

'The Way Forward' champions clinicians as architects of patient-centred service redesign

BY ROD MCNEIL

The demographic time bomb poses the dilemma of how more healthcare can be delivered to the UK's ageing population without commensurate growth in resources.

The Way Forward Project provides a robust resource for clinical centres to better identify and implement quality improvement efficiencies and service enhancements shown to bolster capacity and improve patient experience across ophthalmology. Following recent publication of research findings, this article summarises central components of The Way Forward and practical considerations for local implementation of modern models of care in cataract, glaucoma, medical retina and emergency eye care [1-4]. An exclusive interview with Professor Carrie MacEwen, Chair of The Way Forward and President, The Royal College of Ophthalmologists (RCOphth), provides a contextual perspective.

Further expansion of the consultant ophthalmologist workforce, a clear priority for the delivery of high quality sustainable services, will not be resolved in a suitable time frame to solve the current demand challenges. To help meet the increasing demand in ophthalmic services, the RCOphth believes that clinicians should act as the architects of change for a service to be sustainable for the future.

The Way Forward initiative was commissioned by the RCOphth to identify current methods of working and schemes implemented by ophthalmology departments in the UK to help meet the increasing demand in ophthalmic services. The research, by the Leeds Ophthalmic Public Health Team, focused on the four particularly high volume areas of cataract, glaucoma, medical retina (macular degeneration and diabetic eye disease) and emergency eye care. The findings, based on >200 structured interviews with consultant ophthalmologists leading subspecialist services in England, Scotland, Wales and Northern Ireland, identify real life solutions being used successfully to address increasing demand for ophthalmic care.

Four common themes in new models of care

An overarching objective across the new models of care in ophthalmic services is

to maximise use of consultant time and expertise. This frees up more time to perform surgery, deal with the more complex cases and concentrate on high-level clinical decision-making.

Four consistent themes through The Way Forward research encompass mechanisms to:

- Improve referrals: reduce false positive, unnecessary referrals and retain simple conditions in the community.
- Identify optimum flow through hospital clinics, treatment rooms and operating theatres to increase the number of patients being treated, reduce numbers of review appointments and improve patient experience.
- Develop discharge policies and shared care protocols.
- Enhance the ophthalmology multidisciplinary healthcare team and working practices within the hospital and the community.

"It is absolutely critical that ophthalmologists find better ways of working and implement

more efficient ophthalmic service delivery models," commented John Buchan, Principal Investigator and Consultant Ophthalmologist, Leeds Teaching Hospitals NHS Trust, in a telephone interview with the author. "It is also essential that Britain generates sufficient numbers of suitably qualified healthcare professionals and practising ophthalmologists to better match the gap between need and supply, without having to recruit doctors from already underserved healthcare systems to meet staff shortages at home."

Cataract: deliver greater economic efficiency through high volume surgical practice

Demand for cataract surgery, the commonest surgical procedure undertaken in the UK, is predicted to rise by 25% over the next decade and by 50% over the next 20 years. Referral guidance has improved 'conversion' rates for surgery for those referred with cataract. Patients should be selected based

Table 1: Income versus expense for varying productivity of cataract lists [1].

Number of cataracts per list	Income (£880 per case but varies with location and complexity) (£)	Expenses (£)	Profit (£)	Profit per Case (£)
5	4,400	3,583.13	816.87	163.37
6	5,280	3,808.41	1,471.59	245.27
7	6,160	4,033.68	2,126.32	303.76
8	7,040	4,258.96	2,781.04	347.63

Table 2: Models of cataract surgery postoperative care: community optometrist 'clinics' [1].

All routine postoperative cases seen at 4-6 weeks by local optometrist

Benefits	Limitations
• Frees up large numbers of appointments in the HES	• Ophthalmology trainees unable to review their postoperative patients
• Frees up consultant time	• Communication and continuity of care – patient and optometrist must have direct line of communication to HES for problems / routine transfer of audit data
• Location and time of appointment may be more convenient for patients	• Training and retaining competences and maintaining up to date protocols
• Well-developed audit of postoperative patients can be developed from essential feedback	• Potential financial implications of transfer of care

Table 3: Risk strata in glaucoma management [5].

