Glaucoma Referral Refinement and OHT Enhanced Service Pathways following updated NICE guidance (April 2009)

Glaucoma Referral Refinement, Ocular Hypertension Monitoring and Ocular Hypertension Diagnosis

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Executive Summary

In order to facilitate a reduction of referrals of suspect glaucoma to the Hospital Eye Service and to increase “care in the community” for glaucoma related conditions LOCSU recommends the implementation of a number of care pathways which can be divided into two groups – 1. Referral Refinement and 2. Monitoring.

The aim of a glaucoma referral refinement pathway is to reduce unnecessary referrals to the hospital eye service, reducing patient anxiety and increasing capacity within the overburdened hospital glaucoma clinics. This should provide a more cost effective service with a greater number of patients managed within the primary care setting. This has been shown in the North East of Scotland\(^1\) and in Manchester\(^2\) where there was a reduction in false positive referrals of 40%.

The referral refinement pathway would allow accredited optometrists to repeat diagnostic tests to confirm the risk of disease and thus improve the accuracy of referrals and deflect unnecessary referrals. A further service would allow diagnosis of ocular hypertension (OHT) and suspect chronic open angle glaucoma (COAG) by specialist accredited optometrists, retaining more patients in primary care.

The aim of an OHT and suspect COAG monitoring pathway is to reduce the number of secondary care consultations for the cohort of patients who are diagnosed either as having OHT i.e. consistently high intra-ocular pressures (IOPs) but no glaucoma, or as being COAG suspect i.e. other suspicious signs. Currently, patients considered to have a greater chance of developing COAG due to elevated IOP or other suspicious signs are generally retained in secondary care and reviewed there on an annual basis, following referral in. The new service would provide for these patients to be discharged back into primary care for monitoring by community optometrists. Patients would only be referred back into secondary care if there was a change in clinical status.

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Background

Nice Guidance

*NICE clinical guideline 85 (Diagnosis and management of chronic open angle glaucoma and ocular hypertension)* issued 22 April 2009 sets out how best to diagnose COAG and OHT, how people with COAG, OHT or at risk of COAG should be monitored, and which treatments should be considered.

Affecting an estimated 480,000 people in England, COAG is a common condition involving optic nerve damage and loss of the visual field that can lead to blindness if it’s not diagnosed early and treated promptly. Around 14% of UK blindness registrations are due to glaucoma. However many people won’t know that their eyesight is at risk – there are usually no symptoms until the later stages when their vision is already seriously damaged. OHT (raised pressure in the eye) is a major risk factor for developing COAG, although COAG can occur with or without raised eye pressure. Glaucoma is more common with increasing age, and people of African descent or with a family history of glaucoma may be at greater risk of developing the condition. With changes in population demographics the number of people affected by the condition is expected to rise. Once diagnosed, people with COAG need lifelong monitoring so that any progression of visual damage can be detected. Controlling the condition to prevent or minimise further damage is crucial to maintaining a sighted lifetime. By implementing this guideline it is expected that more people will be prevented from going blind.

Organisation of Care

NICE states that diagnosis of OHT and suspected COAG and formulation of a management plan should be made by a suitably trained healthcare professional with relevant experience who either has a specialist qualification, or is working under the supervision of a consultant ophthalmologist. However, diagnosis of COAG should be confirmed by a consultant ophthalmologist. NICE also states that monitoring of people with a confirmed diagnosis of OHT or suspected COAG, who have an established management plan, can be carried out by a suitably trained healthcare professional with the relevant skills and ability to detect a change in clinical status. Optometrists are suitably trained healthcare professionals in this context.

Implications of NICE guidance

IOP Referrals

Currently due to the constraints of a GOS sight test, and recent NICE guidelines, optometrists are referring all cases of suspect glaucoma to secondary care for confirmation of the diagnosis and treatment where necessary. This works well when the diagnosis is positive. However, there is no simple single test for glaucoma and this, coupled with the low prevalence of the condition, makes it difficult to detect with certainty in the early stages. Referral refinement has been shown to reduce onward referrals by as much as 40%². OHT is defined in the NICE guidance as repeatable intra-ocular pressure over 21 mmHg as measured by Goldmann tonometry. By defining the criteria and procedures for diagnosis, NICE have, by
implication, created a referral threshold. Previously the threshold for OHT was set by local ophthalmologists and in many cases was around 25 mmHg. This lowering of the effective threshold has increased the number of referrals by community optometrists who are now following the NICE guideline.

