THE COLLEGE OF OPTOMETRISTS

Learning outcomes for the professional higher certificate in medical retina, incorporating age related macular degeneration and diabetic retinopathy

1. Aim

This higher certificate is a prerequisite to the College accredited professional diploma in medical retina. Optometrists working at this level should additionally possess all of the competencies required at professional certificate level. This qualification is for optometrists who are working or wish to work in a consultant ophthalmologist-led medical retina service and will provide optometrists with the knowledge and experience to work effectively under supervision in a multidisciplinary medical retina team.

Work settings and responsibilities may include:

- medical retina new patient triage clinics
- AMD treatment-retreatment clinics
- slit lamp diabetic retinopathy screening and grading including referral outcome grading according to the National Screening Programme common pathway
- diabetic macular oedema assessment and monitoring.

2. Learning outcomes

Following completion of the programme an optometrist working in a consultant ophthalmologist-led environment[1], should be able to demonstrate:

a) an ability to obtain a clinical history
b) an ability to undertake a detailed slit lamp examination including Volk lens indirect ophthalmoscopy
c) an ability to use and interpret OCT imaging software and fundus photography to review data and make accurate diagnoses
d) an understanding of the principles of fluorescein/ICG angiography and autofluorescence in the differential diagnosis of macular disorders
e) an ability to differentially diagnose retinal and macular conditions and manage or refer as appropriate
f) an ability to diagnose wet AMD with a provisional recommendation for treatment
g) an ability to diagnose retinal vein occlusions and refer or manage as appropriate
h) an ability to recognise other ocular abnormality and refer or manage as appropriate
i) an ability to make re-treat decisions for wet AMD according to local protocols in a consultant ophthalmologist-led pathway, including the ability to determine when further investigations are required in the event of atypical or sub-optimal responses to treatment
j) an ability to detect the features needed to accurately grade diabetic retinopathy according to modified ETDRS criteria in addition to National Screening protocols
k) an ability to communicate with patients about their diagnosis and potential management options
l) an ability to communicate with colleagues within a multidisciplinary setting
m) an awareness of NICE guidelines and local protocols for AMD, diabetic macular oedema (DMO) and retinal vein occlusions
n) an ability to work within the clinical governance framework of the ophthalmic unit
o) an ability to work within own level of competence.

[1]College of Optometrists and the Royal College of Ophthalmologists (2010) *Joint Supplementary College Guidance on Supervision in relation to Glaucoma-related Care by Optometrists.* Available from: http://www.college-optometrists.org/en/utilities/document-summary.cfm/docid/14D0AC7E-06FC-4453-BAFBEEC13E236C21 [accessed on 29 Jan 2014]

3. Indicative content

a) Appropriate and comprehensive clinical history, including presenting symptoms, past ocular and medical history, current medication and allergies.

b) Slit lamp examination and Volk lens indirect ophthalmoscopy, including anterior segment, lens, vitreal and retinal assessment.

c) OCT imaging and fundus photography to include, but not limited to:

- subretinal fluid
- intraretinal fluid
- intraretinal haemorrhage
- sub RPE haemorrhage
- intraretinal exudates
- intraretinal inflammation
- drusen
- atrophic change
- fibrosis
- pigment epithelial detachment
- macular oedema:
    - cystoid
    - diabetic macular oedema
    - macular oedema secondary to vein occlusion
- epiretinal membrane
- RPE tear
- vitelliform macular changes
- vitreo-macular interface disorders, e.g. macular holes, lamellar macular holes, pseudoholes and epiretinal membranes
- interpretation of OCT thickness measures
- monitoring the response to treatment over time.

d) Interpretation of fluorescein, ICG angiography and autofluorescence for differential diagnosis.

e) Ability to differentially diagnose the following:

- dry AMD
- wet AMD
- diabetic retinopathy and maculopathy
- vitelliform macular changes
- other causes of choroidal neovascularisation
- epiretinal membrane
- pseudo-macular holes and macular holes
- vitreomacular adhesion and traction
- retinal tears and detachments
- ocular ischaemia
- central serous retinopathy
- central retinal vein occlusion (ischaemic and non-ischaemic)
- branch retinal vein occlusion
- cystoid macular oedema
- macular telangiectasia
- macroaneurysms
- central and branch retinal artery occlusions
- retinal emboli
- benign or potentially malignant lesions
- inflammatory retinal disease
- vitreous inflammatory abnormalities
- retinal dystrophies
- causes of optic disc swelling.

f) Diagnosis of wet AMD with a provisional recommendation for treatment.

g) Features of central and branch retinal vein occlusions; systemic and ocular management.

h) Ocular co-morbidity.

i) Re-treat decisions for wet AMD according to local protocols including need for further investigation or opinion if atypical or sub-optimal response to treatment.

j) Diabetic retinopathy grading according to modified ETDRS criteria and National Screening protocols.

k) Effective communication with patients

l) Effective communication with colleagues

m) NICE guidelines and local protocols for AMD, DMO and retinal vein occlusions.

n) Clinical governance, including need for regular audit.

o) Working within own level of competence:

- awareness of own limitations
- need to seek advice when appropriate
- CPD, including regular multidisciplinary peer review.

