NHS England

GIRFT
GETTING IT RIGHT FIRST TIME

GIRFT Best Practice for Glaucoma Services

May 2026



GIRFT is part of an aligned set of programmes within NHS England

Contents

Quick reference guide 2
- Guidance overview 2
- Checklists 2
- Detailed guidance 2
- Summary boxes and illustrations 3
- Case studies 3

Foreword by Professor Tim Briggs 4

Foreword by Louisa Wickham 5

Supporting statements 6

Introduction 9
- NHS Online 9

Overview of GIRFT best practice across the pathway 10

Detection, repeat measures and enhanced case finding in primary care 13

Referral to the Single Point of Access 22

Management in secondary care and the community 26
- Diagnostics 27
- Continuity of care 31
- Safe and effective interventions 35
- Timely, effective and appropriate follow-up 37
- Discharge 53
- Urgent and emergency care 56
- Patient communication and support 66
- Quality and safety 69
- Training 71
- Research 72

Benchmarks: Measuring GIRFT best practice 74

Contributors 79

Quick reference guide

This list provides a quick way to jump to specific information in this guide. This may be helpful for readers who are familiar with glaucoma but want to quickly access key details on one selected topic. ***Reading any item should take at most five, and often less than two, minutes.***

Guidance overview

- Overview of GIRFT best practice across the pathway

Checklists

- Checklist: What effective referral processes look like
- Checklist: What continuity of care looks like
- Checklist: What delivering safe and effective intervention looks like
- Checklist: What delivering timely, effective and appropriate follow-up looks like
- Checklist: key things to look out for in discharge practice
- Checklist: Delivering robust urgent and emergency care
- Checklist: Patient communication and support
- Checklist: Guidelines
- Checklist: Failsafe practice
- Checklist: Training
- Checklist: Research

Detailed guidance

- Minimum data set required for DAVRAP
- Follow-up intervals for each patient cohort
- Detailed guidance on asynchronous pathways
- Discharge guidance for each patient cohort
- Extracts from relevant sections of General Medical Council guidance
- Benchmarks to measure GIRFT Best practice
- Essential components of best practice glaucoma pathways

Summary boxes and illustrations

- Overview of repeat measures and enhanced case-finding
- Clinical care provided at Glaucoma Repeat Measures Service (GRMS)
- Clinical care provided at Glaucoma Enhanced Case-Finding Service (GECFS)
- Service design: Glaucoma Repeat Measures Service (GRMS)
- Service design: Glaucoma Enhanced Case-Finding Service (GECFS)
- Examples of handover errors
- Evidence base for Glaucoma Repeat Measures Service (GRMS)
- Evidence base for Glaucoma Enhanced Case-Finding Service (GECFS)
- Supporting organisational culture and infrastructure when assessing clinical emergencies in glaucoma care – based on the RCOphth's Emergency Eye Care 2020 document
- Eye care support pathway

Case studies

- Community-based asynchronous review clinic integrated with a London hospital network
- Devon case report – glaucoma service redesign (community-based asynchronous review clinic integrated with the Royal Devon University NHS Foundation Trust Glaucoma Service)
- Primary Eyecare Glaucoma Service (PEGS) pilot in Manchester
- Synchronous models in devolved nations
- Norfolk: Example of escalation re-referral form from primary to secondary care

Foreword by Professor Tim Briggs

Glaucoma remains one of the leading causes of irreversible sight loss. When detection is late, or follow-up is delayed, the consequences for patients can be profound and permanent – affecting independence, ability to work and quality of life. The clinical imperative is clear: we must do everything we can to reduce the risk of avoidable blindness by delivering timely, consistent, high quality care wherever patients are seen.

That is why I am very pleased to introduce this GIRFT Best Practice for Glaucoma Services guidance. It offers a practical framework for delivering consistent, patient-centred glaucoma care which prioritises early detection, streamlined referrals, risk-based follow-up and discharge, robust communication and effective interventions.

In developing this guidance, the GIRFT ophthalmology team relied on valuable contributions from many colleagues and organisations. That collaborative effort matters. Delivering the glaucoma pathway well depends on clinicians and organisations working together across professional and organisational boundaries, with mutual trust and a shared commitment to improvement.

I encourage colleagues to use this best practice to strengthen pathways, reduce variation and ensure patients receive high quality, timely care: whether that care is delivered in the community, in hospital, or across both.



Professor Tim Briggs CBE
GIRFT programme lead and NHS England National Director for Clinical Improvement, Elective Recovery and UEC

Foreword by Louisa Wickham

The scale of the challenge in addressing the glaucoma burden is clear: by 2060, the number of affected individuals is projected to rise to 1.6 million, a 60% increase in cases. Resources are already stretched and we will need to transform to ensure that we target resources appropriately if we are to avoid preventable, irreversible sight loss.

The glaucoma pathway is inherently complex, and this can make achieving consensus and shared understanding across the full range of clinical staff and provider organisations challenging.

The GIRFT ophthalmology team has drawn on significant input from a wide range of colleagues and organisations in finalising this document. As such, we are confident it clearly sets out the clinical best practice needed to underpin a successful glaucoma pathway – irrespective of where care is delivered.

Now is the time for all clinicians and organisations involved in glaucoma care to come together and work collaboratively, using this document to inform service improvement and support the delivery of high-quality, patient-centred care. Achieving this will require mutual trust and a shared commitment to working constructively across organisational and professional boundaries, for the benefit of all patients.



Louisa Wickham
NHS England National Clinical Director for Eye Care

Supporting statements

Royal College of Ophthalmologists

In the context of changing models of ophthalmology care, with a variety of providers, there is a need for modern, best practice guidance to ensure safe high-quality care for all patients. The Royal College of Ophthalmologists (RCOphth) therefore supports the need for best practice guidance which, where possible, is evidence based and supports improved outcomes for patients. These GIRFT best practice recommendations, developed with the RCOphth, will help to ensure that patients get the right treatment when they need it, limiting the risk of them being exposed to unnecessary treatments.

The College of Optometrists, Association of British Dispensing Opticians, Association of Optometrists, Local Optical Committee Support Unit and Federation of Optometrists and Dispensing Opticians

The College of Optometrists and wider primary eye care welcome the publication of this new glaucoma best practice guidance and recognise it as an important first step in the continued development of safe and effective glaucoma care across England. This guidance sets a positive direction of travel by supporting multidisciplinary working and care delivered in primary care settings, helping to ensure patients receive the right care, in the right place, at the right time. Services must remain clinically led, evidence-based and appropriately resourced, so that integrated pathways between primary care optometry, hospital eye services and the wider multidisciplinary team can deliver the best outcomes for patients at risk of sight loss from glaucoma.

Royal National Institute of Blind People

RNIB welcomes GIRFT's Best Practice for Glaucoma Services guidance to ensure optimal clinical pathways and practices are in place for glaucoma patients.

Eye Care Liaison Officers (ECLOs) provide information, emotional support and advice to people who have a condition affecting their sight. At a recent national meeting of RNIB's 140+ ECLOs, the main concern highlighted was the management of glaucoma patients who had extended waiting times for follow-up appointments, did not understand how to administer their eye drops and, in some cases, were not receiving eye drops on a regular basis. All of these issues are also raised via our telephone support service, as well as with the RNIB Eye Health Information Service, and are leading to patients losing sight.

One ECLO stated:
"I had a patient who was due to be seen in March last year, and he's only been seen in November and now he has advanced glaucoma and practically lost all his vision in his right eye. That's quite worrying that patients like him are being left to wait for such a long time."

RNIB therefore supports GIRFT in providing guidance to support the effective delivery of glaucoma pathways to address the issues such as long waiting times, poor treatment adherence and the standardisation of local delivery pathways, to ensure the risk of irreversible sight loss is minimised for glaucoma patients.

As part of RNIB's integrated pathways work, RNIB will commit to overlay The Eye Care Support Pathway against the guidance, ensuring patients have access to optimum clinical and non-clinical support, enabling patients to overcome the challenges we have identified.

Glaucoma UK

Glaucoma UK – the only charity in the UK solely dedicated to supporting people living with glaucoma – welcomes the development of the GIRFT Best Practice for Glaucoma Services guidance. We hear daily of the practical and emotional challenges that glaucoma patients face in navigating a highly varied, unpredictable and disjointed care system. It is time for a framework that offers access to the right care, in the right place, at the right time. People living with the constant fear of sight loss deserve no less.

UK Ophthalmology Alliance

The UK Ophthalmology Alliance (UKOA) represents trusts and boards across the UK who provide secondary care eye services. We also have a number of stakeholder members, which include charities and other national bodies such as Glaucoma UK and RNIB.

Part of the UKOA's role is to promote and share good practice. We see and share many examples of good practice across all areas of eye services which others then adopt. We also fully endorse the development and sharing of national best practice guidance across all areas of eye care. The UKOA fully endorse this GIRFT Best Practice for Glaucoma Services guidance, which will help to improve operational effectiveness in glaucoma pathways and improve the quality of care for glaucoma patients.

The Independent Healthcare Providers Network

IHPN and independent sector eyecare providers welcome this new GIRFT Best Practice Guidance for Glaucoma services. Timely intervention and clear referral pathways are critical to good glaucoma care, and the independent sector is delighted to be working with the NHS and GIRFT to ensure that patients can get the vital care they need when they need it, and in the place most convenient for them.

Rachael Burridge, Head of Elective and Cancer Transformation, NHS Devon ICB

As a commissioner, I agree and support the need for a national best practice document as it is a vital step towards reducing unwarranted variation, ensuring consistent service delivery across all providers (including ISPs) and improving timely access to high-quality care. From a commissioning perspective, having nationally endorsed guidance provides a clear framework to support planning, service development, and assurance – benefiting both patients and systems.

Introduction

Glaucoma is a lifelong condition with the potential to cause irreversible blindness[1]. Moreover, it is the second most common cause of blindness in the United Kingdom, with an incidence that is growing significantly and expected to reach more than 1.6 million by 2060[2,3]. Ensuring consistently high-quality, safe and equitable care for glaucoma patients is critical.

This guide provides a clinical framework for the delivery of effective, patient-centred care, emphasising timely detection, accurate referrals, effective diagnostics and lifelong continuity of care to reduce avoidable sight loss. The document will be of interest to all colleagues involved in the delivery of glaucoma services, including commissioners, NHS trusts, independent sector providers and community-based providers. It can also be considered a response to the RCOphth's October 2025 position statement recommending change: shifting ophthalmology-led care from hospital to community settings[4].

Delivery of services in this way will support elective recovery by making referrals as accurate as possible, ensuring patients receive accurate information about available services and current waiting times, enabling virtual review for diagnosis and follow-up, and discharging lower-risk patients. This approach increases productivity and helps maintain safe, effective care. In doing so, it will help prevent follow-up delays, which could otherwise lead to irreversible sight loss[5,6], and ensure consistent and equitable care in all regions of the country.

NHS Online

NHS Online, a new flagship service to provide virtual appointments, will be operational from 2027 and will initially focus on nine conditions, including glaucoma[7]. We expect this guide will provide best practice to inform referral processes in the service.

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[1] About Glaucoma | Primary, Secondary & Developmental | Glaucoma UK
[2] Clinical Research on the Leading Causes of Severe Sight Impairment in the UK General and Working Populations
[3] Current burden and future projections of glaucoma in the United Kingdom | British Journal of Ophthalmology
[4] Position-statement-Shifting-ophthalmology-led-care-October-2025.pdf
[5] Surveillance of sight loss due to delay in ophthalmic treatment or review: frequency, cause and outcome
[6] Lack of timely monitoring of patients with glaucoma
[7] NHS England » Menopause and prostate conditions prioritised for NHS's new online hospital

Overview of GIRFT best practice across the pathway

The glaucoma pathway covers detection, treatment and support, lifelong monitoring where necessary, and discharge where clinically appropriate, with providers working together across primary, community and secondary care. It sets out the key steps in the glaucoma pathway, with a focus on potential new ways of working, along with the quality considerations needed to deliver high-performing services.

The information below summarises all those elements.

Detection in primary care

Strategies are adopted to increase uptake of sight tests in high-risk groups and those in deprived areas, to support early detection and prevent severe sight loss. New cases are identified more accurately in primary care using repeat measures and enhanced case-finding. Delivered closer to home, these steps in the pathway optimise referrals to hospital eye services, ensuring that a higher proportion of referrals are true positives.

Referral to the Single Point of Access

Optometrists refer to secondary care via a Single Point of Access (SPOA), streamlining time-to-treatment for the patient while reducing variation in administration and ensuring informed choice for patients. All referrals use a minimum data set, as defined by the best practice described in this document and are triaged in a timely manner based on clinical risk. A referral should also be sent to the SPOA when a new event, such as a cataract, is identified in an existing glaucoma patient during a sight test by the optometrist. This will streamline the pathway and ensure informed choice in the same way as for a new glaucoma referral.

Management in secondary care and the community

Diagnostics

Diagnostics need to be delivered in an efficient and scalable way. A of combination different models may be required to meet demand, given the growing disease burden, and different models are appropriate in different settings. Specifically:

- When diagnostics are performed by secondary care, a high proportion of new and follow-up glaucoma cases should be assessed via a Diagnostics Asynchronous Virtual Review Assessment Pathway (DAVRAP), allowing face-to-face appointments to focus on higher-risk patients**.** Tools like GLAUC-STRAT Fast[8] should be used to ensure appropriate clinically risk-based care.
- When diagnostics are performed within primary care, both synchronous and asynchronous models are acceptable.

[8] Designing glaucoma pathways using Glauc-strat

Continuity of care

Patients benefit from continuity of care being delivered to the highest possible standards in line with *Good Medical Practice*[9,10], with all providers and clinicians recognising that this is a key consideration for a longitudinal disease like glaucoma, particularly where multiple providers may be involved in a patient's care.

Safe and effective interventions

Patients receive safe and effective, evidence-based interventions to treat their glaucoma from a qualified and appropriately experienced clinician who can base their decision-making on sub-specialist glaucoma consultant expertise and the patient's longitudinal data set, ensuring that the information given to patients, including when discussing benefits and harms, reflects *Good Medical Practice*[9].

Timely, effective and appropriate follow-up

Patients are assessed in a follow-up pathway that is timely, based on clinical risk, well governed, supported by failsafe processes, and delivered by qualified and appropriately experienced clinicians with sub-specialist glaucoma consultant oversight and support.

Discharge

Providers adhere to discharge criteria provided in this document, which are based on NICE guidance. Patients who do not have glaucoma, or who have not converted to glaucoma, and are therefore not considered ocular hypertension or glaucoma suspect patients, can be discharged and advised to see their optometrist for sight tests. Discharge cannot mean monitor or review according to a management plan/ protocol. The discharge report should be sent to the patient and copied to the optometrist and GP with clear advice and guidance regarding re-referral.

Urgent and emergency care

Providers must ensure their patients have 24/7 access to urgent and emergency eye services adhering to the principles of continuity of care described by *Good Medical Practice*[9].

Patient communication & support

All outcome and discharge letters must be shared with patients, optometrists and GPs with clear instructions for follow-up. Patient care should adhere to The Eye Care Support Pathway[11] to ensure patients have the appropriate support at the four key stages in their eye care journey.

Quality and safety

Providers adhere to applicable guidance and principles as set out by NICE, GIRFT and HSIB, with failsafe processes in place for clinical risk stratification and LCAD (Latest Clinically Appropriate Date) reporting.