Low risk
<ul style="list-style-type: none"> COAG suspect or OHT with or without suspicious features, i.e. equivocal optic disc or visual field, and those with PAC who have been successfully treated and have been demonstrated to have non-occludable angles. Essential elements include the fact that the optic disc and visual field are undamaged due to glaucoma and a diagnosis has been established by an appropriately trained and experienced HCP (as specified by NICE) and a management plan has been formulated and communicated along with relevant information for monitoring and triggers for return referral. There is a distinction between monitoring of low risk patients, and the management of low risk patients which requires further qualifications and enables a change of treatment plan within the care setting. Monitoring is a clinical process of following a patient's condition through time to detect changes in clinical or disease status which may require action. Management is a clinical process of reviewing treatment in response to changes in a patient's clinical or disease status.
Medium risk
<ul style="list-style-type: none"> Early to moderate established apparently 'stable' glaucoma.
High risk
<ul style="list-style-type: none"> Complex glaucoma (including COAG, PACG, secondary glaucoma and rare glaucomas). Patients at high risk of significant visual loss and those under active management or requiring, or having recently undergone glaucoma surgery.
Abbreviations: chronic open angle glaucoma (COAG); ocular hypertension (OHT); primary angle closure (PAC), healthcare professional (HCP); primary angle-closure glaucoma (PACG); National Institute for Health and Care Excellence (NICE).

on symptoms and clinical need rather than visual acuity. The following questions facilitate a high conversion rate by ensuring that those referred need and want an operation: 1) does the cataract affect the individual's sight and quality of life? and 2) does the patient understand the risks and wish to have surgery?

The target of departments performing one cataract operation every half an hour is not being routinely achieved and National Health Service (NHS) providers should look for opportunities to streamline processes to achieve "higher volume" surgery to secure greater economic efficiency. High volume cataract lists need adequate support but are cost-effective, i.e. reduced cost per case (Table 1). The income generated needs to be retained and reinvested in local eye care services rather than diverted elsewhere by the trusts in which they are housed. For postoperative care and discharge policies, only 11% of interviewees in The Way Forward Project reported that ophthalmologists routinely review cataract patients postoperatively. Cataract follow-ups are seen by non-ophthalmologists in 90% of cases and over 25% of these are discharged directly to the community (Table 2).

Eye departments should audit cataract referrals and the proportion listed for surgery. If it is less than 80%, then clinic capacity is probably being sub-optimally utilised. Ophthalmologists are advised to consider the possibility of coming to an arrangement with local optometrists that incorporate training and communication arrangements so that second eye cataract patients can be discharged directly following their operation if the surgery has been uncomplicated and there were no postoperative complications with the first eye, no increased risk factors for postoperative complications and no other

significant ocular comorbidities. As part of a pathway design, units might consider training either Hospital Eye Service (HES) healthcare professionals or community optometrists to see routine postoperative patients following uncomplicated first eye surgery.

Glaucoma: risk stratification is key to MDT glaucoma service

Glaucoma management accounts for 20% of current ophthalmology hospital outpatient

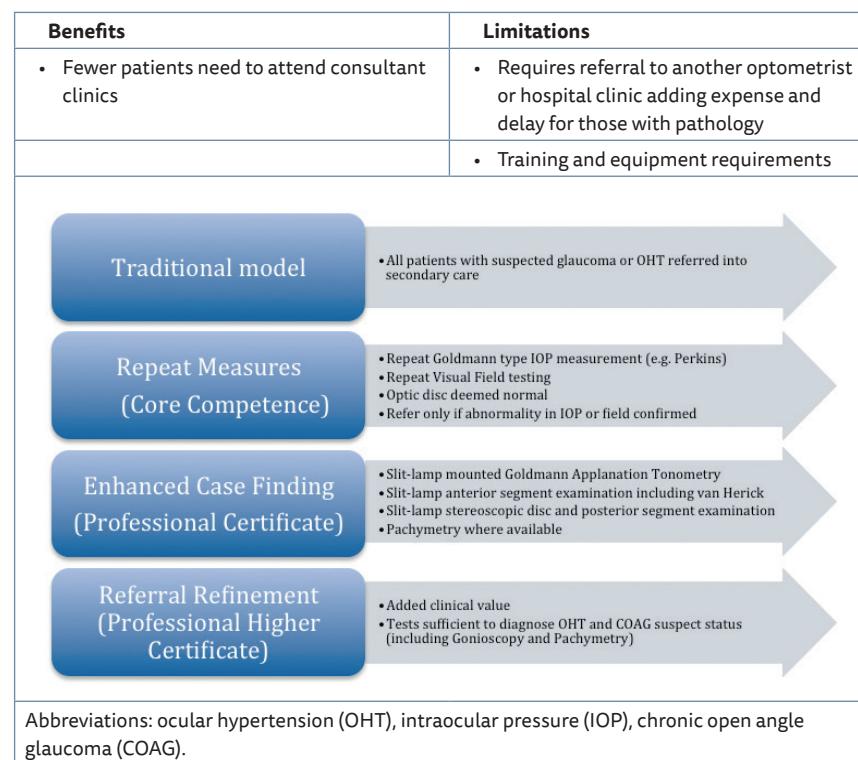
activity. Over the next 10 years, glaucoma cases are predicted to rise by 22%, glaucoma suspects by 10% and ocular hypertension cases by 9%. It is likely that a progressively greater percentage of prevalent cases will be detected and diagnosed with improvements in technology. Glaucoma referral filtering schemes (GRFS), refining referrals by interim assessment by non-ophthalmologists, can be used to improve accuracy of assessment prior to hospital referral and reduce false positive referrals (Figure 1).

