

Glaucoma care provision using a multidisciplinary approach: a personal view

BY STANLEY KEYS

This article is going to explain the secret to running an efficient multidisciplinary glaucoma service which will comfortably meet the demands of an ever-growing elderly population, within the confines of budgetary and clinical constraints, wherever the setting. This may be very wishful thinking. If nothing else, I hope to put forward some solutions to how this ideal solution may be achieved.

Challenges of a glaucoma service

In a recent article in the *BMJ* from the Norfolk Eye Study into the relevance of intraocular pressure (IOP) to the eventual glaucoma diagnosis [1], the authors cited the fact “that glaucoma and glaucoma suspect patients account for the sixth largest share of NHS outpatient attendances in England”. In some ways I found this quite reassuring in that it put a sense of scale upon the challenge that we are trying to meet collectively. It also confirms why clinicians in this field often feel swamped with the level of demand.

Several key factors make glaucoma service provision challenging. Patient assessment is fairly labour intensive, and diagnosis is often ambiguous, requiring several visits to establish. With regard to examination, there is also quite a list of clinical testing and information that has to be gathered for each patient in order to establish the risks and possible diagnosis. Most glaucoma presentations are chronic conditions that require long-term follow-up, perhaps for the remainder of the patient's life and given this chronicity, we tend to gain new patients at a greater rate than we are able to discharge. New glaucoma referrals to our department in Inverness have approximately doubled in the last 10 years, to around 10 or 11 new patients each week. For a small department this is highly significant, equating to around 500 to 550 new patients every year. A large proportion of these patients will require multiple visits in that year.

Glaucoma risk stratification

The traditional model of a ‘consultant or doctor only’ clinic working their way through new and review patient lists, I suspect has

long since changed in most places. Different departments have had to evolve their approach to meet these demands in terms of staffing, location and clinical model. For a large number of patients who either have glaucoma, ocular hypertension, or are glaucoma suspects, the disease process is either stable or slowly progressive. This means that you can stratify the patient cohort into categories such as ‘stable,’ ‘low risk’ or ‘complex.’ In terms of who sees these patients, you can then start to arrange or prioritise your staffing resource, moving to a multidisciplinary staffing model. Consultants can focus their time on progressive cases where treatment is challenging and / or requiring surgical intervention. A large proportion of the non-complex patients can be stratified and managed by different Health Care Professionals (HCPs) with the appropriate level of qualification and experience.

The glaucoma team

Across the UK, optometrists, orthoptists and nurse practitioners are heavily involved in glaucoma care mainly within the Hospital Eye Service (HES), but in some cases, in the community. The Royal College of Ophthalmologists’ recent document ‘The Way Forward’ describes very nicely how these different professionals might be involved in a tiered model of glaucoma delivery [2].

Figure 1 summarises how these different HCPs might work in delivering care to glaucoma patients. The first group is really

involved in acquisition of clinical data for an ophthalmologist to review, in a ‘virtual clinic’ setting. This allows the consultant to increase the number of patients they can manage in a given clinical session, as their time isn’t consumed by patient contact and clinical testing. This has been successfully set up in hospitals across the UK using a variety of locations. These may be carried out in the eye clinic setting, peripheral locations such as GP surgeries and in some cases using mobile van or bus units. This latter model may be applicable to the health board region in which I work, the Scottish Highlands and Islands, where there is a very rural based population covering an area larger than Belgium. This model has the added benefits of bringing the service to the patient and also reducing patient footfall through busy clinics.

The middle tier is now a commonplace approach, with an HCP working alongside a consultant. This is how most practitioners, myself included, get the opportunity of developing in this field. They work alongside a consultant in order to learn and build up clinical knowledge and experience, then gradually become more comfortable with running their own clinical list, with the safety net of a consultant nearby.

Finally, the third tier is when a HCP can run an autonomous clinic and manage patients without the supervision of a consultant. In this situation, having a higher glaucoma qualification is a pre-requisite and having Independent Prescribing (IP) status is certainly advantageous. Patients

Figure 1: A multidisciplinary approach to managing glaucoma review patients.

