways under the Quality Innovation Productivity and Prevention (QIPP) agenda and have realised immediate cost savings following implementation (for example the Manchester scheme detailed in Annex 4).

We also call for the rapid confirmation by NICE of national quality standards/pathways for:

- stable glaucoma management in the community;
- primary eyecare assessment and referral services in the community;
- cataract direct referral and post-operative management in the community;
- low vision services in the community;
- stable diabetic retinopathy management in the community.

Universal availability of these services would have the scope significantly to reduce pressure on hospital eye services, accident and emergency departments and GP services.

These quality standards/pathways can easily be constructed from the successful LOC Support Unit and other local pathways which are already in operation, or by further development working with other interested stakeholders. It would be a simple task for NICE or the Royal Colleges to endorse them on behalf of the NHS Commissioning Board.

Unlike sight testing, these enhanced services would need to be commissioned by GP consortia as part of a continuum with the hospital service. However, just as for sight testing, the country can neither afford nor needs 150 or 300 different pathways. Patient needs and treatment modalities are broadly the same and the operation of varying pathways in adjoining populations simply complicates the picture and increases the potential risk (albeit low) within the system.

The NHS Commissioning Board should therefore:

- commend early adoption of the NICE pathways/quality standards to GP commissioning consortia;
- advise them to consider implementation as soon as possible to reduce pressure within the system, increase the amount of optical health care provided locally and reduce overall costs.

This report is submitted by the Optical Confederation and Imperial College as part of their response to the White Paper *Equity and Excellence - Liberating the NHS* and as a formal submission to the Comprehensive Spending Review 2010.

The Optical Confederation also stands ready to work on this agenda with the College of Optometrists, the Royal College of Ophthalmologists, the Royal College of General Practitioners and Imperial College and to assist in any other way they can.

This is an opportunity for more and better care at less cost – in the public interest, it should be seized.

Professor Nick Bosanquet
Imperial College
December 2010



Section One

Improving Healthcare Outcomes – better eye health, less blindness, less public expense

Challenge of Visual Impairment Today

Along with cancer, heart disease and dementia, visual impairment is one of the major health challenges facing the NHS (see Annex 1 for details).

The Royal College of Ophthalmologists (RCOphth) estimate that in England and Wales, around 4.3 million people aged 65 and over already have impaired vision (<6/12) in one or both eyes. Of these, 2.4 million have impaired vision in both eyes (RCOphth 2002).

A report by Access Economics for RNIB (2009) projected an increase in the numbers in this latter group (i.e. with impaired vision in both eyes) to nearly 4 million people by 2050 - approximately 5.2 per cent of the total projected population (Access Economics 2009).

Individuals can lose their sight for many reasons. Tackling visual impairment means understanding and addressing the key causal conditions: glaucoma, cataract, refractive error, diabetic retinopathy and macular eye disease. The incidence, treatment options, and impact on the individual of all of these conditions are detailed in Annex 1.

The NHS therefore faces a major challenge to detect glaucoma, cataracts, diabetes and age-related macular degeneration (AMD) early and to ensure these conditions do not unnecessarily develop into irreversible visual impairment across the UK. There is also a need to reach out to those patients who would benefit from a correction of their refractive error, which would greatly enhance their safety and quality of life and help to reduce risks to themselves (e.g. falls – see below) and others (e.g. driving).

Three stark messages arise from the analyses of visual impairment (Annex 1):

- the burdens of eye disease, visual impairment and blindness increase exponentially with age (both for individuals and populations);
- half of this is preventable if caught early;
- health outcomes of eye disease are significantly better if detected and treated early.

Future Challenges

Ageing Population

The UK population is ageing and ageing rapidly. Over the past 25 years the proportion of the population over 65 increased from 15 per cent in 1984 to 16 per cent in 2009, an increase of 1.7 million people. The next 25 years will see an even higher proportion – 23 per cent of the population - aged over 65 by 2034, supported by a shrinking proportion of working age adults to support them (ONS 2010).

This means that the NHS will need to meet the needs of 16.4 million people aged 65 and over by 2034. (A more detailed analysis is outlined in Annex 1.)

Burden of Eye Disease

Although all age groups can be affected, the main causes of visual impairment in the UK have a higher incidence among the over 65s. As is clearly outlined in Annex 1, the prevalence of glaucoma, cataract, diabetes, and macular eye disease increases substantially and progressively with age. We can therefore expect a corresponding increase in the demand for NHS eye services. We need to start planning now to do all that we can to slow or reverse this expected rise in visual impairment.

The severity of this future challenge has been detailed by the Access Economics (2009) report (page 44), which projects the following changes by condition from 2010 to 2050:

- Numbers with AMD will almost double to 890,000 people;
- Numbers with cataract will increase 140 per cent to 600,000 people;
- Numbers with diabetic retinopathy will increase 46 per cent to 93,000 people;
- Numbers with glaucoma will double to 200,000 people;
- Numbers with uncorrected refractive error will double to 1.9 million people;
- Numbers with other eye disease will rise to nearly 300,000 cases.

Blindness

The numbers of people registered as blind or partially sighted have continued to increase. From 1982-2000 there was a 41 per cent increase in the number of registered blind people; and a 156 per cent increase in the number of people registered as partially sighted. Since then there have been further increases, although it must be borne in mind that many that meet the clinical criteria for blind and partial sight are not registered. By 2008 there were estimated to be 1.8 million people with partial sight and blindness in the UK (Access Economics 2009). Individuals with preventable blindness are still losing their sight. The NHS has failed adequately to address this problem to date. The challenge for policy-makers and the UK Governments is to slow and hopefully reverse this trend - a challenge that cannot be ignored.

Costs of visual impairment

Visual impairment carries a substantial human and financial cost. Sight loss impacts greatly on the individual and significantly affects their independence and opportunity to succeed in life. Moreover, sight loss leading to visual impairment or blindness is a major cost to the public purse, through increased dependency on the NHS, social services, benefits payments, and the impact on families.

A report by Ethical Strategies (2003) *The Costs of Blindness* estimated that the annual costs to society for those registered as blind or partially sighted in England range from £1.4 billion to £2.9 billion (at 2002 costs). By taking RNIB evidence of under-reporting of blindness and visual impairment, the same report concludes that this increases the cost estimate to between £4.1 billion and £8.8 billion annually (Ethical Strategies 2003).

RNIB estimates that half of this is avoidable through regular sight testing and early detection, implying savings of £2 billion to £4.1 billion annually.

There are substantial spill-over benefits from correcting refractive error and preventing visual impairment in the elderly such as prevention of falls and quality of life. Falls have been found to be significantly associated with a best-corrected Snellen visual acuity of less than 6/12 (Kuang et al 2008). In addition, women with AMD have impaired balance, slow visual reaction times and poor vision which in combination can result in a significantly greater risk of falls (Szabo et al 2008). Other publications have pointed to the importance of checking vision when aiming to prevent falls in the older population (Kulmala et al 2009, Patino et al 2010). Preventing falls would help to prevent injuries and reduce the significant levels of premature mortality, particularly amongst women, resulting from hip fracture, saving significant additional NHS and social care expenditure.

Access Economics found that sight loss can “shorten life, increase the risk of other conditions, restrict social participation and independence, and impair physical and mental health” (Access Economic 2009). RNIB (2010) also found that fear of sight loss is stronger than the fear of other disabilities.

Sight loss can also cause depression. Access Economics (2009) judged the relative risk of depression is 3.5 times higher for those who experience sight loss. Diagnosing and treating depression adds significantly to NHS expenditure. The same report also looks at indirect costs (namely absenteeism, productivity loss, lower employment, premature mortality, informal care costs). The report concluded that total direct payments and indirect costs to people with sight loss and their carers was £4.73 billion in 2008 (projected to rise to £5.67 billion by 2013).

These costs did not consider the impact on quality of life or years lost due to premature death. The projected total health care system costs due to partial sight and blindness in the UK is £2.22 billion in 2009, rising to £2.6 billion in 2013 (Access Economics 2009). The gains from tackling visual impairment early and preventing downstream dependency over the current Spending Review period will therefore be substantial.

Reducing blindness and visual impairment

In order to slow and reverse the rise in visual impairment, a rethink is needed about the delivery of both primary and secondary eye care in the UK. This report looks at the capacity and potential for primary and secondary eye care to rise to this challenge, while at the same time considering the most effective use of the resources likely to be available, and designing pathways that put patients and quality first. The nation needs effective eye care services that ensure a timely detection and diagnosis, while planning adequate capacity for new and increasingly specialised treatments as they become available. This report outlines a way forward, and highlights how eye care services can lead the way to equity and excellence in the NHS.



Section Two

Putting Patients and the Public First

In 1948, average life expectancy was 66 for men and 70 for women in England and Wales (OHE 2008a). Cataracts were the major cause of visual impairment and blindness at that time. Eye surgery was then in its infancy, and treatments for glaucoma, AMD and diabetic retinopathy were generally not possible. Optometrists and opticians' role was centred on meeting the post war need for vision correction and spectacles.

In the intervening years, the optical workforce has grown significantly in skills and professionalism. At the same time, the optical market has developed outside, but in partnership with, the NHS. Given the benefits of an open (but regulated) market system, and the boost of the removal of advertising restrictions in the 1980s, the optical sector and professions have undergone transformational change in customer service, choice and supply, clinical care and outcomes.

A firm foundation

Whether by wisdom, foresight or happenstance NHS funding for community eye care is structured to be portable between providers and follows the choice made by a patient. In addition the market is open to all providers who meet national quality standards. Any provider can apply for a GOS contract with the PCT in any area and the performer (optometrist) of the sight test must be registered with the General Optical Council (and also currently, although unnecessarily, on a PCT performers list).

Providers that fail to deliver exit the market and are replaced by others that meet patients' expectations. This open market ensures that there are no waiting lists for appointments, and there is sufficient structural spare capacity in the sector to respond flexibly and rapidly to changing demands. Should any local shortage of provision arise, the market has always and will continue to respond quickly to cater for additional demand. In all of these respects, the current model of primary eye care functions very effectively.

As a result primary eye care across the UK is highly competitive and very cost effective (as outlined in Annex 2) - the cost of sight testing to the public purse is about £250 million per annum for 20 million sight tests (a third of which are self-funded by working adults) – and, responding to these genuine market conditions, the optical sector has grown to provide a genuine choice for patients of when to attend, where to attend and who delivers their primary eye care, with the same level of service delivered to NHS and private patients in the same setting – an entirely equitable service.

In short, community optometric practice already embodies most of the government's principles in *Equity and Excellence: liberating the NHS*. The opportunity now exists to develop this for more health gain, less disability and less cost.

Sight Testing Service

NHS sight testing is provided under the General Ophthalmic Service (GOS) contract. This basic framework has stood the test of time and has existed largely unchanged for over 60 years whilst technology and training have changed the scope and content of a sight test beyond the dreams of health planners, opticians and patients in 1948.