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[9] Good medical practice - professional standards - GMC

[10] in extracts throughout the document, we make references to GMC standards. In any context where optometrists may provide care, the GOC standards apply as the relevant regulatory framework for those professionals. However, from the perspective of best clinical practice, we consider the GMC and GOC standards interchangeable for the purposes of the glaucoma pathway.

[11] The Eye Care Support Pathway

Training

All providers delivering NHS-funded glaucoma services should contribute to workforce development and training opportunities appropriate to their scale and expertise. This includes supporting multi-professional training (medical, optometric, nursing) and CPD for community practitioners.

Research

Providers participate in clinical research aimed at improving patient outcomes, including recruiting patients for studies or contributing to real world research or registry data. Primary care optometry and third sector organisations also contribute to research activity as applicable to their services and objectives.

Detection, repeat measures and enhanced case finding in primary care

GIRFT best practice

Strategies are adopted to increase uptake of sight tests in high-risk groups and those in deprived areas, to support early detection and prevent severe sight loss. New cases are identified more accurately in primary care using repeat measures and enhanced case-finding. Delivered closer to home, these steps in the pathway optimise referrals to glaucoma services, ensuring that a higher proportion of referrals are true positives.

The need to increase uptake of sight tests

There is a clear evidence base for increasing the uptake of sight tests as a prevention strategy for severe sight impairment[12], particularly for those living in areas of higher deprivation who are at higher risk of presenting with more advanced disease[13,14].

The case for repeat measures and enhanced case-finding services

An effective and quality assured glaucoma service depends on receiving referrals from optometrists that are as accurate and complete as possible, as well as strong collaboration between primary care, secondary care and support services. A patient's experience of being referred for a potentially blinding disease can be traumatic, and the General Ophthalmic Services (GOS) sight testing contract does not cover the detailed activity required in primary care to filter referrals effectively – e.g. without an enhanced service, up to 50% of glaucoma referrals can turn out to be false positives[15,16].

An optometry delivered enhanced service providing referral filtering closer to a patient's home will free up glaucoma service capacity for higher risk new patients and higher risk follow-up patients, to support the shift of care into the community, and improve the experience for low-risk patients. As optometry-led and delivered services, Glaucoma Repeat Measures and glaucoma enhanced case finding services do not require consultant glaucoma sub-specialist oversight.

NICE guideline NG81 recommends that commissioners consider three approaches to referral filtering: repeat measures, enhanced case-finding and referral refinement. Since NG81 was last updated (2017), Optical Coherence Tomography (OCT) diagnostics has become increasingly available in both primary and secondary care settings (many referrers

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[12] Deprivation & NHS GOS sight testing activity in England in 2022-23.
[13] The relationship between multiple deprivation and severity of glaucoma at diagnosis - PubMed
[14] Effects of socioeconomic status on baseline values and outcomes at 24 months in the Treatment of Advanced Glaucoma Study randomised controlled Trial.
[15] Clinical Effectiveness of the Manchester Glaucoma Enhanced Referral Scheme
[16] The effectiveness of schemes that refine referrals between primary and secondary care—the UK experience with glaucoma referrals: the Health Innovation & Education Cluster (HIEC) Glaucoma Pathways Project

send OCT data with their referrals), and it was considered to be clinically appropriate to incorporate this in the enhanced case-finding referral filtering pathway. Referral refinement (which includes central corneal thickness and slit lamp angle examination gonioscopy) has seen very limited uptake in England compared to repeat measures and enhanced case-finding. Consequently, our working group considered it both pragmatic and contemporary for this guidance to focus on repeat measures and enhanced case-finding. Our decision to do this is not a critique of referral refinement services or a departure from NICE guidance, and any currently operational referral refinement services can still use the data sets recommended for enhanced case-finding for guidance.

Overview of repeat measures and enhanced case-finding

Repeat measures involves the primary care optometrist repeating the key tests they carried out before referring the patient, to confirm whether the initial results were accurate or affected by factors such as measurement error or patient variability.

Enhanced case-finding involves a healthcare professional with additional qualification, accreditation and experience to undertake a more comprehensive assessment to more accurately identify patients with suspected glaucoma.

Evidence base for repeat measures and enhanced case-finding

According to the NICE Clinical Knowledge Summary[17], ocular hypertension affects 3–5% of people in the UK over 40 years of age. Primary open angle glaucoma (POAG) affects about 2% of people in the UK older than 40 years. The prevalence increases with increasing age. For example, POAG affects approximately 1% of people aged 40, around 3% of people aged 60, and around 8% of people aged 80 years. It is thought that roughly half of all people in the UK with POAG have not been diagnosed, as people with early POAG are typically unaware that they have it.

Glaucoma is also a leading cause of blindness, affecting around 10% of people who become blind in the UK. Due to the low prevalence of glaucoma, and the NHS sight test being a ‘single episode of service’ with no follow-up or funding for rechecking suspect or uncertain test results, high false positive referrals for conditions like POAG are likely, given it is a complex condition to diagnose without repeat and enhanced clinical tests.

Further investigation through repeating test measurements by the optometrist before they make a referral decision to a secondary service has been shown to make false positive referrals less likely. Parkins and Edgar[18] published research showing that 76% of suspect glaucoma patients were not referred through a repeat measures service; this method of

[17] Prevalence | Background information | Glaucoma | CKS | NICE
[18] Comparison of the effectiveness of two enhanced glaucoma referrals schemes

filtering produced a 62% financial saving against hospital tariff in the Bexley area. A paper from LOCSU discusses how many repeat measures are needed[19].

Referral filtering significantly reduces referrals to glaucoma services. These pathways are recommended in the NICE Glaucoma: diagnosis and management NG81 guideline, as part of the case-finding recommendations 1.1.9[20]. Peer-reviewed evidence from the Manchester Glaucoma Enhanced Referral Scheme (GERS) showed the service is safe and effective, resulting in a low false positive and low false negative rate[15]. GERS has been shown to have a positive and significant impact on reducing referrals to hospital – for instance, more than 50% of new referrals are discharged following first glaucoma service attendance without a GERS, compared to 15% when a GERS type service is in place[15]. Further evidence for repeat measures and enhanced case-finding specifically are presented on the next page.

[19] LOCSU-Case-Study-Glaucoma-Repeat-Readings-July-2020.pdf
[20] Glaucoma: diagnosis and management

Evidence base for Glaucoma Repeat Measures Service (GRMS)

Glaucoma Repeat Measures Services (GRMS) can help reduce false positive referrals of patients identified to have raised eye pressure on non-contact tonometry and/or suspect or unreliable visual fields, without any other signs of glaucoma. GRMS is unsuitable for referral filtering for glaucoma suspects (suspicious optic discs or other features of glaucoma).

The referral outcomes were reported by a LOCSU case study conducted between April 2016 and 2020, which involved glaucoma repeat measures for a total of 29,083 patients. During this period, between 24% and 29% of patients were referred to a hospital eye service[19].

Features of the service in this study:

- Assessment performed by the initial optometrist (in GRMS, currently commissioned as a locally enhanced service).
- No requirement for higher qualifications.
- Minimum data set applicable to GRMS.
- Independent decision: discharge or refer to glaucoma service via SPOA.
- Send all data (digital files) via ERS or EeRS.

Evidence base for Glaucoma Enhanced Case-Finding Service (GECFS)

A Glaucoma Enhanced Case-Finding Service (GECFS) is a high-level glaucoma referral filtering option. One example is the Manchester Glaucoma Enhanced Referral Service (GERS), designed for patients identified as glaucoma suspects, such as those with suspicious optic discs who require further assessment before referral to a glaucoma service.

Between 2014 and 2016, a total of 1,404 patients were evaluated via the Manchester GERS. Of these, 651 patients (46.3%) were referred to the hospital eye service (glaucoma service). Among those referred to the glaucoma service, the discharge rate was 15.5%, indicating that most referrals made after GERS evaluation were clinically warranted[15]. The scheme also measured the potential NHS cost savings[21].

Features of the service:

- GERS is currently commissioned as a locally enhanced service.
- Delivered by healthcare professionals with relevant accreditation to meet service delivery and quality assurance requirements e.g. College of Optometrists' Professional Certificate in Glaucoma, or equivalent[22,23] and necessary experience.
- Minimum data set applicable to GECFS.
- Independent decision: Discharge or refer to glaucoma service via SPOA.
- Send all data (digital files) via ERS or EeRS.
- Achievable, requires appropriately qualified workforce[24,25].

Implementation of repeat measures and enhanced case-finding

Referral filtering services need to be in place, with their outcomes monitored, so there is a clear understanding of whether they deliver accurate and effective referrals. A filtering service should include:

- a Glaucoma Repeat Measures Service (GRMS), and
- a Glaucoma Enhanced Case-Finding Service (GECFS).

Patients will follow one pathway or the other but should not be referred from one pathway service to another, to ensure services provide optimal value. Some optometry practices may be unable to provide GECFS, and it is acceptable for only GRMS to be provided. Alternatively, if preferred, the patient may travel to a practice that can provide GECFS, but it is still unnecessary for a patient to pass through both GRMS and GECFS. Further

[21] Impact of the Manchester Glaucoma Enhanced Referral Scheme on NHS costs. Forbes et al. BMJ 2019
[22] The College of Optometrists Higher qualifications
[23] An analysis of glaucoma repeat measures assessment results: Are core competencies enough? Karas et al. Ophthal and Physio Optics 2022.
[24] Providing capacity in glaucoma care using trained and accredited optometrists: A qualitative evaluation. Gunn et al. Eye 2024.
[25] Mapping glaucoma higher qualifications within the United Kingdom

information on the clinical care and service design of these services is provided over the following pages. Please also see further information on Patient Communication and Support.

Any optometry practice could potentially offer referral filtering services. Experience indicates that most practices will choose to offer glaucoma repeat measures, and a smaller number will offer glaucoma enhanced case findings. It is appropriate that patients eligible for a GECFS attending for a sight test at a practice that does not offer this service, should be referred to a participating practice.

Clinical care provided at Glaucoma Repeat Measures Service (GRMS)

• Glaucoma repeat measures assessments should include:
  ○ IOP measurement using contact applanation tonometer (GAT/Perkins).
  ○ Repeated IOP means taking measurement on another occasion i.e. another day – specify the different day, time of day and method.
• Repeated visual field assessment:
  ○ There is no GOS requirement to use a particular visual field type of equipment on first use (e.g., some might be using FDT).
  ○ The repeat visual field(s) must use a suprathreshold or full threshold technique i.e. not frequency doubling technology.
• All relevant results of NHS sight test included in the referral.
• Provisional diagnosis.
• Make a decision: discharge or refer to glaucoma service via SPOA (urgent or routine).

Clinical care provided at Glaucoma Enhanced Case-Finding Service (GECFS)

- History (including symptoms, family history and ethnicity)
- Medical history, including medications.
- Ocular history, including primary angle closure suspect PLUS checklist (if appropriate).
- Visual acuity.
- Refraction (data copied from referral letter).
- Anterior slit lamp examination and van Herick test grade, including assessment for signs of secondary glaucoma.
- IOP measurement using contact applanation tonometer (GAT/Perkins).
- State if the patient dilated for examination.
- Posterior/fundal examination: optic nerve assessment and fundus examination using stereoscopic slit lamp biomicroscopy (with pupil dilatation if necessary):
    - including optical coherence tomography (OCT) and/or optic nerve head image (OCT scan is required)
    - share digital file of disc OCT scan and/or optic disc photo.
- Visual field assessment - central visual field assessment using standard automated perimetry (full threshold or supra-threshold).
- All relevant results of examination and tests included in the referral.
- Provisional diagnosis.
- Make a decision: discharge or refer to glaucoma service via SPOA (urgent or routine).

Service design: **Glaucoma Repeat Measures Service (GRMS)**

- The GRMS is a primary care service, delivered by the sight testing practice, usually by the optometrist who performed the sight test. This contributes to continuity of care and high-quality, seamless patient experience.

Inclusion criteria:

- Patients identified with possible signs of ocular hypertension (IOP 24mmHg or higher, in the absence of any other signs of glaucoma) and/or an abnormal or unreliable visual field defect during a sight test should be reassessed under a GRMS within that optical practice.
- Assessment performed by the initial optometrist i.e. if a patient is an OHT suspect (normal optic disc), the original optometrist can perform a glaucoma repeat measurement assessment on their own patients (contact applanation tonometer (GAT/Perkins), repeat fields if necessary).
- No requirement for higher qualifications to provide GRMS.
- Optometrists should seek refresher training support in contact applanation tonometer (GAT/Perkins) if they feel they might benefit from this.
- Patients should not be referred from GRMS to GECFS, instead they should go through one pathway or the other.

Outcome(s) from GRMS:

- Not referred to glaucoma service (discharged from GRMS) - continue with regular sight testing.

Exclusion criteria

- If there are any other suspect signs of glaucoma (e.g. narrow angle [consider Primary Angle Closure Suspect (PACS) plus additional factors], optic nerve changes, definite glaucomatous visual field loss as per NICE guidance), the patient should be referred to a glaucoma service via SPOA.
- Late presentation of advanced glaucoma, cases of acute angle closure, or IOPs greater than 35mmHg with contact tonometry should be referred with appropriate urgency without GECFS filtering to a glaucoma service[26].

[26] Annex 4 Urgency of referrals table – The College of Optometrists

Service design: Glaucoma Enhanced Case-Finding Service (GECFS)

- Glaucoma Enhanced Case-Finding Services receive referrals from primary care, supporting optometrists to deliver a smooth and efficient pathway. This contributes to a high-quality, seamless patient experience.
- The gold standard glaucoma referral filtering option is glaucoma repeat measures and glaucoma enhanced case-finding, commissioned together e.g. Manchester Glaucoma Enhanced Referral Service.
- To be delivered by healthcare professionals with a relevant specialist qualification (The College of Optometrists' Professional Certificate in Glaucoma and suitable experience). If an optometry practice does not offer a GRMS i.e. not accredited and needs to refer a patient with suspected ocular hypertension or glaucoma suspect, they should refer to another practice which provides GECFS assessments. The clinician in receipt of the referral will do a full GECFS assessment.
- If an optometrist is GECFS accredited, the optometrist can refer their own patient from a routine sight test for a GECFS assessment, to allow the appropriate time and funding to perform all the relevant tests. However, GECFS should not be used if the patient is more suitable for GRM.

Outcome(s) from GECFS:

- Discharge - continue with regular sight testing.
- Refer to a glaucoma service via SPOA.

Exclusion criteria

- Late presentation of advanced glaucoma, cases of acute angle closure, or IOPs greater than 35mmHg with contact tonometry should be referred with appropriate urgency without GECFS filtering to a glaucoma service[26].

Referral to the Single Point of Access

GIRFT best practice

Optometrists refer to secondary care via a Single Point of Access (SPOA), streamlining time-to-treatment for the patient while reducing variation in administration and ensuring informed choice for patients. All referrals use a minimum data set, as defined by the best practice described in this document, and are triaged in a timely manner based on clinical risk. A referral should also be sent to the SPOA when a new event, such as a cataract, is identified in an existing glaucoma patient during a sight test by the optometrist. This will streamline the pathway and ensure informed choice in the same way as for a new glaucoma referral.

Context

In glaucoma care, efficient and standardised referral processes are essential to ensure timely access to appropriate expertise, reduce avoidable delays and prevent irreversible harm. They also create the structural conditions necessary for patient choice to be exercised meaningfully: ensuring that no patient is referred toward a particular provider without an informed discussion, and that decisions are based on the information made available across the system. A Single Point of Access (SPOA) is the ideal way of achieving this. Where SPOA is not already in place in a system, we recommend it is put in place.

