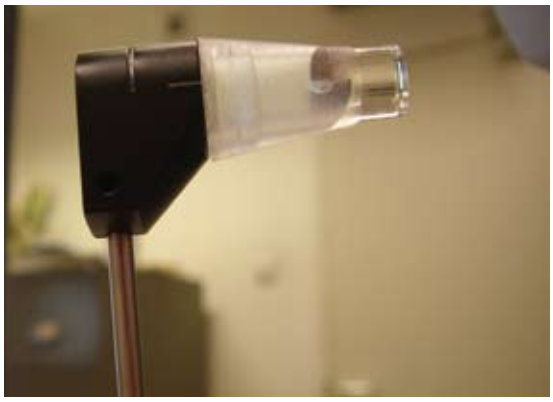
Making sense of the recent glaucoma related guidelines – NICE and beyond

Professor Stephen Vernon clarifies the implications of the NICE guidelines on glaucoma for the primary care optometrist

In April 2009 The National Institute of Clinical Excellence (NICE) issued guidance concerning the diagnosis and management of chronic open-angle glaucoma (COAG) and ocular hypertension (OHT) (see Further reading). Prior to this, community optometrists had been referring glaucoma suspects based upon guidance from the General Optical Council, the College of Optometrists and sometimes their local ophthalmologists. In relation to lower risk OHT, guidance from the GOC about 11 years ago permitted optometrists to observe such cases without referral. Indeed, those of us working in the Hospital Eye Service (HES) noted a reduction in referral of cases of OHT compared with the levels of referral in the 1990s.

Most, if not all, optometrists will be aware of the edict from the AOP/FODO/ABDO which was circulated as a direct consequence of the NICE guidance and many will have appreciated the increased pressure placed on the HES as a result of the 'strong advice' to optometrists to refer all persons measuring an IOP of >21mmHg for assessment by an ophthalmologist. Further guidance has been issued since April 2009 and more may be forthcoming. The purpose of this article is to correlate the current advice to community optometrists concerning referral of patients suspected of having OHT and COAG by examining the history of how the current state of play arose. To do this, it is valuable to look far into the past to see how the referral of glaucoma suspects has changed over the years and note how the HES has adapted to the challenge of caring for OHT and COAG suspects and those with these conditions. This will involve an understanding of terms such as 'shared care', 'referral refinement', 'care pathways', 'supervision', 'any willing provider' and so on.



Optometrists have been strongly advised by the optical bodies to refer all patients with an IOP of >21mmHg

Glaucoma referral in the 1980s and 1990s

There is little data on referral of glaucoma suspects from optometrists prior to the 1980s. In a ground-breaking study examining 207 new patients diagnosed with glaucoma in 1980/1 from eight eye units, only 131 (64 per cent) had their referral initiated by optometrists, the rest came directly from GPs.[1] About two-thirds of glaucoma patients presented with symptoms of visual loss, 33 per cent presented late with 9 per cent registerable as blind on presentation. By the late 1980s we had data on how optometrists attempted to detect glaucoma[2] and their false positive rate.[3] In the former study, 50 per cent of optometrists would refer a patient on IOP grounds alone if the IOP was >24mm Hg and 20 per cent never performed a visual field. In the latter study, 44 per cent of referrals were deemed false positives by the HES. By the 1990s the diagnostic accuracy of optometrists had stabilised so that 33 per cent of referrals had glaucoma, 33 per cent were suspects requiring review in the HES (or shared care scheme) and 33 per cent were normal and discharged.[4]

TABLE 1

Main recommendations from the Eye Care Services Committee Working Party Document (published April 2004)

- Community optometrists are encouraged to conform to College guidelines for referral of glaucoma suspects
- HES services are encouraged to utilise optometrists to assist in glaucoma care within the HES
- Community refinement of optometric referrals is established utilising OMPs and specialist optometrists
- Community care of 'straightforward' glaucoma cases by OMPs and specialist optometrists is established
- The National Screening Committee considers chronic glaucoma as a candidate for formal screening.

Shared care and optometry

In the late 1980s/early 1990s, with an increasing prevalence of non-contact tonometers and a desire within optometry to detect glaucoma early, the numbers of referrals to the HES grew. This led a few pioneers to develop 'shared care' schemes using the skills of optometrists, nurses and orthoptists to assist in the management of COAG and OHT. The first 'in-house' scheme utilising optometrists in England was established in Nottingham in 1993[5] and some schemes (eg the Bristol scheme) have grown so that most routine COAG and OHT care is delivered by optometrists. Some schemes have concentrated on referral refinement[6] and some on the management of established cases. In 2006, a survey of English schemes indicated that 62 of the 131 ophthalmology departments (47 per cent) had a shared care scheme.[5] Considering the increase in such schemes in the early 2000s, it is very likely that this number is now much greater. Schemes develop and evolve. For example, in Nottingham we now (2011) have five schemes running covering all aspects of medical COAG and OHT care, with three 'in-house' (a 'diagnostic' scheme, and two monitoring schemes, one for long-term stable patients and a 'specialist supervised' scheme for less stable

patients) and two 'in the community' (a 'diagnostic' scheme identical to its in-house partner, and an 'OHT monitoring' scheme).

