# British and Irish Orthoptic Society Guideline:

# Orthoptist Led Age Related Macular Degeneration monitoring services

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## Introduction to Age Related Macular Degeneration Monitoring Services

**Aim** Appropriate and accurate evaluation and intervention are necessary to provide quality patient care in Macular Degeneration Services.

The following competency guidelines have been written with a view to best practice under ideal clinical conditions. It is recognised that not all Orthoptists have access to certain pieces of equipment and that their role as a team member may not allow them the freedom to act in individual practice situations.

Nevertheless, it is incumbent on all Orthoptists working in the area of Age Related Macular Degeneration (AMD) monitoring services to ensure that they are meeting best practice criteria within their own workplace limitations with reference to local and national policy guidelines including NICE and RCO. These documents have been consulted during the construction of these competencies, see recommended reading section 9.

It should be noted that for the purpose of this document the term AMD covers Neovascular (Wet) Age Related Macular Degeneration, Atrophic (Dry) Macular Degeneration, Pigment Epithelial Detachment (PED), Geographic Atrophy secondary to age related macular degeneration, and Age Related Macular Degeneration associated with Myopia unless otherwise stated.

When treatment is referred to it covers the use of intravitreal injections that are licensed for treatment by NICE for use in wet AMD such as Ranibizumab (Lucentis) and Aflibercept ( Eylea). It is recognised in some departments alternative intravitreal drugs are used (i.e Bevacizumab - Avastin) and that local departmental guidelines should be adhered to in these circumstances.

## 1 PATIENT INTERVIEW

**Overview**
The patient interview is an integral part of clinical practice whereby an Orthoptist gains essential information, which will form the focus/basis of further assessment. This involves the attributes of communication and interpersonal skills. The case history may be the first point of contact between the patient, carer and Orthoptist.

**Essential standards**
The intellectual needs of the patient are considered and communication techniques adjusted accordingly to best meet the patient's needs. Questions and statements are phrased so that adequate information can be elicited.
Information gained in interview is recorded accurately and concisely and may include:

- Name, address, date of birth
- GP name and address
- Relationship of carer to patient
- Occupation and social history
- Source of original referral
- Reason for attendance
- Family history with particular reference to macular degeneration & severity of disease/ age of onset
- Drug history with specific reference to asprin and/or warfarin.
- General health with particular reference to: diabetes mellitus, hypertension, cerebro-vascular accident (stroke), coronary, MI and vascular disease.
- Social history including occupation, driving, smoking, alcohol intake, diet and nutrition.
- Previous eye history including ocular injury
- Symptoms of deterioration or changes in vision and/or distortion.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- General statement of intent during investigation and communication
- Patient questionnaire
- Audit of documented information in case notes

## 2 PATIENT ASSESSMENT

**Overview**
This involves the application of the attributes of knowledge, investigative and technical skills in the area of macular degeneration. Through patient assessment all information relevant to the case is efficiently and safely acquired.

**Essential standards**
The Orthoptist will undertake specialised ophthalmic testing procedures in the area of Macular degeneration in which the Orthoptist has been competently trained and assessed. These procedures may include:

- Visual acuity
- Pupil reactions
- Lens, anterior segment and media assessment
- Macular assessment
- Dilation as per local approved PGD
- OCT assessment and interpretation
- Ocular adnexa
- Tonometry (either rebound or contact as per local policy)
- The Orthoptist uses knowledge of the visual system and its abnormalities to formulate strategies to assess the patient.
- The Orthoptist varies testing procedures according to the patient's responses and selects testing procedures applicable to the level of ability of the patient.

The Orthoptist correctly uses quantitative and qualitative tests to investigate further the ophthalmic status of the patient which determines:

- The sensory state of the eyes and visual pathway
- The pathogenesis of AMD disease progression
- The testing sequence is modified according to the results gained.
- Accurate observations about the patient's responses to the tests are made and patterns of normal and abnormal responses to testing procedures recorded and evaluated for accuracy.
- The test results are critically evaluated for differential diagnosis.

