The ROYAL COLLEGE of OPHTHALMOLOGISTS

The Way Forward

Options to help meet demand for the current and future care of patients with eye disease

Glaucoma

This summary leaflet provides a quick reference guide to the options and practical steps outlined in the full report document available on the RCOphth website.

The Way Forward was commissioned by the RCOphth to identify current methods of working and schemes devised by ophthalmology departments in the UK to help meet the increasing demand on ophthalmic services. The **information aims to offer a helpful resource for members who are seeking to develop their services to increase capacity.** The findings are based on more than **200 structured interviews offered to ophthalmology clinical leads** in all departments in the four home nations.

Models of care outlined in The Way Forward have, in general, grown rapidly through necessity because of the urgency of increased need in a climate of limited capacity. The majority of the schemes and new ways of working reported, have been successful and the benefits and limitations are highlighted to provide a realistic picture.*

This is one of four summary leaflets covering each of the particularly high volume areas of ophthalmic care:

- Cataract
- Glaucoma
- Medical retina – encompassing macular degeneration and diabetic eye disease
- Emergency eye care

More detailed report findings for each of these areas are available on the RCOphth website.**

The Way Forward can be shared amongst the ophthalmic community as a practical resource for the development of service redesign. The RCOphth will facilitate communication by putting members in touch with those who have contributed to The Way Forward and who will be able to offer further information and advice.

Professor Carrie MacEwen
President

Glaucoma

- Monitoring and treating patients with glaucoma accounts for 20% of current ophthalmology hospital outpatient activity
- Over the next 10 (20) years glaucoma cases are predicted to rise by 22% (44%), glaucoma suspects by 10% (18%) and OHT by 9% (16%)
- With improving technology, it is probable that a progressively greater percentage of prevalent cases will be diagnosed

Glaucoma Pathway

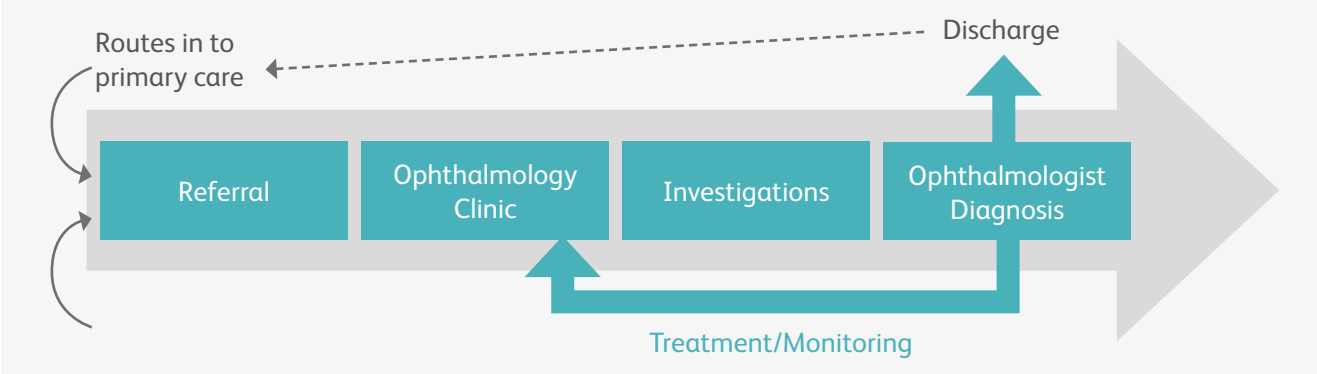

Figure 1: Traditional glaucoma pathway

- The traditional glaucoma pathway (Fig 1) involves patients attending a consultant delivered clinic on a regular basis
- Multidisciplinary team working can reduce the number of those referred through filtering schemes and sharing this out-patient load once a diagnosis is confirmed and the risk of disease progression has been assessed
- 88% of those interviewed indicated that HCPs in expanded roles were delivering care in their glaucoma clinics

Referral options – reducing false positive referrals to improve capacity

- Glaucoma referral filtering schemes (GRFS) are now widespread with 66% of glaucoma leads reporting schemes operating in their locality, many of them relatively new