**Tonometry methods**
Most optometrists measure the pressure using an air-puff tonometer. These are considered by NICE to be less accurate, and so repeating the pressures using GAT will reduce the number of false positive referrals. The use of GAT is not a requirement of a GOS sight test, although it is a core competency of optometrists. Only a small number of practices have a slit lamp GAT but a greater number may have a Perkins which is a hand held applanation tonometer based on the Goldmann prism principle. Maximum participation is very important for the success of a repeat IOP scheme and it would be correct to say that NICE only insist on slit lamp GAT for diagnosis and monitoring. The entire guideline is silent on referral. What is required for the purposes of IOP refinement is accurate repeat measures, therefore repeat measures using either slit lamp GAT or Perkins should be acceptable. It should be stressed that the use of any other type of tonometer for repeat measures in an NHS funded enhanced service should be avoided.

**OHT**
This threshold for suspicion of OHT and for applying a standardised battery of clinical tests will mean an inevitable significant increase in the number of patients. This could quickly overwhelm hospital eye service departments. In order to ensure that follow up care of patients with established glaucoma does not suffer, a service to manage OHT in the community should be established.

When it comes to OHT monitoring, NICE do specify slit lamp GAT and there should be no variation from this. Consequently, if new tonometers are being purchased by commissioners or practitioners to set up a Level 1 IOP Refinement enhanced service, they should purchase slit lamp GAT rather than Perkins. Investment in slit lamp GAT will mean that the practitioners will be in a position to provide a Level 2 OHT monitoring service in addition to IOP refinement.

**Outline of Service**
There are three proposed levels of service with full details on page 7:

**Level 1** would provide primary care referral refinement to deflect unnecessary referrals and is within the basic competency of community optometrists. Some refreshment of skills may be required depending on the service. This service would be below secondary care PbR tariff.

**Level 2** would provide primary care monitoring of patients diagnosed with OHT who will need to be seen annually. This will enable discharge into primary care both of newly diagnosed and large numbers of existing patients with OHT who can be seen closer to home at lower cost. This is within the basic competency of
optometrists. Some demonstration of skills and recent relevant education will be required.

**Level 3** would provide for primary care diagnosis of ocular hypertension and suspect glaucoma by an optometrist with additional training and accreditation as an alternative to referral to secondary care from the level 1 service.
Key Drivers

The national key drivers include:

- NICE clinical guideline 85: Diagnosis and Management of Chronic Open Angle Glaucoma and Ocular Hypertension
- World Class Commissioning (2008)
- Creating a Patient-led NHS: Delivering the NHS Improvement Plan (March 2005)
- Commissioning Framework for 2007-8
- Implement Care Closer to Home; Convenient Quality Care for Patients (April 2007)
- Commissioning Framework for Health and Well-being (March 2007)
- Trust, Assurance and Safety – the Regulation of Health Professionals (February 2007)
- Safeguarding Patients (February 2007)
- Practice Based Commissioning: Practical Implementation (November 2006)
- Health Reform in England: Update and Commissioning Framework (July 2006)
- Tackling Hospital Waiting: The 18 week Patient Pathway (May 2006)
- Standards for Better Health (April 2006)
- White Paper: Our Health, Our Care, Our Say (January 2006)
Description

There are three different levels of enhanced services included in this package. Commissioners may decide to choose one service independently of the others based on local need, however, it is anticipated that all three services will be beneficial in most areas.

Level 1a: Goldmann Applanation Tonometry

A first level enhanced service for IOP refinement where other signs of glaucoma are not present will reduce unnecessary referrals to the hospital eye service, reducing patient anxiety and minimising capacity issues within the already overburdened hospital glaucoma clinics. The service will be cost effective with a greater number of patients managed within the primary care setting.