The Department of Health (DoH) and glaucoma

As a result of a desire to improve eye care, and with evidence of success from a number of schemes, in 2003 the DoH commissioned working parties to explore the possibility of developing new 'care pathways' in the common eye disorders. The Glaucoma Working Party (part of the National Eyecare Services Steering Group) put forward five pathways which were given the seal of approval from the DoH together with five recommendations for action (Table 1). The pathways and recommendations established, for the first time within a policy document, the principle of moving glaucoma care into the community (see Further reading). Integral to this aim was an increasing utilisation of optometrists to provide both diagnostic skills and monitoring ability, with an understanding that this would require the appropriate training, equipment and remuneration. It was further emphasised that it was essential to develop information technology (IT) systems to facilitate the process.

The move to increased community care was further emphasised by the commissioning toolkit for community-based eye care services document from the DoH published in 2007 in which there was practical advice on reviewing and modernising services as well as encouragement for practice-based commissioning (PBC) and payment by results (PBR) (see Further reading).

NICE guidance

As a result of the AOP 'advice' mentioned above, many optometrists (and ophthalmologists!) wrongly assume that the NICE document included guidance on the referral of glaucoma suspects from primary care. The NICE document is aimed at the care professional receiving a referral and gives guidance on who should diagnose COAG and OHT, who should diagnose and manage these conditions (personnel and qualifications), the nature of the management/treatment and the review frequency. All NICE documents are derived by a panel of healthcare professionals with some lay members, and are only permitted to use high quality data when formulating their advice. The NICE glaucoma guidance committee consisted of five ophthalmologists, three optometrists, one nurse, one orthoptist, one patient representative and one representative from a glaucoma charity. They were assisted by NICE staff who presented the relevant data for consideration and who performed complex statistical calculations to determine cost-effectiveness. The draft document was issued in September 2008 and NICE received many suggestions for improvement, including a 20-point document from the Royal College of Ophthalmologists (see Further reading). Some changes were made to the draft as a result of the consultation process, but many ophthalmologists consider that there were still improvements that could have been made.

There is no doubt that the NICE guidance on glaucoma and OHT has many excellent pieces of advice. However, there is significant dispute among glaucoma experts as to the advisability of treating OHT based upon IOP, corneal thickness and age alone, particularly at the levels of IOP stated in the guidance. Indeed, the advice to treat persons under the age of 65 with OHT and IOPs of between 22 and 24mmm Hg providing the central corneal thickness (CCT) measures <555 microns was probably the one part of the guidance that convinced the legal advisers of the AOP consortium to 'strongly advise' referral of all people with a measured IOP >21mmHg. NICE was heavily influenced by the original results of the Ocular Hypertension Treatment Study (OHTS) from the USA.[7] It remains to be seen whether it will modify this guidance given the more recently published study from the OHTS team indicating the lack of a detrimental effect of long-term observation of untreated people with such low risk OHT.[8]

TABLE 2

Referral of low risk OHT suspects by community optometrists (abstracted from *Guidance on the referral of glaucoma suspects by community optometrists*)

- Practitioners may consider not referring patients at low risk of significant visual field loss in their lifetime
  - Patients aged 80 years and over with measured IOPs <26mmHg with otherwise normal ocular examinations (normal discs, fields and van Herick)
  - Patients aged 65 and over with IOPs of <25mmHg and with otherwise normal ocular examinations (normal discs, fields and van Herick).
- These groups do not qualify for treatment under current NICE guidance. Such patients may be advised that they should be reviewed by a community optometrist every 12 months

The joint College guidance on referral of glaucoma suspects by community optometrists

To attempt to define expert guidance related to issues arising as a result of the NICE Glaucoma Guidelines, the College of Optometrists and the Royal College of Ophthalmologists, in an innovative strategy move, convened a joint working party whose remit was to examine areas where new guidance could be of value. The first document, produced in December 2009 and updated in 2010 (see Further reading), deals with the testing and referral of glaucoma suspects in the community. As well as giving practical advice on IOP measurement, it assists the optometrist in decision making concerning referral of low risk OHT suspects (Table 2). Following its publication, the AOP consortium has modified its 'advice' in line with the document, an action that should reduce significantly the number of false positive referrals to secondary care. The referral document is essential reading for all community optometrists.