The benefits of an approach based on Single Point of Access

An operational approach based on SPOA, standardised referral forms, minimum data sets, and digital pathways, ensures referrals are clinically appropriate while enabling informed, transparent, patient-centred conversations which streamline time to treatment and reduce administration and repeat testing.

SPOA will also support an informed patient choice conversation and take responsibility for that statutory requirement, adding to choice conversations that have taken place within primary care[27,28]. In addition to this, the SPOA also supports management of the wider eyecare budget, supporting future sustainability of eyecare services[29]. The administration of SPOA can be done via digital/AI options as well as an administrative workforce[30].

The SPOA should be bidirectional, enabling patient data to flow from community to hospital eye service and vice versa. The SPOA should also help direct referrals to enhance case-finding services as clinically appropriate e.g. to ensure NICE recommendations on case-finding are met before referral for diagnosis.

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[27] SPOA reference – London NCL case report
[28] Patient choice in elective eye care. A deliberation with Londoners. May 2025
[29] NHS England (2025) Eyecare Model Initial Economic Evaluation and business cases shared with the GIRFT programme
[30] Accuracy and safety of an autonomous artificial intelligence clinical assistant conducting telemedicine follow-up assessment for cataract surgery

Minimum data set and time frames

All glaucoma referrals from referral filtering services should be sent on a standardised referral form and must comply with the minimum data set requirements. Referrals should be triaged for clinical risk by the SPOA provider (within a robust timeframe) to enable pathway management and equitable access to care appropriate to clinical risk while supporting patient choice.

Less common presentations

Following SPOA triage, most new referrals will undergo face-to-face diagnostics followed by a virtual review. However, following SPOA triage, less common presentations such as angle closure, secondary glaucoma, certain GECFS cases, or glaucoma with other subspecialty issues, may require additional signposting and assessment, and as such may bypass the asynchronous review to be seen directly in face-to-face clinics.

Checklist: What effective referral processes look like

- ✓ Single Point of Access (SPOA) is used for all elective glaucoma referrals in a system. In line with The College of Optometrists' guidance Urgency of referrals table, Annex 4[26], this does not include urgent referrals where optometrists would contact the eye department for rapid triage, or emergency referrals that require assessment as soon as possible or within 24 hours, such as: late presentation of advanced glaucoma, acute angle-closure glaucoma, or intraocular pressure greater than 35 mmHg (urgent referral) or equal to or greater than 40mmHg (emergency referral). The SPOA can manage referrals which need less rapid triage, within 48 hours. A new event in a glaucoma patient identified via a sight test in the community (e.g. cataract) must be triaged via the SPOA. This ensures patients, with a pre-existing chronic disease such as glaucoma, are referred to an appropriate provider, enabling the appropriate supporting longitudinal data and treatment options to be taken into account.

- ✓ Informed referrals: Referrals from optometrists are directed to the SPOA rather than specific providers, ensuring patients are not steered without appropriate choice and consent, supporting equitable, system-wide oversight. A new event in a glaucoma patient identified via a sight test in the community (e.g. cataract) must be triaged via the SPOA.

- ✓ All referrals meet referral filtering criteria, NICE Glaucoma Guidelines[20], RCOphth[31] and The College of Optometrists referral guidelines, as well as PACS guidelines[32].

- ✓ Referral processes provide appropriate patient communication and support, adhering to The Eye Care Support Pathway[11].

- ✓ Single Point of Access (SPOA) co-ordination: A centralised hub provides up-to-date information service availability and capacity across all providers and sends a copy of the optometrist referral letter to the GP.

- ✓ Agreed minimum data set and standardised referral forms: All referrals include key clinical data – relevant medical history and diagnostic results – to support consistent, thorough triage.

[31] Glaucoma-Commissioning-Guide-Long-June-2016-Final.pdf
[32] Management of Angle-Closure Glaucoma Guideline | The Royal College of Ophthalmologists

- ✓ AI-supported decision-making and administrative efficiency: Integrated AI tools and streamlined processes within the SPOA reduce administrative time and minimise unwarranted variation in information sharing.
- ✓ Bidirectional data flow: Secure, seamless exchange of patient data between primary care, community and hospital eye services supports continuity of care.
- ✓ Patient-centred communication: Patients receive clear, concise correspondence outlining clinical risk, next steps and available choice options; discharge letters and outcome letters are routinely shared with patients, referring optometrists and GPs. Advice and guidance provided, using language suitable for the patient. Patient support is provided in line with The Eye Care Support Pathway.
- ✓ Digital submission and feedback: Diagnostic data is submitted electronically (e.g., PDFs via ERS/EeRS), with prompt advice, guidance provided back to referrers by the SPOA.
- ✓ Triage: Where a referral from GRMS or GECFS meets the criteria for assessment by a secondary eye service (glaucoma service), the SPOA provider should carry out triage to determine the most appropriate next step. This involves using the clinical information in the referral – including glaucoma data obtained through repeat measures and/or case-finding – to direct the patient to the appropriate provider. The aim is to support timely pathway management, equitable access to care, and patient choice.

Management in secondary care and the community

Management of glaucoma in secondary care and the community starts with diagnostics, will involve lifelong monitoring for patients who are confirmed to have glaucoma, and ends with discharge where clinically appropriate. It involves timely, effective follow-up, as well as safe and effective, evidence-based interventions, and requires continuity of care, including with respect to urgent and emergency care. Patient-centred communication, a rigorous approach to quality and safety, and a long-term approach to training and research are also essential.

Glaucoma services need to deliver risk-based care underpinned by longitudinal data, subspecialist oversight with a strong focus on continuity, particularly at transition points between potentially different providers. Continuity of care can be delivered directly by secondary care, or through effective collaboration with community providers. Stratified follow-up, appropriate discharge and effective urgent care all depend on clearly defined clinical criteria, reliable information sharing and sound clinical judgement. Communication needs to be clear and person-centred, and services need to adhere to clinical guidance, implement failsafe systems and participate in research and training to ensure safety, sustainability and continuous improvement.

The following content describes the operational strategy we encourage for management of glaucoma from diagnostics onwards. For ease of reference and quick navigation, a series of links to the subsections covering each area is provided below.

Diagnostics

Continuity of care

Safe and effective interventions

Timely, effective and appropriate follow-up

Discharge

Urgent and emergency care

Patient communication and support

Quality and safety

Training

Research

Diagnostics

GIRFT best practice

Diagnostics need to be delivered in an efficient and scalable way. A combination of different models may be required to meet demand, given the growing disease burden, and different models are appropriate in different settings. Specifically:

- When diagnostics are performed by secondary care, A high proportion of new and follow-up glaucoma cases should be assessed via a Diagnostics Asynchronous Virtual Review Assessment Pathway (DAVRAP), allowing face-to-face appointments to focus on higher-risk patients**.** Tools like GLAUC-STRAT Fast[8] should be used to ensure appropriate clinically risk-based care.
- When diagnostics are performed within primary care, both synchronous and asynchronous models are acceptable.

Context

An effective glaucoma service is risk-based, stratifying patients and reviewing them virtually wherever possible, particularly when performed within secondary care. This ensures optimum use of NHS resources, enabling glaucoma services to manage the risk of blindness effectively while also providing timely diagnosis to newly referred patients[33].

We recognise that some established models of care already deliver effective care in the community without constituting the DAVRAP model we describe in this section as best practice. These models can represent a step towards more mature digital, asynchronous virtual review and should be welcomed where they are appropriately governed and supported by robust minimum data sets and escalation processes.

For example, in Norfolk and Waveney, stable patients are managed in community optometry with defined escalation back to hospital eye services if clinical status changes, alongside a periodic hospital review; there are active discussions locally about whether elements of the periodic review could be undertaken virtually.

Diagnostics Asynchronous Virtual Review Assessment Pathway (DAVRAP)

Definition

DAVRAP is a pathway in which patients physically attend a testing site for their diagnostics and then leave. Subsequently their diagnostics will be reviewed by health care professionals, making a clinical decision on a separate date. There can be different settings for asynchronous virtual reviews to take place – see case studies one and two.

Purpose

An effective DAVRAP enables the clinical team to assess the longitudinal data of glaucoma patients for deterioration in a standardised environment, with digital decision-making support tools if available. This enables clinicians to focus face-to-face capacity on the higher risk

[33] Impact of a community-based asynchronous review clinic on appointment attendance delays across an eye hospital network in London, UK: an interrupted time series analysis. Ndwandwe et al. BMJ Open 2025.

patients e.g. pre-surgical, surgical, those requiring a slit lamp examination and the vulnerable (unable to perform the tests)[34].

Scope

- Most new referrals[33,34] (including from GRMS and GECFS) can be assessed in this pathway, which consists of face-to-face diagnostics (patient attending this part of the pathway) followed by asynchronous virtual review of those diagnostics (patient not attending, health care professional making a clinical decision at a later date). A face-to-face consultation is scheduled only if required (which might be approximately 25% of the time e.g. for consultation on their diagnosis and treatment, physical examination or complexity in the case of secondary and tertiary referral). With effective glaucoma filtering in place, more patients might progress to a face-to-face appointment for consultation about treatment (although the diagnostics provided from glaucoma filtering will be reviewed virtually prior to this). Some patients might be started on treatment following a virtual review of diagnostics; a face-to-face consultation may not always be necessary. This type of interaction needs to support the patient, including telephone appointments and effective patient communication.

- Based on GIRFT Model Health System benchmarking, at least 50% of follow-up glaucoma patients can be reviewed in this pathway to obtain longitudinal data and to assess for lifetime risk of blindness.

- Exact exclusions can legitimately vary between providers e.g. patients who are unable to comply with testing and paediatric glaucoma referrals[35].

- Based on this scope, our GIRFT benchmark recommends ***a median of at least 50% follow-ups*** can be delivered using diagnostics followed by asynchronous virtual review when patients receive follow-up in secondary care. Follow-up care provided in the community can be delivered asynchronously or synchronously.

Minimum data set for DAVRAP

Patients assessed via the DAVRAP should have their data collected adhering to a minimum data set, to allow for an efficient virtual assessment.

Corneal-corrected intraocular eye pressure measuring devices are safe (non-contact), enable cost effective use of resources, may prove to more accurately predict visual field progression, and are excellent for reproducible high-volume diagnostics[36,37]. There may be some exclusions, such as corneal scarring, and very high or very low eye pressure measuring, such as for perioperative and/or early postoperative glaucoma patients.

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[34] Devon Case Report – Glaucoma Service Redesign
[35] Expansion of patient eligibility for virtual glaucoma clinics: a long-term strategy to increase the capacity of high-quality glaucoma care. Nikita et al. BJO 2023.
[36] When gold standards change. Time to move on from Goldmann tonometry? Gazzard et al. BMJ 2020
[37] Association between Rates of Visual Field Progression and Intraocular Pressure Measurements Obtained by Different Tonometers. Susanna et al. Ophthal 2019.

Minimum data set required for DAVRAP

1. Questionnaire to include symptoms, family history and ethnicity (digital and/or AI enabled).
2. Medical history including drugs history.
3. Ocular history.
4. Visual acuity.
5. Anterior OCT of angle (not mandatory at every visit).
6. IOP and method, time of day (ORA IOP or equivalent).
7. Posterior OCT disc RNFL.
8. Posterior OCT – GCL.
9. Central corneal thickness (for 1st assessment following referral).
10. Digital (disc) photo – desirable, not essential.
11. Standard automated perimetry (central threshold visual field test).

Risk stratification

All glaucoma assessments, whether via diagnostics virtual review and/or face-to-face, must be completed with appropriate clinical risk stratification. **GLAUC-STRAT Fast** is the nationally recognised and supported tool for this purpose.

However, approaches that have been embedded locally and which follow the same principles, such as those used at Moorfields, can be warranted and continue to be used. Suitable reference documents include:
• *Moorfields Glaucoma Service: Stratification of Outpatient Clinical Care* (2024)[38]
• *Moorfields Glaucoma Diagnostics Clinics Standard Operating Procedures*, Policy Summary, version 3.1[39]
• GLAUC-STRAT Fast[8]
• Poostchi et al., *Clinical risk stratification in glaucoma*, *Eye* (2023), which provides a peer-reviewed overview of risk-stratification[40]

Patient support

Providers and clinical staff should remain cognisant of the extended intervals between appointments and ensure patients receive support during these periods. All patient support measures should comply with the principles described in The Eye Care Support Pathway.

Continuity of care

Delivering a DAVRAP requires adhering to *Good Medical Practice*[9] guidance on contributing to continuity of care (paragraph 65) and delegating safely and appropriately (paragraph 66). Clinicians must:

[38] *Moorfields Glaucoma Service: Stratification of Outpatient Clinical Care* (2024)
[39] *Moorfields Glaucoma Diagnostics Clinics Standard Operating Procedures*, Policy Summary, version 3.1
[40] Clinical risk stratification in glaucoma. Poostchi et al. Eye 2023.

- Promptly share all relevant information about patients.
- Share information about patient's progress of care, who is responsible and name of lead clinician.
- Be confident that any person they delegate to has the necessary knowledge, skills and training to carry out the tasks they are delegating.

In practice, the requirement to share information about who is responsible for their care means:

- All DAVRAP patients must be explicitly told who their named consultant is and provided with clear contact details for the service.
- It should be explained to the patient that while this named consultant retains overall responsibility, reviews may be conducted by other qualified specialists within the team at the provider.

Further discussion of continuity of care is provided in the next section.

Continuity of care

GIRFT best practice

Patients benefit from continuity of care being delivered to the highest possible standards in line with *Good Medical Practice*[9], with all providers and clinicians recognising that this is a key consideration for a longitudinal disease like glaucoma, particularly where multiple providers may be involved in a patient's care.

Context

Decision-making in glaucoma is based on reviewing longitudinal data and/or sequential measurements and relating this to the lifetime risk of blindness. Services need to be able to care for patients at all stages of disease progression and every patient needs access to the continuity of care required for deterioration to be identified in a timely fashion.

Transfers of patients between providers can create risk, given the longitudinal data required in managing glaucoma. This risk must be mitigated against by ensuring that the patient's minimum data set is appropriately stored and shared, as required and in line with GMC guidance.

To our knowledge, there is currently no interoperable, single-platform digital mechanism for sharing this data. This means it is the responsibility of clinicians to share all relevant information about patients with others involved in their care, and for providers to enable this as appropriate. Consideration of how data could be made more interoperable at a national level would be invaluable; however, this is outside the scope of this document.

Community-based asynchronous review clinic integrated with a London hospital network[33]

Overview

A community-based asynchronous review clinic, located in a London shopping centre, is fully integrated with the wider hospital network's eye care services. Operating under the network's clinical governance and digital infrastructure, the clinic enables joined-up care delivery outside traditional hospital settings. All clinical decisions are made under the auspices of the hospital network's governance framework, ensuring safety, consistency, and integration with existing care pathways. This model has led to a measurable reduction in attendance delays across the network. Model Health System data submissions validate this; as of Q4 2024/25 the % of follow-up for glaucoma which exceed the Latest Clinically Appropriate Date (LCAD) was 4.4%. For all ophthalmology appointments, the median number of weeks exceeding the LCAD was 4.9 weeks.

Key elements of the service

1. Workforce model

- Tests are performed in a community setting, by trained and accredited Band 3 ophthalmic technicians.
- Virtual review, clinical decision-making:
  - All new patients are reviewed by consultants.
  - Stratified review of follow-up patients – between consultants, glaucoma fellows (senior medical HCPs) and principal optometrists (diploma).
  - Specialist optometrists undertaking virtual review have professional or higher certificates or are working towards them. If HCPs do not have these qualifications, each VR is discussed with the diploma level lead.

