Optometry Wales

## OPTOMETRY WALES POSITION PAPER: GLAUCOMA

### EXECUTIVE SUMMARY

Currently optometrists play a crucial role in case detection and repeating those measurements that are associated with referrals for glaucoma. It is widely recognised that optometrists initiate the vast majority of glaucoma related referrals into secondary care. This role could very simply be extended to include monitoring of low risk cases after a diagnosis of Ocular Hypertension or Chronic Open Angle Glaucoma Suspect has been made and a management plan decided.

With further training and specialist qualification referral refinement and management of those patients with Chronic Open Angle Glaucoma could be managed by optometrists in the community. Until this time those optometrists involved in the management of glaucoma should be under direct supervision of a consultant ophthalmologist.

### BACKGROUND

Glaucoma is a term used to describe a group of diseases affecting the eye. It is typified by progressive optic nerve damage that causes irreversible change in vision/visual field. Frequently, the most common form of glaucoma, chronic open angle glaucoma (COAG), is preceded by ocular hypertension (OHT) where eye pressure is elevated alone. Once diagnosed, patients will be offered appropriate treatment, either medical or surgical, and will require regular lifetime review.

Around 2% of the population over 40 years old have chronic open angle glaucoma with this number increasing to around 10% in those over 75 years old. Around 4% of people over 40 years old have ocular hypertension. Individuals are generally unaware of their visual loss until the advanced stages, and early detection and treatment are key to maintaining a sighted lifetime. It is estimated that 10% of blindness registrations are due to glaucoma. In the main this sight loss is avoidable.

Welsh Government statistics show that ophthalmology attendances account for around 10% of total hospital outpatient activity in Wales[1]. A significant proportion of ophthalmology outpatient attendances accommodate long term

[1] http://wales.gov.uk/topics/statistics/theme/health/nhs-outpatient/?lang=en (accessed June 2011)

review of this chronic condition. With an aging population this will inevitably place an increasing burden on capacity within ophthalmology departments as they also attempt to offer high quality services for those requiring elective and unscheduled care.

## NICE GUIDANCE ON THE DIAGNOSIS AND MANAGEMENT OF COAG AND OHT [2,3]

The National Institute of Health and Clinical Excellence (NICE) published guidance in 2009 on the diagnosis and management of COAG and OHT. This guidance set out the standards of care patients should expect; patient groups according to their risk of sight loss in their lifetime, and the skill level healthcare professionals involved in their care should possess. Thus formalising the necessary knowledge and skills required for working with various case mix complexities[4].

NICE singled out three main diagnostic groups and stratified them according to the risk of visual loss within a patients lifetime. Those with elevated eye pressure alone (OHTs) and those with suspected optic nerve damage but normal visual fields (COAG suspects) were deemed to be at lower risk of losing their vision in their lifetime compared with those with definite disease (COAG).

NICE recommended varying levels of treatment and frequency of follow up according to these levels of risk. Unusually, NICE was also requested to make recommendations on appropriate service models.

### Basis for Diagnosis of COAG, COAG suspect and OHT

The diagnosis of COAG, COAG suspect and OHT should be based on several key tests and assessments:-

- Dilated slit lamp indirect ophthalmoscopy
- Goldmann applanation tonometry
- Visual field measurement using standard automated perimetry
- Anterior chamber assessment with additional gonioscopy
- Central Corneal thickness measurement

An optic nerve head image should be obtained at diagnosis for a baseline. While other imaging techniques are available, stereophotography remains the imaging technique reference standard.

### Basis for COAG, COAG suspect and OHT Management Decisions

Those with a diagnosis of COAG should have their management decisions based on change in clinical status from baseline at diagnosis, specifically using:-

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[2] Glaucoma: Diagnosis and management of chronic open angle glaucoma and ocular hypertension. National Collaborating Centre for Acute Care; First Edition (2009). ISBN 0-9549760-6-1.