Level 1a (Part 1)

Patients who are identified as having IOP > 21 mmHg during a GOS or private sight test will have immediate slit lamp GAT or Perkins tonometry assuming the optometrist is contracted to provide the service. This service falls within core competencies for optometrists. Set up costs of purchasing tonometers should be considered.

Outcomes

Guidance from the College of Optometrists and the Royal College of Ophthalmologists recommends that the outcome should be dependent on the patient’s age and they define certain groups who may not need referral. However, pressures should still be repeated on these groups to ensure that decisions are made based on reliable readings.

There are four possible outcomes from this first repeat of pressures:

1. All patients with IOP > 31mmHg should be referred for OHT diagnosis without further IOP refinement
2. Other patients with a pressure of 22 - 31 need to proceed to Part 2 (2nd repeat GAT)
3. Pressures which differ between the eyes by 5 mmHg or more should proceed to Part 2 (2nd repeat GAT)
4. All other IOP results are within normal limits and the patient can be discharged.

At risk groups should be monitored at appropriate intervals.

Level 1a (Part 2)

Patient attends for repeat Goldmann or Perkins applanation tonometry on a separate occasion
Outcomes
There are four possible outcomes from repeating this test:

1. Patients who need to be referred for OHT diagnosis based on confirmed IOP result:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>&lt; 65 years</th>
<th>65 – 79 years</th>
<th>80 years +</th>
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<tbody>
<tr>
<td>Pressure</td>
<td>&gt; 21 mmHg</td>
<td>&gt; 24 mmHg</td>
<td>&gt; 25 mmHg</td>
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</table>

2. Patients who can be referred direct to the OHT monitoring service

<table>
<thead>
<tr>
<th>Age Group</th>
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N.B. The Joint RCOphth/COptom’s advice suggest that optometrists might "consider not referring" this group of patients as under the NICE Guidelines they will never need treatment. Whilst this is true, these patients however DO still have OHT and need careful monitoring to pick up any signs of progression towards COAG. It is not appropriate to monitor these patients under GOS. These patients are not really in any of the groups specifically covered by NICE but the most appropriate way to deal with them is to make the assumption that the College’s advice constitutes the establishment of a "management plan" as per para 1.5.6 of NICE CG85 and monitor these patients as having diagnosed OHT.

3. Where repeat applanation measurements show a consistent difference in pressure of 5 mmHg or more, practitioners may wish to consider whether referral may be appropriate, or whether there is a reasonable explanation (e.g. surgery to one eye)

4. The results are within normal limits and the patient can be discharged. At risk groups should be monitored at appropriate intervals.

The criteria for inclusion of patients in level 1a:
- IOP > 21 mmHg as measured at the sight test and following College guidance on technique where NCT is used (4 readings)

Level 1b: Visual Field Refinement
A first level enhanced service for visual field refinement will reduce unnecessary referrals to the hospital eye service, reducing patient anxiety and minimising capacity issues within the already overburdened hospital glaucoma clinics. The service should be cost effective with a greater number of patients managed within the primary care setting.

Patients who are identified as having suspicious visual fields during a GOS or private sight test will have visual fields repeated on a separate occasion assuming the optometrist is contracted to provide the service This service falls within core competencies for optometrists.
Outcomes
There are three possible outcomes from these tests:
1. The results are within normal limits and the patient can be discharged. At risk groups should be monitored annually under GOS. This would include the case where there is a defect on the repeat but NOT in the same areas of the visual field as the original defect. Such inconsistent defects are usually due to the patient finding the test difficult and should not as a rule lead to referral and further repeats/monitoring may well just add further confusion.
2. Visual field is suspicious and requires monitoring at appropriate intervals
3. Visual field defect is confirmed and the patient is referred to consultant ophthalmologist.