A recent paper[9] has modelled the effect of guidance alteration in the over-65s using data from an epidemiological study of eye disease in the elderly, concluding that if the joint College guidance is followed, the number of referrals for OHT can be reduced by up to 63 per cent in the over-65 age group when IOP is measured by Goldmann tonometry. The addition of CCT measurement to the standard primary care tests would reduce the number of referrals for OHT by 85 per cent, compared with referring all persons with an IOP of >21mmHg (measured by Goldmann applanation).

The joint College guidance on supervision in relation to glaucoma-related care by optometrists

In December 2010 the joint committee produced its second guidance document to clarify the meaning of 'supervision' as it appears in the NICE guidance. The document is essential reading for all those optometrists who work in glaucoma-related shared care schemes and defines responsibilities in the shared care environment (see Further reading). It implies that optometrists who have been working in well-managed schemes supervised by the HES do not have to gain additional qualifications to be able to

continue to work in such schemes. This does not of course undervalue the benefits of acquiring additional formal qualifications such as the College of Optometrists Glaucoma Diplomas A and B.

The future of glaucoma care in the post NICE era

If the NICE glaucoma guidance is followed, it is predicted that the following changes will occur:

- More people with suspect OHT will be referred from primary care for 'management'
- More people will be treated for glaucoma-related disease
- A higher percentage of people with glaucoma and OHT will have optic disc imaging
- More people with glaucoma will have surgery for the condition
- Fewer people with glaucoma or OHT will have their monitoring review postponed
- More glaucoma related care will occur 'in the community'.

Whether fewer people will be visually impaired as a result of the guidance remains to be seen. The most recent government white paper entitled *Equity and excellence: Liberating the NHS*, has paved the way for major changes in chronic care with GP commissioners able to refer patients to 'any willing provider'. Competition is encouraged in an attempt to drive efficiency savings.

The combination of this document and the NICE guidance on glaucoma could lead to an improvement in glaucoma care by the following mechanisms:

- More cases diagnosed
- Increased relevant timely investigations
- Increased use of treatment protocols
- Better documentation
- Specialists have more time to manage complex cases.

However, the same documents could result in a worsening of care:

- Inappropriate treatment (over-treatment of those who do not require it and delayed appropriate treatment if a change of carer required)
- Finance diverted from the 'needy' to the 'worried well' (over-monitoring of low risk (for significant visual impairment) patients absorbs finance previously devoted to high risk cases, increase in false positive referrals)
- Poor continuity of care (short-term contracts)
- Mass mediocrity (centres of excellence forced to reduce quality of care to remain competitive)
- Reduced feedback from secondary to primary care (this is already happening with 'choose and book' where optometric letters are not included in an electronic referral)
- More service providers (may provide bare minimum service lower than previous local HES service, reduced research potential as cohort studies more difficult).

In the current economic climate, it is unlikely that what limited finance that can be devoted to ophthalmic disorders will be increased. The cost of treating wet age-related macular degeneration to NICE standards is currently challenging providers and purchasers. With similar treatments for retinal vascular disorders such as diabetic maculopathy and retinal vein occlusion on the horizon, ophthalmic healthcare professionals must ensure that what finance that can be devoted to glaucoma, a much more chronic but potentially equally devastating disease, is used to its maximum effect.

Community optometrists can help their patients and their colleagues (both optometric and ophthalmic) in the HES by taking the time to read and understand the new guidance produced by the College of Optometrists and the Royal College of Ophthalmologists concerning glaucoma testing and referral and by engaging in referral refinement schemes such as those suggested by LOCSU (see Further reading). In addition they can join in the lobbying of GP commissioners concerning the placement of contracts for glaucoma care.

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Further reading

- NICE document – Glaucoma: diagnosis and management of chronic open angle glaucoma and ocular hypertension – available at www.guidance.nice.org.uk
- Commissioning toolkit for community based eye care services – available at www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/DH_063978
- Guidance on the referral of Glaucoma suspects by community optometrists issued by The College of Optometrists and The Royal College of Ophthalmologists – available at www.rcophth.ac.uk (for the profession section).
- College Statement on NICE Glaucoma guidelines – available at www.rcophth.ac.uk ('for the profession' section)
- Joint Supplementary College Guidance on supervision in relation to glaucoma related activities by optometrists. – available at www.rcophth.ac.uk ('for the profession' section).
- National Eyecare Services Steering Group – first report – available from www.dh.gov.uk
- LOCSU glaucoma referral refinement and OHT enhanced service pathways – available from www.loc-net.org.uk

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