2. Clinical protocols

- All tests are carried out in accordance with the hospital network's standard operating procedures, which includes guidelines specific to glaucoma and other relevant conditions.

3. Data handling and clinical review

- Test scans and clinical data are uploaded to the hospital network's secure online system.
- Reviewing by the HCPs takes place on site and/or via remote access to apps and data via secure links.
- Specialist clinicians review the data remotely and determin whether to:
  - discharge the patient
  - continue follow-up via the asynchronous/virtual pathway, or
  - escalate to face-to-face follow-up if clinically indicated.

Devon case report – glaucoma service redesign (community-based asynchronous review clinic integrated with the Royal Devon University NHS Foundation Trust Glaucoma Service)[34]

A community-based asynchronous review clinic, located in the Exeter Nightingale Centre of Excellence for Eyes (CEE), is fully integrated with the Royal Devon University NHS Foundation Trust hospital glaucoma service. Operating under the trust's clinical governance and digital infrastructure, the clinic enables joined-up care delivery outside traditional hospital settings. All clinical decisions are made under the auspices of the hospital's governance framework, ensuring safety, consistency, and integration with existing care pathways. This model has led to a measurable reduction in the new patient referrals delays, with most patients assessed within six weeks.

Key elements of the service

1. Workforce model

- Tests are performed by trained and accredited ophthalmic technicians.
- Virtual review, clinical decision-making:
    - All new patients are reviewed by consultants.
    - Stratified review of follow-up patients – consultant-led as well as health care practitioner virtual review with/without consultant oversight subject to patient risk.
    - Health care practitioners doing virtual review have (or are working towards) professional or higher certificates or equivalent for non-optometry practitioners.
    - Non-medical and medical HCPs are signed off as competent as part of this trust's internal training process and then allowed to do virtual reviews.

2. Clinical protocols

- All tests are carried out in accordance with the hospital standard operating procedures, which includes guidelines specific to glaucoma and other relevant conditions.

3. Data handling and clinical review

- Test scans and clinical data are uploaded to the hospital network's secure online system.
- Reviewing by the HCPs takes place on site in a non-clinical reading room, freeing up clinic space for other pathways.
- Health care practitioners review the data to determine whether to:
    - discharge the patient
    - continue follow-up via the asynchronous/virtual pathway
    - discuss the assessment with the consultant
    - escalate to face-to-face follow-up if clinically indicated.

Checklist: What continuity of care looks like

- ✓ Ensure and maximise continuity of care by ensuring effective provider collaboration and communication; and ensure all providers share the minimum data set when a patient transfers from one provider to another, to minimise clinical risk.
- ✓ A patient's named provider provides diagnosis, treatment, fail safe processes and long-term follow-up.
- ✓ Any other providers involved in a patient's glaucoma care are expected to work closely with the named provider, to ensure all relevant clinical information is shared.
- ✓ A patient's named provider provides a locally based subspecialty glaucoma consultant, to supervise and/or manage adverse events, urgent and/or emergencies related to glaucoma, provide laser and surgical treatments as well as face to face follow-up following an emergency presentation.
- ✓ A patient's named provider maintains a minimum data set (which is shared if clinical responsibility transfers to a new provider).
- ✓ All clinical care is provided by suitably trained and qualified healthcare professionals with competencies and experience in accordance with NICE guidance and formally operationalised locally.
- ✓ Any treatment for glaucoma, including laser or surgical interventions, is delivered by the patient's named provider or in consultation with the patient's named provider.

Safe and effective interventions

GIRFT best practice

Patients receive safe and effective evidence-based interventions to treat their glaucoma from a qualified and appropriately experienced clinician who can base their decision-making on sub-specialist glaucoma consultant expertise and the patient's longitudinal data set, ensuring that the information given to patients, including when discussing benefits and harms, reflects Good Medical Practice[9].

Context

Glaucoma clinical decision-making requires subspecialist leadership and expertise. This is because decision-making involved in a patient being offered a glaucoma intervention is sophisticated. It requires understanding longitudinal data, assessing risk of blindness within a patient's lifetime and understanding the intervention options available and appropriate to clinical risk. The long-term nature of disease progression and the potential for adverse events following interventions, make continuity of care and subspecialty oversight critical to ensure optimal clinical effectiveness and safety.

Good clinical practice requires that clinicians only use interventions with proven efficacy, and that all interventions and/or devices are audited through the most appropriate governance structures. As of 2025, a nationally recognised database for glaucoma interventions and/or devices is not available. We expect this to change in the future, at which point this aspect of good practice can be achieved by providers across the country. The United Kingdom and Eire Glaucoma Society (UKEGS) has recommended the following guidelines for the provision of Minimally Invasive Glaucoma Surgery (MIGS):

- The decision to perform MIGS[41] must be made by a subspecialist glaucoma consultant with access to the patient's minimum data set. If that is not the clinician overseeing the patient's long term glaucoma care, the glaucoma consultant making the decision must share all relevant information with the glaucoma consultant responsible for the patient's long term care, in line with *Good Medical Practice*[9] and considered in detail in *Decision Making and Consent*[42].
- The procedure only to be performed by surgeons with specialist training and experience managing the condition over time e.g. glaucoma fellowship training[41].

[41] Building consensus on MIGS: insights from a UKEGS survey. Ansari et al. Eye 2025.
[42] The dialogue leading to a decision part one of four - professional standards - GMC

Checklist: What delivering safe and effective intervention looks like

Who delivers interventions and where?

- ✓ Surgical interventions are performed by a glaucoma subspecialist who has had prior access to the patient's longitudinal data set (for example, because they have been responsible for the patient's care), or by a glaucoma subspecialist who has obtained an opinion from, or access to the patient's longitudinal data set via a glaucoma subspecialist who had prior access.
- ✓ Laser interventions for glaucoma are performed by a glaucoma subspecialist-led team who has had prior access to the patient's longitudinal data set (for example, because they have been responsible for the patient's care), or by a glaucoma subspecialist-led team who has obtained an opinion from, or access to the patient's longitudinal data set via, a glaucoma subspecialist who already has access and has been responsible for, or had oversight of, the patient's care.
- ✓ Cataract surgery in patients with glaucoma may be performed by any cataract surgeon competent to do so, provided that a glaucoma subspecialist with access to the patient's longitudinal data set has reviewed the case and provided an opinion supporting the intervention. The cataract surgeon must be competent to deliver the best possible surgical option for that patient, which may often be a more complex operation i.e. cataract surgery combined with other eye pressure lowering interventions, due to the presence of glaucoma[41].
- ✓ Clinicians performing any intervention must share all relevant information about the patients they are treating with others involved in their care. Likewise, any clinicians involved in follow-up or monitoring must share all relevant information (when they are aware that another provider is considering an intervention for that patient).

What interventions are performed?

- ✓ Only glaucoma surgical devices and/or new glaucoma surgeries (including lasers) - whose efficacy is supported by appropriate evidence (e.g., Level 1 or Level 2 evidence) or authoritative clinical guidance such as NICE guidelines - are used by the glaucoma provider, unless part of a randomised controlled study and/or clinical trial.
- ✓ Once a new national database of approved devices is published only glaucoma surgical devices whose data is submitted should be used in a glaucoma service, unless part of a randomised controlled study and/or clinical trial.

Timely, effective and appropriate follow-up

GIRFT best practice

Patients are assessed in a follow-up pathway that is timely, based on clinical risk, well governed, supported by failsafe processes, and delivered by qualified and appropriately experienced clinicians with subspecialist glaucoma consultant oversight and support.

Context

NHS resources need to be used effectively and appropriately to clinical risk. While delay to follow-up creates clinical risk of permanent sight loss, over-reviewing glaucoma patients can lead to inappropriate use of follow-up capacity.

Directing patients into lower-risk pathways when their condition is stable enables more efficient use of resources, provided care is based on clinical risk, follows NICE guidelines and includes clear criteria and failsafe mechanisms for re-escalation if needed. Effective follow-up decision-making by all providers is therefore essential to ensure resources are used appropriately for patients at greatest lifetime risk of blindness.

Auditing follow-up activity with patients stratified according to clinical risk is essential to ensuring timely, effective and appropriate care and is safety critical. It would be desirable for follow-up data, including timescales, to be published and nationally auditable. There are currently no plans to deliver this as a patient-level data set across all providers. However, GIRFT does collect this information as part of its quarterly service-level questionnaire for NHS glaucoma service services from NHS acute trusts, and the data is available on the Model Health System. It would be clinically beneficial to extend this questionnaire to other providers of follow-up care, and GIRFT can consider the practicalities of this.

> An audit of >9,000 glaucoma appointment requests over three years demonstrated that: 14% could have had their appointments delayed, and 22% could have been discharged from the glaucoma service[43].
>
> The medical records of over 45,000 patients from five regionally different glaucoma clinics in England were assessed for the conversion to POAG from ocular hypertension (OHT). Less than one-fifth of OHT patients managed in glaucoma clinics in the UK convert to POAG over a five-year period, suggesting that these patients require less intensive follow-up[43,44].
>
> We recommend that most patients with ocular hypertension (OHT) do not require visual field testing more frequently than once a year and, in some cases, intervals may safely be extended further. This recommendation is supported by real-world evidence showing

[43] Tackling the NHS Glaucoma Clinic Backlog. Broadway & Tibbenham. Eye 2019.
[44] Progression from ocular hypertension to visual field loss in the English hospital eye service. Kelly et al BJO 2019

> that fewer than one in five of patients with OHT converted to primary open-angle glaucoma (POAG) within five years, and only one in six developed any detectable visual field loss, most of which was mild. Despite this low conversion rate, average monitoring frequency remains similar across OHT, POAG and glaucoma suspects, suggesting that many OHT patients in routine care are unlikely to experience clinically significant functional loss even without intensive follow-up. GIRFT recommends that the majority of OHT patients do not need to be tested more frequently than once a year and sometimes the Latest Clinically Appropriate Date (LCAD) can be longer[44].

Follow-up intervals for an effective glaucoma service

The table on the next page summarises NICE-recommended follow-up intervals for glaucoma. From a GIRFT perspective, we recognise these as the best practice intervals that effective glaucoma services should work to. Clinicians would need to use clinical judgement to decide when the next appointment for any one patient should take place. This would involve assessing control of intraocular pressure (IOP) and the risk of conversion to glaucoma and/or progression to sight loss within the patient's lifetime.

We recommend auditing against these intervals to ensure alignment with best practice standards. In addition, these intervals will imply new to follow-up ratios relevant to individual providers. it is important to monitor these ratios, as they provide valuable insight into how well providers are using their resources. For stable follow-up glaucoma patients, understanding and stratifying these ratios according to risk category – where 'red' patients require more frequent reviews, 'amber' are seen at moderate intervals, and 'green' typically have annual assessments – would enable providers to optimise care pathways and benchmark their protocols effectively.

Follow-up intervals for each patient cohort

	Conversion or progression	IOP control	Time to next assessment (months)
OHT	Not detected or uncertain conversion	No	Consultant review management plan
	Uncertain conversion	Yes	6 to 12
	No conversion detected	Yes	18 to 24
	Conversion	No or yes	Consultant review management plan
Suspected COAG	Not detected or uncertain conversion	No	Consultant review management plan
	Uncertain conversion	Yes	6 to 12
	No conversion detected	Yes	12 to 18
	Conversion	No or yes	Consultant review management plan
COAG	Not detected	No	Consultant review management plan
	Uncertain progression or progression	No	Consultant review management plan
	No progression (RAG rating low or green risk)	Yes	12 to 18
	No progression (RAG rating high or red risk)	Yes	6 to 12
	Uncertain progression or progression	Yes	Consultant review management plan

Post-ops and lasers (from Moorfields Stratification of Outpatient Clinical Care (2021)		
Selective laser trabeculoplasty	6 to 8 weeks then back into Virtual Clinic	Remote monitoring (consultant)

Quality assurance and failsafe data

All glaucoma assessments, whether via diagnostics virtual review and/or face-to-face, must be completed with the following quality assurance and failsafe data (as recommended by GIRFT, see Benchmarks: Measuring the operational strategy):

- Clinical risk stratification
- Latest Clinically Appropriate Date (LCAD)
- Compliance with The Eye Care Support Pathway[11]

Patient communication: timescales and safety netting

To ensure patient safety and transparency regarding care pathways, patients must be clearly informed of their LCAD. Staff must advise patients of the protocol to follow should this date be exceeded.

In practice, patients should be explicitly advised that if their LCAD is not met or is postponed, they should:

- Contact the service provider directly using the details provided.
- Inform their general practitioner (GP) of the delay.
- Seek advice from their optometrist, who may be able to assist in flagging these delays to the provider on the patient's behalf.

Delivery of and clinical input required in glaucoma follow up pathways: from hospital to community, from analogue to digital

Glaucoma diagnostic pathways can be effectively and safely delivered in any appropriate physical setting including a primary care (community) setting, provided staff are appropriately qualified, trained and experienced, and that robust clinical governance arrangements are in place to ensure accountable continuity of care and seamless data sharing.

Key considerations include:

- Moving glaucoma follow up into a community setting requires defined roles, clearly defined pathway devolvement, responsibility and accountability, and formal clinical oversight by a subspecialist glaucoma consultant (clinical lead).
- Where patients have diagnostics tests done in different places and different time points, these must be standardised because glaucoma is a progressive disease, requiring accurate longitudinal clinical data to identify the risk of permanent sight loss and the timing for appropriate interventions.

The remainder of this section describes the consultant glaucoma subspecialist oversight required as glaucoma pathways and, in particular, glaucoma monitoring, transition from hospital-based care to delivery within community settings.

It also outlines the responsibilities and accountabilities of clinicians working within these pathways, including how clinical decision-making, supervision and escalation should be managed. It also considers the importance of maintaining and interpreting longitudinal glaucoma data to ensure continuity, safety, and effective monitoring of disease progression. This then leads into a discussion of the service models that can be used to support the safe movement of glaucoma follow-up from hospital to community care.

Consultant glaucoma subspecialist oversight

All glaucoma diagnostic pathways must operate under the oversight of an accountable subspecialist glaucoma consultant acting as the clinical lead. Specifically:

- Infrastructure to enable the provision of consultant oversight on site or remotely, 52 weeks a year.
- Consultants may be employed by a different organisation to the organisation employing optometrists and/or other health care professionals, provided:
    - Formal agreements are in place to deliver a level of oversight comparable to that which can be achieved when clinical staff are employed within the same organisation.
    - The degree of consultant supervision required is proportionate to the experience and qualifications of staff reviewing diagnostics.

Glaucoma subspecialist consultant oversight is required to:

- Provide expert clinical leadership and governance
- Support decision-making in complex, borderline, or ambiguous cases
- Ensure safe delegation and appropriate escalation of care

Clear mechanisms must be in place for either virtual escalation to the consultant team and/or direction to face-to-face interactions with a consultant-led team, when cases fall outside the agreed competency framework or standard protocols.

Responsibility and accountability

Health care professionals retain responsibility to practise in line with *Good Medical Practice*[9] or their relevant regulatory standards (General Optical Council standards[45] and Nursing and Midwifery Council standards[46]). This includes, but is not limited to:

- Ensuring that clinical activity is appropriately delegated to the right workforce - qualified, trained and experienced. Providing adequate supervision, support, and oversight.
- Health care professionals provide care while staying within their competency, including non-consultant health care professionals acting independently or delivering delegated tasks when they are appropriately qualified, trained and experienced.