**Desirable objectives**
The Orthoptist may undertake specialised ophthalmic testing procedures in the ophthalmic setting in which the Orthoptist has been trained, including;

- Ocular Adnexia examination
- Slit lamp biomicroscopy of peripheral retina
- Fundus photography and Fluorescein Angiography (FFA)
- Fundus AutoFluoresence (FAF)
- The Orthoptist uses interpersonal and communicative skills to indicate to the patient/carer the purpose of the tests and to obtain appropriate responses to the tests.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Random review of case notes
- Written department statements regarding additional specialised testing skills and policies and procedures applicable to these
- Audit of practice
- Evidence of clinical protocols ( appendix 1)
- Appropriate medical supervision
- Competency record ( appendix 2)

## 3 RETINAL IMAGING FOR INVESTIGATION AND MONITORING

**Overview**
Retinal imaging is essential in the management of patients with AMD for diagnosis and monitoring response to therapy. The usage of different imaging methods should follow local protocol.

**Essential Standards:**
The Orthoptist or appropriate trained practitioner may perform the following:
Optical Coherence Tomography (OCT):

- Appropriate programmes should be used to create serial documentation of macular changes.
- is able to acquire images of high quality
- Is able to adapt to any mobility difficulties a patient may have to achieve correct positioning.
- Uses high level communication skills to explain the test to the patient and gain their cooperation.
- Appropriate drops should be used for pupil dilation before the test as per local PGD protocol.

Fundus Photography:

- For recording macular appearance images are recommended to be taken at 35 degrees centred on the macular.
- Appropriate drops should be used for pupil dilation before the test as per local PGD protocol.

Fundus Fluorescein Angiography (FFA):

- The current gold standard in the diagnosis of CNV Essential as a baseline test in new cases.
- Patients medical history including any allergies to shellfish or iodine must be obtained and documented.
- Orthoptists should always be aware of the risk of serious adverse reactions, patient consent must be obtained and documented.

**Desirable standards:**
The Orthoptist:

- Is able to provide high level interpretation of the results of a range of imaging modalities.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Random review of case notes
- Written department statements regarding additional specialised testing skills and policies and procedures applicable to these
- Audit of practice
- Evidence of clinical protocols
- Competency record ( appendix 3)
- Appropriate Medical supervision

## 4 Monitoring of Stable Diagnosed AMD

**Overview**
An assessment is made following appropriate interview and assessment of the patient using available ophthalmic techniques and equipment. Patients should be defined as stable as per local guidelines.

**Essential standards**
The Orthoptist

- Interprets information gained in patient assessment to determine if the patient's macular degeneration is stable or requires further treatment.
- Selects or identifies additional tests required if appropriate.
- Is able to recognise when clinical findings reveal a possible change in direction or discontinuation of patient management.
- In stable cases establishes the appropriate monitoring interval.
- When inconsistencies arise, is able to highlight the most important information gained in the assessment.
- Considers the ocular and general history in conjunction with test results in summarising the findings with regard to the diagnosis and management.
- Is able to provide access to support services, for example low vision aids, local ECLO, stop smoking services and discuss relevance with patient.
- Gives appropriate advice to the patient about sudden vision loss, the use of an Amsler grid, and how to contact the department.
- Identifies changes to the general health of all patients and considers contraindications with respect to treatment plans, and advises the patient/ophthalmologist as required.
- Initiates onward referral to the ophthalmologist as required.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Random review of case notes
- Audit of practice
- Peer review
- Case presentations and discussions
- Competence Statement
- Appropriate medical supervision

## 5 Management of active Diagnosed AMD

**Overview**
After each patient has received a formal diagnosis from the consultant ophthalmologist and had their treatment plan initiated.

**5 Essential standards**
The Orthoptist

- In conjunction with the ophthalmologist designs and implements treatment plans with the patient's involvement and consent.
- Demonstrates knowledge of the practical, and therapeutic aspects of Macular Degeneration management including:
    - Intravitreal injection procedure
    - Lucentis, Eylea and Avastin Treatment
    - Risks and benefits to intravitreal treatment
    - Other interventions that may improve patients resulting vision for example yag capsulotomy or cataract surgery.
- Explains the diagnosis in appropriate terminology.
- Is able to identify other ophthalmic pathology and refer to appropriate team for investigation and/or management.
- Considers all treatment options in liaison with the ophthalmologist and patient taking into account prognostic indicators, available resources, any adverse side effects and level of patient involvement that will be required.
- In conjunction with the ophthalmologist advises and structures the specific treatment with respect to the general condition of the patient for example patients who are unable to lie flat .
- Provides details of verbal or written instructions/information regarding Orthoptic and Ophthalmic procedures and care.
- Reviews the progress of the treatment plan regularly and evaluates the need for modification or alternative treatment plans.
- Gives appropriate advice to the patient about sudden vision loss, the use of an Amsler grid, and how to contact the department.
- Is able to advice on the management of patient's postoperative care.
- Identifies changes to the general health of all patients and considers contraindications with respect to treatment plans, and advises the patient/ophthalmologist as required.
- Initiates onward referral to the ophthalmologist as required.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Policies and procedures relating to treatment and care plans
- Random review of case notes
- Patient questionnaire
- Case presentation and discussion
- Competence Statement
- Appropriate medical supervision