The sight test has two purposes:

- to provide a prescription for glasses or contact lenses to correct sight and defective vision;
- to check the internal and external health of the eye and vision system – it is in this area that major advances have been made (e.g. visual fields screening, eye pressure measurement, imaging techniques).

The system is overseen and regulated by the General Optical Council (or the General Medical Council for ophthalmic medical practitioners). This system effectively manages and resolves patient complaints, which are few in number. Complaints to the GOC numbered 135 for optometrists and 32 for dispensing opticians in 2008/09 out of a total of almost 20 million sight tests (less than one in 115,000), evidence of the safe and effective delivery of primary eye care across the UK (GOC 2009, FODO 2010).

Support

The professions have developed an effective network of support, communication and sharing of best practice and information, which connects the national representative bodies and College of Optometrists with front-line optical practitioners. Local Optical Committees (LOCs) assist in coordinating front-line practitioners and distributing information on clinical practice in England. The same role is played by Regional Optical Committees (ROCs) in Wales and Northern Ireland and Area Optical Committees (AOCs) in Scotland. The LOC Support Unit (LOCSU) works closely with national optical bodies to assist LOCs/ROCs by providing guidance on best practice and supporting the development of enhanced local primary eye services.

Information Technology

Optical practices are increasingly computerised with internet access, which has been achieved solely on the basis of private investments, and could therefore easily adopt electronic information exchange with other parts of the health service.

Highly Skilled Workforce

There is a skilled and resourceful pool of qualified professionals currently delivering primary eye care in the UK, which increasingly has access to hospital standard equipment (see Annex 2). In 2008 there were 11,559 optometrists and 5,549 registered dispensing opticians (GOC 2009). In addition to these, there are approximately 396 ophthalmic medical practitioners (OMPs) working in the UK (FODO 2010 compiled from NHS statistics). The number of qualified optometrists has risen from 8,646 in 2000 to 11,559 in 2008, an increase of 33.7 per cent to meet the needs of the optical marketplace. In addition the number of dispensing opticians has risen from 4,488 in 2000 to 5,549 in 2010, an increase of 23.6 per cent (GOC 2005, GOC 2009).

The College of Optometrist's Clinical Practice Survey (2007) found that optometrists are already involved in a range of primary care activities that go over and above the basic sight test. Annex 2 clearly demonstrates the skills set within the optometric labour force coupled with an enthusiasm for additional personal development, specifically for managing patients with glaucoma and the medical treatment of eye disease.

Meeting the Needs of Housebound Patients

The optical marketplace has responded innovatively and effectively to meet the needs of housebound patients who require sight tests. An additional service option within the GOS contract allows patients who are unable to leave home unaccompanied because of mental or physical disability to access an NHS funded sight test. In 2008/9 over 418,000 NHS domiciliary sight tests were performed in the UK, out of an estimated 1.75 million people who could benefit from one (FODO 2010). This innovation has been market-led, in partnership with the NHS, and expands the availability of sight tests to housebound and disabled patients. Competition has driven up standards as the market has developed, with increasing use of portable high-tech testing equipment and electronic records.

Enhanced Primary Eye Care Services

Enhanced Primary Eye Care services delivered by optical providers have been evolving over the past ten years.

A number of innovative schemes have developed organically with local partners from ophthalmology, to address the rising burdens faced by secondary eye care. These schemes are also patient-centred: allowing faster access, greater choice, and an appointment closer to home. Several enhanced services have been successfully piloted and are reviewed in Annex 4.

These schemes however have been developed largely in isolation and in piecemeal fashion (often wastefully covering the same ground several times with only minor variations) and have often depended on the drive and personality of a single person, a far-sighted optometrist, optician, ophthalmologist or commissioner. Too often they have been funded at the margins of care with short-term project or end-of-year funding and been subject to cuts at short notice regardless of their efficacy or the benefits to patients.

The one exception to this fragmented development has been the implementation of glaucoma referral refinement schemes in response to the revised NICE glaucoma guidelines in 2009. The NICE guidelines set a new threshold for suspect ocular hypertension (OHT) which was significantly lower than thresholds used in community optometric practice. To cope with this new standard, commissioners around the country have been developing community-based glaucoma and OHT referral refinement schemes to reduce an otherwise unmanageable influx of patients into the hospital sector.

To support the NHS in this task, the professional-funded LOC Support Unit developed a glaucoma referral refinement pathway supported by the Royal College of Ophthalmologists and the College of Optometrists and endorsed as “flawless” by NICE.

The problem with the development of local services has been that, as ever:

- schemes have not been systematically introduced as part of service planning (they have been piecemeal, isolated and sporadic);
- there are still many variations which means that some optometrists may have to work with more than one pathway which increases patient risk;
- in some cases, non-implementation has been the result of entrenched professional rivalries which commissioners have not been able to tackle;
- schemes have often been dependent on the drive and enthusiasm of particular individuals rather than on systematic direction by NHS leaders, the Department of Health or Strategic Health Authorities;
- inefficiency in care is still being tolerated under the pretext of localism.

These are indulgences of the years of plenty that neither the NHS nor the nation can now afford.

The establishment of the NHS Commissioning Board should provide a significant opportunity to revise or endorse the LOCSU pathway for glaucoma referral refinement as the national quality standard and to ensure that it is implemented by all GP commissioning consortia (or PCTs in advance of that, during the transition).

Glaucoma is but one example. Similar significant opportunities exist, following the White Paper *Liberating the NHS*, to capitalise on the potential of community-based cataract, minor ocular emergencies and diabetic retinopathy schemes across the NHS to deliver a more effective and patient focussed eye care service that achieves maximum efficiency and cost-effectiveness for the NHS.



Section Three

Improving Efficiency and Cutting Bureaucracy in Eye Care

Capacity in Secondary Eye Care

The Government's commitment to delivering real increases in NHS expenditure over the lifetime of this Parliament, together with the commitment to achieve European level health outcomes, is very much to be welcomed.

Unfortunately, to make the challenge harder, for many years now, healthcare inflation has exceeded general inflation (detailed in Annex 3). For the Government's commitment to deliver an improved health service, therefore, the increase in NHS expenditure would either have to exceed not only general inflation but also healthcare inflation or else significant efficiencies would have to be found.

Whilst it may be possible that additional investment can be made in front-line health services in time, given the economic and fiscal climate, we can reasonably expect that financial resources will remain tight, especially relative to the previous decade.

Capital Investment

There has been a huge investment in physical resources in hospitals across the UK over the past fifteen years. Unfortunately further significant funding is unlikely to be achievable in the current fiscal environment to continue this investment. Even if additional funds were to become available, the challenge would still remain of how to make the most efficient use of the available space and equipment.

Human Resources

As a workforce-based organisation, the four key inputs in the supply of hospital ophthalmology services are ophthalmic nurses, orthoptists, hospital-based optometrists and ophthalmologists, all of which are important in the patient pathway. Intuitively it should not be difficult to recruit, train and retain ophthalmic nurses and orthoptists. However, there is a widespread shortage of nurses in the UK, driven in part by changing demography, deeper qualification gradients and changing workforce expectations. It is unlikely therefore that ophthalmology would be able significantly to expand the number of ophthalmic nurses any more, and indeed only at the expense of other specialties within the hospital sector. Similarly, orthoptists are generally thought to be in short supply. (This is not a shortage of optometrists as discussed in Section two.) However, as the main limiting resource is the supply of ophthalmologists, these issues are not explored further here.

Increasing Hospital Appointments

To meet expanding need and due to capacity constraints, the first option would naturally be to seek to generate more appointments per ophthalmologist. Unfortunately, this is limited by the capacity constraint of the European Working Time Directive and should not be achieved by spending less time with each patient, which would reduce the quality of care (detailed in Annex 3).

The second option would be to increase the numbers of ophthalmologists. A number of publications have raised concerns about the supply of suitably trained ophthalmologists (see Annex 3).

In 2006 the Royal College of Ophthalmologists noted that "in ophthalmology there is currently a significant imbalance between the numbers of trainees completing specialist training and available consultant posts in the UK. This imbalance is worse than for any other speciality" (RCOphth 2006).

It is costly and takes on average eight years of post-graduate training to train an ophthalmologist. There are

also concerns that increasing sub-specialisation within the specialty, whilst improving the quality of care, impacts on the number and type of specialists required to service a full department (NHS 2008). Although secondary eye care services can and should deliver highly specialised care, it is clear that there can never be sufficiently flexible to increase the overall appointments capacity to address the urgency of rising visual impairment.

Other reports have indicated this shortage is causing delays in detection and treatment of eye disease and impacting on the quality of outcomes for patients. Between June 2005 and May 2009, the National Reporting and Learning Service (NRLS) received reports of "44 glaucoma patients who experienced deterioration of vision, including 13 reports of total loss of vision, attributed to delayed follow-up appointments. A further 91 incidents related to delayed, postponed or cancelled appointments, but the level of harm is not known" (NRLS 2009).

Not only will the NHS need to ensure adequate capacity for the ageing population, treatments will continue to emerge, for example Lucentis in 2008 for wet AMD and the new implant Ozurdex approved by the European Medicines Agency in 2010 to treat macular oedema from retinal vein occlusion. As has been the case over the past 60 years, new and increasingly sophisticated treatments will continue to become available to prevent or delay visual impairment. Improving quality for eye care patients means preparing now to ensure the NHS can rapidly adopt these new treatments to deliver universally successful outcomes and prevent avoidable visual impairment.

Default approach

Given the unquestionable expanding need and future supply-side constraints in the hospital sector, the challenge for the NHS is how to respond flexibly and rapidly at a time of constrained resource growth.

The default option is to do nothing and to continue with the current provision of eye care (detailed in Annex 3). As a result the demand for secondary eye care would have to be rationed, for example as the NHS has traditionally done, by increasing waiting times and delaying follow up appointments.

However, access to appointments and treatments is important to prevent or minimise visual impairment and this option would simply lead to greater ill health (worse outcomes), disability (in visual impairment and blindness), inequity (wealthier patients could jump the queue by opting for private treatment) and downstream NHS, benefits and social care costs. The status quo therefore will not improve eye health outcomes or equity for patients or the NHS whilst significantly increasing overall costs.

The second option (detailed in Annex 3) would be greatly to expand the capacity of secondary eye care: by building new hospital departments, purchasing more equipment and training more ophthalmologists and nurses). Whilst this might address physical capacity problems, it would not address the significant constraint of available staff.

The substantial amount of investment needed under this scenario is unlikely to be available given the realities of the funding climate that we face. Even if it were, it is unlikely ophthalmology would be able to acquire the significantly expanded proportion of the available medical workforce required.

We therefore need to consider how to make the best possible use of existing eye care resources whilst maintaining downward pressure on capital and workforce costs.

