Minor Eye Conditions Service (MECS) Pathway

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Outline Description

A MECS examination will provide a timely assessment of the needs of a patient presenting with an eye condition. This will be undertaken by an accredited optometrist within suitably equipped premises who will manage the patient appropriately and safely. Management will be maintained within the primary care setting for as many patients as possible, thus avoiding unnecessary referrals to hospital services. Where referral to secondary care is required it will be to a suitable specialist with appropriate urgency.

Patients can self refer or be referred by GPs, pharmacists or other optometrists.

Key Drivers

The national key drivers include:

- NHS Standard Contract 2016-17 (March 2016)
- HM Treasury Spending Review and Autumn Statement (November 2015)
- NHS Commissioning for Quality and Innovation (CQUIN) Guidance for 2015/16 (March 2015)
- NHS Serious Incident Framework (March 2015)
- NHS Standard Contract 2015-16 (March 2015)
- NHS England Business Plan (March 2015)
- National Information Board Personalised Health and Care 2020 (November 2014)
- NHS Five Year Forward View (October 2014)
- NHS Outcomes Framework 2015 to 2016 (Dec 2014)
- NHS Constitution (March 2013)
- Safeguarding Vulnerable People in the Reformed NHS (March 2013)
- The Information Governance Review (March 2013)
- Commissioning Better Care: Urgent Care (Feb 2013)
- NHS (Procurement, Patient Choice and Competition) (No. 2) Regulations 2013
- Everyone Counts: Planning for Patients 2013/14 (Dec 2012)
- Securing excellence in commissioning primary care (June 2012)
- Health & Social Care Act 2012
- Equity & Excellence: liberating the NHS (2010)
- Right Care: Increasing Value – Improving Quality (June 2010)
- NHS 2010-15; from good to great (Jan 2010)
- Quality Innovation Productivity & Prevention (QIPP) agenda
- Implement care closer to home; convenient quality care for patients (April 2007)
- The UK Vision Strategy 2013-2018
Purpose of Service

Using the skills of primary care optometrists to triage, manage and prioritise patients presenting with an eye condition, patient care will be improved by:

- Improving access
- Refining referrals
- Ensuring referrals are appropriate and timely
- Retaining patients in primary care where appropriate
- Signposting to other appropriate services
- Improve eye health in line with the UK Vision Strategy

Description

Patients can self-refer or be referred into the service by their own GP (or the practice nurse or surgery receptionist), Pharmacist, Optometrist, NHS111, A&E or Eye Clinic/Eye Casualty by arrangement. There is a list of participating optometrists for the patient to choose from. Optometrists must, within reason, be able to offer an acute MECS examination within 48 hours of the day that the appointment has been requested by the GP or pharmacist (excluding weekends and public holidays) unless it is for routine assessment. Where this is not possible, the patient should be directed to a colleague nearby.

For acute potentially sight threatening eye conditions the optometrist should arrange to see the patient on the same day or refer directly to Eye Casualty. All referrals should be read and prioritised within 24 working hours. An appointment for a routine assessment should be offered within 2 weeks.

The level of examination should be appropriate to the reason for referral. All procedures are at the discretion of the optometrist. Guidelines for the commonest eye conditions listed below. It is recommended that practitioners utilise the College of Optometrists’ Clinical Management Guidelines which can be found on their website www.college-optometrists.org/en/professional-standards/clinical_management_guidelines/index.cfm.

A GOS sight test or private eye examination may also be required but it would be unusual for this to be carried out at the same time as a MECS examination. Practitioners should at all times respect the patient’s loyalty to their usual optometrist and not solicit the provision of services that fall outside the scope of the service. The patient’s details should NOT be added to the practice reminder system for the purpose of sending recall letters for regular eye examinations, unless the patient expressly requests it.

Children under 17 years of age should be accompanied by a responsible adult.
Criteria for inclusion

The criteria for inclusion of patients may include the following:

- Loss of vision including transient loss
- Sudden onset of blurred vision but always consider if a sight test would be more appropriate
- Ocular pain or discomfort
- Systemic disease affecting the eye
- Differential diagnosis of the red eye
- Foreign body and emergency contact lens removal (not by the fitting practitioner)
- Dry eye
- Epiphora (watery eye)
- Trichiasis (in growing eyelashes)
- Differential diagnosis of lumps and bumps in the vicinity of the eye
- Recent onset of Diplopia
- Flashes/floaters
- Retinal lesions
- Patient reported field defects
- GP referral

Same day referral

The following cases should be referred directly to the nearest Eye Casualty:

- Severe ocular pain requiring immediate attention
- Suspect Retinal detachment
- Retinal artery occlusion
- Chemical injuries
- Penetrating trauma
- Orbital cellulitis
- Temporal arteritis
- Ischaemic optic neuropathy
- Sudden loss/dramatic reduction in vision in one eye

Exclusions

Other conditions excluded from the service:

- Diabetic retinopathy
- Adult squints, long standing diplopia
- Repeat field tests to aid diagnosis following an eye examination

Outcomes

Outcomes resulting from the consultation are likely to be one of the following:

- The optometrist decides to manage the condition, and offers the patient advice and/or prescribes/recommends medication. A follow-up consultation may be necessary.
• The optometrist carries out a minor clinical procedure e.g. eyelash removal or foreign body removal. A follow-up consultation may be necessary.
• The optometrist diagnoses the condition and suggests/prescribes appropriate medication or the GP is requested to prescribe
• The optometrists makes a tentative diagnosis and refers the patient urgently/non-urgently into the Hospital Eye Service using the usual channels of communication
• The optometrist reassures the patient and discharges him/her
• The examining optometrist recommends an NHS or private sight test.