## 6 PERMANENTLY DISCONTINUING TREATMENT

**Overview**
At times it may be appropriate to consider the permanent cessation of intravitreal treatment. This discussion with a patient should always involve the Consultant Ophthalmologist (or other assigned doctor).

**Essential Standards**
The Orthoptist:

- Enters the discussion with an appropriate level of knowledge of when permanent discontinuation is appropriate (see recommended reading)
- Gives due consideration to the wishes, best interests and quality of life of the patient.
- Has a conversation with the patient to make sure they are fully informed of the decision and due consequences.
- Discusses the case with the Consultant Ophthalmologist (or other appropriate doctor) and seek their counter signature in the medical records should the decision to permanently discontinue treatment be made.
- Recommends other appropriate measures to ensure the patient achieves the best possible level of best corrected visual acuity.
- Understands the final decision to discharge is to be made by the consult ophthalmologist.
- Demonstrates awareness and can make appropriate referrals to low vision services and support groups.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Audit of clinical practice
- Policies and procedures for referrals and data handling (case notes)
- Random review of case notes
- Appropriate medical supervision

## 7 RECORDING OF CLINICAL DATA

**Overview**
This involves the method of correct documentation of information gathered during the patient interview and assessment.

**Essential standards**
The Orthoptist:

- Ensures that accurate patient records and ophthalmic assessments are organised in a legible, secure, accessible, permanent (ink copy) and clear manner, including relevant test results filed in an appropriate manner. All entries should be dated, signed and follow local guidelines.
- Ensures permanent copies of records are kept of every consultation.
- Uses abbreviations and diagrams that are recognised by the ophthalmic team.
- Maintains confidentiality of patient records.
- Ensures department records and case notes being held in the department are kept in a secure place and access is only available to authorised personnel.
- Ensures documentation of informed consent is gained before releasing case records and personal histories to services outside the hospital/Trust (dependent on local policy) such as educational providers and non health care professions.
- Documents follow-up arrangements and referral/attendance/discharge details.

**Desirable standards (dependent on local referral policy)**
The Orthoptist

- Refers patient for appropriate additional ophthalmic assessment and treatment to team members in a timely manner.
- Refers the patient to an ophthalmologist as per local protocol.
- Refers the patient back to the ophthalmologist if clinical judgement indicates possible additional pathology.

**Monitoring**
Monitoring measures should be in place and reviewed annually and staff required to sign as evidence they have read and are aware of these. Methods that may be used to determine compliance with the above may include:

- Audit of clinical practice
- Policies and procedures for referrals and data handling (case notes)
- Random review of case notes
- Appropriate medical supervision

## REFERENCES AND RECOMMENDED READING:

Action on AMD. Optimising patient management: act now to ensure current and continual delivery of best possible patient care. Eye 2012 26 S1-21. W Amoaku et al.

Maximising Capacity in AMD services. The Royal College of Ophthalmologists Dec 2009.

Ranibizumab: The clinician's guide to commencing, continuing and discontinuing treatment. The Royal College of Ophthalmologists June 2008.

Age Related Macular Degeneration Guidelines for Management. The Royal College of Ophthalmologists February 2009.

How big is the burden of visual loss caused by age related macular degeneration in the United Kingdom? British Journal of Ophthalmology 2003: 87 ; 312-317 Owen et al.

Quality of life in age related macular degeneration: A review of the literature. Health Quality of Life Outcomes 2006:4 ;97-117. M, J Bradley.

National Institute for Clinical Excellence (2008). Ranibizumab and pegaptanib for the treatment of age-related macular degeneration. NICE technology appraisal guidance 155.