Way Forward

This logic leads inevitably to a third option - to redesign the provision of eye care services on a nationwide basis to make best use of all available resources (additional detail in Annex 3).

The strength of primary eye care is that it is skilled, equipped, flexible, and can be delivered in the community, at convenient times and locations (including a domiciliary service) for patients.

The strength of secondary eye care is that it can deliver effective specialist care to patients facing acute sight loss, and adopt emerging treatments to improve eye health outcomes.

The solution is to bring these two sectors closer together with the patient at the centre.

The evidence base is now sufficiently strong, tested and credible for community optometry nationally to take on:

- referral refinement of non urgent conditions;
- managing minor ocular emergencies, e.g. assessing red eye, treating minor infections and foreign body removal;
- pre and post cataract monitoring and management;
- management within quality guidelines of patients with stable chronic conditions such as glaucoma and diabetic retinopathy.

Bureaucracy could also be cut by making direct referral from primary to secondary eye care the norm (with patients only being referred via a GP where the optometrist believes the patient's condition goes beyond eye care and GP input is needed).

On this basis a not insignificant proportion of secondary eye care could be put to more effective use. On the basis of the success of local enhanced eye care services already in operation, this report estimates that a third of returning out-patients to secondary eye care could instead be seen in their local optometric practice.

Hospital ophthalmology could then be refocused on improving outcomes for patients with multiple and complex needs, those facing acute sight loss, and the timely adoption of new treatments to prevent and delay sight loss. Backed by research, ophthalmology in the UK could focus on delivering the best outcomes globally for NHS patients.

At the same time optometrist and dispensing optician skills, training and enthusiasm could be coupled with the flexible and open primary eye care market to deliver enhanced eye care services in the community, quickly and effectively freeing up hospital capacity.

As noted in Section 2, the community optical providers operate with an overhead of spare physical capacity (e.g. privately-funded consulting rooms with increasingly specialised equipment) combined with a highly skilled workforce (both optometric and medical) that can respond flexibly and rapidly to demand (including gaining clinical accreditations to offer enhanced services).

Patients would be placed at the centre of this revolution in eye care services. Where clinically possible, patients could have the choice of provider, at the time of their choosing, close to their home or place of work. Patients would benefit from quicker access to diagnosis, treatment and follow up of all eye care services – including

additional chair time to assess and monitor compliance with treatment. The totality of eye care services would not only be more efficient, they would be more responsive to patients' needs. In particular, access for low income groups would be improved, which is vital to improving outcomes in eye health.

The NHS Workforce Review Team came to a similar conclusion: "the key component of any solution is to increase the diversity and fully utilise the optometric workforce in order to address the challenges facing eye care services" (NHS Workforce Review Team 2008 - see Annex 3 for details). Primary eye care services are sufficiently flexible to adapt swiftly to ensure nationwide provision of redesigned eye care services.

A redesign of NHS eye care services is essential if we are to slow or reverse the trend of increasing visual impairment in the UK (these options are presented in more detail in Annex 3). The Government's proposals for *Liberating the NHS* present a unique opportunity to upgrade eye care services at all levels to deliver ongoing and sustainable improvements to clinical outcomes.

Section Four

Working Models

Two major opportunities to tackle rising costs and visual impairment have been missed in the past 10 years:

- failure to implement the clinical standards/pathways developed by the National Eye Care Steering Group in 2004;
- failure to tackle system reform in the light of the UK Vision Strategy, supported by government, in 2008 (with the exception of some local initiatives).

These opportunities to redesign eye care have not generally been taken up because of: the general focus on acute care and low awareness of the costs of visual impairment amongst NHS management; the desire of every PCT to develop its own mildly differing variants of the pathways; the overly complex commissioning processes of the NHS and in some cases, long-standing and inexcusable professional rivalries and territorialism at local level.

Twice in ten years patients have been failed in eye care and people have unnecessarily gone blind as a result. This should not be permitted to happen a third time.

Despite this universal failure, there have been sufficient local schemes developed in partnerships between community optical practice and secondary eye care services to provide a strong evidence base of success on clinical, economic and patient satisfaction grounds. A selection of these working models is detailed in Annex 4.

These schemes are in line with best clinical practice and NICE guidance on eye care. They have proved to be clinically effective and low risk for patients. Hospital based eye care has benefited in that higher quality referral information allows quicker clinical judgements to be made. All of the schemes have delivered reduced numbers presenting to hospital eye care services or to GPs (and some to both) – a substantial and valuable freeing up of NHS resources. This reduces pressure on the NHS and enables resources to be redeployed into other secondary eye care services.

The six working models outlined in Annex 4 have been introduced with limited upfront NHS investment. These schemes can deliver overall savings to the NHS (the Manchester scheme has been particularly successful in this regard) alongside the quality improvements outlined above.

Patients too have expressed a high level of satisfaction with the schemes: benefiting from local provision of eye care services, greater choice in appointment times and quicker access to eye care services.

All of these tested enhanced services models are ready to be generalised to all localities, and a series of recommendations to make this happen is included in Section 6.

Optical practices have the flexibility and capacity to offer enhanced eye care services across the country. Just as for sight testing, the open market in primary eye care ensures that providers compete on the quality and availability of services.

Although these services need to be commissioned locally as part of a continuum alongside hospital care (and social services and voluntary sector care in the case of low vision diagnosis, treatment and support), what is not desirable is to have several hundred sets of marginally dissimilar standards/pathways which have so inhibited progress in the past. Given that patients' needs and treatment modalities are broadly the same in eye care, it is recommended that a single national set of standards/pathways be agreed which can then be implemented by GP commissioning consortia as part of local commissioning to meet local needs.

If, because of pressures on NICE resources, most eye care pathways cannot be covered in the early programmes, it is recommended that the Royal College of Ophthalmologists and College of Optometrists, along with patient agencies, be invited by the NHS Commissioning Board to agree model pathways to be recommended to GP consortia on efficiency grounds, subject to ratification by NICE as resources permit.

In the meantime we recommend that PCTs be asked to ensure the existing effective eye care pathways (which as described above are often dependent on pilot funding) and other initiatives taken in response to the UK Vision Strategy are not lost during the transition to new local commissioning arrangements. The optical bodies could be asked to provide a national list of these for the NHS Commissioning Board if that would be helpful.

Section Five

New Government Priorities: the Opportunities in Eye Care

The government has set out its priorities in the White Paper *Equity and Excellence Liberating the NHS* with the goal of achieving a more consistent and stable policy framework. ("The White Paper is the long-term plan for the NHS in this parliamentary term and beyond.") The debate about health should be about progress in health improvement rather than about structures and processes. Key themes include focus on outcomes, information for patients and responsibility for GP commissioners:

1. Patients must have more information and more power to make choices about services.
2. There should be a new kind of partnership between patients and professionals. "No decision about me without me."
3. The NHS Commissioning Board and GP Commissioners must focus on outcomes and use the key levers of competition and choice to improve outcomes.
4. There should be a clear and distinct capability for public health with an increased role for local government.

Key development areas for the new strategy include improved information on outcomes and quality for patients; greater choice for patients to cover many more areas of care beyond elective surgery; the wider use of quality standards; and the encouragement of GP commissioners to develop better services.

This is a very positive programme which should be seen as a major opportunity for breakthroughs in care development. However there is a danger of planning blight and detrimental impacts on services in transition as organisations disappear, with SHAs abolished from 2012 and PCTs from 2013.

The new GP commissioners will be starting with the difficult mandate of saving £20 billion, in addition to the impacts of increasing costs. However the NHS Chief Executive has set out a clear transitional plan. This stresses the continuing importance of the Quality, Innovation, Productivity and Prevention (QIPP) framework. Key areas for change include the new commissioning and the new provider landscape and managers are urged to work closely with new GP Commissioners to develop programmes which can meet their key challenge of delivering better outcomes to an aging population at lower cost.

The challenge and opportunity in eye care is to develop an approach to services which will meet these requirements in the new funding situation. The new GP commissioners will be seeking to show quick wins in improving outcomes within this new financial reality.

Eye care can therefore be a key area for delivering on the new kinds of partnership:

- in improving information for patients;
- in improving outcomes through earlier diagnosis and speeding up both initial access and follow up to the wider range of therapies now available;
- in guaranteeing quality through the use of quality standards;
- in delivering an improved service and better value within the new context of more limited funding;
- in keeping sight testing as a national service whilst presenting clear development options for GP commissioners on the wider eye care front which can produce better results for local communities, especially in socially deprived areas, very rapidly.

Eye care can be a lead success area for the new policy where patients and GP commissioners can show results even before the full implementation of the reforms in 2013.

The Next Five Years: the Challenge for Commissioning

The central challenge is that of improving outcomes and quality for an increasing number of patients. This may seem little different from other areas of care but eye care stands out for the projected increase in the number of patients and the range of new therapies. The development of eye care has been fragmented and procedure led and recent care pathways are by definition disease specific.

Commissioners on the other hand have the responsibility to promote a comprehensive service for eye care to a local community. Commissioners have to find ways of developing services across the range of therapies and interventions. Twenty years ago eye care used to be about spectacles and specific bottlenecks in cataract care - now a more comprehensive approach is both possible and necessary.

The challenge is how to develop quality and improve access within the new fiscal climate. The new health policy stresses the importance of quality standards and of local initiatives (rather than centrally set targets) to deliver them. Thus the first essential for successful commissioning is to define quality standards.

We argue above for the development of national standards/care pathways for the major eye conditions (building on existing tried and tested pathways). In addition we would point to two types of quality standard which would be highly relevant and which would give a sense of direction to local development and feasible metrics to compete for resources in the new world of commissioning:

1. Early diagnosis is vital for the main disease areas of glaucoma, diabetic retinopathy and AMD. Early diagnosis improves the chances of successful treatment and brings health gains to patients. For the main disease areas it is possible to define a simple staging which can be measured at the local level. Thus one quality standard would be the percentage of patients with timely diagnosis/intervention. This could also be related to prevalence to ensure that timely diagnosis and treatment were available for an increasing proportion of the total potential population of patients.
2. Quality standards on improved outcomes should be developed through specific standards for eye disease and there could also be a more general standard to reduce numbers having to register as blind or partially sighted. The long term aim for services should be to reverse the relentless rise in numbers of people with visual impairment.

This may seem daunting in the face of increased incidence from population ageing and it will certainly not happen without central guidance from the NHS Commissioning Board and local motivation. To date, a combination of fatalism, combined with the absence of information, has been the biggest barrier to progress.

The new metrics would point the way to improvement in standards and also give a clear sense of direction for services. They would also help in providing a more local community orientated approach to services which would assist local commissioning.

As well as standards for specific diagnoses it is recommended therefore that NICE should set a quality standard on an integrated basis for the eye care field as a whole. The effectiveness of specific therapies depends not just on the teams carrying them out but on appropriate links to primary eye care.