GRFS are used to:

- Improve accuracy of assessment prior to hospital referral
- Avert unnecessary appointments for patients who do not have glaucoma

Glaucoma filtering can take place in the community or Hospital Eye Service (HES) (Fig 2)

Repeat measures and enhanced case finding

- Repeat IOP measurement for "IOP-only" referrals is recommended by the Joint College Guidelines and, especially if combined with pachymetry, can reduce referrals significantly
- More extensive examination for enhanced case finding requires additional equipment provision (Goldmann applanation tonometer (GAT), fields machine, pachymeter) and training
- Scotland and Wales have moved in the enhanced case finding direction with appropriate funding **(although the current training is not necessarily NICE compliant)**
- Skill levels and case complexity are detailed in the 2016 NICE accredited RCOphth Glaucoma Commissioning Guideline

Benefits	Limitations
• One stop referral improvement that is closer to home – patient satisfaction • Fewer unnecessary hospital referrals – better for patients and clinic capacity	• Training and funding of optometrists to meet standards of care (including repeat testing) and provision of equipment

Referral Refinement (interim assessment by non-ophthalmologists) (Fig 2)

- Optometrists or other HCPs are trained to assess glaucoma referrals in HES or community settings
- Initial referrals may be triaged and more suspicious cases are seen rapidly in the consultant delivered glaucoma clinic
- Further assessment of borderline cases by trained HCPs which is quality assured/underwritten by ophthalmologists
- Skill levels and case complexity are detailed in the 2016 NICE accredited RCOphth Glaucoma Commissioning Guideline

Benefits	Limitations
• Fewer patients need to attend consultant clinics	• Requires referral to another optometrist or hospital clinic adding expense and delay for those with pathology • Training and equipment requirements