The criteria for inclusion of patients in level 1b
- Visual field defect which may be due to glaucoma and requires further investigation (Defects caused by old pathology or lens rim artefacts should be excluded)

Level 1 Accreditation
The procedures and skills required for level 1 are core competency. That doesn't necessarily mean that every practitioner is completely up to date in those areas and/or has any recent experience of the techniques. LOCSU would expect most areas to introduce repeat IOP and fields, with no accreditation requirement at all beyond a refresher for those who request it. Others may require some form of accreditation. However it should be noted that, for Level 1a in particular, a very high level of participation is the key to successful referral deflection. Placing barriers to participation at core competency level may affect the success of the scheme. If accreditation at this level is required, it must be available rapidly to new practitioners in an area. Typical professional staff turnover within an area can be around 10% per year. A LOCSU training and accreditation package for Level 1a and 1b referral refinement and Level 2 OHT monitoring has been developed in conjunction with Cardiff University.

Notes:
1. It is anticipated that the majority of optometrists will participate in this pathway if it is commissioned, assuming refresher training is available and funding is appropriate. For the small minority of practices who decide not to sign up to the pathway, LOCSU recommends that they should continue to refer to ophthalmology as normal. IOP refinement by another optometrist leaves too many questions as to who is responsible for the patient and is not recommended. The major providers of professional indemnity insurance to optometrists agree with this view.

2. If a community OHT and Suspect COAG diagnosis service (Level 3) is in place, commissioners may wish to implement Goldmann applanation tonometry (Level 1a) only and direct suspicious visual fields to the Level 3 service. If however, there is no Level 3 service in place, Level 1a and Level 1b are recommended.
Level 2: OHT and suspect COAG Monitoring

Patients who have a confirmed diagnosis of OHT or suspect COAG and who do not require treatment should follow the OHT or suspect COAG monitoring pathway and be monitored at regular intervals as specified by NICE. Patients will be referred to this pathway from the community OHT diagnostic clinic or secondary care with an individual management plan. It is further recommended that patients falling into the 2 groups that the Colleges suggest may not need referral should be directed straight into this service rather than refer them for diagnosis. The skills required for this pathway are covered by the core competencies for optometrists. Training and accreditation for optometrists would include knowledge of the NICE guidelines, referral criteria, interpretation of results and the disease process. If a change in clinical status is found, the patient should be referred to a specialist community optometrist or hospital eye department for further investigation, depending on local protocol. This service will reduce unnecessary hospital eye service consultations and minimise capacity issues in secondary care. Set up costs of purchasing slit lamp mounted Goldmann tonometers should be considered.

The accredited optometrist will carry out slit lamp mounted Goldmann tonometry, suprathreshold perimetry, Van Herick’s test, and dilated slit lamp biomicroscopic examination of the optic nerve head.

Outcomes

There are two possible outcomes from these tests:
1. No change in clinical status. Next appointment as per protocol.
2. Change in clinical status. Patient referred to specialist optometrist or hospital clinic depending on local arrangement.

The criteria for inclusion of patients may include the following:
- Diagnosed ocular hypertension discharged from hospital eye service (HES) or specialist practitioner
- Diagnosed suspect COAG discharged from HES or specialist practitioner

Level 2 Accreditation

With OHT monitoring, although the skills are still core competencies, LOCSU would expect most areas to require accreditation in the form of a validation of knowledge and skills. A LOCSU training and accreditation package for Level 1a and 1b referral refinement and Level 2 OHT monitoring has been developed in conjunction with Cardiff University. This package includes distance learning via CD–Rom and a template for practical skills assessment in slit lamp GAT, disc assessment and Van Herick’s technique. A number of Lead Assessors have been trained at Cardiff so that the practical assessments can be organised locally when required.
Level 3: OHT and Suspect COAG Diagnosis

For patients whose pressure is confirmed as above the OHT threshold of 21 mmHg, or whose pressure is ≤ 21 mmHg but the optic nerve head and/or visual fields are suspicious, the OHT and Suspect COAG Diagnosis Pathway should be followed. Patients referred into this pathway would be those who are identified as being at risk of COAG or OHT during a GOS or private sight test or GP consultation. The referring optometrist would send all the relevant clinical details with the referral. (In many cases the examining optometrist and the accredited optometrist will be the same person, or may be referring within the same practice).