A majority (88%) of glaucoma clinical leads have incorporated non-ophthalmologist expanded roles for delivering care in their glaucoma clinics. Stratification of patient risk of sight loss from glaucoma is being used to organise review at virtual clinics, healthcare professional specific clinics and consultant delivered clinics. Discharge policies for those referred with possible glaucoma and found not to have it or OHT should include clear instructions for re-referral.

The key to organisation of a glaucoma service by a multidisciplinary team (MDT) is stratification of patients into low, medium and higher risk categories, defined in the National Institute of Health & Care Excellence (NICE) accredited RCOphth glaucoma commissioning guideline (Table 3) [5]. Low (OHT / suspects) and medium ('stable' treated glaucoma patients) risk patients can be managed by a virtual follow-up service or by suitably trained healthcare professionals with limited consultant input. High risk complex cases are seen by ophthalmologists, commonly with a subspecialty interest.

Questions to consider for improving a glaucoma service include:

Figure 1: Interim filtering of glaucoma and ocular hypertension referrals by non-ophthalmologists – reducing false positive referrals to improve capacity [2].



- Discuss with colleagues and management how you can reduce inefficiencies (e.g. Did Not Attend [DNA] rates), manage demand (e.g. GRFS) and improve capacity by optimising available staff including training where needed.
- Check the first visit discharge rate and assess if the false positives are from IOP only, fields only or imaging only referrals. If there is no Goldmann applanation tonometry repeat pressure scheme or no repeat fields scheme in operation, consider setting one up in collaboration with local optometrists or in house healthcare professionals (HCPs). If effective in reducing false positives, consider developing it into an Enhanced Case Finding or full Glaucoma Referral Refinement Scheme.
- Consider a virtual review service for images captured by community optometrists, or additional training for optometrists that use such imaging devices.
- If there is an established high volume virtual clinic, consider putting all new referrals through it as this may be more efficient than starting another separate scheme.

For those looking to use a shared cared glaucoma service, bear the following in mind:

- A strong team of trained, competent and motivated HES optometrists, orthoptists or ophthalmic nurses over time can add capacity to complex patient cases, and can manage moderate risk patients under consultant care.
- Consider sessions funded for optometrists / HCPs working predominantly in the community or community clinics.
- Set up some glaucoma teaching open to all community optometrists as they may take on shared care roles for new referrals and follow-ups in the future.

Medical retina: explore higher throughput for AMD and virtual referral refinement opportunities in diabetic eye disease

Case numbers of neovascular age-related macular degeneration (AMD) are predicted to increase by 29% in the next 20 years (2015-2035) and by 59% over the twenty years to 2035, with the prevalence in the population over 50 years of age rising from 1.85% in 2015 to 2.36% in 2035 as the number of elderly rises. A similar rise in diabetic retinopathy (DR) case load is projected over the next 20 years. Practitioners are encouraged to use the Three Step Plan for reducing risks from outpatient delays: monitor and report data on delays for review appointments, maximise existing capacity and empower and inform patients regarding the importance of their appointment scheduling and personal treatment plans [6]. New referrals and review patients should have

equal access to timely care.

The need for continuing treatment of neovascular AMD necessitates significant and increasing resources. To improve injection services, practitioners are encouraged to consider non-ophthalmologist injectors. Intravitreal anti-vascular endothelial growth factor (anti-VEGF) injections are being performed by non-medical healthcare professionals (mainly trained nurses) in 64% of departments interviewed. The number of injections per session varied from <10 to 40, dependent on local circumstances, space and support. For intravitreal injection services that deliver less than 16 injections in a four-hour dedicated injection session (where the injector is not also performing clinical assessment), units are advised to visit a unit running with higher throughput to see how this is managed.