All procedures undertaken and advice given to the patient should be recorded on a patient record card or electronic device, and stored in a safe retrieval system.

Supply of therapy
Registered Optometrists may sell or supply all pharmacy medicines (P) or general sale list medicines (GSL) in the course of their professional practice, including 0.5% Chloramphenicol antibiotic eye drops or 1% eye ointment. Optometrists may give the patient a written (signed) order for the patient to obtain the above from a registered pharmacist, as well as the following prescription only medicines (POMs):

- Chloramphenicol
- Cyclopentolate hydrochloride
- Fusidic Acid
- Tropicamide

In making the supply to the patient the optometrist must ensure:

- Sufficient medical history is obtained to ensure that the chosen therapy is not contra-indicated in the patient
- All relevant aspects, in respect of labelling of medicine outlined in the Medicine Act 1968 are fully complied with
- The patient has been fully advised on the method and frequency of administration of the product

In general, supply via a pharmacist is preferred. The College of Optometrists has produced guidelines on the use & supply of drugs as part of its ‘Guidance for Professional Practice’ http://www.college-optometrists.org/en/professional-standards/Ethics_Guidance/index.cfm

If the patient is exempt from prescription charges, supply of appropriate treatments could be covered by Group Prescribing Directives and/or by Minor Ailment Services in accordance with The National Pharmacy Enhanced Service Plan already in existence.

Independent prescribing optometrists may be able to issue FP10s depending on local agreements.
Record keeping

On conclusion of a MECS examination the optometrist must complete a MECS report form, entering the information on the IT system where applicable for audit purposes and report to the referring GP, and to the hospital eye service, should an onward referral be necessary.

Management of Service

It is strongly recommended that an electronic management system is used such as the Webstar OptoManager. This is vital for effective audit and performance management as well as facilitating payments.

Special requirements – equipment

All practices contracted to supply the service will be expected to employ an accredited optometrist and have the following equipment available:

- Access to the Internet
- Means of binocular indirect ophthalmoscopy
- Slit lamp
- Tonometer
- Distance test chart (Snellen/logmar)
- Near test type
- Equipment for epilation
- Threshold fields equipment to produce a printed report
- Amsler Charts
- Equipment for FB removal
- Appropriate ophthalmic drugs
  - Mydriatic
  - Anaesthetic
  - Staining agents

Special requirements – competencies

All participating optometrists will have the core competencies as defined by the GOC and may require some extra training or updating of skills.

In addition the following apply:

- Aware of own limitations
- Does not compromise patient safety

Training and accreditation for participating optometrists to perform within MECS will include demonstrating the ability to identify and manage a range of ocular abnormalities and proficiency in the use of certain elements of the above-mentioned equipment.

Participating optometrists must complete the Wales Optometry Postgraduate Education Centre WOPEC/LOCSU (PEARS) Distance Learning modules (Part 1) and the associated Practical Skills
Demonstration (Part 2). In order to progress to the second element of the accreditation process, a candidate must have successfully passed the first.

An optometrist who has a relevant higher qualification and experience may be exempt from the PEARs Distance Learning and/or the Practical Skills Assessment at the discretion of the Clinical Lead.

Participating optometrists will also be expected to keep their knowledge and skills up to date.

**Patient information**

Leaflets will be available and will be handed to patients as appropriate. These may include:

- Mydriatic drops - warning re pupil dilation
- Tear Dysfunction/Dry eye
- Blepharitis
- Conjunctivitis
- Trichiasis
- Epiphora
- Foreign body removal
- Flashes & floaters
- Age related macular degeneration
- Glaucoma
- Public Health Messages e.g.
  - Smoking cessation
  - Obesity
  - Alcohol abuse

**Clinical commissioning guidance on Urgent Eye Care**

The College of Optometrists and the Royal College of Ophthalmologists

This clinical commissioning guidance makes the following recommendations:

- Minimise visual loss from sight threatening conditions, particularly trauma, through prompt triage, diagnosis and treatment.
- Ensure those diagnosing urgent eye conditions have a slit lamp and the necessary skills to use it.
- Ensure that there is adequate availability of urgent (same day or next day) appointments in the primary care service and educate the public and referring clinicians to use them as the first port of call for urgent eye conditions to achieve a significant shift of urgent eye care from hospital to primary care settings.