Patients will be assessed by accredited specialist optometrists working to NICE Glaucoma Management Guidelines. Patients would then follow a specific management pathway depending on outcome. Again this service should be cost effective and reduce unnecessary referrals to secondary care. Additional equipment costs should be considered.

The accredited optometrist will carry out slit lamp GAT, central corneal thickness (CCT) measurement, gonioscopy assessment, central threshold perimetry, Van Herick’s test, dilated slit lamp biomicroscopic examination of the optic nerve head and optic nerve head image capture.

Outcomes

There are four possible outcomes from these tests:

1. IOP 22–32 mmHg with optic nerve and visual field normal. The patient should be referred to the OHT monitoring pathway where assessments will take place at intervals specified by NICE guidelines.
2. IOP < 21 mmHg, optic nerve head suspicious, visual field normal or uncertain. The patient should be referred to Suspect COAG monitoring pathway where assessments will take place at intervals specified by NICE.
3. Visual field defect, with suspicious or damaged optic nerve head and any IOP. The patient should be referred to consultant ophthalmologist.
4. All results are within normal limits. The patient is discharged.

The criteria for inclusion of patients may include the following:

- GP referral
- IOP > 21 mmHg
- Suspicious visual fields
- Suspicious cupping or asymmetry of optic discs
- Difference in IOP between the two eyes of ≥ 5 mmHg
- Suspicious HRT/GDx or similar results

Level 3 Accreditation

In addition to the accreditation requirements for Level 2, Optometrists participating in Level 3 OHT diagnosis will need to demonstrate competence in gonioscopy and pachymetry.
Patient Records

All advice given to the patient, and procedures undertaken should be recorded on a patient card or electronic device, and stored in a safe retrieval system. On conclusion of a referral refinement, OHT diagnosis or OHT monitoring assessment the optometrist must complete the appropriate report form, entering the information on the IT system for audit purposes (where applicable) and report to the referring GP, and to the hospital eye service, should an onward referral be necessary.

NB: Glaucoma is a very slow developing disease and there is very little risk to the patient in delaying the repeat tests. The reason for repeating the tests on a different occasion is to ensure that factors that may have influenced the patient responses, particularly in the fields test, the first time around will be different.

IT System

LOCSU has developed an electronic patient record for Level 1a which is currently being piloted in Stockport. This will standardise data collection and will ensure audit data is readily available. It can generate paper referrals or can provide for electronic referral via a referral management centre. Subject to satisfactory evaluation, LOCSU will make the product available to other PCTs/LOCs. It is also intended that modules for Level1b and Level 2 will be developed in due course.

Special Requirements (Equipment)

All practices participating in the Level 1a and 1b IOP and Visual Field refinement service and the Level 2 OHT monitoring service will be expected to employ an accredited optometrist and have the following equipment available:

- Access to the Internet
- Slit lamp and fundus viewing lens
- Goldmann applanation tonometer (Perkins acceptable for IOP refinement)
- Threshold fields equipment capable of producing a printed report
- Distance test chart
- Appropriate ophthalmic drugs (Mydriatic, Anaesthetic, Staining agents)

All practices participating in the Level 3 OHT diagnosis service will be expected to employ an accredited optometrist and have the following equipment available:

- Access to the Internet
- Fundus camera
- Slit lamp and fundus viewing lens
- Goldmann applanation tonometer
- Threshold fields equipment capable of producing a printed report
- Gonioscope
- Pachymeter
- Distance test chart
- Appropriate ophthalmic drugs (Mydriatic, Anaesthetic, Staining agents)
Patient Information
Patient information leaflets as recommended by NICE will be available to patients.