One-stop clinics are more common for review patients. Where a department is struggling with capacity for fundus fluorescein angiography (FFA) assessment, consider a targeted approach such that FFA investigations are only instigated when there is an expectation of this altering the management approach. For optical coherence tomography (OCT) provision, it could be decided not to perform an OCT on those patients who are receiving a planned series of consecutive injections until the next management decision is required. A virtual clinic service might be considered for follow-up stable R2 (pre-proliferative retinopathy) cases or for patient groups at lowest risk, e.g. those who have been stable off treatment for three months or longer.

The population with DR is projected to increase by between 20% and 80% in the next 20 years. Approximately 50% of referrals from the DR screening (DRS) service are at low risk of vision loss. Referral refinement using OCT virtual review of DR referrals is becoming increasingly common, experience showing that this could divert over half away from hospital ophthalmology clinics with patients having low risk OCT images diverted back into screening or into a surveillance clinic (Figure 2). If all referable maculopathy is being reviewed face to face in the HES, practitioners might consider reviewing the images and categorising cases as: a) high risk – must be seen in HES; b) low risk – can be seen again in the DRSS in

six months; and c) equivocal – could have an OCT and then decision made as to appropriate review. If this produces a useful reduction in patient numbers, then units might review the possibility of training for a non-medical healthcare professional, or move the task into the DRSS itself.

Emergency eye care: increase consultant input and promote EEC as a subspecialty

Increasing acute eye care attendances have been accompanied by more centralisation of units offering an emergency eye care (EEC) service. Many eye departments reported healthcare professionals delivering clinical care from triage to working as independent practitioners, with 61% reporting some degree of dedicated consultant time being provided to emergency departments. Early senior ophthalmologist input reduces follow-up appointments, and units may look to create a departmental strategy to increase senior input into emergency cases at their first presentation. Effective routes or protocols for onward referral to other clinics or discharge (e.g. with telephone review for patients who have a self-limiting condition and with improved patient access to advice) are vital to provide the best care for patients and an efficient service.

Organisational options for emergency patient care include increasing consultant input, working with other hospitals to share or transfer emergencies with larger units providing a dedicated service, and telemedicine in areas of low population density or as part of a hub-and-spoke arrangement. Where sufficient numbers of patients coming to the emergency eye care service are identified as being low-risk prior to presentation and could have been diverted to another provider, consider starting a community optometrist Primary Eye-care Acute Referral Scheme (PEARS) or Minor Eye Conditions Service (MECS), subject to appropriate engagement and training of community optometrists. Services may also be improved by appointing a consultant with a specific remit for emergency eye care and promoting EEC as a subspecialty option.

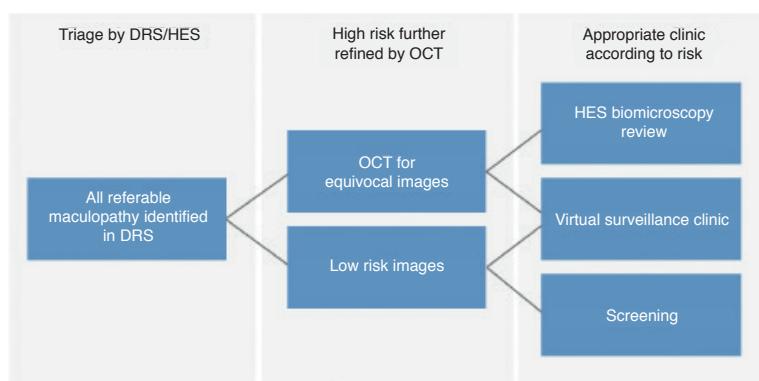


Figure 2: Managing referrals from the diabetic retinopathy screening (DRS) service [3].

Action steps for ophthalmologists

If you're not doing any of the following, ask yourself, "why not?"

- Discharge from theatre uncomplicated second eye cataract patients.
- Glaucoma virtual clinic for follow-up appointments and review.
- Non-ophthalmologist led diabetic maculopathy OCT referral refinement of patients referred from the diabetic retinopathy screening programme.
- Non-ophthalmologist delivered intravitreal anti-VEGF injection service.
- Greater consultant input into emergency eye care and subspecialty promotion.

Some initiatives and subcontracting practices in NHS funded care are counterproductive if they dampen enthusiasm for task shifting with extended roles. There may be good reasons such as low population density that limit opportunities for modern refined models of care. However, eye centres serving high population density areas – where care closer to home is less of an issue – are strongly encouraged to seize the initiative.

RCOphth members can email wayforward@rcophth.ac.uk for more information and to make contacts with consultant colleagues.

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