This guidance shows evidence for the following:

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1 Commissioning better eye care: clinical commissioning guidance from the College of Optometrists & the Royal College of Ophthalmologists (Feb 2013)
• Over 50% of patients attending eye casualty services self-refer
• ‘Eye emergencies’ are estimated to make up 1.46-6% of accident and emergency attendances of which 89.7% will be self referrals. 51-65.6% of the case load will be related to trauma, 11-27% will be related to infection/inflammation.
• 1.5-2% of GP consultations may be eye related
• Urgent eye conditions are mostly non-acute and relatively straightforward to treat but a significant minority are emergencies that cause acute distress and are sight threatening
• As many as 78.1% of cases attending eye casualty are deemed ‘non serious’, with 50-70% of cases not constituting either an accident or an emergency, a figure supported by patient feedback
• Optometrists have shown agreement of around 90%, with diagnosis, treatment and management strategies of ophthalmologists in eye casualty settings
• Many cases can be managed without the input of an ophthalmologist
• Patients may rate immediate treatment and reassurance more highly than diagnosis as the most important aspect of their urgent eye care

Audits of Community Eye care Services

An audit of all ophthalmology referrals from eight GP practices over a four-week period in Stockport\(^2\) showed that 56% of these originated from optometrists.

Differences were found – such as most referrals to secondary care for red eye came from GPs, whereas all glaucoma referrals began with optometry. 20% of the referrals could have been seen in a MECS-type community service.

The first six months of a MECS service in Stockport showed activity was 1,451 episodes (approx. 1,000 per 100,000 head of population), of which 79% were managed exclusively within the service. The most common investigation was for flashes or floaters, followed by dry eye, blepharitis and conjunctivitis. Almost 100% of patients were ‘very satisfied’ or ‘satisfied’ with the service.

A retrospective analysis of the Somerset ACES\(^3\) (Acute Community Eye-care Service) showed the scheme provided 4801 appointments from July 2010-June 2011. The five practices included in this study provided 1508 appointments for 1368 patients. The majority of patients (1130, 82.6%) were managed by the optometrist, most of whom (1036, 91.7%) required a single appointment. Managing more patients in optometric practice as opposed to general practice or hospital eye services produced theoretical savings of between 11.5% and 20.3%. Patient satisfaction on a variety of measures of the service ranged from 92.4% to 95.2%. GP confidence in the scheme was 89.4%.

In Yorkshire, a Community Ophthalmic Referral Refinement Service (CORRS) has been provided by 47 optical practices across Hull and East Riding of Yorkshire since 1\(^{st}\) April 2012. Previous versions

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\(^2\) Stockport GP Practice Audit. Stockport NHS. S Parker. June 2012
\(^3\) Providing enhanced eye care in the community: an evaluation of the Somerset Acute Community Eye-care Service (ACES) Edward Farrant, Rachel Stark, Sarah Farrant, Beverley Hancock
of the same service have been provided by the community based optical practices since 2006. There have been over 4,000 patient episodes in the service across Hull and East Riding of Yorkshire in 2012/13, during which time the service has significantly reduced the number of inappropriate referrals into secondary care, freeing up vital capacity within busy ophthalmology departments and providing cost-savings to the commissioners.

A recent audit demonstrated that 79% of CORRS service users were treated within primary care by either their local accredited Optometrist or own General practitioner (GP). Those requiring onward referral into secondary care were offered direct referral into the appropriate department with a comprehensive and complete referral report.

The Welsh Experience

Generally there is little data on referrals into ophthalmology on the basis of condition and there is no differentiation between optometry referral and GP referral. However using the figures from the MECS evaluation in Wales it can be seen that a significant number of cases can be either:

- Discharged at first visit or managed in practice or
- Referred to GP for appropriate care

In addition, of the patients self-referring for an acute eye problem, 27% were discharged at the first visit, 36% were managed in practice, 15% were referred to the GP and only 22% were referred to the HES.

The table below lists the most common reasons for patients to present to a MECS accredited optometrist.

Primary presenting symptoms and outcome table

Symptom and outcome of the 4881 patients presenting for a MECS examination:

<table>
<thead>
<tr>
<th>Symptom reported</th>
<th>Referred to HES</th>
<th>Managed in practice or discharged</th>
<th>Referred to GP</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute vision loss</td>
<td>160</td>
<td>27</td>
<td>1</td>
<td>188</td>
</tr>
<tr>
<td>Chronic vision loss</td>
<td>132</td>
<td>376</td>
<td>3</td>
<td>511</td>
</tr>
<tr>
<td>Distorted vision</td>
<td>64</td>
<td>49</td>
<td>0</td>
<td>113</td>
</tr>
<tr>
<td>Diplopia</td>
<td>23</td>
<td>2</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Headaches</td>
<td>15</td>
<td>83</td>
<td>116</td>
<td>214</td>
</tr>
<tr>
<td>Unilateral red eye</td>
<td>140</td>
<td>888</td>
<td>388</td>
<td>1416</td>
</tr>
<tr>
<td>Bilateral red eye</td>
<td>15</td>
<td>99</td>
<td>2</td>
<td>116</td>
</tr>
<tr>
<td>Discomfort / Irritation</td>
<td>87</td>
<td>590</td>
<td>309</td>
<td>986</td>
</tr>
<tr>
<td>Ocular discharge, only</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