Notes

Specialised Equipment
Some practices may have specialised glaucoma detection equipment (e.g. GDx, HRT2/3, OCT or Corneal Pachymetry) available for which they make a private charge over and above the normal GOS fees. Where this equipment is used following a GOS (or private) sight test for routine monitoring (e.g. in the case of family history or very small optic discs) then an additional private charge may be made subject to the normal GOS regulations (see AOP advice on supplementary charges). It is conceivable these private additional tests may be part of the reason why a Glaucoma Referral Refinement is initiated. However, if you decide to use such equipment as part of the referral refinement process itself, then the patient may not be charged an extra fee for these procedures as the refinement consultation must be at no cost to the patient.
OHT Monitoring Pathway

Referred from OHT diagnosis clinic with management plan (no treatment required)

- CCT 590 micrometres
  - IOP 22–32 mmHg
  - Age - any

- CCT 555–590 micrometres
  - IOP 22–25 mmHg
  - Age - any

- CCT 555–590 micrometres
  - IOP 26–32 mmHg
  - Age > 60
  - Or
  - CCT < 555 micrometres
    - IOP 22–25 mmHg
    - Age > 65
    - Or
    - CCT < 555 micrometres
      - IOP 26–32 mmHg
      - Age > 80

Monitoring by accredited optometrist at intervals specified by NICE

Examination to include:
- Suprathreshold perimetry
- IOP measured by Goldmann applanation tonometry
- Van Herick’s assessment
- Slit lamp biomicroscopic examination of the optic nerve

No change in Clinical status
  - Arrange next appointment as per protocol

Change in Clinical status
  - Refer to specialist accredited optometrist or hospital clinic
  - CCT measurement
  - Gonioscopy assessment
  - Image capture of the optic nerve
  - No change in Clinical status
    - Arrange next appointment as per protocol
  - Evidence of optic nerve damage and/or visual field changes
    - Refer to consultant ophthalmologist

NB: All combinations of CCT, IOP and age not listed above should be referred to the treatment pathway
Suspected COAG Monitoring Pathway

Referred from Suspect COAG diagnosis pathway (no treatment required)

Monitoring by accredited optometrist at intervals specified by NICE

Examination to include:
- Standard Automated Perimetry (suprathreshold if field previously normal)
- IOP measured by Goldmann applanation tonometry
- Van Herick's assessment
- Slit lamp biomicroscopic examination of the optic nerve

IOP remains normal
IOP and visual field normal or suspicious

Arrange next appointment as per protocol (discharge after 3-5 years)

IOP > 22 mmHg, IOP and visual field normal or suspicious

Refer to OHT Monitoring Pathway

Evidence of optic nerve damage and/or visual field changes

Refer to specialist accredited optometrist or hospital clinic

CCT measurement
Gonioscopy assessment
Image capture of the optic nerve

Change in clinical status

Arrange next appointment as per protocol

Change in clinical status

Refer to consultant ophthalmologist
OHT and Suspect COAG Diagnosis Pathway

Confirmed IOP 22–32 mmHg
(assessed by accredited optometrist)

IOP ≤ 21 mmHg
Optic nerve head suspicious
Visual field normal or suspicious
(assessed by accredited optometrist)

Examination to include:
- IOP measurement using Goldmann applanation tonometry
- CCT measurement
- Gonioscopy assessment
- Van Herick’s test
- Dilated slit lamp biomicroscopic examination of the optic nerve head
- Image capture of the optic nerve

IOP 22–32 mmHg
Optic nerve head normal
Visual field normal

IOP ≤ 21 mmHg
Optic nerve head suspicious
Visual field normal or uncertain

Any IOP
Optic nerve head suspicious or damaged
Visual field defect (or IOP > 32 mmHg)

OHT monitoring pathway
Suspected COAG monitoring pathway
Refer to consultant ophthalmologist
Clinical Management Guideline for IOP and Visual Field Refinement (Level 1a and 1b)

1. **Intra-ocular pressure alone (i.e. normal fields and disc appearance)**

   IOP > 21 mmHg by non contact tonometry at GOS or private sight test.
   IOP refinement by Goldmann (or Perkins) tonometry is carried out by the optometrist:
   - All patients with IOP > 31mmHg should be referred for OHT diagnosis without further IOP refinement.
   - Any patients with IOP ≤ 21mmHg should be discharged
   - If IOP result is 22 - 31mmHg, or if there is a difference in IOP of ≥ 5 mmHg between the eyes then Goldmann (or Perkins) is repeated on a separate occasion.