Currently the programme budget identifies spending at £1.6bn on hospital services. We would estimate that of this approximately £400 million is being spent on services that could be provided more cost effectively in local communities, and free up resources in secondary eye care to be reinvested in front line services, as is outlined in Section 3.

To make progress in quality and access, the realistic question to be faced is what pattern of services will best achieve commissioning goals in a funding climate where the central message will be for finding overall saving of £15-20 billion at the service level? In the case of eye care services this would involve savings of at least £150 million.

At present there is a certain retreat into wishful thinking at the service level—every service thinks it is going to be the exception in that it will not have to find these savings. However, there is no obvious reason why hospital based eye care should be such an exception. It would be prudent to plan on the assumptions that:

- eye care services will have to find savings;
- some of the savings would be available for re-investment.

Eye care services have in fact an urgent task of defining such options for re-investment as otherwise funds are likely to be diverted into other areas of care.



Section Six

Delivering on Equity and Excellence - Making it Happen

The third option for commissioners proposed in Section Three would allow delivery of the key new drivers for improved health care.

There would be a very definite improvement in the information and choice available to patients. This would cover access and outcomes on specific therapies across the eye care field. New NICE quality standards would also encourage new confidence and partnership between patients and professionals. Outcomes would be improved through earlier diagnosis speeding up both initial access and follow up to the wider range of therapies now available. It would be an example of a service which was showing improving and effective results. Patients would be able to get full information on a range of services - no decision about me without me. GP Commissioners would be able to purchase a distinctive range of services from a variety of providers who would take responsibility for investing in new services as opportunities emerged. Option three would be a platform for continuous improvement in services.

To make this happen, this report recommends that the Government should make eye care services a demonstrator model for *Equity and excellence: Liberating the NHS* to show the way forward. As part of this process the Government/National Commissioning Board should:

- i. commend the early adoption of the LOC Support Unit Glaucoma Referral Refinement and Ocular Hypertension Monitoring Pathways to GP commissioning consortia as a matter of urgency in 2011;
- ii. commission NICE to endorse at the earliest opportunity a single set of NHS quality standards/pathways for
 - a. stable glaucoma management in the community
 - b. primary eye care assessment and referral services in the community
 - c. cataract direct referral and post-operative management in the community
 - d. stable diabetic retinopathy management in the community

(or if this is not possible in the short term to commission the Royal College of Ophthalmologists and the College of Optometrists to endorse national quality standards/pathways pending subsequent NICE approval);
- iii.
 - a. commend early adoption of the above NHS pathways/quality standards to GP commissioning consortia
 - b. advise them to consider implementation as soon as possible to reduce pressure within the system, increase the amount of optical health care provided locally and to reduce overall costs;
- iv. ensure that the benefits of existing cost-effective shared eye care schemes in the community are not lost for patients and local secondary eye care (because of their small size), during the transition from PCT to GP-led Commissioning;
- v. review and remove the bureaucratic burdens from the new NHS general ophthalmic services contract in England (introduced in 2008) which have added significant public sector costs with no demonstrable gain for patients or the public;

- vi. introduce and centralise electronic claims and payments for the NHS sight testing service and streamline costs within the Business Services Authority as part of the Arms Length Body Review (in place of the current inefficient localised paper/postage-based systems);
- vii. work with the community optical sector and hospital eye care service to ensure these services are integrated and built around patients;
- viii. by the above reforms tackle avoidable visual impairment and blindness and thereby prevent significant longer-term costs to individuals and their families, the health and social care systems and the wider UK economy.

Annex 1

Public Eye Health Need – a more detailed analysis

General picture of visual impairment

Visual impairment impacts on a substantial proportion of the population. The Royal College of Ophthalmologists (RCOphth) estimate that in England and Wales, around 4.3 million people aged 65 and over have impaired vision (<6/12) in one or both eyes. Of these, 2.4 million have impaired vision in both eyes. 72 per cent is remedial through surgery or refraction and dispensing of spectacles (RCOphth 2002). A report by Access Economic (2009) found a total of 1.8 million people (both eyes) with partial sight (<6/12) and blindness in the UK in 2008. Of these 63.4 per cent had mild sight loss (largely due to refractive error); 24.5 per cent had moderate sight loss and 12.1 per cent were considered blind. The report also projected an increase of 115 per cent in the numbers to nearly 4 million people by 2050 (Access Economics 2009).

This snapshot frames the extent of the problem of visual impairment in the UK today. Other reports indicate that the official figures for blindness and visual impairment substantially under-report the magnitude of the problem (Ethical Strategies 2003). In order to better understand the gravity of the challenge facing public health, it is necessary to examine the key conditions that cause visual impairment, their incidence and impact on the individual and eye care services.

The Main Causes of Visual Impairment in the UK Population

Glaucoma

Glaucoma is an important cause of blindness. Glaucoma damages the nerve fibre layer in the retina, leading to a gradual loss of the field of vision, which is irreversible, and if untreated, can cause total loss of sight. It can progress to an advanced stage without being noticed by the individual as it is usually without symptoms of pain or noticeable loss in vision. Early diagnosis is the key to improving outcomes, as intervention can be very successful in slowing its progression.

There has been a substantial increase in numbers of patients diagnosed with glaucoma over the past twenty years. The RCOphth estimate that 250,000 have definite Primary Open Angle Glaucoma (POAG). At least half of these do not come forward for timely diagnosis, which is crucially important to slow the progression of glaucoma. About 15,000 new cases are expected to occur every year (RCOphth 2002). About 14 per cent of UK blindness registrations are due to glaucoma. About 2 per cent of the population above the age of 40 in the UK suffer from some form of glaucoma and this rises to almost 10 per cent over the age of 75 years (NICE 2009a). Given this pattern, one can only expect an ongoing rise in the numbers at risk of and suffering from glaucoma as the population ages.

In addition, there are large numbers of patients that are classified as having ocular hypertension (consistently elevated intraocular pressure in the eye without optic nerve head damage or visual field defect). The risk of developing glaucoma is markedly increased in eyes that have ocular hypertension and once detected it should be monitored, usually annually depending on its severity. In the UK, 308,000 patients will have ocular hypertension diagnosed in 2010 (p. 54 EpiVision 2009). Ocular hypertensives add significantly to the workload of hospital eye services.

Treatments for glaucoma are evolving. There has been a shift to medical management of glaucoma over the past fifteen years, with improving medical treatments taking the place of surgical intervention. This shift has increased the annual volume of patients attending for routine glaucoma follow up appointments, placing a substantial additional burden on hospital eye services, struggling to cope with the current workload.

Cataract

Cataracts affect sight by causing an opacification (or frosting) of the lens in the eye. This causes a person's sight to become blurred or misty with a gradual loss of the ability to see contrast and detail. Cataracts are generally uncovered during a sight test, although referrals must be sent via the GP. Fortunately, cataracts are generally easily treatable by surgical intervention, and can be regarded a major success story within secondary eye care. Over the past fifteen years, substantial progress has been made in improving detection of and reducing waiting times for cataract surgery.

Cataracts impact on large numbers of individuals in the UK annually. 2.5 million people aged 60 and over have been estimated as having sight impairing cataract. Of those, almost 2.4 million are aged 65 and over. An estimated 225,000 additional new cases are expected each year (RCOphth 2002). In the UK, the number of people with partial sight due to cataract in 2010 is estimated to be 206,000 (p.32 EpiVision 2009).

88 per cent of people with treatable visual impairment from cataract were not in touch with secondary eye care services in advance of presenting with cataracts (RCOphth 2004). Although many improvements have been made in the identification of risk factors for cataract there is, as yet, no proven primary or medical treatment for cataract, therefore surgery can be expected to remain the principal intervention. With increasing life expectancy and the resulting expansion of the elderly population, both the prevalent cases of cataract and the demand for surgery will continue to rise.

Figures from EpiVision (2009) show the number of cataract operations in the UK reached 389,000 in 2010. In addition we can anticipate that expected changes in the population age structure, will cause this to increase to almost 474,000 in 2020 (p.32 EpiVision 2009).

Uncorrected refractive error

Uncorrected refractive error simply means blurring in vision that could be remedied by sight correction such as glasses or contact lenses. A surprising number of people in the UK have uncorrected refractive error, especially among the older population. "In the older population, of England and Wales, (aged 65 and over), a total of 735,000 have impaired vision (<6/12) in one or both eyes due to refractive error. Some 395,000 have impaired vision in both eyes and need spectacles to bring their visual acuity up to the level required for driving" (RCOphth 2002).

Uncorrected refractive error affects quality of life as it impacts on distance or near vision, or both, which makes it increasingly difficult for an individual to perform day to day tasks. Uncorrected refractive error is often overlooked as a cause of sight loss. Fortunately it is one of the easiest to remedy with an updated visual correction. Primary eye care services are available across the country to resolve this, although the individual must first attend for a sight test.

Diabetes

The ever increasing prevalence of diabetes in the UK population is by now well understood. The latest data from the National Diabetes Audit (2009) show that there were 2.3 million people with diabetes in 2009 compared with 1.3 million in 2003. For type 1 diabetes there is no association with social deprivation or age. By contrast type 2 diabetes is strongly associated with ethnicity, social deprivation and age. The prevalence of all types of diabetes, rises steadily from 0.05 per cent in the 16-25 year age group to 13.5 per cent in the 70-84 year age group (National Diabetes Audit 2009). A more recent report by EpiVision (2009) put the overall

number of persons in the UK with diabetes at 2.66 million (p.44 Epivision 2009).

Less well known is the impact that diabetes can have on visual impairment. Diabetes can affect vision in several ways, but the most serious impact is generally on the blood supply to and within the retina. Most sight loss due to diabetes can be prevented, the crucially important thing is that it is diagnosed early and treated promptly. Among the 2.66 million estimated to have diabetes by Epivision (2009), an expected 748,000 will have background diabetic retinopathy which needs to be monitored carefully as this can develop into irreversible sight loss.

Diabetic Eye Disease and Eye Care

All diabetics should be screened appropriately for diabetic retinopathy. As the numbers with diabetes continue to grow, this places an ever-increasing burden on eye care services. In addition to screening programmes, a growing proportion of diabetics require intensive treatment and follow up. Figures from the National Diabetic Audit indicate that currently about 3 per cent of type 1 diabetics and 1 per cent of type 2 diabetes require Diabetic Retinopathy treatments (National Diabetes Audit 2009).

Much has already been done to meet this challenge, but there is much more to do to meet the expected rise in numbers over the next ten years. England now has the world's first screening programme for diabetic retinopathy which should assist greatly in detecting and referring diabetic eye disease for appropriate clinical management.

The Department of Health Third Quarter Report (2010) on the health service:

“Good progress has been made and more people with diabetes are being offered screening for retinopathy than ever before and to higher standards. However, the speed of progress is variable across the country and some PCTs are still not offering screening to all people with diabetes. England alongside other UK countries leads the world and this is the first time a population-based screening programme has been introduced on such a large scale.”