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Unusual lid appearance | 11 | 4 | 5 | 20  
Flashes + floaters   | 190 | 403 | 8 | 601  
Floaters, only       | 34  | 39  | 2 | 75   
Trauma               | 18  | 34  | 15| 67   
Unclassified         | 96  | 428 | 8 | 532  

The Welsh scheme evaluation also shows that optometrists in the vast majority of cases managed the patient appropriately as can be seen by the table below.

**Appropriateness of optometric management table**

The appropriateness of the optometric management decision, stratified by location of ocular disorder, of the patients referred to the HES as a result of the MECS:

<table>
<thead>
<tr>
<th>Location of disorder</th>
<th>Managed appropriately</th>
<th>Managed inappropriately</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lids / lashes / periorbital</td>
<td>12</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Conjunctival / Scleral</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Corneal</td>
<td>47</td>
<td>15</td>
<td>62</td>
</tr>
<tr>
<td>Lens</td>
<td>23</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Iris</td>
<td>19</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Vitreous</td>
<td>8</td>
<td>51 *</td>
<td>59</td>
</tr>
<tr>
<td>Macula area</td>
<td>41</td>
<td>3</td>
<td>44</td>
</tr>
<tr>
<td>Retinal / choroidal (periph)</td>
<td>37</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Optic nerve head</td>
<td>20</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Normal eye</td>
<td>10</td>
<td>12</td>
<td>22</td>
</tr>
</tbody>
</table>

* The relatively high number of corneal referrals was due to confusion between bacterial and marginal keratitis resulting in inappropriate referral.

* The high number of referrals in the “vitreous” category was associated with symptoms of flashes and floaters caused by uncomplicated posterior vitreous detachment (PVD) which generally should not require onward referral. However some hospital areas in Wales chose to retain their local protocols requiring all such cases to be referred, which skewed the result.

Both of these issues have now been addressed by further training and the revision of protocols regarding flashes and floaters.

**Patient satisfaction**

The Evaluation in Wales also asked patients how they had found the service:

- 84.1% thought that their optometrist ‘seemed to know what their eye problem was’
- 86.5% also thought that ‘their optometrist knew what to do for their eye problem’
- 92.7% also thought that ‘they had the chance to tell their optometrists everything they wanted to about their eye problem’
• 94.5% also thought that ‘their optometrist understood them’
• 98.3% considered that ‘they got on well with their optometrist’
• 94.8% were “very satisfied” and the remaining 5.2% were “fairly satisfied”. No interviewees were “very dissatisfied”, “fairly dissatisfied” or “neither”
Flashes and Floaters Management Guidelines

Terminology

The following terms are important in this text:

**Retinal break**
This is a retinal hole, operculum or tear

**Retinal detachment**
This is any type of retinal detachment including rhegmatogenous, traction or exudative

Optometric Assessment

History and symptoms

A full and thorough history and symptoms is essential. In addition to the normal history and symptoms, careful attention must also be given to the following:

**History:**
- Age (over 50 year olds more likely to develop breaks)
- Myopia (over -3D)
- Family history of retinal break or detachment
- Previous ocular history of break or detachment
- Systemic disease (e.g. Diabetes, Marfan syndrome)
- History of recent ocular trauma, surgery or inflammation

**Symptoms:**
- Loss or distortion of vision (a curtain / shadow / veil over vision)
- Floaters
- Flashes

For symptoms of *floaters* these *additional questions* should be asked:
- Are floaters of recent onset?
- What do they look like?
- How many are there?
- Which eye do you see them in?
- Any flashes present

For symptoms of *flashes* these *additional questions* should be asked:
- Describe the flashes?
- How long do they last?
- When do you notice them?
For symptoms of a *cloud, curtain or veil* over the vision these *additional questions* should be asked:

- Where in the visual field is the disturbance?
- Is it static or mobile?
- Which eye?
- Does it appear to be getting worse?

**Symptoms of less concern:**

- Long term stable flashes and floaters
- Symptoms >2 months

**Clinical examination**

All patients presenting for a MECS examination with symptoms indicative of a potential retinal detachment should have the following investigations (in addition to such other examinations that the optometrist feels are necessary):