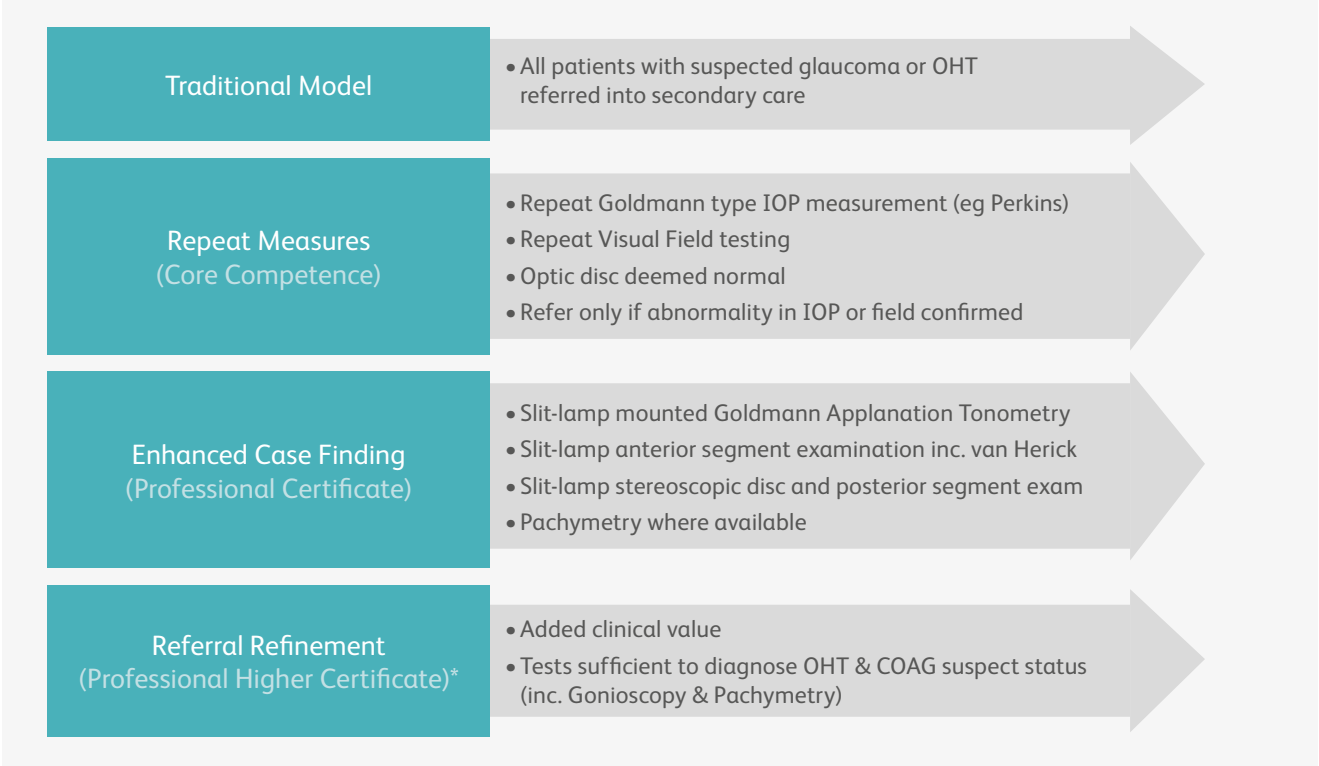

Figure 2: Referral Filtering of Glaucoma/OHT can be systematised and this can take place in the community or HES
*Professional Higher Certificate in Glaucoma ≈ previous Certificate A (College of Optometrists Higher Qualifications)

Adjusting delivery of hospital eye service

If, as expected, the projected growth in patient numbers is not matched by an expansion in ophthalmologists, either ophthalmologists need to see more patients, or someone else is going to need to contribute to patient care, either within the HES or in the community.

- Two thirds of the cost of glaucoma care is spent on the clinical care rather than the drugs
- 88% of UK clinics have already incorporated non-ophthalmologists into their glaucoma services at some level
- The key to organising a glaucoma service by a multidisciplinary team (MDT) is stratification of patients into low, medium and higher risk categories
- Lower risk patients can be managed by a virtual service or by suitably trained HCPs with limited consultant input

The new referral clinic

- Glaucoma must be diagnosed by a consultant ophthalmologist (NICE guidance)
- This is usually assisted by examination and investigations performed by appropriately trained HCPs in both basic (VA, fields etc) and expanded roles (Fig 3)

Follow-up clinics

- A variety of different ways that aim to maximise staff time and patient attendance have developed
- These generally involve a team of technicians, ophthalmologists in training and HCPs working together with, or without, direct consultant presence

Four models of follow-up clinic have become apparent with full input of the multidisciplinary team, but with different levels of training and skill (Fig 3 and Fig 4).

Data Acquisition only – data then reviewed by ophthalmologists

1. Nurse / Ophthalmic technicians / practitioners:

- VA
- Visual Field
- IOP (GAT)
- Pachymetry
- Disc (HRT/OCT/photo)
- +/- gonioscopy

Stable treated glaucoma / OHT monitored - concerns flagged up

2. Optometrists / Nurse Practitioners / Orthoptists

- 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)

- Running independent clinics or alongside consultant

Figure 3: Non-Ophthalmologists' involvement in HES Glaucoma Services (option 1 can be used for face to face or virtual clinics)

Treatment Response clinics

HCPs monitor outcomes of treatment plans, usually solely to measure IOP after a change in medication.

Benefits	Limitations
• Saves ophthalmologist time by undertaking routine measurements • Large numbers can be seen in a clinic	• Training/competency to understand potential side-effects of therapy

Consultant Efficient Models: intensive joint clinics

In this model, each patient is tested and examined by technicians and HCPs followed by the consultant seeing all patients face to face. (Fig 3 option 1 and Fig 4).