Macular Eye Disease

Age-related macular degeneration (AMD) is a chronic disease that results in progressive damage to the macula, with loss of central vision and the ability to see details. The numbers of individuals suffering from AMD in its various forms are increasing rapidly. In 2002, almost 700,000 aged 65 and over have sight-impairing macular degeneration (RCOphth 2002). By 2009, an estimated 1.49 million individuals had some form of AMD; of which almost 133,000 will be partially sighted and 90,000 will be blind (p.19 Epivision 2009).

AMD mainly affects the population over 50, with increasing incidence with age. AMD can be classified as dry or wet. Dry AMD is the more common form and is characterised by progressive and permanent loss of central vision that causes blurring and loss of perception of colour and detail. There is currently no medical treatment for this type, although many of these patients would benefit from an improved low vision service. Wet AMD results from bleeding of new and leaking blood vessels at the back of the eye. Wet AMD can respond well to treatment in its early stages. If untreated, wet AMD can cause sudden and permanent loss of central vision.

Wet AMD and the Challenge for Secondary Eye Care

Wet AMD accounts for about 10 per cent of patients with AMD. It is estimated that there are about 26,000 new cases of wet AMD in the UK each year. The condition usually affects people over 50, and the risk

significantly increases with age (NICE 2008). It is crucially important that wet AMD be detected and referred for appropriate treatment in as short a time as possible after symptoms develop. Treatments for AMD are expensive and require an intensive programme of follow up appointments and further treatment.

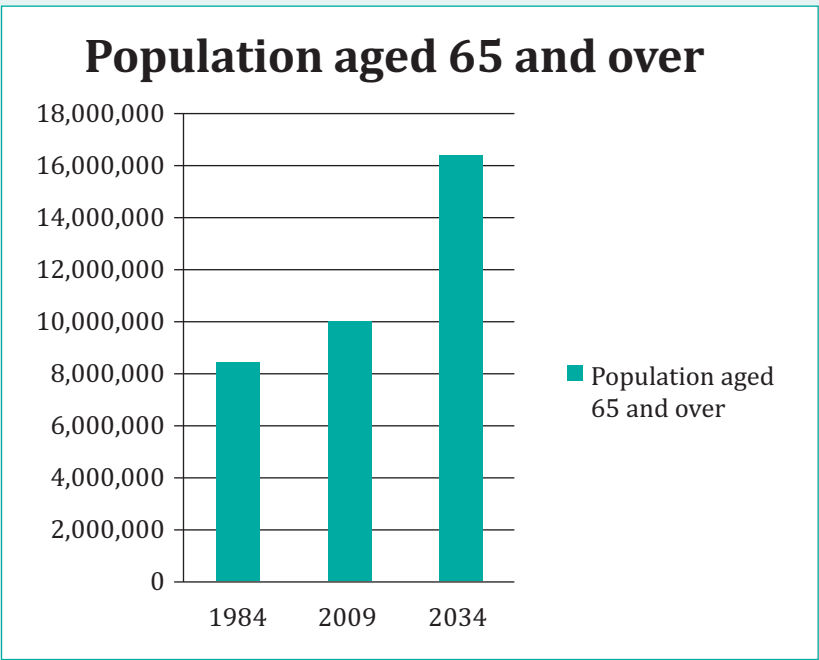
Visual impairment in the UK today

The NHS already faces a major challenge to ensure that glaucoma, cataracts, diabetes and AMD do not unnecessarily develop into irreversible visual impairment for individuals across the UK. In addition, we need to reach out to those patients who would benefit from a correction of their refractive error, which would greatly enhance their quality of life. One commonality among all of the drivers of visual impairment in the UK is age. All of these conditions have an increasing prevalence among the older population.

Demographics

The UK population is ageing and ageing quickly. Over the past 25 years the percentage of the population over 65 increased from 15 per cent in 1984 to 16 per cent in 2009, an increase of 1.7 million people. This trend is projected to continue, with 23 per cent aged over 65 by 2034 (ONS 2010). The overall population of the UK is projected to increase from 61,800,000 in 2009 to 71,300,000 in 2033 (ONS 2009). This corresponds with a projected increase in the number of individuals aged 65 and over of 6.5 million by 2033, or an increase of 66 per cent compared to 2009 (calculation based on ONS figures).

The graph below charts this progressive ageing of the UK population. The UK Governments should be planning for an NHS that can cater for a total number of 16,400,000 people aged 65 and over by 2033, which will be supported by a shrinking proportion of the population of working age.



Data source ONS (2010)

Although all age groups can be affected, the main causes of visual impairment in the UK have a higher incidence among the over 65s. The population over 65 is expected to increase by a further 66 per cent in total numbers from 2009 until 2033. As has been clearly outlined the prevalence of glaucoma, cataract, diabetes, and macular eye disease increases substantially and progressively with age. We can expect a corresponding increase in the demand for sight tests and NHS secondary eye care services. We should therefore start planning now to do all that we can to cope with an ever increasing prevalence of eye disease up to 2034.

For the future there are therefore major challenges to be faced to not only maintain access to current eye care, but to plan for adequate capacity for the uptake of new technologies and treatments. We are facing a situation in which the numbers of people registered as blind or partially sighted have continued to increase.

From 1982-2000 there was a 41 per cent increase in the number of registered blind people since 1982; and a 156 per cent increase in the number of people registered as partially sighted. Since then there have been further increases. There is a huge responsibility on the policy-makers and the UK Government to slow and hopefully reverse this trend, which presents a major challenge that cannot be ignored.

UK Vision Strategy

The UK Vision Strategy (2008) has summed up just how much has to be done over the next five years to ensure that more people can benefit from new therapies:

“Too many people are living with a sight loss that could have been avoided through earlier detection of treatment. And too many people who have lost some or all of their sight do not receive the support they need to deal with the emotional trauma of sight loss or manage basic everyday tasks.”

The UK Vision Strategy (2008) sets three key outcomes:

1. Improving the eye health of the people of the UK with stress on prevention and earlier detection.
2. Eliminating avoidable sight loss and delivering excellent support for people with sight loss.
3. Inclusion, participation and independence for people with sight loss.

Primary eye care services in the community already play a very important role in the UK Vision Strategy by correcting refractive error and detecting eye disease. Optometrists in the UK have a long established role in this delivery of primary eye care, and are trusted providers of eye care services to patients across the UK.

Social and Human Cost of Visual Impairment

We have seen that there are substantial spill-over benefits from correcting refractive error in the elderly in falls prevention and quality of life in Section One. Access Economics (2009) outlines how sight loss can “shorten life, increase the risk of other conditions, restrict social participation and independence, and impair physical and mental health” (p.67 Access Economics 2009). Older people with sight loss are at a significantly higher risk of falls that can cause injuries and additional NHS expenditure.

Sight loss can also cause depression. Access Economics for RNIB (2009) reported that the relative risk of depression is estimated to be 3.5 times higher for those who experience sight loss. Similarly, the diagnosis and treatment of depression causes not insignificant additional NHS expenditure.

The same report also looks at indirect costs (absenteeism, productivity loss, lower employment, premature mortality, informal care costs) and found:

- total direct payments to people with sight loss and their carers in 2008 was £397.22 million
- total indirect costs in 2008 were £4.34 billion and projected to rise to £5.27 billion by 2013 (Access Economics 2009).

These costs do not include the impact on quality of life or years lost due to premature death. In addition to these indirect costs, the projected total health care system costs due to partial sight and blindness in the UK is £2.22 billion in 2009, rising to £2.6 billion in 2013 (ibid).

The Older People and Eye Tests report for RNIB (2007) outlined that “fear of sight loss is stronger than the fear of other disabilities: 94 per cent of respondents feared blindness more than deafness, 95 per cent feared it more than having to use a wheelchair, 88 per cent more than losing a limb and 71 per cent more than mental or emotional illness”.

Annex 2

A Firm Foundation of Primary Eye Care

The current model of primary eye care in the UK has delivered substantial benefits to the UK population. There is a genuine choice for patients of when to attend, where to attend and who delivers their primary eye care. Funding is structured to be portable between providers and follows the choice made by a patient. The same level of service is delivered to NHS and private patients in the same setting. Primary eye care across the UK is highly competitive and very cost effective.

The delivery of NHS eye care in optometric practice has evolved across the nations of the UK with devolution. NHS sight testing is delivered through a national General Ophthalmic Services (GOS) contract, though with some differences between the nations. GOS in all four nations operates on the basis that the service follows patient demand, i.e. those eligible for a free sight test can attend for a sight test at the time and optometric practice of their choosing, so long as they are due to attend for that sight test. This model operates effectively to deliver choice and convenience for patients. In addition, NHS patients receive the same level of care and access to a sight test as private (non-NHS) patients, and both systems operate smoothly in parallel. The NHS funding system is not capped, which ensures that all eligible patients who have a genuine need can access an NHS sight test whenever and wherever they are, provided it is clinically justified.

The market to provide the service is open and competitive, as long as the GOS provider has a contract with the PCT in that area, and the performer of the sight test is on a PCT performers list. NHS and private eye care are successfully delivered by a range of independent contractor professions and businesses, such that patients have access to a wide choice of providers close to home. NHS sight tests account for 14.1 million out of a total of 19.9 million across UK (FODO 2010). There are no waiting lists for appointments, and there is substantial spare capacity in the sector. Should any local shortage of provision arise, the market has always and will continue to respond quickly to cater for additional demand. In all of these respects, the current model of primary eye care functions very effectively.

General Ophthalmic Services (GOS) Sight Test

The design of the GOS has existed largely unchanged for over 60 years and is primarily a refraction service to provide correction of refractive error, but with elements of health screening and other health checks included. The current GOS is therefore primarily designed to provide a prescription for spectacles or contact lenses, rather than acting as the primary examination in response to a range of eye symptoms or conditions.

NHS Expenditure on GOS Sight Tests

Expenditure on GOS in the UK has fallen in real terms since the 1950s. Overall expenditure on General Ophthalmic Services (GOS) has fallen in terms of 2006/07 prices from £612 million in 1949/50 to £488 million in 2006/07 (OHE 2007). Expenditure on GOS as a proportion of expenditure on Family Health Services has fallen from 16 per cent from 1949/50 to only 2 per cent in 2006/07 (ibid). This has inevitably resulted in an underfunding of sight testing in England and Wales. NHS sight tests are only viable due to cross-subsidisation by those who purchase spectacles. This is an anomalous situation whereby those primary eye care patients requiring vision correction (spectacles or contact lenses) are subsidising NHS patients that do not. This situation is not replicated across the NHS and is unique to primary eye care services. Although nationally there is little additional funding available for currently commissioned services like a sight test, this merits further consideration if we are to address the demographic challenge.