[3] National Institute for Health and Clinical Excellence: Glaucoma Quality Standards (2011)

[4] Joint Supplementary College Guidance on Supervision in relation to Glaucoma-related Care by Optometrists . The College of Optometrists and The Royal College of Ophthalmologists (2010) http://www.college-optometrists.org/

- Slit lamp indirect ophthalmoscopy
- Goldmann applanation tonometry
- Visual field measurement using standard automated perimetry
- Anterior chamber assessment with additional van Herick
- Repeat gonioscopy when clinically indicated
- Repeat central corneal thickness measurements as necessary

Patients with established COAG may have co existing eye problems and pharmacological interactions that need to be considered. Treatment options for those with COAG may include complex surgeries that are out of the scope of routine, entry level, optometric experience.

Those with a diagnosis of OHT or COAG suspect status should be monitored by those utilising several key tests:-

- Slit lamp indirect ophthalmoscopy
- Goldmann applanation tonometry
- Central suprathreshold perimetry (or standard automated perimetry)
- Anterior chamber assessment with additional van Herick

The clinician involved in the diagnosis and management of OHT and COAG should be able to perform and interpret the recommended assessments for each patient group and put them into context with any previous ocular and medical history to arrive at their clinical decision. Clinicians making a diagnosis must also be able to provide a management plan. Those who diagnose, treat or monitor patients independently should take full responsibility for the care they provide. Appropriate documentation and records should be available to healthcare professionals at each clinical encounter.

## NICE GUIDANCE AND OPTOMETRY

Core competent optometrists possess the skills and qualification to identify those at risk of OHT and COAG, and routinely undertake optic nerve assessment, measure intraocular pressure and visual fields. Indeed, most patients diagnosed with glaucoma will have been initially identified by an optometrist during a routine sight test[5]. Optometrists who find features that are suspicious for glaucoma during such case finding examination are duty bound to refer patients to secondary care for consideration of diagnosis.

Optometrists are able to formalise the skills, knowledge and experience gained to work independently in glaucoma clinics through a College of Optometrists Higher Qualification in Glaucoma. The Higher Qualification is split into two parts. Certificate A deals with the knowledge surrounding diagnosis and differential diagnosis of glaucoma and includes the skills and decision making surrounding diagnosis and differential diagnosis of OHT and

[5] Davey CJ, Green C & Elliott DB. Assessment of referrals to the hospital eye service by optometrists and GPs in Bradford and Airedale. Ophthalmic Physiol Opt 2011, 31, 23–28.

glaucoma[6]. Certificate B deals with the skills and decision making surrounding the management of glaucoma and relevant co-morbidities[6].

## Repeat Measures

Individuals who are perceived at risk of glaucoma during a routine eye examination may be referred on the basis of elevated intra ocular pressure, a suspicious visual field result or a suspicious optic nerve appearance. Those with suspected optic nerve damage should be referred to a Consultant Ophthalmologist. However, intraocular pressure and visual field measures are prone to measurement error, and as such repeating these measurements can reduce the number of false positive referrals into the Hospital Eye Service[7].

## Referral Refinement

The definitive diagnosis of COAG should be made by a Consultant Ophthalmologist, who may need to consider investigation into alternative neuropathy. However optometrists who have satisfied the College of Optometrists Glaucoma Certificate A and have relevant experience can undertake the diagnosis of OHT and COAG suspect status.

A referral refinement service involving the undertaking and interpretation of tests sufficient for diagnosis of OHT and suspected COAG, and the preliminary identification of COAG could be delivered independently, and could reduce the number of individuals referred into the Hospital Eye Service further[7,8].

## Management of OHTs and COAG suspects in the Community

Those patients who have received a diagnosis of OHT or COAG Suspect and a management plan may be monitored by optometrists in the community. Indeed, the examinations these patients should expect maps the examination performed during a Welsh Eye Health Examination (WEHE). The management plan patients receive at the point of diagnosis would allow optometrists to monitor these individuals within the community, only requesting further input from secondary care when the management plan stipulates.

Those with a diagnosis of OHT or COAG suspect who are using topical medication can also be monitored in this way. However, alterations in their medication should be made, in accordance with their management plan, by a clinician with a supplementary or independent prescribing qualification.

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[6] College of Optometrists Glaucoma Diploma Syllabus. Accessed June 2011

[7] Glaucoma Referral Refinement & OHT Monitoring www.loc-net.org.uk accessed June 2011

[8] Henson DB, Spencer AF, Harper R, Cadman EJ. Community refinement of glaucoma referrals. Eye 2003, 17(1):21-6.