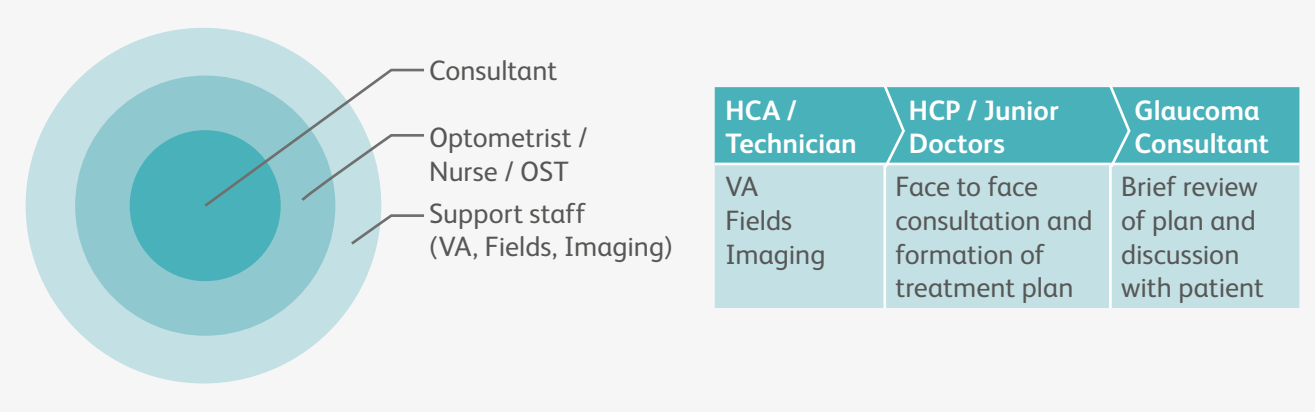

Figure 4: A consultant efficient model

Benefits	Limitations
• Consultant sees all patients to agree treatment plans, but does not perform full work up – optimises review times and quick decision making • Promotes excellent cohesive training and team working • More patients can be seen (increased capacity) due to good team work • Efficient use of HCPs can facilitate a consultant opinion on more patients	• Space required to accommodate many patients and staff • Appropriate training – recruitment and retention of HCPs

Face to face clinics with stratification based on clinical risk

In this format there is incrementally more devolved HCP clinical activity (Fig 3 options 2 & 3) based on risk of disease progression and visual loss. Low risk patients can be monitored in a protocol defined manner; medium risk patients can be seen by HCPs with higher levels of training and qualification. Training requirements and case complexity are detailed in the 2016 NICE accredited RCOphth Glaucoma Commissioning Guideline. Clinics can run without or with consultant direct supervision with the advantage of the latter providing an instant opinion where necessary.

Benefits	Limitations
• Patients see the correct level of professional for their disease complexity • Consultant expertise is concentrated on complex cases but can be requested for all cases • Strong team leadership is evident • Increased patient numbers when used effectively	• Recruitment, training and retention of HCPs can be challenging • Variable productivity of clinics – audit essential

Virtual Clinics

Nearly 50% of departments who responded utilise some form of virtual review of glaucoma patients.

In this model patients are seen solely by technicians or HCPs and the information (fields, IOPs, optic disc imaging – Fig 3 option 1) is viewed remotely by the ophthalmologist who does not routinely see the patient.

Benefits	Limitations
• Increased capacity for improved throughput • Data collection is not dependent on consultant presence (job planning and flexibility) • Patients encouraged to contact specific team member – even if not consultant • Clinic can take place remotely at another hospital or a community setting	• Limited patient contact for consultant (sees only complex cases) • Some possible fragmentation of the team • Duplication of visit for those requiring face to face review • Requires fast, secure IT links • Recruitment, training and retention of HCP team members

Shared care and decentralisation

- Stable and low risk patients can be reviewed on a shared care, or hub and spoke, basis with suitably trained and qualified community optometrists or in hospital clinics run by HCPs (Fig 5)

Benefits	Limitations
• Reduces pressure on busy clinic space and consultant time • Patients remain in regular, but less frequent consultant contact	• Dependent on training, communication, IT and well established relationships • Use of outside providers may result in fragmentation of the patient's record with loss of important clinical details (eg images / visual field tests) subsequently needed for patient care by the HES team