Longitudinal data

Longitudinal data is required to monitor glaucoma progression, so it is essential that measurements taken at different time points can be reliably compared. In practice, this is difficult where care is delivered across different settings using different machines. These challenges need to be resolved so that standardised data sets can be reliably and seamlessly assessed for longitudinal change over time and risk of sight loss. This means

[45] Standards of Practice for optometrists and dispensing opticians
[46] Standards - The Nursing and Midwifery Council

consistent and reliable data sharing in both directions to assure patient safety and escalation processes.

Follow up service models: asynchronous and synchronous

Follow-up for glaucoma should be delivered in one of two main ways:

- via an asynchronous pathway (in any appropriate setting)
- via a synchronous pathway when care is provided by a primary or community-care provider.

This section describes these two approaches in detail before comparing what we know about their scalability and benefits.

Asynchronous pathways

In the asynchronous pathway, e.g. DAVRAP, patients undergo the required diagnostic tests in any appropriate clinical testing setting, including community settings, such as a sports centre, after which the results are reviewed remotely by an appropriate clinician during a dedicated clinical session. This could be a healthcare professional (HCP) working remotely from home, or an HCP doing their virtual reviews in a primary, community or secondary setting after the tests have been completed.

Our use of the term DAVRAP does not imply that diagnostics must be reviewed by a glaucoma consultant within an acute trust setting.

The main benefit of the asynchronous pathway is that it divides the diagnostic and review steps, allowing other required tests to be undertaken in one session and reviewed remotely at a later point by a qualified clinician. This scalable model utilises current digital technology and can be made ready for the application of AI as the technology progresses (in alignment with the shift from analogue to digital in the NHS 10 Year Health Plan for England).

The rest of this section provides detailed guidance on the asynchronous model.

Detailed guidance on asynchronous pathways

Key features of the asynchronous pathway:

- In the asynchronous pathway, remote monitoring clinics are the default clinic type, with patients moving out of remote monitoring only during periods of clinical instability or when undergoing surgery. Once these periods resolve, patients should return to remote monitoring as standard practice.
- Clinical imaging and other required tests for remote review is appropriately undertaken by ophthalmic technicians[47], who are responsible for acquiring diagnostic images and test data.
- Images and test data are then reviewed remotely but appropriately qualified, trained and experienced with the appropriate supervision and support.
- Evidence from existing services demonstrates that this is effective and safe[33].
- Services operating synchronous clinics – where the same staff member performs imaging and review – achieve significantly lower throughput[34].

The pathway aligns closely with the established national model used in diabetic eye screening, which demonstrates the effectiveness of this approach:

- A technician visits a community location (e.g., a sports centre) and undertakes high-volume image capture – typically one patient every 12 minutes, resulting in approximately 20 patients per session.
- All images are uploaded to an integrated software system and transferred to a centralised grading centre.
- Qualified clinical graders review approximately 100 patients per session, enabled by the efficiency of remote, asynchronous review.

This illustrates the significant difference between the imaging role and the clinical review role – differences that underpin the scalability of the model. This could be replicated in glaucoma as part of a shift from hospital to community-based activity.

[47] When technicians are employed by an acute NHS trust we would generally expect the technician staff to be employed at band 3, and we would assume that primary care or independent sector employers would use their equivalent grade, with respect to seniority and renumeration (although that is a commercial decision for them).

Staff undertaking diagnostic acquisition

Ophthalmic technicians undertake the acquisition of glaucoma diagnostic data.

Technicians should:

- Be appropriately trained and competent in the diagnostic tests they are undertaking.
- Work to agreed protocols and standard operating procedures.
- Operate within a quality-assured and clinically governed service model.

Technicians are responsible for data acquisition only and do not undertake clinical interpretation or decision-making.

Staff undertaking virtual review and interpretation

The review and interpretation of glaucoma data can be undertaken by qualified and experienced health care professionals (optometrists, registered nurses, orthoptists and ophthalmologists) in any setting (secondary, community and primary care), provided:

- Health care professionals have higher qualifications in glaucoma, so that they can work independently.
    - Health care professionals working towards higher qualifications should be discussing their virtual reviews with a glaucoma subspecialist consultant and/or a designated senior decision maker if they are not signed off as independent decision makers.
- They have sufficient training and relevant clinical experience to interpret longitudinal glaucoma clinical information and diagnostics accurately and safely.
- They work within a clearly defined scope of practice and escalation framework to ensure avoidable sight loss is identified and escalated to appropriate clinical scrutiny.
- They are part of a pathway infrastructure that ensures their clinical practice is within the day-to-day supervision and/or oversight of an accountable glaucoma subspecialist consultant.

How asynchronous pathways could apply in practice within primary care for glaucoma

- Imaging and other required diagnostic tests can be performed across multiple community sites (including optometry practices), while clinical reviewers operate remotely from any suitable location.
- For example, an optometry practice with could undertake imaging sessions and other clinical data capture periodically, with all data uploaded for remote review by clinicians.
- The Moorfields glaucoma service optometry virtual review team (Band 7 and 8 with higher qualifications) are scheduled to complete between 12 to 18 virtual reviews per four-hour session each[48], provided they have access to consultant supervision appropriate to their qualifications and experience.

When face-to-face interactions are needed by exception in asynchronous pathways

Face-to-face interactions are sometimes required within this pathway. The following information is taken from a protocol from Moorfields, outlining the indications for which they use face-to-face interactions within a consultant-led team:

- Unstable ocular hypertension, possibly converting to glaucoma.
- Unstable primary open angle glaucoma (IOP high & not at target +/- definite visual field or disc progression).
- New primary angle closure suspects with irido-trabecular meshwork contact confirmed on AS-OCT plus risk factors.
- Unstable primary angle closure with laser peripheral iridotomy and ocular hypertension, possibly converting to glaucoma.
- Unstable primary angle closure glaucoma (IOP high & not at target +/- definite visual field or disc progression).
- Progressing glaucoma, referred from optometrist-led or remote monitoring clinics.
- Reduction in visual acuity (cataract query).
- Postop glaucoma surgery < 1 year.
- Postop cataract surgery in the presence of:
  - functioning bleb
  - advanced glaucoma
  - only eye.
- Patient with learning difficulties / potential lack of capacity.

[48] Based on a standard operating procedure from Moorfields.

Synchronous pathways within primary care

Synchronous approaches within primary care reflect established service design in optometry and are an appropriate model to use to reduce demand on hospital-based services.

Experience from health systems in England – including Manchester[49] – as well as Scotland, Wales and Northern Ireland, indicate that synchronous glaucoma monitoring and follow-up models delivered in primary care can be viable. These models could enable greater choice, accessibility and potentially scalability, helping to ensure that growing demand for glaucoma follow-up can be met.

Critically, synchronous models depend on a foundation of standardised data acquisition. Ensuring consistent, reliable and clinically appropriate data collection is fundamental to model safety and effectiveness.

These models also require review by qualified, trained and experienced optometry staff – specifically, optometrists with higher qualifications in glaucoma. Close collaboration with ophthalmology teams in secondary care is essential to maintain appropriate escalation pathways and continuity of care.

Comparing both models

Available evidence indicates that both synchronous and asynchronous models can be clinically safe, effective and more efficient than traditional face-to-face follow-up in secondary care settings[50].

GIRFT case studies and peer-reviewed publications have shown the efficiency and impact on glaucoma outpatients' backlog[33,34, 51]. These show that there are two key reasons why asynchronous review should be expected to enable high volume follow-up of patients:

- Higher-volume review sessions: Remote review – whether conducted by optometrists with higher glaucoma qualifications or other appropriately trained staff – can enable larger numbers of patient datasets to be reviewed per session. Clinicians focusing solely on review activity can complete more reviews than if they were required to both acquire diagnostics and review them in real time. Evidence from Devon shows that the number of patients reviewed in a half-day session can increase from 15 to 70 as a result of moving to an asynchronous model[34].
- Use of diagnostic acquisition staff: Diagnostic acquisition delivered by ophthalmic technicians or optometric assistants supports optimal use of workforce resources for this part of a DAVRAP pathway.

[49] Primary Eyecare Glaucoma Service (PEGS): a mixed methods service evaluation | Eye
[50] Hospital to community in Wales: What is the value of optometrists playing a greater role in managing neovascular AMD and glaucoma in primary care? ; The value of virtual glaucoma clinics: a review | Eye
[51] Experiences with developing and implementing a virtual clinic for glaucoma care in an NHS setting | OPTH

Conversely, a synchronous model delivered in primary care may have scalability advantages due to the:

- large primary-care optometry workforce
- large number of community practices.

These factors could help meet demand by virtue of the volume of practitioners and the choice of sites available, possibly offsetting the potential relative inefficiency per session of delivering diagnostic acquisition and review at the same time in a synchronous model. Additionally, patients may benefit from the opportunity to discuss their glaucoma-related diagnosis and management/adherence queries, improving patient experience. Additionally, there may be reduced travel time, and greater appointment availability and flexibility.

Given the strengths and limitations of both models - and the current gaps in robust comparative evidence - a mixed economy of synchronous and asynchronous pathways is a reasonable prospect as services develop and transform.

The remainder of this section describes examples of synchronous models from Manchester, Scotland, Wales and Northern Ireland before giving an example of escalation processes within primary care synchronous models from Norfolk.

Primary Eyecare Glaucoma Service (PEGS) pilot in Manchester[49]

Manchester Royal Eye Hospital (MREH) piloted a Primary Eyecare Glaucoma Service (PEGS) to utilise shared care with primary care optometrists reviewing low risk patients, reducing the burden in secondary care and creating capacity for higher-risk patients.

Low-risk ocular hypertensive (OHT) patients on treatment and glaucoma suspect patients were identified by the glaucoma lead as suitable for PEGS. These patients were contacted, and consent was provided.

The pathway started in April 2021. Eligibility criteria included:

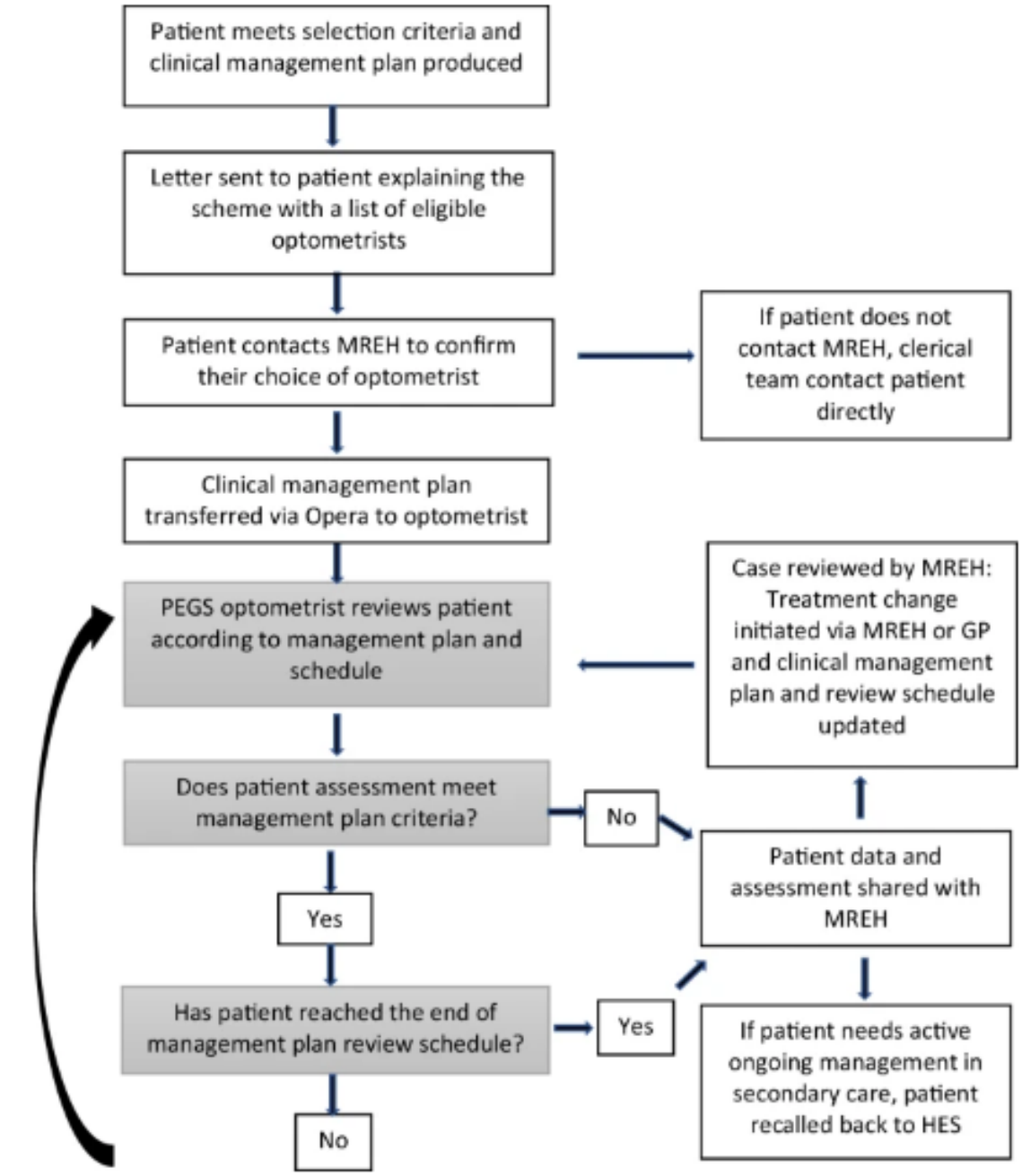
- Stable medically managed glaucoma suspects or OHT patients
- Untreated glaucoma suspect where further assessment is required to determine status

All patients were suitable for optic disc imaging and visual field testing.

Each patient had a clinical management plan produced by the glaucoma lead, including follow-up intervals and target intraocular pressure (IOP). They were referred to primary care optometrists, who had been trained and accredited to the standard of the College of Optometrists' Professional Certificate in Glaucoma (or beyond). Patients' clinical management plans were accessible by the optometrist using an electronic platform OPERA. Together with the clinical management plan and using guidance shown in the table below, primary care optometrists formed a management decision for each patient. We have also included a flow chart below, summarising the pathways.

Conversion from OHT to COAG?	IOP at target?	Management outcome:
Not detected	Yes	Review in PEGS in 12 months
Not detected	No	Seek advice and guidance from MREH regarding change in medication or need for review by MREH
Uncertain	Yes	Seek advice and guidance from MREH regarding need for earlier review in PEGS or review by MREH
Detected	Yes/No	Recall back to MREH
Conversion from GS to COAG?	**IOP at target?**	**Management outcome:**
Not detected	Yes	Discharge with advice according to pre-agreed management plan
Not detected	No	Seek advice and guidance from MREH regarding further management
Uncertain	Yes	Seek advice and guidance from MREH regarding further review or discharge
Detected	Yes/No	Recall back to MREH

Fig. 1: Flow chart summarising the complete PEGS (Primary Eye Glaucoma Service) pathway.



MREH Manchester Royal Eye Hospital, HES Hospital Eye Service.

Full size image >

Synchronous models in devolved nations

Scotland

In Scotland optometrists with NESGAT training (NHS Scotland's qualification which is broadly similar to the professional certificate in glaucoma in England) and independent prescribing qualifications manage stable glaucoma patients easing pressure on hospital services[52].

Wales

Some optometrists in primary care practices in Wales[53] have gained higher qualifications in glaucoma and hospital eye services discharge suitable low risk patients to these practices for further monitoring. These practices typically also provide referral filtering services.