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# Standard of Practice

| | |
|---|---|
| Introduction: | Optical Coherence Tomography (OCT) is a non-invasive high resolution method of imaging the internal structures of the eye using optical signal acquisition and processing. The three dimensional images provide early detection, diagnosis and treatment guidance for retinal diseases such as macular degeneration and diabetic eye disease, for glaucoma and other anterior segment conditions. |
| Practice statement: | It is implicit in the delivery of this aspect of care that your Trust's policies and guidelines are adhered to in regard to: Scope of Practice, Infection Prevention & Control, Privacy & Dignity, and Communication & Consent. |

| | |
|---|---|
| Date: | Author: |
| Version number: 1 | Review date: |
| Reviewed by:<br><br>Authorised by: | |

| References: | |
|---|---|
| 1 | Reed, Brandon; Glabe, David; and Yudcovitch, Lorne, "Ocular Coherence Tomography Guide" (2011). Faculty Scholarship (COO) Paper 12, college of optometry http://commons.pacificu.edu/coofac/12 |
| 2. | Dr Simon Chen 2011; Interpreting OCT scans, article from Optometry Pharma |
| 3 | Hee et al. Interpretation of the Optical Coherence Tomography Image, taken from Chapter 2 of the book: Optical coherence tomography of ocular diseases |

Staff member……

This is aimed at orthoptists within the ophthalmology department who will be carrying out interpretation of OCT images, predominantly in clinics such as ARMD clinics. The orthoptist must demonstrate the following:

| SKILL | KNOWLEDGE | PERFORMANCE CRITERIA |
|---|---|---|
| 1 | Demonstrate knowledge of the anatomy and optics of the eye. | • Name relevant structures of the eye<br>• Explain why the images are needed |
| 2 | Demonstrate knowledge of the layers of the retina of the eye | • Name relevant layers of the retina and appreciate what a normal retina looks like |
| 3 | Demonstrate knowledge of the retinal layers relevant to the condition being examined | • Explain the aetiology, signs and symptoms in patients with retinal conditions such as ARMD. |
| 4 | Appreciate the quality of the OCT scans taken | • Assess the quality and reliability of OCT images and recognise common artefacts |
| 5 | Identify retinal changes using OCT scans, due to conditions such as ARMD | • Identify the changes that occur as a result of ARMD and explain how findings can influence management of patients. |
| 6 | Demonstrate effective record keeping | • Document relevant findings from OCT images in patients' notes and on Medisoft |

Declaration

I feel competent in this procedure and understand the competency statement, action and outcome. Having received appropriate training, I accept responsibility for my own competence and have discussed this role as part of my job description with the person to whom I am managerially accountable.

Your signature: ……

I have assessed …… in this competency and feel that both practice and knowledge meet the required standard.

Assessor's signature: ……

I confirm that the above named person has provided appropriate evidence to support a claim of competence and has been assessed in practice.

Manager's name: ……

Manager's signature: ……

| | Key skill | Competency Checklist | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date |
|---|---|---|---|---|---|---|---|
| 1 | Demonstrate knowledge of the anatomy and optics of the eye. | • Name relevant structures of the eye<br>• Give clinical indications for obtaining OCT images | | | | | |
| 2 | Demonstrate knowledge of the retinal layers of the eye. | • Name the layers that are present in the retina of the eye<br>• Understand what a normal retinal OCT image of the eye looks like | | | | | |
| 3 | Demonstrate knowledge of the retinal layers relevant to the condition being examined. | • Explain the aetiology, signs and symptoms that may be present in ARMD patients. | | | | | |
| 4 | Appreciate the quality of the OCT scans taken | • Be able to assess the quality and reliability of the OCT scans that have been taken.<br>• Appreciate and identify the more common artefacts that may be present on OCT scans. | | | | | |

| | Key skill | Competency Checklist | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date | Assessor's Signature + date |
|---|---|---|---|---|---|---|---|
| 5 | Demonstrate the ability to assess OCT images that show changes In the retinal layers, caused by conditions such as ARMD | • Be able to identify changes that may be found in the retinal layers of the eye, and appreciate how the management of the patient will depend on the OCT findings.<br>• Be able to formulate an appropriate management plan based on the findings on the OCT images. | | | | | |
| 6 | Demonstrate ability for effective record keeping | • Be able to record the relevant findings from the OCT images in patients' notes.<br>• Be able to add relevant results from the OCT images to the department's database (Medisoft) | | | | | |