A functioning and free market of eye care

Under the GOS contract, any provider can set up in optometric practice in any area, which challenges existing practices to offer the best and most cost effective service that they can. This free market has delivered a substantial benefit for the delivery of NHS care for the Department of Health and patients by simultaneously keeping costs under control and delivering an improving service. Since deregulation of the market in the 1980s, many new providers have entered the market and compete on the grounds of quality, access and cost. There are approximately 7,250 optical practices spread across the UK. These practices provide a valuable service to the estimated 68 per cent of adults aged sixteen and over that wear spectacles (Department of Health 2001).

The centrally funded and centrally negotiated GOS fee is a key element in the success of this free market, because it means that all NHS patients, for example in all parts of England, represent the same value for practices who compete for their custom. In this way the free market works in partnership with nationally negotiated GOS fees to deliver high quality primary ophthalmic services, while competition drives efficiency and expands patient choice.

The optical market has been examined independently by Mintel and was found to function effectively as a mature and competitive market, with freedom of entry and exit (Mintel 2008). The capacity of this functioning and free market can and should be employed to develop a new system of eye care in the UK, and one that can respond effectively and quickly to meet the challenges outlined in Annex One.

Potential of Primary Eye Care

To date there has been a limited NHS investment in the delivery of primary eye care in England and Wales. Despite this limited public investment, significant results have been delivered, with cost effective provision of NHS services and pioneering enhanced services in some areas.

Optometrists play a valuable and influential role in correcting refractive error and in the detection of glaucoma, cataract, AMD, diabetes and diabetic retinopathy. It is important not to overlook the potential of locally available primary eye care. There is a substantial skills base in the optometric workforce to build on, and an eagerness to play a greater role in the delivery of NHS eye care in partnership with the hospital eye services. A large volume of undetected (and untreated) eye conditions are picked up during a routine sight test. Optometrists have the skills to recognise and detect conditions such as glaucoma, AMD, cataract, and diabetes, and are well placed to play an enhanced role in the eye care pathway of all of these patient groups as well as treating minor ocular emergencies, foreign bodies in the eye and infections. Optometrists currently detect and refer about 4 per cent of all patients for further tests and treatment (FODO 2010).

There has been a substantial private investment in the equipment utilised by optometrists in practice. This is a substantial and under-reported benefit that is enjoyed by NHS patients when they attend for primary eye care. Moreover, this is an underutilised resource in primary eye care that could readily support additional enhanced eye care services.

The College of Optometrists (2007) found increasing use of hospital standard equipment and procedures (Goldmann/Perkins tonometry; binocular indirect ophthalmoscopy; and digital fundus photography) by optometrists in 2007 compared to 2001 (see table below).

Use of Equipment: 2001 vs 2007

	Year	
	2001	2007
Goldmann/Perkins tonometer	48%	54%
Other contact tonometer	13%	20%
Non-contact/pneumo tonometer	83%	79%
Slit-lamp binocular indirect ophthalmoscope (e.g. Volk lens)	80%	94%
Headset BIO	15%	15%
External photography - film	4%	10%
External photography - digital	8%	24%
Fundus camera - film	4%	3%
Fundus camera - digital	11%	45%

College of Optometrists Clinical Practice Survey 2007

The College of Optometrists (2007) found optometrists are already involved in a range of primary care activities that goes over and above the basic sight test (see first table below). This demonstrates the skills set within the optometric labour force coupled with an enthusiasm for additional personal development (see second table below), specifically for glaucoma and therapeutics (intervention and medical treatment of disease), which can and should be utilised to deliver additional enhanced services, and therefore to play a greater role in the delivery of eye care in the UK.

Primary Care Activities

In any of the areas on which you practice, are you involved in:	Total	
	N	%
Dry eye management	1500	55%
Red eye management	947	34%
Specific learning disabilities (e.g. Dyslexia)	514	19%
Non-penetrating foreign body removal	684	25%
Lash removal	1468	53%
Punctal occlusion	127	5%
NHS funded referral refinement (e.g. Repeat fields and pressures)	515	19%
Co-management of patients with ocular hypertension	328	12%
Co-management of patients with stable glaucoma	298	11%
No reply	627	23%

College of Optometrists Clinical Practice Survey 2007

Personal Development Preferences

Glaucoma	47%
Therapeutics	39%
Diabetes	36%
Slit-lamp BIO technique	28%
Refractive surgery update	24%
Orthoptics	23%
Mainstream contact lens fitting	23%
Paediatrics	16%
Contact tonometry	15%
Suitable aids and support for patients who are sight impaired	15%
Specific learning disabilities (e.g. Dyslexia)	14%
Specialist contact lens fitting (e.g. Keratoconus)	13%
Gonioscopy	12%
Examining patients who are sight impaired	12%
Examining patients with intellectual impairment	9%
Headset BIO technique	8%
No reply	6%

College of Optometrists Clinical Practice Survey 2007

How might this additional role evolve? Fortunately, several schemes to deliver enhanced eye care across the UK have developed organically and have been successfully trialled, piloted and reviewed over a number of years. This is reviewed in detail under the working models in Annex 4, which clearly demonstrate the potential for eye care to lead the way in reforming the NHS.

Annex 3

Constraints within Secondary Eye Care

Annex 1 has highlighted the current volume of work that is faced by secondary eye care services (or hospital eye services). It is now clear that this workload is expected to increase over the next ten years, and to continue to increase up to 2050. There is already little room for manoeuvre for secondary eye care services, especially if one considers that new treatments requiring intensive specialist care are likely to emerge over the coming years (much like wet AMD treatments which have become widely available in the past five years). In any case, it is important to plan ahead for the volume of new patients which can be expected due to demographics, while at the same time considering this capacity issue for emerging treatments. By their nature, new referrals to HES require highly specialist intervention and follow up, and many of these eye conditions can occur alongside several other chronic conditions, which require time and resources to think through all potential implications. This section looks at the resources available to the Hospital Eye Services in more detail, with an analysis of financial, physical and human resources and a more detailed look at current and future demands.

Capacity in Secondary Eye Care

The resources available to NHS secondary eye care can be broken down into financial, physical factors and human resources. Financial resources are those provided by NHS expenditure. Physical factors include buildings, specialist equipment, and IT and processes (like patient management systems). Human factors, for the purpose of evaluating patient appointments, would include specialist front line staff necessary to diagnose and treat patients in secondary eye care, such as ophthalmologists and ophthalmic nurses.

Financial Resources in Secondary Eye Care

Given the economic and fiscal climate, it is necessary to consider the overall budget available to secondary eye care services. While the Government has committed to increasing NHS expenditure in real terms over the life of this Parliament, and to devote an increasing share of resources to front-line care, we can reasonably expect resources to be tight, especially relative to the previous decade.

In 2008/09 expenditure on 'Problems of Vision' totalled almost £1.67 billion (England only), out of a total spend of £93.18 billion on the NHS in England, an increase of 4 per cent compared to the previous year (Department of Health 2010b).

An additional consideration must be the real value of this expenditure in healthcare terms. Healthcare inflation has traditionally exceeded general inflation rates. Brown et al. (2003) reported that overall healthcare expenditures in the US increased at an annual rate of 10 per cent between 1970 and 1999, compared to an overall annual inflation rate of 5 per cent. This trend was expected to continue into the foreseeable future, driven largely by the emergence of new therapies and treatments (Brown et al. 2003). The Government's commitment to deliver a real increase in NHS expenditure (in healthcare terms) would have to ensure that the annual increase (in NHS expenditure) exceeds not only general inflation but also healthcare inflation, in order to deliver quality improvements.

Human Resources in Secondary Eye Care

There are four key units of labour in secondary eye care, when considering the scope to supply appointments to patients, ophthalmologists, orthoptists, hospital-based optometrists and ophthalmic nurses.

Although it might be considered to be relatively easy to train and develop ophthalmic nurses, there is a significant shortage of nurses at all levels and fewer trainees coming into the profession. For the purposes of this study however the supply of nurses or orthoptists is not considered to be the main constraining factor. The supply of ophthalmologists, however, is.

Increasing the supply of secondary eye care appointments can be assumed to be directly related to the availability of ophthalmologists. If we are concerned with increasing the number and availability of eye care appointments, two options should be considered. The first is to increase the number of appointments per ophthalmologist; the second is to increase the overall number of ophthalmologists.

In order to increase the number of appointments per ophthalmologist the options are to:

- (i) Increase number of hours worked by current staff.

This option is limited by the European Working Time Directive (EWTD) to a maximum of 48 hours per week in 2009 (RCOphth 2008). The impact of the EWTD on NHS hospitals and the availability of staff more generally has been confirmed by a recent survey by the Royal College of Surgeons which paints a “picture of an NHS that is totally overstretched” and struggling to find adequate cover (RCS 2010).

- (ii) Increase the efficiency of working practices to increase the numbers seen by each ophthalmologist per day.

This option is limited as spending less time per patient would be likely to lead to lower quality outcomes for each patient, which goes against stated Government aims.

Considering the restrictions above, increasing the volume of patients seen in secondary eye care (in the short to medium term) is therefore directly related to staff numbers, and highly dependent on the number of trained ophthalmologists. To what degree, if any, does the supply of ophthalmologists constrain the availability of appointments currently? Is there likely to be spare capacity to meet the future demands?

Increasing numbers of ophthalmologists?

Several publications have questioned the availability of suitably trained human resources, specifically ophthalmologists, in hospital eye services (RCOphth 2006).

The NHS Workforce Review Team (2008) for England found insufficient ophthalmologist cover to meet the current needs of secondary eye care:

“Medical ophthalmology is predominantly outpatient based. About 50 per cent of the new referrals to ophthalmology that require intervention or specialist follow up are medical in nature and benefit from the expertise of a clinician with expertise in internal medicine, immunosuppression, neurology and cardiovascular medicine.

Although some medical subspecialisation (for example, medical retina) has occurred within ophthalmology and takes responsibility for a proportion of the medical ophthalmology patients, there is insufficient cover to meet the needs for all medical diagnoses, such as sight threatening ocular inflammatory disease, diabetic eye disease, or neuro-ophthalmology.”

The current workforce in ophthalmology is comprised of the following numbers of staff.

	Headcount	Full-time equivalent (FTE)	Source
Consultants	839	784	Information Centre for Health and Social Care (IC) Census 2007
SpR	93 89 638	627	Deanery Monitoring (DM) 2006 - 87 NTN and 6 VTNs DM 2007 - 83 NTNs & 6 VTNs IC Census 2001
SHO	117	114	IC Census 2007
Staff grade and associate specialists (SAS)	507	470	IC Census 2007

From NHS Workforce Review Team (2008)

From this table we can see that secondary eye care services use an unusually large proportion of Staff Grade and Associate Specialists (relative to consultants), especially if compared to other hospital departments. This would also indicate that there is a lack of availability of ophthalmologists. We also know that it takes on average eight years of post-graduate training to become an ophthalmologist, and channelling more doctors into ophthalmology would reduce the number of doctors available elsewhere.