Northern Ireland

In Northern Ireland, accredited primary care optometrists with additional glaucoma qualifications triage referrals and monitor the patients with ocular hypertension discharged from hospital care[52].

Norfolk: Example of escalation re-referral form from primary to secondary care

The Norfolk Community Glaucoma Suspect Monitoring Scheme uses an escalation re-referral form back to secondary care, shown on the next page, in the event of a change in clinical status. Please note: the GIRFT best practice discharge guidelines for glaucoma suspects are included later in this document.

These recommended services discharge glaucoma suspects who have been followed up for three years, or for three data sets, if there has been no conversion to glaucoma. Discharge can be sooner if there is a reduction in risk factors and data to suggest there has been no conversion to glaucoma.

[52] Access to care 2025
[53] Guide to primary care Optometry in Wales for healthcare professionals

Norfolk Community Glaucoma Suspect Monitoring Scheme (NCGSMS)
Re-Referral Form (Norfolk & Norwich University Hospital)

This form should be used ONLY for the routine referral of NCGSMS patients back to the Eye Dept

Unstable Referrals: Email to OPServicesPostTeam@nnuh.nhs.uk (from an '@nhs.net' address only)

Stable 5-year Referrals: Email to nnu-tr.eyesec@nhs.net (from an '@nhs.net' address only)

Patient Details

Title (Dr Mr Mrs Miss Ms)	Surname	Other Names

Address	DoB:
	Hosp No:
Post Code	Occupation:

Date of last NNUH clinic appt:	Date of most recent NCGSMS appt:

Vision (Snellen)

	Right Eye			Left Eye		
	U/A	VA	PH	U/A	VA	PH
Current VA						
Maximum VA			N/A			N/A

Goldmann Tonometry (mmHg)

	Right	Date	Left	Date
Current IOP		N/A		N/A
Maximum IOP				
Re-referral target		N/A		N/A

Optic Nerve Head (circle all that apply)

Circle or complete	**Right Eye**	**Left Eye**
Current CDR		
Disc status (Circle all that apply)	Normal / Stable Worse / Haem	Normal / Stable Worse / Haem

Visual Field (enclose latest plot)

(Enclose latest plot)	**Right Eye**	**Left Eye**
Test reliability	Reliable / Unreliable	Reliable / Unreliable
Visual field status (Circle all that apply)	Normal / Stable Improved / Worse	Normal / Stable Improved / Worse

Crystalline Lens (circle all that apply)

Right Eye	**Left Eye**
Clear / Cataract / IOL Symptoms / Glare / PCO	Clear / Cataract / IOL Symptoms / Glare / PCO

Anterior Chamber Angle (circle all that apply)

Right Eye	**Left Eye**
Open / Stable-narrow Patent PI / Narrower	Open / Stable-narrow Patent PI / Narrower

Reasons for Re-referral from NCGSMS Scheme (tick all that apply)

Reason	**RE**	**LE**	**Other Information**	**Optometrist Comments**
IOP outside re-referral target	☐	☐	See discharge form	
Suspected glaucomatous change	☐	☐	Record details above	
Anterior chamber angle	☐	☐	Refer if no patent iridotomy	
Cataract	☐	☐	If symptomatic / other indication	
Other	☐	☐	Use comments box for detail	
5 years since last NNUH Glaucoma appt	☐			

Optometrist & GP Details

Optometrist Signature: Print: Date of referral:

Name of GP & Address of GP Practice		Name & Address of Optometrist's Practice	

Checklist: What delivering timely, effective and appropriate follow-up looks like

- ✓ Every provider maintains clear documentation demonstrating that their planned follow-up intervals align with NICE guidelines.
- ✓ Follow-up activity is audited to monitor and help improve achievement of planned follow-up intervals.
- ✓ When a patient is receiving follow-up care in a secondary care setting, at least 50% of follow-ups are delivered via DAVRAP.
- ✓ Stable follow-up patients can be managed by primary care providers with formalised escalation plans agreed in place. Health care professionals working in community providers have the relevant qualifications and accreditation to meet service delivery and quality assurance, with the necessary experience. Follow-up in the community and primary care can be delivered asynchronously or synchronously.
- ✓ Community providers' escalation plans are agreed (via service level agreements) with secondary care providers and describe arrangements for governance, adverse and/or urgent care provision, what care the community provider will deliver, and when they will escalate to the secondary provider.
- ✓ 80% of lower risk patients such as OHT and glaucoma suspect patients should require follow-up at intervals of no more than 12 months (potentially up to 24 months for some ocular hypertension).

Discharge

GIRFT best practice

Providers adhere to discharge criteria provided in this document, which are based on NICE guidance. Patients who do not have glaucoma, or who have not converted to glaucoma, and are therefore not considered ocular hypertension or glaucoma suspect patients, can be discharged and advised to see their optometrist for sight tests.
The discharge report should be sent to the patient and copied to the optometrist and GP with clear advice and guidance regarding re-referral.

Context

Patients should be discharged from a glaucoma service once it is confirmed that they do not have glaucoma and/or that their risk of conversion is very low. Determining this may require monitoring for up to three to five years, although in some cases a shorter period is sufficient if risk factors resolve sooner. Once discharged, patients no longer require glaucoma monitoring and should be returned to their community optometrist for routine sight testing.

The NICE glaucoma guidelines clearly define the criteria for discharge. Glaucoma services should follow these guidelines to ensure they do not retain individuals who have no clinical need for ongoing care and who inadvertently divert essential resources from patients with genuine pathology.

Overall validation of this part of a service and its management is an essential component of running effective clinical pathways. For this reason, it is essential that discharge rates are routinely monitored to ensure practice remains optimal.

Where a patient is discharged to

Patients from the glaucoma service can be discharged to their community optometrists for regular sight testing, with clear advice and guidance regarding re-referral.

When to discharge a patient

The table on the next page provides comments as to when different types of patients should be discharged. Additional advice on how that discharge should be delivered and the supporting information required for the patient is also included.

Discharge guidance for each patient cohort

Patient type	Comments criteria	Discharge with letter to patient, GP and optometrist
New patients	No ocular hypertension No evidence of glaucoma red 'disease' - OCT diagnostics suggesting red 'disease' but not glaucoma	• Discharge after first attendance • With outcome/advice and guidance (A&G) letter from provider • Recommend regular sight test with community optometrist
Follow-ups ocular hypertension	Up to three years or up to three data sets if no conversion to glaucoma, and can be sooner if there is a reduction in risk factors and data to suggest not glaucoma and/or no conversion to glaucoma	• Discharge from follow-up • With outcome/A&G letter from provider • Recommend regular sight test with community optometrist
Glaucoma suspects	Up to three years or up to three data sets if no conversion to glaucoma, and can be sooner if there is a reduction in risk factors and data to suggest not glaucoma and/or no conversion to glaucoma	• Discharge from follow-up • With outcome/A&G letter from provider • Recommend regular sight test with community optometrist
PACS plus	Treated Laser Peripheral Iridotomy (LPI)	• Discharge after LPI • With outcome/A&G letter from provider • Recommend regular sight test with community optometrist
PACS plus	Treated after cataract surgery	• Discharge • With outcome/A&G letter from provider • Recommend regular sight test with community optometrist

Checklist: key things to look out for in discharge practice

- ✓ For patients with ocular hypertension or suspected glaucoma, discharge should be considered if, after three years and/or three data sets, there has been no conversion to glaucoma, risk factors have reduced, and available data supports a non-glaucoma diagnosis. This can be sooner if there is a reduction in risk factors and data to suggest not glaucoma and/or no conversion to glaucoma.
- ✓ A provider with an annual 0% discharge rate is an outlier and should be audited. For ocular hypertension, a discharge rate of 80% after five years is a reasonable benchmark.
- ✓ All discharge letters shared with the patient and copied to referring clinician (optometrist) and GP need to contain instructions to the patient being discharged, to keep a record of the letter for the optometrist sight test and to be shared with their new optometrist if they change optical practice.
- ✓ Patient support complies with the principles described in The Eye Care Support Pathway[11].

Urgent and emergency care

GIRFT best practice

Providers must ensure their patients have 24/7 access to urgent and emergency eye services, adhering to the principles of continuity of care described by *Good Medical Practice*[9].

Context

Some patients being monitored or treated on a glaucoma pathway will require rapid treatment delivered by a subspecialty glaucoma team with glaucoma subspecialty consultant oversight and/or supervision in the event of adverse events, complications, urgent or emergency presentations.

Treatment will sometimes need to occur as soon as possible after the onset of symptoms, and within 24 hours of onset. Importantly, adverse events of this nature or similar can follow not just glaucoma surgery, but also medical and laser treatments for glaucoma and cataract surgery in patients with glaucoma.

Achieving rapid care of this nature requires that clinicians involved in the patient's care uphold *Good Medical Practice* with respect to continuity of care, delegating safely and appropriately, being competent, discussing benefits and harms prior to treatment and giving information to patients.

High-quality providers support the appropriate culture and set up the processes to enable their clinical staff to deliver these obligations. This means the provision of handover and escalation protocols, where necessary, which support clinical staff to maintain continuity of care, delegate appropriately and share information.

Section contents

The rest of this section:

- Provides background information on painful loss of vision after glaucoma interventions.
- Reprints GMC guidance on continuity of care, delegating safely and appropriately, discussing benefits and harms, being competent, and the information that should be given to patients.
- Describes scenarios where handover has not been done adequately.
- Outlines our view on best practice clinicians and providers in this area.
- Closes by providing a detailed best-practice checklist that applies this context and existing guidance to emergency provision for patients with glaucoma.

We have taken the step of providing and reprinting such information in detail because we know that all health care professionals are concerned about continuity of care in this area of practice, based on their collective experience of managing care for these patients.

Furthermore, as *Good Medical Practice*[9] notes, continuity is particularly important when care is shared between teams, between different members of the same team, or when patients are transferred between care providers. In our view, this is more pertinent when managing a complex, long-term condition with sight-threatening emergency presentations.

In other words, although handover, escalation and continuity of care are fundamental principles of good medical practice, they warrant particular clarity and emphasis in glaucoma. The significance of these details may be taken as a given, yet patient outcomes depend on them being delivered robustly in practice.

Supporting organisational culture and infrastructure when assessing clinical emergencies in glaucoma care – based on the RCOphth's Emergency Eye Care 2020 document[54]

Scenario:

Painful loss of vision after glaucoma interventions (including glaucoma medical and laser treatments, glaucoma surgery and cataract surgery in patients with glaucoma).

Painful loss of vision after glaucoma surgery can include bleb-related endophthalmitis. This is a serious condition that can occur at any time in the years following surgery and can lead to permanent visual impairment, with a worse prognosis if not identified and treated early.

The bullet points below describe the interventions required within appropriate time frames, taken from existing RCOphth guidance. Escalation and handover protocols would need to document clearly how these standards will be achieved, and by which site, to be fit for purpose. Elements of a high value service include:

- Patients with suspected late complications following glaucoma surgery should be examined on a slit lamp by an ophthalmologist as soon as possible from onset of symptoms and within 24 hours.
- If a clinical diagnosis of bleb-related endophthalmitis has been made, patients should undergo immediate diagnostic tissue sampling (aqueous and vitreous) and initial intravitreal injection of antibiotics.
- Subsequent management requires close monitoring by a specialist glaucoma and retinal team, as repeat intravitreal injections or vitrectomy surgery may be required.
- There should also be access to oral and topical antibiotics.

[54] Emergency-Eye-Care-Commissioning-Guidance.pdf

Paragraph extracts from relevant sections of General Medical Council guidance

Extract from *Good Medical Practice*[9]: "Contributing to continuity of care"

65 Continuity of care is important for all patients, but especially those who may struggle to navigate their healthcare journey or advocate for themselves. Continuity is particularly important when care is shared between teams, between different members of the same team, or when patients are transferred between care providers.
You must promptly share all relevant information about patients (including any reasonable adjustments and communication support preferences) with others involved in their care, within and across teams, as required.

You must share information with patients about:

- the progress of their care
- who is responsible for which aspect of their care
- the name of the lead clinician or team with overall responsibility for their care

You must be confident that information necessary for ongoing care has been shared:

- before you go off duty
- before you delegate care, or
- before you refer the patient to another health or social care provider.

You must check, where practical, that a named clinician or team has taken over responsibility when your role in a patient's care has ended.

Extract from *Good Medical Practice*[9]: "Delegating safely and appropriately"

66 You must be confident that any person you delegate to has the necessary knowledge, skills and training to carry out the task you're delegating. You must give them clear instructions and encourage them to ask questions and seek support or supervision if they need it.

67 If a task is delegated to you by a colleague but you're not confident you have the necessary knowledge, skills or training to carry it out safely, you must prioritise patient safety and seek help, even if you've already agreed to carry out the task independently.

68 You must follow our more detailed guidance on Delegation and referral.

Extract from *Good Medical Practice*[9]: "Being competent"

1 You must be competent in all aspects of your work including, where applicable, formal leadership or management roles, research and teaching.

2 You must recognise and work within the limits of your competence. You must only practise under the level of supervision appropriate to your role, knowledge, skills and training, and the task you're carrying out.

3 You must keep up to date with guidelines and developments that affect your work.

4 You must follow the law, our guidance on professional standards, and other regulations relevant to your work.

5 You must have the necessary knowledge of the English language to provide a good standard of practice and care in the UK.

Extract from *Decision making and consent*[55]: "Discussing benefits and harms"

21 You must give patients clear, accurate and up-to-date information, based on the best available evidence, about the potential benefits and risks of harm of each option, including the option to take no action.

22 It wouldn't be reasonable to share every possible risk of harm, potential complication or side effect. Instead, you should tailor the discussion to each individual patient, guided by what matters to them, and share information in a way they can understand. See paragraphs 16–20 on *Finding out what matters to a patient*.

23 You should usually include the following information when discussing benefits and harms.

a) Recognised risks of harm that you believe anyone in the patient's position would want to know. You'll know these already from your professional knowledge and experience.

b) The effect of the patient's individual clinical circumstances on the probability of a benefit or harm occurring. If you know the patient's medical history, you'll know some of what you need to share already, but the dialogue could reveal more.

c) Risks of harm and potential benefits that the patient would consider significant for any reason. These will be revealed during your discussion with the patient about what matters to them.

d) Any risk of serious harm, however unlikely it is to occur. See paragraphs 32–39 on *Looking ahead to future decisions*. See paragraph 5 on *Taking a proportionate approach*.

e) Expected harms, including common side effects and what to do if they occur.

24 You should consider using visual or other explanatory aids to support patients to understand their personalised risk, taking account of their individual clinical and personal circumstances, compared with population level risk.

25 You must answer patients' questions honestly and accurately, and as fully as is practical in the circumstances. You must be clear about the limits of your knowledge and, if you can't answer a question, explain whether it is something you are uncertain of or something that is inherently uncertain.

26 If you are uncertain about the diagnosis, or the clinical effect a particular treatment might have, or if the available evidence of benefits and harms of an option is unclear, you should explain this to the patient. Some things will become clearer after treatment starts, so you should discuss in advance what the arrangements will be for monitoring the effect of the treatment and reviewing the decision to provide it. You should also explore in advance what

[55] Decision making and consent - professional standards - GMC

options the patient might prefer in the future, depending on how treatment progresses, and the factors that might influence their choice. See paragraphs 16–20 on *Finding out what matters to a patient* and paragraphs 21–24 on *Discussing benefits and harms*.