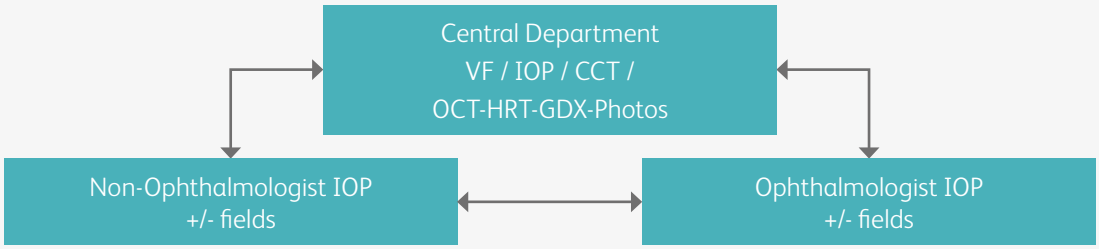

Figure 5: Hub and spoke alternating clinic appointments

Discharging patients: is this possible in the glaucoma service?

- Patients with glaucoma require life-long management
- Those without glaucoma should be discharged once this becomes evident (which may take several visits to ascertain, and needs an active policy)
- Those with OHT, not requiring treatment, may be discharged to competent community services in line with national guidance (NICE, SIGN and RCOphth Glaucoma Commissioning Guideline)
- On discharge, a summary of the patient's clinical record with clear instructions as to when re-referral would be appropriate should be given to the patient and sent to the GP

Questions to consider for improving your services

- Discuss with colleagues and management how you can; a) reduce inefficiencies (eg DNA rates), b) manage demand (eg GRFS) c) improve capacity by optimising available staff – including training where needed
- Look at your first visit discharge rate and assess if the false positives are from IOP only, fields only or imaging only referrals – if there is no GAT repeat pressure scheme or no repeat fields scheme in operation, consider collaboration with local optometrists or in house HCPs to set one up. If that is good value and is shown to reduce false positives think about developing it into an Enhanced Case Finding or full Glaucoma Referral Refinement Scheme
- Consider a virtual review service for images sent in by community optometrists, or additional training for optometrists that use such devices

If you set up a Glaucoma Referral Filtering Scheme ensure that:

- The HES is fully engaged in the scheme design with consultant or Optometrists with a Special Interest (OSI) triage of referrals so higher risk cases are sent directly to HES to save duplication and delay
- The scheme is compliant with national standards as specified by NICE and summarised in the RCOphth Glaucoma Commissioning Guideline
- Monitoring and evaluation of the scheme is built in
- If you have an established high volume virtual clinic set up, you consider putting all new referrals through it as this may be more efficient than starting another scheme
- You have consulted with glaucoma consultant colleagues in other departments who have already established schemes with good audit and efficacy data

If you wish to use Shared Care remember:

- A strong team of trained and competent and motivated HES optometrists, orthoptists or ophthalmic nurses over time can add capacity to complex patient clinics, and can manage moderate risk patients under your care
- To consider sessions funded for optometrists/HCPs working predominantly in the community or community clinics
- To 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

Virtual Clinics

- Virtual clinics are growing in numbers, and consulting with colleagues who have one established is likely to be of significant advantage
- Ensuring staff are working to the full extent of their training and competence will keep the cost down (eg senior nurses doing simple tasks with automated equipment should be avoided)

On training

- Don't forget to ensure adequate approved training for all technicians and HCPs is established in any scheme
- Upskilling and training are essential for ensuring that patients with various levels of disease complexity are cared for by appropriately qualified and experienced HCPs
- Training and progression through the various higher qualifications takes time and effort on the part of the shared care staff as well as the consultant and other medical staff
- Ophthalmologists in training have sufficient exposure to any scheme

***Where schemes do not comply fully with RCOphth standards, this has been highlighted**

**** The more detailed report findings for each of the high volume areas of ophthalmic care are available at www.rcophth.ac.uk/standards-publications-research/the-way-forward/**

Members can email: wayforward@rcophth.ac.uk for more information

The Way Forward was commissioned by The Royal College of Ophthalmologists and appreciation is extended to everyone who contributed to the development of this important initiative. This includes all members who took part in the interviews conducted by Mr John Buchan in undertaking research for The Way Forward.

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