   **After repeating Goldmann (or Perkins)**
   - Any patients with IOP ≤ 21mmHg should be discharged
   - If there is a difference in IOP of ≥ 5 mmHg between the eyes then practitioners may wish to consider whether referral may be appropriate, or whether there is a reasonable explanation (e.g. surgery to one eye)
   - The following patients are referred for OHT diagnosis:

<table>
<thead>
<tr>
<th>Age Group</th>
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<th>65 – 79 years</th>
<th>80 years +</th>
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<td>Pressure</td>
<td>&gt; 21 mmHg</td>
<td>&gt; 24 mmHg</td>
<td>&gt; 25 mmHg</td>
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   - The following patients are referred to the OHT monitoring service

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2. **Visual Field alone (i.e. normal IOP and optic disc appearance)**

   Visual field defect which may be due to Glaucoma found at GOS or private sight test.
   Visual field refinement is carried out by the optometrist on a separate occasion.
   - Field defect consistent on two occasions patient is referred to consultant ophthalmologist for differential diagnosis.
   - Field defect inconsistent or not repeatable patient should be discharged

3. **Optic Disc indications**

   Suspicious optic nerve head found at GOS or private sight test.
   Patient is referred to Community OHT and Suspect COAG Diagnosis Service regardless of other results. In areas where no such service is in place patients is referred to a consultant ophthalmologist.

4. **Narrow Angle**

   Suspicious anterior chamber angle found at GOS or private sight test.
   If suspect narrow angle refer to consultant ophthalmologist if symptoms of sub acute attacks or IOP > 21 mmHg or greater (Van Herick grade 2 or less)
1. No change in clinical status
   No change in clinical status found at OHT monitoring assessment.
   • Next appointment is arranged as per protocol.

2. Change in clinical status
   Change in clinical status found at OHT monitoring assessment.
   • Patient is referred to hospital clinic or specialist optometrist depending on local protocol.
   Further diagnostics carried out by specialist optometrist/healthcare professional.
   • Change in clinical status confirmed. Patient is referred to consultant ophthalmologist.
   • No change in clinical status. Patient is referred back to OHT monitoring.

Clinical Management Guideline for OHT and Suspect COAG Diagnosis (Level 3)

1. Raised Intra-ocular Pressure only
   IOP 22–32 mmHg at diagnostic assessment.
   • Visual field and optic nerve are normal and angle is open on gonioscopy. Patient is referred for OHT monitoring.
   IOP > 32 mmHg at diagnostic assessment
   • Rapid referral to consultant ophthalmologist.

2. Optic Disc and Visual Field indications
   Suspicious optic disc and normal or suspicious visual field at diagnostic assessment.
   • IOP is normal. Patient is referred for COAG suspect monitoring.
   Suspicious or damaged optic disc and visual field defect at diagnostic assessment.
   • Any IOP. Patient is referred to consultant ophthalmologist.

3. Narrow Angle
   Angle appears to be closeable by gonioscopy at diagnostic assessment.
   • Patient is referred to consultant ophthalmologist (especially if symptoms of sub acute attacks or IOP > 21 mmHg or greater)

4. Normal Results
   All results are normal at diagnostic assessment
   • Patient is discharged
Appendix 1: The General Optical Council
Core Competencies for Optometry

Core Subject 1: Communication Skills
The ability to communicate effectively with the patient and with professional colleagues

Core Subject 2: Professional Conduct
An understanding of professional conduct and the legal aspects of professional practice

Core Subject 3: Visual Function
An understanding of and the ability to assess visual function

Core Subject 4: Optical Appliances
The ability to prescribe and to dispense appropriate optical appliances

Core Subject 5: Ocular Examination
The ability to perform an examination of the eye and related structures

Core Subject 6: Ocular Abnormalities
The ability to identify and manage ocular abnormalities

Core Subject 7: Contact Lenses
The ability to manage patients with contact lenses

Core Subject 8: Binocular Vision
The ability to assess and manage patients with anomalies of binocular vision