Extract from *Decision making and consent*[55]: "The information you give patients"

10 You must give patients information they want or need to make a decision. This may include:

- diagnosis and prognosis
- uncertainties about the diagnosis or prognosis, including options for further investigation. See also paragraphs 25–26 on *Dealing with uncertainties*
- options for treating or managing the condition, including the option to take no action
- the nature of each option, what would be involved, and the desired outcome
- the potential benefits, risks of harm, uncertainties about and likelihood of success for each option, including the option to take no action.

By 'harm' we mean any potential negative outcome, including a side effect or complication. See also paragraphs 21–24.

11 You must try to make sure the information you share with patients about the options is objective. You should be aware of how your own preferences might influence the advice you give and the language you use. When recommending an option for treatment or care to a patient you must explain your reasons for doing so, and share information about reasonable alternatives, including the option to take no action. You must not put pressure on a patient to accept your advice.

12 You should not rely on assumptions about:

- the information a patient might want or need
- the factors a patient might consider significant
- the importance a patient might attach to different outcomes.

13 Other examples of information that might be relevant and should be shared with patients:

- whether an option is an innovative treatment designed specifically for their benefit
- whether there is a time limit on making their decision and what the implications of delaying might be
- the names and roles of key people who will be involved in their care, and who they can contact (and how) if they have questions or concerns
- their right to refuse to take part in teaching or research
- their right to seek a second opinion
- any bills they will have to pay
- any conflicts of interest that you or your organisation may have
- any treatments that you believe have greater potential benefit for the patient than those you or your organisation can offer.

Handover errors

Where handover and escalation are not done well enough, patients may lose sight avoidably or may experience unwarranted stress during a presentation that could lead to irreversible sight loss, as illustrated in the cases below, which are based on real incident reports.

Examples of handover errors

Example 1: Lack of clear arrangements by a provider

A patient developed an acute and substantial eye pressure increase following two cataract procedures in the same eye (15 days apart). The patient did not previously have glaucoma risk factors. The patient reported being told that the first operation “couldn’t get all of the lens out”. The day after the second procedure, the patient’s eye became very painful, the patient felt sick and was shaking. The patient’s husband was unable to contact the original provider through a telephone number supplied.

The patient presented to the emergency department of an acute trust and then was referred to the acute trust’s own emergency eye service. The patient’s eye had developed a significant rise in intraocular pressure due to retained viscoelastic, and the patient needed immediate medical treatment to reduce the eye pressure and to reduce the risk of acute permanent sight loss. The acute event resolved; however, the patient has developed chronic glaucoma, impaired vision and now requires lifelong glaucoma care.

Breakdown in emergency eye care: The emergency team of the acute trust could not identify any clear arrangement for managing the patient’s complications. This resulted in precarious delays during an acute presentation which threatened the patient’s sight.

Example 2: Delays in redirecting and referring a post-surgical patient

A patient who underwent a cataract operation with no previous glaucoma risk factors developed an acute eye pressure spike on postoperative day one, called aqueous misdirection.

The patient presented to one branch of the original provider [1] over the weekend, but couldn’t be assessed at the branch, so was redirected to another branch of the original elective care provider [2], travelling 50 miles.

The patient was not treated by the eye care team at this site but instead sent to a different acute trust’s emergency department [3] without checking whether that trust had an emergency eye service, which it did not.

The emergency department team had to telephone a tertiary eye hospital [4] to seek initial medical advice. The patient was then redirected to a second acute trust provider [5], who had not been involved in the original cataract surgery but was closer to the patient’s home address, for further emergency medical treatment.

The patient received emergency medical as well as laser treatment to resolve the acute issue. The patient remains under the care of the provider [5] with long lasting risk factors for glaucoma.

Breakdown in emergency eye care: This patient was made to travel between four providers within 48 hours to access emergency eye care. This sequence involved multiple hand-offs, delays and uncertainty about responsibility for managing the adverse event, highlighting risk when escalation pathways are unclear.

Our view on best practice in the event of an adverse event following initiating any form of glaucoma treatment – medical, laser and surgical

As illustrated by the discussion in this section, best practice management of adverse events creates responsibilities for both providers and clinicians:

Providers: Providers will need to have clear arrangements in place for urgent and emergency glaucoma care. This includes either delivering and/or being part of a 24-hour, seven-day on-call service or establishing formalised escalation and handover procedures with another suitable local provider as part of a service level agreement. They will also need to ensure they can share minimum data sets and relevant patient history promptly with emergency departments, particularly when patients present out of area. These measures help ensure that, even when continuity of care is disrupted, patients receive timely and appropriate treatment without unnecessary delay.

Clinicians: In principle, clinicians should be able to manage complications and adverse events themselves. Where this is not possible, clinicians should be able to assure themselves that formal arrangements are in place for handover and escalation. Ophthalmologists must also comply with GMC guidance on consent and decision-making, which requires that patients are informed about potential risks. In addition, our view is that clinicians should be transparent with patients about how adverse events and complications will be managed if the patient consents to treatment – whether these would be managed by the clinician personally, by colleagues within the same provider, or through a formal agreement with another provider.

We caution colleagues against consenting a patient to treatment when clear arrangements for on-call urgent and emergency care are not in place, to minimise the likelihood of scenarios such as those described above.

Checklist: Delivering robust urgent and emergency care

Checklist for providers

- ✓ The provider that delivered the original glaucoma treatments and/or surgeries can provide specialist urgent and emergency input if so required, or alternatively:
- ✓ In a scenario when a provider is not part of, or cannot provide, a 24/7 emergency eye service, a handover and escalation process via a formal service level agreement with another provider is in place that meets the following standards:

    - A patient should be advised if a provider proposing an elective service does not have 24/7 emergency eye services provision and how to access out of hours emergency eye services in the event of an emergency.
    - There are clear arrangements for a patient developing an emergency, including how a referral is made to an emergency eye service by the original provider.
    - Transfer to an emergency department without urgent emergency eye care is not acceptable.
    - Urgent and emergency arrangements must be clearly defined both during normal hours and out-of-hours to ensure 24/7 emergency provision for the patient (a telephone advice service alone is not an emergency glaucoma service; if a provider can only provide a telephone advice service a formal service level agreement must cover all other aspects of provision).
    - Providers ensure they can share minimum data sets and patient history with emergency departments in a timely fashion, in cases where patients present to an emergency department out of area.
    - Standard operating procedures and documentation are in place for the emergency glaucoma service describing the workforce, rosters and emergency pathways for medical, laser and surgical glaucoma patients.
    - Clinical incident reporting is in place, including for the following scenarios:
        1. Any patient attendance related to an emergency or adverse event at a provider who was not the original provider, when a referral was not made by the original provider in the same system.
        2. Any patient attendance related to an emergency or adverse event at a provider who was not the original provider, when the original provider is not part of a formal service level agreement in the same system.
    - All providers maintain a quarterly data report regarding clinical incidents and serious incidents for learning, accountability and quality assurance.

Checklist for clinicians

In line with GMC guidance, ophthalmologists must:

- ✓ Promptly share all relevant information about patients with others involved in their care, within and across teams.
- ✓ Share information with patients about the progress of their care, who is responsible for each aspect of their care, and the name of the lead clinician or team with overall responsibility.
- ✓ Be confident that all information necessary for ongoing care has been shared before going off duty, delegating care, or returning the patient to another health or social care provider.
- ✓ Be confident that any person to whom they delegate has the necessary knowledge, skills, and training to carry out the task being delegated.

Raising a concern:

- ✓ Clinical staff working at any provider should consider raising a concern when continuity of care is not being delivered appropriately, particularly if this amounts to serious or repeated mistakes in patient care, in line with guidance from the GMC, GOC, CQC and BMA.

Patient communication and support

GIRFT best practice

All outcome and discharge letters must be shared with patients, optometrists and GPs with clear instructions for follow-up. Patient care should adhere to The Eye Care Support Pathway[11] to ensure patients have the appropriate support at the four key stages in their eye care journey.

Context

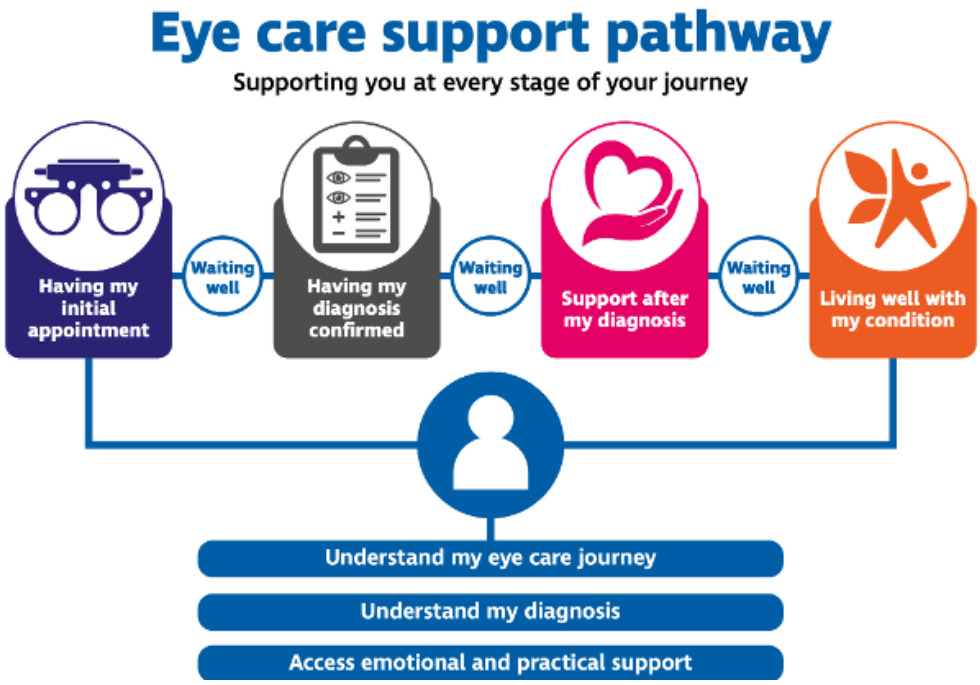
Clear, patient-centered communication is essential in any clinical setting. While this has long been established, it was also underlined by the findings of the Paterson Inquiry. Within glaucoma, the need for clear letters takes on particular importance due to the long-term nature of the condition, how it progresses and the clinical risk that can change over time. There can be unacceptable, unwarranted variation in referral reply rates across England:

- An associated study published in 2021, reported England's referral reply rates varied between 38% to 62% (compared to Scotland's referral reply rate varying between 45% to 92%), with replies copied to English patients in 2.8%-20.7% of referrals[56].

Patient support and clear communication should be hand in hand with the clinical parts of the glaucoma pathway. The Eye Care Support Pathway enables a comprehensive understanding of the support that should be complied with, and the RNIB glaucoma standard operating procedure for eye care liaison officers provides practical advice for use by Eye Clinic Liaison Officers (ECLOs)[57]. The Eye Care Support Pathway is summarised in the Infographic below.

[56] Referrals from community optometrists to the hospital eye service in Scotland and England
[57] RNIB ECLO Standard Operating Procedure: Glaucoma Pathway

Eye care support pathway



Source: The Eye Care Support Pathway[11]

Patient communication and support should be initiated from the start of a glaucoma pathway, integral to follow-up and informative at discharge from a glaucoma pathway. The rationale for this is:

- To support patient understanding of their long-term disease and/or risk factors.
- To understand the purpose of the various assessments; explaining asynchronous diagnostics virtual review clinics versus face-to-face clinics; explaining the purpose of glaucoma diagnostics.
- To promote adherence to treatment.
- To understand the need for long term monitoring, as well as the risk of delayed follow-up and avoidable asymptomatic sight loss.

Checklist: Patient communication and support

- ✓ Patient care should adhere to The Eye Care Support Pathway to ensure patients have the appropriate support at the four key stages in their eye care journey.
- ✓ Information must be provided to patients in an accessible format, complying with the Accessible Information Standard.
- ✓ When a patient is invited to a repeat measures or enhanced case-finding service, the referring clinician should signpost the patient to a Glaucoma UK and/or RNIB endorsed information via text link and/or leaflet.
- ✓ Single Point of Access: Signpost patients to information links that explain to the patient the purpose of the referral and patient choice.
- ✓ When the patient is invited to attend a new patient diagnostics asynchronous virtual review assessment, the nature of the attendance should be explained to the patient in the appointment letter and/or via a link to digital information.
- ✓ The outcome of new referrals should be shared with the referring clinician (optometrist) and cc'd to the GP for feedback and training.
- ✓ The outcome of follow-up assessments/appointments should be shared with the patient's community optometrist and cc'd to the GP.
- ✓ Patients with sight loss should be referred to the Eye Clinic Liaison Officer (ECLO) for support and sight impairment information and registration (if appropriate).
- ✓ All discharge letters should be shared with the patient and cc'd to referring clinician (optometrist) and the GP. Letters should contain instructions to the patient being discharged to keep a record of the letter so that if they consider changing opticians it can be shared with the new optometrist.
- ✓ Correspondence to patients needs to:
    - Outline their treatment in clear, simple language. It should be posted/emailed to them, copying their GP, in the knowledge that it will also most likely be available in the NHS App.
    - Include information about the level of clinical risk where appropriate.
    - Include the time interval for the next appointment i.e. the LCAD date.
    - Signpost to the Glaucoma UK website and helpline to support understanding glaucoma treatment options and improve compliance.
    - Contain information about the importance of attending follow-up and the risk of delayed follow-up, to raise awareness about avoidable asymptomatic sight loss.
    - Provide a contact phone/email so patients can reach their provider for queries.

Quality and safety

GIRFT best practice

Providers adhere to applicable guidance and principles as set out by NICE, GIRFT, and HSIB, with failsafe processes in place for clinical risk stratification and LCAD (Latest Clinically Appropriate Date) reporting.

Context

A broad range of clinical guidelines apply to glaucoma care, which providers need to consider when designing and operating their service. Failsafe processes are also an essential part of a safe glaucoma service, and we have outlined what is needed to deliver failsafe effectively below.

Checklist: Guidelines

- ✓ Services are delivered in line with the guidance listed below. The order of this list does not imply a hierarchy between the guidance.
    - NICE guidelines
    - GIRFT guides
    - HSIB recommendations
    - The Eye Care Support Pathway
    - College of Optometrists Clinical Management Guidelines and LOCSU pathway guidance (primary eye care)[58,59]

[58] Final Glaucoma Monitoring Pathway_July25
[59] Final_LOCSU-Glaucoma-Monitoring-Guideline-vs-1.2-Jul-25-.pdf

Checklist: Failsafe practice

- ✓ Providers will need Failsafe officers[60], usually separate for glaucoma and retina. Failsafe officers will be responsible for the audit suite(s) and report on LCAD data:
  - By clinical risk.
  - At timely intervals (minimum - at least monthly) otherwise clinical incident reporting should be recorded due to absence of data.
  - Failsafe processes are supported by effective ASI reporting.
- ✓ Failsafe processes consist of the following:
  - Access to urgent glaucoma clinic slots when indicated.
  - Capacity management.
  - LCAD data reporting by subspecialty (monthly).
  - Validation (e.g. waiting list and DNA validation).
  - Quarterly LCAD & other relevant data reporting to GIRFT.
  - See best practice failsafe: Calderdale & Huddersfield NHS Foundation Trust Further Faster Oct 2023[61].