- Tests of *pupillary light reaction* including swinging light test for Relative Afferent Pupil Defect (RAPD), *prior to pupil dilation*
- *Visual acuity* recorded and compared to previous measures
- *Tonometry*, noting IOP discrepancy between eyes
- Visual Field examination at discretion of optometrist
- *Slit lamp bio microscopy of the anterior and posterior segments, noting:*
  - Pigment cells in anterior vitreous, 'tobacco dust' (Shafer’s sign)
  - Vitreous haemorrhage
  - Cells in anterior chamber (mild anterior uveitic response)
- Dilated pupil fundus examination with *slit lamp binocular indirect ophthalmoscopy using a Volk or similar fundus lens* (wide field fundus lens optimal) asking the patient to look in the 8 cardinal directions of gaze and paying particular attention to the superior temporal quadrant as about 60% of retinal breaks occur in that area. Noting:
  - Status of peripheral retina, including presence of retinal tears, holes, detachments or lattice degeneration
  - Presence of vitreous syneresis or Posterior Vitreous Detachment (PVD)
  - Is the macula on or off (i.e. does the detachment involve the macula or not)
- Alternatively, if the optometrist is familiar and confident then a dilated pupil fundus examination with *headset binocular indirect ophthalmoscopy using a 30D lens with scleral indentation or a fundus contact lens* could be used.

**Management**

Local hospital arrangements may vary for dealing with retinal problems. It is vital to be aware of the local arrangements as this may affect the management of patients.
Symptoms requiring assessment within 24 hours:
1. Sudden increase in number of floaters, patient may report as "numerous", "too many to count" or "sudden shower or cloud of floaters" Suggests blood cells, pigment cells, or pigment granules (from the retinal pigment epithelium) are present in the vitreous. Could be signs of retinal break or detachment present
2. Cloud, curtain or veil over the vision. Suggests retinal detachment or vitreous haemorrhage – signs of retinal break or detachment should be present

Signs requiring referral within 24 hours:
1. Retinal detachment with good vision unless there is imminent danger that the fovea is about to detach i.e. detachment within 1 disc diameter of the fovea especially a superior bulbous detachment, when urgent surgery is required.
2. Vitreous or pre-retinal haemorrhage
3. Pigment 'tobacco dust' in anterior vitreous
4. Retinal tear/hole with symptoms

Signs requiring referral ASAP next available clinic appointment:
1. Retinal detachment with poor vision (macula off) unless this is long standing
2. Retinal hole/tear without symptoms
3. Lattice degeneration with symptoms of recent flashes and/or floaters

Require discharge with SOS advice (verbal advice and a leaflet):
1. Uncomplicated PVD without signs and symptoms listed above
2. Signs of lattice degeneration without symptoms listed above

Explain the diagnosis and educate the patient on the early warning signals of further retinal traction and possible future retinal tear or detachment:
- Give the patient a Retinal Detachment warning leaflet
- Instruct the patient to return immediately or go to A&E if flashes or floaters worsen

Referral letters
Patients requiring referral for retinal breaks or detachment must have the following noted on the referral form to the ophthalmologist. Letters should be typed wherever possible and may be faxed or sent with the patient in urgent cases.

- A clear indication of the reason for referral e.g. Retinal tear in superior temporal periphery of right eye
- A brief description of any relevant history and symptoms
- A description of the location of any retinal break / detachment / area of lattice
- In the case of retinal detachment whether the macula is on or off.
- The urgency of the referral
Record keeping

Optometrists are reminded to keep full and accurate records of all patient encounters. This includes when the patient is spoken to on the telephone (by the optometrist or another member of staff) as well as when they are in the consulting room. All advice that is given to the patient should be carefully noted, together with any information that was given to the patient. Patient leaflets about retinal detachment are available from the AOP website; http://www.aop.org.uk/uploads/uploaded_files/flashes_and_floaters_px_info_sheet_final_jan053.pdf Negative as well as positive findings should be noted (e.g. 'no retinal tears or breaks seen').

*Flashes and Floaters*

**Patient Information**

The following information sheet may be used to provide written backup following a verbal explanation of the symptoms and risks of posterior vitreous detachment. The text can be transferred to your own headed paper. The text is written so as to be easily understood by the general public, so we advise that it is not altered. It should be laid out using a clear font in a reasonably large size, as in the example below.

This information sheet is intended for use by the optometrist to augment verbal information and explanations given to the patient in the consulting room. It is not intended as a general waiting room information leaflet and it should not be used as an alternative to appropriate verbal explanations and warnings.

It is always wise to fully document your actions on the patient's record card and this should include a note that you have issued written advice to the patient.
Flashes and Floaters
Patient Information Sheet

What are floaters?
Often, people who have healthy eyes see floaters. They appear as spots, lines or cobweb effects, usually when you look at a plain surface such as a white wall or a clear blue sky. They often appear when the clear jelly in the main part of your eye gets older.

What are flashes?
Sometimes the jelly in the main part of your eye shrinks a little and tugs on the retina (the light-sensitive layer) at the back of your eye. This can cause flashes of light at the edge of your vision. These differ from the disturbance of vision that can occur with migraine.

When should I be concerned?
If you suddenly notice a shower of new floaters, or floaters along with flashes or a dark shadow or “curtain” in your vision, then you should seek advice urgently. These symptoms can mean that the retina is tearing. Go to an Accident and Emergency Department if necessary.