## Management of COAG

The management of those with established COAG is, in the main, carried out within the Hospital Eye Service. Although intraocular pressure measurement is a convenient device to assess disease control, the treatment aim is to preserve vision throughout a patient's lifetime. Rates of progression in this irreversibly blinding condition vary considerably, and surgical intervention is not uncommon. Regular assessment of visual field and optic nerve head appearance according to their perceived threat of sight loss within their lifetime is essential.

To provide safe, high quality care to patients, those who have received a diagnosis of COAG should be monitored by a healthcare professional who can perform and interpret their clinical findings[2]. Core competent optometrist should only manage COAG if they are under direct supervision by a Consultant Ophthalmologist. Recent guidance on supervision has set out that supervision should be appropriate to case mix[4], with optometric precedent in protected functions requiring a supervising practitioner to be on the premises[9].

Those optometrists involved in the care of patients with established glaucoma who are working without direct access to their supervising consultant should have satisfied the requirements of the College of Optometrists Glaucoma Diploma (DipGlau) and have relevant experience. This arrangement would increase teaching opportunities and remain within current professional guidance[4].

There are examples throughout the English Health Services where care of these patients has been placed in a community setting[10,11]. However, the case mix chosen in these schemes makes no allowance for the case complexity, rather most schemes place an emphasis on 'stability'. Progression in glaucoma is not linear, and perceived stability is largely historical[12].

Optometrists in Wales have the skills to work in partnership with the Hospital Eye Service to provide high quality care to patients who become involved with glaucoma services. Initially involved in case detection and repeat measurements, community optometrists with up to date core competency could immediately be involved in monitoring OHT/COAG suspects, increasing capacity within the Hospital Eye Service with minimal training implications.

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[9] Section A8 Supervision. Code of Ethics and Guidelines for Professional Conduct. College of Optometrists (2011)

[10] Spry PG, Spencer IC, Sparrow JM, Peters TJ, Brookes ST, Gray S et al. The Bristol Shared Care Glaucoma Study: reliability of community optometric and hospital eye service test measures. British Journal of Ophthalmology 1999, 83(6):707-12.

[11] Vernon SA, Adair A. Shared care in glaucoma: a national study of secondary care lead schemes in England. Eye (Lond). 2010 Feb;24(2):265-9.

[12] Rossetti L, Goni F, Denis P, Bengtsson B, Martinez A, Heijl A. Focusing on glaucoma progression and the clinical importance of progression rate measurement: a review. Eye (Lond). 2010 Oct;24 Suppl 1:S1-7.

Optometrists in Wales, with further training, could extend their role to provide services where OHT/COAG suspects are diagnosed in the community and only those who require input from a Consultant Ophthalmologist enter the Hospital Eye Service.

Optometrists in Wales, with further training, could extend their role to provide services to independently manage patients with glaucoma. Until this training is available, those optometrists involved in the management of glaucoma should be under the direct supervision of a Consultant Ophthalmologist.

**RECOMMENDATIONS**

Optometry Wales would support an 'All Wales' service as supported by the Welsh Government to ensure equity of service across Wales for the patient.

The Welsh Government should consider funding training for optometrists to gain the College of Optometrists Diploma in Glaucoma.

Health Boards in Wales should consider repeat measurement services with local independent contractors.

Health Boards in Wales should consider implementing local enhanced OHT/COAG suspect monitoring services with local optometry independent contractors.

Health Boards in Wales should consider implementing OHT/COAG suspect monitoring services through WECI.

Health Boards in Wales should consider utilising optometrists with College of Optometrists Glaucoma Certificate A to provide referral refinement services.

Health Boards in Wales should consider employing DipGlau optometrists directly or through local enhanced services to manage routine glaucoma cases.

Health Boards in Wales should consider employing optometrists to work alongside consultant ophthalmologists in hospital eye departments.

The Welsh Government should continue to fund training for optometrists to consolidate their core skills, to underpin the requirements for monitoring those with low risk of visual loss, through the WECI accreditation process.