[60] Appropriately trained failsafe officers would typically be employed at Band 4 in the NHS, as outlined on page 9 of elective-care-high-impact-interventions-ophthalmology-specification.pdf

[61] GIRFT Further Faster Oct 2023: Failsafe and LCAD at CHFT

Training

GIRFT best practice

All providers delivering NHS-funded glaucoma services should contribute to workforce development and training opportunities proportionate to their service scale. This includes supporting multi-professional training (medical, optometric, nursing) and CPD for community practitioners.

Context

Training in glaucoma care is essential to building a safe, sustainable workforce across primary and secondary care. The Royal College of Ophthalmologists' Level 1–4 Glaucoma Syllabus outlines a clear progression, from basic skills like measuring intraocular pressure and identifying angle types, through to advanced interventions such as laser and incisional surgery. Local delivery of this training, including for optometrists working towards higher qualifications, strengthens regional capacity and supports more integrated, patient-focused care.

Checklist: Training

- ✓ A provider of secondary care can support training as outlined in the RCOphth Level 1 to 4 guide[62]. This includes both outpatients and interventional glaucoma treatments training, such as SLT and glaucoma surgery.
- ✓ The locally based, subspecialty glaucoma consultant is responsible for providing training.
- ✓ Providers facilitate training opportunities and CPD for local primary care optometrists, in particular those completing College higher glaucoma and prescribing qualifications.

[62] RCOphth Postgraduate Medical Training – Level 1 to 3 Guidance

Research

GIRFT best practice

Providers participate in clinical research aimed at improving patient outcomes, including recruiting patients for studies or contributing to real world research or registry data. Primary care optometry and third sector organisations also contribute to research activity as applicable to their services and objectives.

Context

Recent advances in knowledge about the natural history of glaucoma, the effectiveness of glaucoma treatments, the cost effectiveness of treatment options and patient experience of treatment options would not have been achieved without the unique access afforded by the NHS to recruit patients and active research NHS providers organisations, supported by the National Institute for Health and Care Research infrastructure, Medical Research Council (MRC), Glaucoma UK and other funding bodies.

NHS providers have a duty to facilitate and promote research, as explicitly mentioned in the Health and Care Act 2022 and the NHS Constitution, with the Care Quality Commission recognising that research leads to improved staff recruitment and retention, earlier access to new treatments, and evidence-based practice.

These important NHS based studies inform treatment options for patients, cost effectiveness information for commissioners and form the evidence base for NICE guidelines.

The following recent glaucoma landmark studies have been delivered via collaborative, multi-centre UK NHS providers with their principal investigators based in UK and are recognised internationally as studies which have changed the way glaucoma care is delivered:

- Latanoprost for open-angle glaucoma (UKGTS): a randomised, multicentre, placebo-controlled trial[63].
- Effectiveness of early lens extraction for the treatment of primary angle-closure glaucoma (EAGLE): a randomised controlled trial[64].
- Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial[65].
- Primary trabeculectomy for advanced glaucoma: pragmatic multicentre randomised controlled trial (TAGS)[66].

[63] Latanoprost for open-angle glaucoma (UKGTS): a randomised, multicentre, placebo-controlled trial. Garway-Heath et al. Lancet 2015.
[64] Effectiveness of early lens extraction for the treatment of primary angle-closure glaucoma (EAGLE): a randomised controlled trial. Azuara-Blanco et al. Lancet 2016.
[65] Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial. Gazzard et al. Lancet 2019.
[66] Primary trabeculectomy for advanced glaucoma: pragmatic multicentre randomised controlled trial (TAGS). King et al. BMJ 2021.

Future failure to ensure an active NHS based glaucoma research infrastructure will undermine the NHS's ability to deliver important NHS relevant and pragmatic clinical trials informing the most effective treatment choices for patients and the most cost-effective care delivery for the NHS.

Checklist: Research

- ✓ Providers embed research activity into service delivery, including opportunities for staff to participate in patient recruitment, contribute to real-world research, and support registry data.
- ✓ Primary care optometry and third sector organisations also contribute to research activity as applicable to their services and objectives.

Benchmarks: Measuring GIRFT best practice

Benchmarks to measure GIRFT best practice

GIRFT best practice	Benchmark
Single Point of Access (SPOA) is used for all elective glaucoma referrals in a system. This does not include urgent referrals where optometrists would contact the eye department for rapid triage, or emergency referrals that require assessment as soon as possible or within 24 hours, such as: late presentation of advanced glaucoma, acute angle closure glaucoma, or intraocular pressure greater than 35 mmHg (urgent referral) or equal to or greater than 40mmHg (emergency referral)[26]. The SPOA can manage referrals which need less rapid triage, within 48 hours.	95% of referrals from GECFS/GRMS to SPOA, with clear documentation showing that a choice was offered e.g. by a digital app or telephone call/letter in the event of no response to the digital option.
Glaucoma Repeat Measures Service (GRMS)	Yes/No
Glaucoma Enhanced Case-Finding Service (GECFS)	Yes/No
Glaucoma minimum data set - for ALL new GRM referrals (Glaucoma Repeats Measures)	95% of data sets post GRMS referred to SPOA

Glaucoma minimum data set - for ALL GECFS referrals (Glaucoma Enhanced Case-Finding Referral Service)	95% of data sets post GRMS referred to SPOA
Referrals to glaucoma service from GRMS – first visit discharge rate	Measure annually
Referrals to glaucoma service from GECFS – first visit discharge rate	Measure annually
Glaucoma minimum diagnostics data set - for 1st assessments after referral and follow-ups	For 100% of those patients assessed in the diagnostics asynchronous review pathway
Provision of DAVRAP, when follow up is delivered within secondary care[67]	Minimum of 50% (GIRFT benchmark)
Led by a locally based subspecialty-trained glaucoma consultant i.e. named glaucoma consultant (available, responsible and accountable on a day-to-day basis)	Named consultant(s)
Description of end to end, comprehensive glaucoma service	100%
Failsafe policy and processes	100%
Named failsafe officer(s) reporting LCAD data for glaucoma & retina	100%

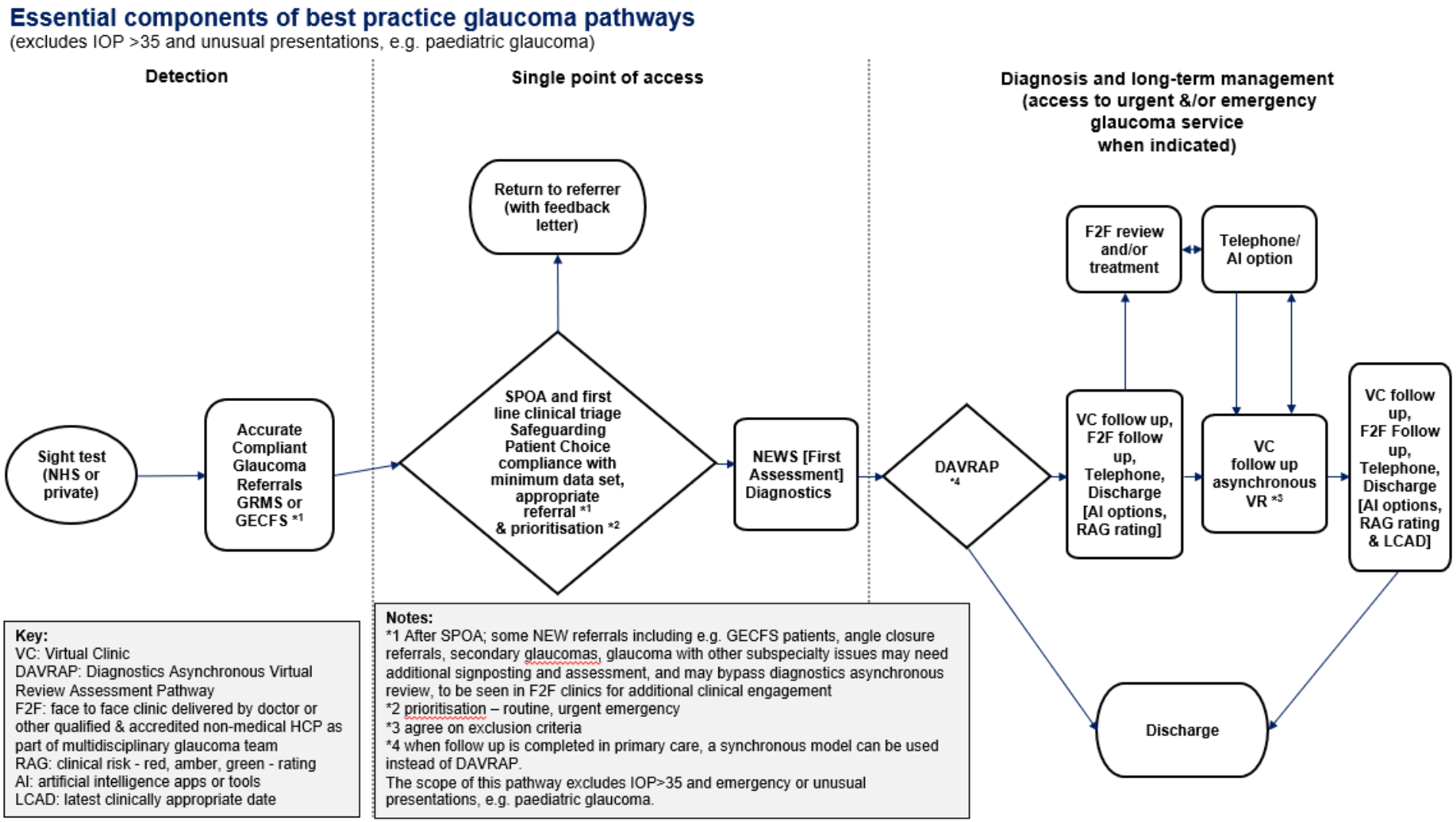
[67] When follow up is delivered within a community setting both asynchronous and synchronous follow up pathways are acceptable. We have not collected data on follow up provision within the community setting and so cannot set any benchmarks for this setting at the present time.

Compliance with clinical risk stratification	95%
Compliance with monthly reporting LCAD data for retina and glaucoma	95%
Discharge from glaucoma service 1st assessment	Discharge rates from glaucoma service 1st assessments diagnostics asynchronous review services (annually)
Follow-ups	All providers to conduct an audit re. discharge rates[68] - Audit discharge rates of ocular hypertension patients after three data sets and/or three years of care - Audit Discharge rates of Glaucoma Suspect patients after three data sets and/or three years of care
Compliance with patient communication	Audit: New referrals outcomes: letters sent back to patient and cc'd to the referring clinician (optometrist) & GP Follow-up letters - letters sent to patient and cc'd to the referring clinical (optometrist) and GP
Compliance with the Eye Care Support Pathway	Eye service complies with the Eye Care Support Pathway recommendations Including ECLO support

[68] Providers should contribute to audits of this data that are accessible to them. GIRFT already collects information about follow-ups as part of its service-level questionnaire for NHS HES services and makes the data available on the Model Health System. We think it would be clinically beneficial to extend this questionnaire to other providers delivering follow-up care and will consider the practicalities of this.

Provision urgent and emergency glaucoma service	Providers have an urgent and emergency eye service or a handover and escalation protocol meeting the best practice standards described in this document, which is audited regularly. All providers must supply regular data reports to the ICB for assurance, enabling glaucoma services system-wide learning and accountability.
Postop complications & Adverse events service	There should be clear policies in place on the management of post-operative complications.
Future Metric: Compliance with reporting to National Glaucoma Devices Registry	95% Outcomes must be in line with expected outcomes and success rates as published by the registry.

Essential components of best practice glaucoma pathways



Contributors

Ms Lydia Chang	Consultant Ophthalmologist, Luton and Dunstable, Bedfordshire Hospitals NHS Foundation Trust, and GIRFT national co-lead for ophthalmology
Mr Jon Bhargava	Consultant Ophthalmologist, Countess of Chester NHS Trust, and GIRFT national co-lead for ophthalmology
Ms Elizabeth Wilkinson	Consultant Ophthalmologist, Clinical Director Transformation, Clinical Director Centre of Excellence for Eyes, Exeter, and GIRFT national co-lead for ophthalmology
Ms Nishani Amerasinghe	Consultant Ophthalmologist, Consultant Ophthalmic Surgeon, University Hospitals Southampton NHS Trust, Past President UK & Eire Glaucoma Society
Professor Rupert Bourne	Consultant Ophthalmic Surgeon and Glaucoma Specialist Professor of Ophthalmology, Vision & Eye Research Institute, School of Medicine, Anglia Ruskin University, Cambridge Consultant Ophthalmic Surgeon and Glaucoma Specialist at Cambridge University Hospital Eastern Region Ophthalmology, East of England NHSE Regional Clinical Lead NHS Improvement
Rachael Burridge	Head of Elective and Cancer Transformation, NHS Devon ICB
Professor Ben Burton	President of the Royal College of Ophthalmologists Honorary Professor, University of East Anglia Consultant Ophthalmologist, James Paget University Hospital
Ms Manju Chandran	Consultant Ophthalmologist, Frimley Health NHS Foundation Trust, South East NHSE Regional Clinical Lead NHS Improvement
Professor Cecilia Fenerty	Consultant Ophthalmologist, (Previous) Medical Director, Manchester Royal Eye Hospital, NICE Guideline Development group member 2009, 2017 and 2022

Professor Alastair Denniston	Professor of Regulatory Science and Innovation at University of Birmingham and Consultant Ophthalmologist at University Hospitals Birmingham NHSFT
Professor Gus Gazzard	Director of Surgery & Consultant Ophthalmic Surgeon, UCL Professor of Ophthalmology (Glaucoma Studies) Institute of Ophthalmology at UCL & NIHR Biomedical Research Centre, Moorfields Eye Hospital
Dr Patrick Gunn	Consultant Optometrist and Head of Optometry, Manchester Royal Eye Hospital
Mr Lawrence Gnanaraj	Consultant Ophthalmologist, Sunderland Eye Infirmary, Sunderland, UK
Professor Robert Harper	Consultant Optometrist/ Honorary Professor of Optometry, Manchester Royal Eye Hospital/University of Manchester, NICE guideline glaucoma panel member 2017 and 2022
Mr Hari Jayaram	Consultant Ophthalmologist, Moorfields Eye Hospital, Glaucoma Service Director
Professor Anthony King	Nottingham University NHS Trust Academic Dept Ophthalmology, University of Nottingham Medical School Consultant Glaucoma, Specialist Ophthalmologist, Honorary Professor Clinical Ophthalmology, Chairman Glaucoma UK
Jenny Mooney	(Previous) Deputy Director of Planned Care Improvement, NHS England – East of England
Dr David Parkins	(Previous) Eye Health Network Chair, NHS England London, NICE Glaucoma guideline committee member NG81 2017
Ms Dilani Siriwardena	Consultant Ophthalmologist, Moorfields Eye Hospital NHS Foundation Trust, NHSE London Clinical Director for Ophthalmology, and Vice President RCOphth
Mr Michael Smith	Consultant Ophthalmologist, Royal Devon University Healthcare NHS Foundation Trust and RCOphth Chair of the

	Healthcare Resource Group and Member of the Quality and Standards Committee
Mr Andrew Tatham	Consultant Ophthalmologist, Princess Alexandra Eye Pavilion, Edinburgh Honorary Reader, University of Edinburgh, Current President (2024-25), UK and Eire Glaucoma Society (UKEGS)
Mr Peter Thomas	Executive Director of Digital Development and Chief Clinical Information Officer, Moorfields Eye Hospital NHS Foundation Trust, Consultant Ophthalmologist
Ms Louisa Wickham	Consultant Ophthalmologist, Medical Director, Moorfields Eye Hospital NHS Foundation Trust, and National Clinical Director for NHS England

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