This picture of constrained secondary eye care services is consistent with findings elsewhere. According to government figures published in 2005 (the most recent available) the Hospital Eye Service (ophthalmology) departments were experiencing some of the longest waiting times in the country (NHS 2005).

Between June 2005 and May 2009, the National Reporting and Learning Service (NRLS) received reports of “44 glaucoma patients who experienced deterioration of vision, including 13 reports of total loss of vision, attributed to delayed follow-up appointments. A further 91 incidents related to delayed, postponed or cancelled appointments, but the level of harm is not known” (NRLS 2009).

Capacity constraints are therefore a reality in secondary eye care services today, which should concern the Government and the NHS Commissioning Board.

Future demands

Several publications have also projected large upcoming increases in demand for ophthalmology services in England. The NHS Workforce Review Team (2008) outlined new treatments and the implications of the aging population, it also considered increasing sub-specialism in the field and increasing demands to see and treat patients within a specified period of time, such as 18 weeks. The team produced a detailed report on the current provision of secondary eye care which clearly indicates the challenges ahead (NHS Workforce Review Team 2008).

“Demand for ophthalmology is likely to increase in the near future. The reasons for this are as follows:

- The National Institute for Health and Clinical Excellence (NICE) recommendations on treatment for age related macular degeneration (AMD) have led to an increase in demand for referrals for treatment.

- The population of England is forecast to rise at approximately 0.74 per cent per year over the next 15 years (Government Actuary's Department, October 2008), with the proportion of over 60s changing from 22.1 per cent in 2008 to 26.0 per cent in 2023 (Government Actuary's Department, October 2007).
- There is set to be an explosion in the numbers of people with diabetes increasing the numbers undergoing screening for diabetic retinopathy and the numbers of patients requiring monitoring and treatment for sight threatening retinopathy.
- July 2008 18 week referral to treatment data indicates that 87.5 per cent of patients are receiving treatment within 18 weeks of referral.
- Increasing sub-specialisation within the specialty will impact on the numbers and type of specialists required.
- The Working Time Directive (WTD) will have a substantial effect on the service as many departments have only a few trainees. This would make provision of a 24 hour service very difficult without reduced service in the daytime or through shifting the out of hours service to a larger unit or operating a rota for the out-of-hours service. However, there are some skill mix and productivity drivers that may decrease demand for ophthalmology specialists which are as follows.
- Anecdotal evidence suggests that about 25 per cent of new posts advertised are in the subspecialty medical retina. This supports the evidence for growth in medical ophthalmology which would result in an associated decrease in the requirements for ophthalmologists.
- Workload will be influenced by the increasing diversity of roles of other ophthalmic staff such as optometrists, orthoptists, ophthalmic photographers and technicians.
- Many of the roles previously taken by junior staff are being developed and performed by Allied Health Profession (AHP) and Healthcare Scientist (HCS) staff e.g. monitoring and screening for glaucoma, screening for diabetic eye disease, visual field assessment, pre- and post-operative cataract management and accident and emergency triage. These tasks all use the skills of specifically trained orthoptists, nurses, optometrists or ophthalmic technicians to support the workforce of the ophthalmic service. Indeed about two-thirds of units have some form of shared care for the management of cataracts, glaucoma and diabetic retinopathy.
- Evidence suggests that at least 50 per cent of new referrals to ophthalmology requiring specialist care are medical in nature. Although some medical subspecialisation (for example, medical retina) has occurred and takes responsibility for a proportion of the medical ophthalmology patients, there is insufficient cover for a number of other medical diagnoses, such as sight threatening ocular inflammatory disease, diabetic eye disease, or neuroophthalmology.
- The use of medical ophthalmologists to undertake the medical diagnosis would increase the time that ophthalmic surgeons are able to spend undertaking surgery.
- Proposals are also being developed to allow optometrists to prescribe for patients in order to increase the capacity of the NHS and to ease the burden on eye departments.
- The number of finished consultant episodes between 2002/03 and 2006/07 increased by about 7 per cent. The associated increase in consultant FTE was almost 17 per cent. This indicates that some productivity was lost but it is likely that the time gained is being used for continued professional development (CPD)."

The same report while realising the magnitude of the problem, points towards a potential solution to managing the increases in volume of work for ophthalmology departments, which is supported by the findings of this (Bosanquet) report. Increasing the diversity and fully utilising the optometric workforce and community optical practices must feature as a key component in the solution to this challenge.

Improving the quality of outcomes

NICE has introduced strict referral criteria to improve the quality of glaucoma care – specifically to ensure early diagnosis by monitoring at risk groups. NICE estimates that there are currently more than a million glaucoma-related outpatient visits in the Hospital Eye Service (HES) every year (NICE 2009). OHT (ocular hypertension) is a major risk factor for developing COAG, and it is estimated that 3 to 5 per cent of people over 40 have OHT: around 1 million people in England. People with OHT or suspected COAG, as well as people with normal intraocular pressure (IOP) but a suspicious optic nerve appearance, should be monitored. Once diagnosed, people with COAG need lifelong monitoring, because once lost, sight cannot be restored. Current demand pressures in the Hospital Eye Service could be alleviated if monitoring services for people with OHT or suspected COAG are moved from the hospital to the community. The *Service for people at risk of developing glaucoma NICE Commissioning Guide (2009)* advises Commissioners to consider a referral refinement scheme that could take all OHT and suspected COAG patients, as a cost effective and locally available solution to help manage the demand for HES (NICE 2009).

Improving the quality of outcomes in glaucoma services will involve an increasing number of patients presenting to the NHS. This workload can only be expected to increase with further NICE reviews. The continuing evolution of science will also deliver exciting new treatments, the most recent example to treat wet AMD.

Previously, individuals suffering from wet AMD faced a grim prognosis of rapid loss of sight. A new and innovative treatment for wet AMD is now available and very welcome, although it is expensive and causes a substantial additional workload for secondary eye care services.

According to the Royal College of Ophthalmologists (2009):

“AMD services have continued to expand following the introduction of contemporary treatments for AMD. The workload associated with such contemporary AMD services is significant and will continue to increase as it is agreed that despite pro-re nata (PRN) treatment with ranibizumab best outcomes are achieved with monthly follow up visits.”

Managing rising demand for eye care – a more detailed review

Option 1: Default option

Option 1 is to continue with the present system based on hospital hubs which provide a full range of services and follow up clinics. Primary eye care would mainly involve sight testing, assessing eye health and fitting of spectacles and contact lenses.

We have seen that delivering the whole range of services has put secondary eye care under pressure. The Royal College of Ophthalmologists (2009) stressed that there were already major difficulties in recruiting doctors and adopting new treatments:

“Some eye departments have been unable to recruit medical staff especially middle grade doctors, either because of inadequate funding of services or inability to recruit to the correct specification. The pressure on resources and service delivery in the AMD clinics will become even more intense, as we are unable to discharge patients in the system, but have to accommodate all the new ones. The regular monthly follow up for AMD patients under treatment in order to maintain efficacy is quite demanding. The situation is likely to be further aggravated by the impending treatments of retinal vein occlusions and some diabetic retinopathies with intravitreal therapies. As such the problem seems more acute than was originally envisaged and will get worse.”

The current system is also affected by a rising level of referrals from at risk groups. Hospital eye departments are already complaining about a recent surge of referrals with suspected glaucoma following the NICE (2009) review. Currently the links from community services to are through referral on a case by case basis rather than a planned partnership. Hospital eye departments have to plan their work in the expectation of a rising workload but also where the timing and diagnostic balance of the growth are highly unpredictable. Given the constraints we already see in secondary eye care services, this will be very difficult to address.

Option 1 is likely to lead to a large and ongoing unselective increase in workload in secondary eye care. Waiting times are likely to rise and there is very high risk that some patients with serious problems will not get treated in time to save their sight. Option 1 represents a movement into unknown territory where it will be impossible for commissioners to define quality standards or to develop local programmes. Most energy will be directed to dealing with problems of waiting times. The service will continue to be fragmented rather than one which could deliver a comprehensive eye care service. It is also important to factor in the likely effect of the savings drive in the NHS. Realistically this is likely to reduce the number of clinic hours available as front line service depends on support functions. As reductions in spending reduce the number of service hours available it will become ever more difficult to deal with rising numbers of patients.

Option 2: Expand the capacity of secondary eye care

The second option is to greatly expand the capacity of secondary eye care: build new hospital departments, purchase equipment and train more consultants. We face two obvious problems with this approach. Firstly we have seen that hospital eye departments are already struggling to recruit staff. In addition, training ophthalmologists is a slow and expensive process. Secondly, we face a difficult funding climate and any increases in expenditure will be minimal. In reality the amount of investment needed to pursue this option would be substantial, and will not be available.

There is likely to be strong competition for NHS funds in the coming years for re-investment and services that do not have coherent plans for this are likely to find that funds are transferred to other services. Within eye care there is little room for expansion of hospital based services in any case given the shortages both medical and technical staff, nor would it make sense to buy more equipment without the staff to use the equipment effectively.

Option 3: Way Forward

Secondary eye care is that it can provide high quality services to their patients. A disadvantage of this high quality of service is that the hospital eye service cannot adapt quickly and easily to accommodate rising patient numbers while maintaining the same quality of service as before. New and innovative ways to deliver eye care should be explored at the national level, building on the innovative local initiatives that have started and making best use of all available eye care resources.

Option 3 is for a defined and purposeful partnership between community based optometry services and hospital based ophthalmology. This would involve a greater role for community teams in early diagnosis and follow up of stable conditions. Primary eye care services are skilled, flexible, and can be delivered in the community at convenient times for patients. Optometrists and opticians are also eager to take on additional roles and responsibilities in the NHS. Secondary eye care can deliver effective specialist care to patients facing acute sight loss, and adopt emerging treatments to improve eye health outcomes.

In order to fully utilise these resources, eye care services should be redesigned to best address the challenge of rising visual impairment, to improve access for patients and the quality of outcomes. Eye care services can be redesigned nationally to enhance the role of community optometric providers in monitoring at risk groups, early diagnosis, and routine follow up of stable patients. A not insignificant proportion of secondary eye care that is currently deployed in these aspects of eye care could then be put to more effective use. Ophthalmology could be refocused on improving outcomes for patients with multiple and complex needs, and those facing acute sight loss. Ophthalmology could refocus on timely adoption of new treatments to prevent and delay sight loss. More time could be devoted to world-class research to develop new and more effective therapies and treatments. Ophthalmology in the UK could focus on delivering the best outcomes globally for NHS patients. This presents an opportunity to upgrade eye care services at all levels to deliver ongoing and sustainable improvements to clinical outcomes, and to lead the way to equity and excellence in NHS services.