Data Acquisition only – data then reviewed by ophthalmologists		
1. Nurse / Ophthalmic technicians / practitioners: <ul style="list-style-type: none"> • VA • Visual Field •IOP(GAT) • Pachymetry • Disc (HRT/OCT/photo) • +/- gonioscopy 	Stable treated glaucoma / OHT monitored - concerns flagged up	
	2. Optometrists / Nurse Practitioners / Orthoptists <ul style="list-style-type: none"> • Running clinics alongside consultant • Treatment variation according to protocol • Seeking help appropriately for review / prescribing 	Full Management
		3. Optometrists or other practitioners with glaucoma training, qualifications and experience (+/- IP) <ul style="list-style-type: none"> • Running independent clinics or alongside consultant
<small>The Royal College of Ophthalmologists [2]</small>		

can be managed in this situation medically, however, with a consultant opinion being sought when the patient requires surgical / laser interventions, or in situations of other complications. The College Common Clinical Competency Framework for glaucoma [3] also suggests laser procedures may be carried out by an HCP with higher qualifications.

Reflecting on the above model I suspect that a lot of departments have been working on something along these lines for quite a few years, however, this helps to give clarity on how we organise our service and try to play to the strengths of our staff members. At present I am involved in trying to filter the shorter 'IOP check' appointments out of the main review clinics, and run dedicated clinics for IOP reviews in which patient numbers can be increased. This should lend itself to another HCP such as a nurse, orthoptist or optometrist without the glaucoma qualifications coming to help to deliver these services, facilitating staff development.

From personal experience, I started working alongside a consultant about 12 years ago, learning directly from them, gradually taking patients from their list and building up a real depth of clinical experience. I completed a Diploma in Glaucoma Studies through the College of Optometrists, and then gained IP status. The initial building of clinical experience and competence is crucial as this is where a huge proportion of your learning takes place. Completing an accreditation process is invaluable as it forces you to consolidate what you have learnt clinically and identifies gaps in your knowledge and experience. Finally, IP shores up your medical management knowledge and ability to prescribe without needing input from a medical colleague.

The Diploma in Glaucoma Studies is currently delivered as a post-grad qualification through several of the optometry schools in the UK. The available courses and providers may be accessed via the College of Optometrists website [4].

Glaucoma care in the community

In the final part of this article I would like to examine the role of our colleagues in community optometry, in the overall provision of glaucoma care. The vast majority of referrals into the HES for glaucoma are derived from optometrists, so already they have an important role, in trying to detect cases of glaucoma or those at risk as accurately as possible. In Scotland we have had an enhanced General Ophthalmic Service since 2006 [5]. This increased the clinical standards by making certain tests mandatory when it came to potential glaucoma referrals, such as applanation

tonometry, dilated Volk lens examination of the discs and threshold visual field testing. This also gave provision for a supplementary examination to facilitate follow-up appointments for repeat IOP and visual field assessment.

In the past couple of years all practices have also been equipped with pachymeters so that referrals can be refined even further under Scottish Intercollegiate Guidance Network (SIGN) 144 Glaucoma referral and safe discharge guidance (6). This supports optometrists to refer patients appropriately and have confidence to monitor patients who are ocular hypertensives (OHT) within certain ranges of IOP and central corneal thickness. It also makes provisions for patients being discharged from the HES and monitored in practice. These patients include those with untreated OHT who are deemed to be low risk, and those OHT patients who are on monotherapy and seen to be stable. This is greatly beneficial for the HES and will hopefully work well, given clear communication and guidance for our colleagues in community practice. Again, in the region where I work, this is beneficial for patients as it may save them a six hour round trip to Inverness for a 20 minute glaucoma review.

There are various other models which have been implemented across the UK, such as referral refinement schemes, whereby patients will be referred to an optometrist with an accredited qualification such as a Professional Certificate or Higher Professional Certificate in glaucoma, for a more detailed glaucoma assessment before the decision as to whether to refer or not is taken. There are also shared care schemes where patients are co-managed with an HES consultant. It may be that the patient sees the optometrist at alternate reviews, or that they monitor the patient as long as they remain within a certain range of clinical parameters, at which stage they are sent back to the consultant.

The need to change

One of the certainties with being involved in glaucoma is that with the ageing population, the number of patients will continue to rise. I think, however, there are ways to develop our services. Firstly by re-arranging our hospital services to make best use of the skills of our HCP staff such as technicians, photographers, nurses, orthoptists and optometrists. This can be a good opportunity for staff members to increase their clinical experience and to develop their roles. Following the Royal College of Ophthalmologist's model of clinical delivery alongside available technology can also facilitate virtual clinics to support the service. And secondly,

by developing the role and link with our community optometry colleagues, both in detecting glaucoma patients accurately and in monitoring certain patient groups, through good communication links with the HES. If we can start to fulfil these goals, we might just realise the aim of developing a future-proofed service to better support our glaucoma patients.

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