What will happen if the retina tears?
The retina is at the back of your eye. It receives the images and sends them to the brain. This is one of the things that enable you to see. If the retina tears, it may come away from the back wall of the eye. This is called retinal detachment. It can result in partial or complete loss of vision.

How is retinal detachment treated?
A tear may be treated by using a laser. If treated quickly, you may have a better chance of full recovery. However, if your retina has become detached, you will need surgery. The operation may restore most of your vision but may come too late for a full recovery.

Look out for:
- flashes or floaters getting worse
- a black shadow in your vision
- a sudden cloud of spots
- a curtain or veil over your vision
- any sudden loss of vision

Go to an Accident and Emergency Department without delay if you notice any of these symptoms.
Patient presents via MECS to Optometrist

- **Clinically significant symptoms**
  - Recent onset
  - Increasing flashes and/or floaters
  - Less than 6 weeks duration
  - Field loss
  - Cloud, curtain or veil over vision

- **Symptoms of less concern**
  - Stable flashes and floaters
  - Symptoms >2 months
  - Normal vision

**Investigations as per protocol**

- **Positive signs**
  - Refer
    - Urgent 24hrs
    - Soon – next available clinic
    - Routine

- **Negative signs**
  - Discharge
    - SOS advice
    - Explain / educate on RD
    - Given written warnings
Age-related Macular Degeneration (AMD)
Assessment and Management Guidelines Terminology

The following terms are important in this text & for differential diagnosis:

**Wet (exudative) AMD**
Condition caused by the growth of abnormal blood vessels under the retina. Symptoms appear suddenly and progress over days or weeks. Person complains of central metamorphopsia (distortion) and/or central loss of vision. The most important signs are sub-retinal fluid and haemorrhage.

**Dry (atrophic) AMD**
Condition caused by the accumulation of waste products under the retinal pigment epithelium. Symptoms develop gradually and progress over months or years. Most people are asymptomatic but may eventually complain of difficulty reading and poor vision in dim light. The most important signs are drusen, pigment epithelial atrophy and pigment clumping (so-called pigmentary changes).

**Optometric Assessment**

**History and symptoms**

A full and thorough history and symptoms is essential. In addition to the normal history and symptoms, careful attention must also be given to the following:

**History**

- Age (over 55 years)
- Family history of maculopathy
- Previous ocular history
- Systemic disease e.g. hypertension, diabetes
- History of ocular surgery- cataract extraction, retinal detachment repair
- Myopia
- Medication e.g. chloroquine derivatives, tamoxifen
- Smoking status (current, ex-smoker or non-smoker)
- Excessive exposure to sunlight (UV)

**Symptoms**

- Any change in vision
- Loss of central vision
- Spontaneously reported distortion of vision
These *additional questions* should be asked:
- When did loss of vision start?
- In which eye are symptoms present?
- Has the loss of vision occurred suddenly or gradually?

**Clinical examination**

All patients presenting for a MECS examination with symptoms indicative of a potential macular degeneration should have the following investigations (in addition to such other examinations that the optometrist feels are necessary):

- **Visual acuity** (distance and near) recorded monocularly and compared to previous measures
- **Refraction** as a hyperopic shift can be indicative of macular oedema
- **Amsler grid or similar assessment of central vision of each eye**
- Tests of *pupillary light reaction* including swinging light test for Relative Afferent Pupil Defect (RAPD), *prior to pupil dilation*
- Dilated pupil fundus examination of both eyes with *slit lamp binocular indirect ophthalmoscopy using a Volk or similar fundus lens* noting:
  - Status of macula, including presence of
  - Drusen, noting size
  - haemorrhages, sub-retinal, intra-retinal, pre-retinal
  - pigment epithelial changes i.e. hyper or hypo pigmentation,
  - exudates,
  - oedema i.e. sub-retinal fluid
  - signs of sub retinal neovascular membrane

**Management**

If local protocols for the referral of AMD are in place, then these should be followed. If not, you should note that some HES ophthalmology departments will not have the facilities to deal with wet age related macular degeneration. In these cases it is best to telephone the department first to find out what procedures to follow.

**Referral ASAP next available clinic appointment:**

1. Sudden deterioration in vision + VA better than 6/96 in affected eye
2. Spontaneously reported distortion in vision + VA better than 6/96
3. Sub-retinal neovascular membrane
4. Macular haemorrhage
5. Macular oedema

**Routine referral:**

1. Patient eligible and requesting certification of visual impairment
2. Patients requesting a home visit from Social Services to help them manage their visual impairment in their home.
3. Patients requiring a low vision assessment (this may be in the community or the hospital
4. Patients requiring a routine ophthalmological opinion
No referral and routine follow-up:

1. Patients with VA 6/96 or worse in the affected eye
2. Patients with dry AMD, drusen and/or pigment epithelial changes
   - Explain the diagnosis and educate the patient on the early warning signs of wet AMD.
   - Give stop smoking advice via leaflet if appropriate + advice on healthy diet + protection from blue light
   - Assess the risk of AMD progression by looking for large drusen (about the size of a vein at the disc margin or larger) and pigmentary changes. If these are both present bilaterally there is a 50% chance of progressing to advanced AMD within 5 years\(^5\). Give advice on a healthy diet unless there is moderate loss of vision or significant risk of loss. Provide information on AREDS findings & leaflet on AREDS 2 supplements
   - Give information on local services for the visually impaired- public and third sector.
   - Give appropriate information on national voluntary agencies e.g. RNIB, Macular Disease Society
   - Give advice on driving
   - Instruct the patient to *inform the practice or GP immediately if vision suddenly deteriorates or becomes distorted.*

Referral letters

Patients requiring referral for macular degeneration must have the following noted on the referral form to the ophthalmologist. Letters should be typed whenever possible and may be faxed or sent with the patient in urgent cases. The Royal College of Ophthalmologists fast track referral form for wet AMD can be used:


- Date
- Full name of referring optometrist and practice address
- Full details of patient including name, address, telephone number, date of birth
- Visual acuities
- A clear *indication of the reason for referral* e.g. macular haemorrhage
- A brief description of any *relevant history and symptoms including onset*
- A *description of the type of macular degeneration or signs* such as drusen, pigment epithelial changes, sub retinal neovascular membrane, haemorrhages, exudates, macular oedema.
- The *urgency* of the referral

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Differential diagnosis

Macular hole
This is a hole at the macula caused by tangential vitreo-retinal traction at the fovea. Causes impaired central vision & typically affects elderly females.

Macular epiretinal membrane
Can be divided into cellophane maculopathy and macular pucker.

Central Serous Retinopathy
Typically sporadic, self-limited disease of young or middle-aged adult males. Unilateral localised detachment of sensory retina at the macula causing unilateral blurred vision.

Cystoid Macular Oedema
An accumulation of fluid at the macula most commonly due to retinal vascular disease, intra-ocular inflammatory disease or post cataract surgery.

Myopic Maculopathy
Chorio retinal atrophy can occur with high myopia, usually > 6.00D, which can involve the macula.

Diabetic Maculopathy
This is the commonest cause of visual impairment in type 2 diabetic patients. It can be exudative, ischaemic or mixed.

Vitelliform Macular Dystrophy (Best Disease)
There is an inherited condition with a juvenile and adult type.

Solar Maculopathy
Due to the effects of solar radiation from looking at the sun causing circumscribed retinal pigment epithelium mottling or a lamellar hole at the macula.

Drug Induced Maculopathies
Antimalarials e.g. chloroquine, hydroxychloroquine
Phenothiazines e.g. thioridazine (melleril), chlorpromazine (Largactil)
Tamoxifen

Idiopathic Macular Telangiectasia
This can be unilateral or bilateral.
Maculopathy Referral Pathway

Patient presents via MECS to Optometrist

**Clinically significant symptoms**
- Loss of vision of recent onset
- Spontaneously reported visual distortion

**Symptoms of less concern**
- Longstanding loss of vision
- Gradual deterioration in vision
- Normal vision

Investigations as per protocol

**Positive signs**
- Refer
  - Soon – next available clinic using the appropriate pathway
  - Routine
  - Inform Social Services

**Negative signs**
- **Discharge**
  - SOS advice
  - Explain / educate on types of maculopathy
  - Give Amsler grid
  - Advice on:
    - smoking cessation
    - Blue light
    - Vitamin supplements
Red Eye Guidelines

Optometric Assessment

The College of Optometrists have produced Clinical Management Guidelines (CMGs) to provide an evidence based information resource on the diagnosis and management of various eye conditions. There are currently 60 of these CMGs, the vast majority of which could apply to red eyes. These Clinical Management Guidelines were originally intended for specialist therapeutic prescribers but they are valuable to all optometrists.

History and Symptoms

A full and thorough history and symptoms is essential. Careful attention must be given to the following as appropriate:

History

- Previous ocular history
- Systemic disease, especially diabetes, thyroid dysfunction and inflammatory disease e.g. rheumatoid arthritis, ankylosing spondylitis, inflammatory bowel disease
- Recent cold, flu or infections
- Acne rosacea
- History of contact lens wear
- History of recent ocular trauma, pay particular note to hammer and chisel i.e. risk of penetrating injury and to possible chemical contamination
- History of recent ophthalmic surgery
- History of recent UV exposure e.g. sunlamp, welding
- Atopia e.g. hayfever, asthma, eczema
- Recent foreign travel
- Instillation of any eye drops, if so what are they?
- Systemic medication
- Allergies to drops, preservatives, medications
- Family history

Symptoms

- Discomfort, gritty sensation
- Itchiness
- Pain - sharp or aching on a scale of 1-10
- Discharge - watery, purulent, mucoid
- Unilateral or bilateral
- Duration of onset

• Acute, recurrent or chronic
• Photophobia
• Reduced vision
• Any predisposing factors

Clinical Examination

Include the following as appropriate according to symptoms and history:

• Visual acuity
• Pupil reactions – particularly check for RAPD (relative afferent pupillary defect)
• Ocular motility
• Exophthalmos
• Eyelids – inflammation, incomplete closure, ptosis, position & size of any lumps & bumps, misdirected eyelashes, lid margin disease (blepharitis, meibomianitis, phthiriasis i.e. crab louse, punctae (normal, occluded, absent, stenosed or plug inserted)
• Tears – quality and quantity plus tear break-up time
• Discharge – serous, watery (viral toxic), mucopurulent (bacterial) or stringy (allergic)
• Bulbar conjunctiva – redness (use grading scale e.g. CCLU) note depth of vessel injection (conjunctival, episcleral, sclera) and location (perilimbal, sectoral, diffuse, localized) subconjunctival haemorrhage, pigment, raised areas
• Palpebral conjunctiva – evert upper and lower lids to look for foreign bodies, scarring, membranes, papillae, follicles & concretions.
• Corneal epithelium – note any defects (size, location, pattern e.g. superficial punctate keratitis, dendritic, geographic) FBs, infiltrates ( pattern, size, location, depth), oedema, deposits ( location, pattern, material e.g. iron, calcium, filaments)
• Corneal stroma – size, location & depth of opacities- infiltrates, scars, oedema. Note any vessel infiltration – ghost or active vessels
• Corneal endothelium – thickening guttatae, folds or breaks in Descemets’ membrane, location, pattern & type of any deposits (KPs, pigment, blood)
• Anterior chamber – depth & Van Herrick assessment of anterior angles. Any cells, flare or blood
• Iris – heterochromia, atrophy, nodules, pigment dispersion, posterior synechiae, new vessels (note is not unusual to see vessels in light coloured irides), peripheral iridotomy

Management

Practitioners should recognise their limitations and where necessary seek further advice or refer the patient elsewhere

Symptoms requiring emergency referral

- Sudden severe ocular pain
- Severe photophobia
- Unexplained sudden loss of vision
- Painful red eye in CL wearer, unless due to FB/torn CL, (retain CLs, case and solutions for culture)
- Severe trauma

Signs requiring emergency referral (to eye casualty, ophthalmic outpatient clinic or accident and emergency)

- Circumcorneal flush
- IOP > 45mmHg
- Chemical injury
- Hyphaema
- Hypopyon
- Penetrating injury or deep corneal foreign body
- Corneal ulcer unless small and marginal
- Cells or flare in anterior chamber
- Dendritic ulcer in CL wearer (possible acanthamoeba)
- Deep corneal abrasion
- Corneal abrasion contaminated with foreign material
- Proptosis, restricted eye movements, pain with eye movement, pyrexia (fever > 38c)

Signs requiring urgent referral (within one week)

- Rubeosis (new iris vessels)
- IOP > 35mmHg (and <45mmHg) unless due to acute closed angle glaucoma
- New case of facial palsy or those with loss of corneal sensation
- Pyrexia (fever > 38c), with lid oedema, warmth, tenderness & ptosis

Symptoms requiring routine referral

- Slow developing, non-resolving lesion of eyelid skin
- Epiphora causing symptoms

Signs requiring routine referral

- Non-resolving lid lump
- Severe ectropian with symptoms
- Entropian
- Obstructed naso lacrimal duct
- Pterygium threatening vision or associated with chronic inflammation
Referral Letters

Urgent and emergency referral letters may be faxed or sent with the patient. Telephone the ophthalmic casualty unit or ophthalmic unit to arrange for the patient to be seen.

Routine referral letters should be typed whenever possible and sent to the GMP unless there are other local arrangements in place e.g. referral centres. All referral letters/forms should include the following:

- Date
- Full name of referring optometrist & practice address
- Full details of patient including name, address, telephone number, date of birth, reason for referral, supporting signs and symptoms; reports of relevant tests/ investigations, including copies of any supplementary data
- A clear indication of the reason for referral
- Provisional diagnosis
- Indication of urgency
- Clearly state if the report is for information only

Patient presents to MECS Optometrist

Optometrist takes history and symptoms; examines patient and makes initial diagnosis

Manage in practice
- Bacterial conjunctivitis
- Allergic conjunctivitis
- Non-herpetic viral conjunctivitis
- Subconjunctival haemorrhage
- Tear Dysfunction (Dry eye)
- Episcleritis
- Marginal keratitis
- Superficial abrasions
- Recurrent epithelial erosion
- Small corneal foreign bodies:
  - Remove
- In-growing eyelash:
  - Remove

Treat and advise
- Antimicrobials
- Mast cell stabilisers
- Ocular lubricants
- Artificial tears
- Topical antihistamines
- Ibuprofen

Follow up
Generally none expected

Exceptions
- Repeated in-growing lashes
- Dry eye

No improvement?
Refer to secondary care

Complete record and report to GP

Follow up in Secondary care

Urgent telephone referral
- Infective keratitis
- Anterior uveitis
- Posterior uveitis
- Scleritis

Follow up
Generally none expected

Exceptions
- Repeated in-growing lashes
- Dry eye

No improvement?
Refer to secondary care