Annex 4

Working Models of Enhanced Eye Care

Six case studies on working models are referred to in Section 3. They are all tried, tested and ready to be uploaded to the national level (detailed in Chapter 3):

1. Bristol Shared Care Glaucoma Scheme
2. Grampian Optometric Glaucoma Service
3. Welsh Primary Eyecare Assessment and Referral Service (or PEARS)
4. Acute Community Eyecare Services (ACES)
5. Manchester Glaucoma Referral Refinement
6. Stockport Intraocular Pressure Referral Refinement

Bristol Shared Care Glaucoma Scheme

Bristol Eye Hospital is one of the leaders in glaucoma shared care in the UK. 22 optometrists in the Bristol area see approximately 10,000 diagnosed glaucoma patients per year in follow up consultant-led clinics in the hospital, and also perform baseline evaluation of the majority of glaucoma related referrals. This scheme was established in 1998 in order to accommodate the number of glaucoma-related follow up appointments required in secondary eye care services (University Hospital Bristol 2010).

The potential for optometric monitoring in the community in the Bristol area has been subject to academic review. Spry et al (1999) reviewed the reliability of community optometric glaucoma assessment in another Bristol Shared Care Glaucoma project, by conducting a trial to compare care by community optometrists with routine hospital eye service (HES) follow up. This project selected optometrists to provide glaucoma assessment in the community, with the aim of relieving overloaded secondary eye care outpatient departments. Results showed that measurement reliability by optometrists was found to be comparable with cross comparison of results in the trials. Optometrists trained in assessment of glaucoma-related measures perform as reliably as traditional methods of HES glaucoma review (Spry et al 1999).

Gray et al (2000) conducted a follow up review of patient outcomes from same Bristol Shared Care Glaucoma project, two years later. The report found no marked difference in outcome between the shared care project and those patients followed up in the hospital eye service. Patients were significantly more satisfied with certain aspects of care in the community compared with their experience in the hospital eye service, having benefited from shorter travelling time, more choice and easier access to appointments.

In late 2010, Bristol PCT, in collaboration with Bristol Eye Hospital and the Local Optical Committee, were developing a scheme with accredited community optometrists monitoring low-risk glaucoma suspects and ocular hypertensive patients in the community.

Grampian Scheme

The Grampian Scheme was launched following patient demands for a service in the local community with shorter waiting times. Optometry was recognised as having potential in this regard, with the necessary equipment and knowledge to diagnose eye problems accurately, and owing to the community presence of optical practices.

In order to access this service, patients can self-present to an optical practice, or be referred by another healthcare professional. Patients attend for appointments with accredited optometrists. Optometrists follow

specified care pathways when dealing with a range of common eye conditions. Responsibility rests with each practice to ensure that every patient is seen within a reasonable period of time.

In Grampian, a new optometric glaucoma service was started in June 2004. The performance of glaucoma accredited optometrists in the Grampian area was reviewed by Azuara-Blanco et al (2007). The aim of the scheme was to redesign eye care services to reduce unnecessary referrals into secondary eye care, to initiate treatment more promptly, and to monitor people at risk of developing glaucoma in the community. As in Bristol, local optometrists were trained at practical sessions in partnership with a consultant ophthalmologist in glaucoma. Azuara-Blanco et al (2007) outlined that the aging population, an increasing prevalence of glaucoma and ocular hypertension, and the limited resources in hospital eye services, means that part of glaucoma care nationally should be transferred to optometrists and delivered locally.

In terms of clinical efficacy, the agreement between optometrists and the consultant ophthalmologist was high (Azuara-Blanco et al 2007). Most disagreements were at the lower end of the severity scale. From a clinical point of view, accredited optometrists could potentially manage and treat patients with ocular hypertension in the community, without their having to attend hospital. In addition, patients diagnosed with glaucoma could start treatment immediately, without having to wait for an appointment in secondary eye care. The quality of care was at least as good as that provided by junior ophthalmologists in the outpatient department. The report concluded that “community optometrists trained in glaucoma are potentially a very valuable resource for the detection and management of glaucoma, and indeed of other significant eye diseases. Access to community optometrists is easy, and they help to reduce the demand on stretched hospital eye services” (Azuara-Blanco et al 2007).

PEARS Scheme

The Primary Eyecare Assessment and Referral Service (PEARS) has been in place in Wales since 2003, having been introduced alongside the Welsh Eye Health Examination (WEHE). The PEARS service provides an optometric primary care intervention service to facilitate an earlier assessment of acute ocular conditions. This is in effect an enhanced service for the diagnosis and treatment of minor eye conditions in Wales. The aim of the scheme is to reduce unnecessary hospital referrals in order to free up the capacity of secondary eye care services. Patients attending for a PEARS appointment are generally referred having presented to their GP with an acute eye condition, although any patient that is suffering from a sudden eye problem can request an appointment from their optometrist. Patients attending for a WEHE have previously attended for predefined and specific ocular investigations, for example patients having sight in only one eye, or if there is a specific family history or ethnic background. Any optometrist in Wales can participate in these schemes having passed specific training and practical assessments in order to demonstrate their skill and competence. Both PEARS and WEHE appointments are free to patients and readily accessible in the community across Wales. The efficacy of both schemes has been evaluated by Sheen et al (2009).

Sheen et al (2009) have determined that the PEARS and WEHE “provide a unique primary care service triaging and ocular case finding service. The evidence indicates that these schemes are clinically effective, provide a satisfactory service to the patient and combine ease of access at relatively low cost” (p.437 Sheen et al 2009). PEARS and WEHE exist alongside sight tests yet differ in structure since higher level management of ocular conditions is implemented and formalised, resulting in a lower referral profile into secondary eye care for example from PEARS. In the study by Sheen et al. most patients referred by GPs were managed within an optometric practice, demonstrating that optometrists have the expertise to manage these patients effectively without hospital intervention. The study also saw potential to shift eye related services from GPs to

optometrists which should release valuable GP resources for allocation elsewhere. A telephone survey indicated that there was a very high level of satisfaction with the service among patients, with 94.8 per cent 'very satisfied' and 5.2 per cent 'fairly satisfied' (Sheen et al. 2009).

Sheen et al. determined that the PEARS and WEHE model of primary eye care were clinically effective, acceptable and accessible to patients and clinicians, and provided at a relatively low cost (Sheen et al. 2009).

ACES Scheme

A variation on the PEARS scheme exists in Somerset called the Acute Community Eyecare Services (ACES). The aim of the ACES scheme is to provide a better quality local service for patients that suffer acute eye conditions, in order to reduce unnecessary referrals into secondary eye care (NHS Somerset 2010). An additional benefit is that it makes better use of optometrists' skills and training, making better use of available resources. The service was developed in partnership between NHS Somerset and Somerset LOC with input from patient representatives. The service is the first point of entry for patients with: sudden or recent reduction in vision; recent onset double vision; red eye; pain or discomfort in the eyes or temples; significant ocular discharge; recent flashes and floaters; mild trauma; and suspect foreign body. Access to the service is generally via the GP or patients can self-refer. The service operates during normal working hours, and there is a commitment to be seen within 24 hours (NHS Somerset 2010). The ACES innovation provides support to both GPs and secondary eye care and delivers quicker access to additional eye care services in the local community.

Manchester Glaucoma Referral Refinement Scheme

In the UK, the vast majority of glaucoma referrals into secondary eye care come from optometrists. Diagnostic tests funded as part of a NHS sight test do not have high specificity and consequently many of these referrals will be false positives, in that the patient is later diagnosed as not suffering from glaucoma. The Manchester referral refinement scheme aimed to reduce the numbers referred into secondary eye care by introducing and funding an additional layer of screening between the initial sight test and the hospital appointment to improve specificity, and reduce the number of false positives, improving the quality of each referral into secondary eye care.

Local optometrists in the Manchester area were selected for accreditation training in glaucoma following discussions between Manchester LOC and the Manchester Health Authority, in partnership with local secondary care glaucoma services. The aim was to reduce the number of false positive referrals for glaucoma which can be as high as 65 per cent of suspect glaucoma referrals into secondary eye care (Henson et al 2003).

Patients in Manchester with suspected glaucoma, instead of being referred to their GP and then to secondary eye care services, are referred to accredited optometrists in the community, who work to an agreed set of referral criteria. Patients who do not meet the referral criteria, meaning that they do not have suspected glaucoma, are returned to the original referring optometrist. Those requiring further analysis are referred directly to Manchester Royal Eye Hospital. An evaluation of this scheme conducted in 2003 demonstrated that the numbers of suspect cases of glaucoma referred into secondary eye care services were reduced by 40 per cent (Henson et al 2003). This figure was close to the percentage of false positive referrals measured at Manchester Royal Eye Hospital prior to the onset of this study. The information accompanying referral has been improved and the scheme produces a financial saving to the NHS of £17 per patient (Henson et al 2003).

In addition, Henson et al (2003) note that expanding the scheme to cover all suspect glaucoma referrals would lead to additional savings. The same report concluded that community refinement of suspected glaucoma offers some important benefits over the current referral pathway in operation over the majority of England and Wales. The report also noted that patients additionally benefited from greater flexibility in choosing appointments, reduced waiting times and they did not have to travel so far for their appointment, so that the quality of service to patients also improved. The scheme also operates with a clear reporting pathway, with clear lines of responsibility (Henson et al 2003).

The Manchester scheme therefore saves time and resources in secondary eye care by reducing the number of false positives, while improving the quality of information on those patients that were subsequently referred into hospital.

Stockport Referral Refinement Scheme

The Stockport scheme was established using the LOCSU glaucoma pathways to deal with the increased level of referrals due to the NICE guidelines. This scheme operates as an enhanced service for intraocular pressure (IOP) refinement, where other signs of glaucoma are not present. The aim is to reduce unnecessary referrals to the hospital eye service, and to minimise capacity issues within overburdened hospital glaucoma clinics. The service is designed to be cost effective by appropriately retaining a greater number of patients within the primary care setting.

Patients identified as having intra ocular pressure (IOP) above NICE guidelines (of over 21mmHg) have an additional assessment of IOP using hospital standard equipment. This service falls within the core competences of optometrists, and is commenced immediately if the optometrist is contracted to provide the service. If the patient turns out to be within normal IOP limits, they can be discharged. If the outcome is uncertain, then the patient returns for a follow up assessment and, if repeatable high pressures are confirmed, is referred directly into secondary eye care services. The primary care glaucoma referral scheme is deflecting 77 per cent of low risk patients (with suspect IOP and no other signs of glaucoma) that would otherwise have been seen in secondary eye care under NICE guidelines (NHS Stockport 2010). This should free up about 1200 appointments per year in secondary eye care in Stockport, which will help to clear a backlog of 2,500 diabetic retinopathy and glaucoma patients that are overdue for follow ups (NHS Stockport 2010).

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