4. Teaching, learning and assessment strategies

The programme should be of sufficient length to achieve the stated learning outcomes. Programme delivery will be achieved through a combination of a taught element and supervised clinical practice or placement in a consultant ophthalmologist-led medical retina service. It is anticipated that a variety of learning strategies could be used, including: working in the medical retina clinic, face-to-face instruction, practical skills, distance learning or directed private study, as appropriate for the material or skills being taught.

To guide teaching strategy we distinguish between different levels of candidate competence in our learning outcomes:

- awareness – the candidate will be familiar with the item(s) in the learning outcome but is not required to demonstrate detailed understanding, knowledge or practical experience
- understanding – the candidate will be able to explain the key item(s) in the learning outcome but is not required to have practical experience
- detailed knowledge – the candidate will be able to demonstrate higher order thinking in most item(s) in the learning outcome
- ability – the candidate will have competence in a practical task acquired through skills based training or experience. Ability should incorporate higher order thinking.

Assessments should be appropriate for higher level complex clinical practice and must be designed to provide valid and reliable judgements about a candidate's performance. Assessment criteria must be made explicit and be appropriate for the competence they are designed to test. For example, competence relating to a clinical skill should be assessed using an appropriate skills-based assessment. For each assessment, a marking scheme with the appropriate pass/fail criteria should be established. Candidates should demonstrate skills such as critical thinking, problem solving and reflection.

Accreditation of prior learning (APL)
Accreditation of prior learning (APL) may be awarded to candidates as appropriate. It should be noted that the APL must be specific to the units and certificates already held by candidates. APL can count for no more than one third of the programme.

Candidates may be eligible for exemption from the clinical placement through accreditation of prior learning (APL).

The criteria for exemption are:

1. candidates must be current practitioners with relevant experience in medical retina within a hospital, clinic or other appropriate setting
2. candidates must present a portfolio of at least 200 patient episodes recorded in a minimum of 40 sessions of three hours each; patients should be seen within a hospital, clinic or other appropriate setting
3. the portfolio evidence must include details of relevant, specific workplace assessments which directly match the clinical skills learning outcomes in the College of Optometrists' Medical retina professional higher certificate
4. items of evidence within a portfolio have a currency of two years.

The course provider must ensure that this portfolio is assessed by at least two assessors, using a formal process which is explicit, reliable, and valid and fits into the quality assurance framework of their course.

5. Clinical placement

The course provider is responsible for ensuring that:

- the placement is for a minimum of three months and can be 12 months or longer
- candidates complete a minimum of 40 clinical sessions of three hours each
- candidates examine their own caseload of patients with the opportunity to discuss clinical findings and clinical decision making with their supervisor

- candidates present a portfolio of written case records to include clinical details of the case, and a discussion of how the diagnosis and management is supported by the evidence base
- a minimum of six case records from the portfolio are assessed, to include case discussions with an assessor
- candidates present a logbook of patients examined, with a minimum of 200 patient episodes.

The range of cases must include:

- dry AMD
- wet AMD
- diabetic retinopathy and maculopathy

and most of the following:

- vitelliform macular changes
- other causes of choroidal neovascularisation
- epiretinal membrane
- pseudo-macular holes and macular holes
- vitreomacular adhesion and traction
- retinal tears and detachments
- ocular ischaemia
- central serous retinopathy
- central retinal vein occlusion (ischaemic and non-ischaemic)
- branch retinal vein occlusion
- cystoid macular oedema
- macular telangiectasia
- macroaneurysms
- central and branch retinal artery occlusions
- retinal emboli
- benign or potentially malignant lesions
- inflammatory retinal disease
- vitreous inflammatory abnormalities
- retinal dystrophies.

To assess the ability to undertake slit lamp diabetic retinopathy screening i.e. learning outcomes b, h and j, assessment must include the following:

- formal assessment, using national grading criteria[2], of 10 patients examined by the candidate in a single session, or over a number of clinics within a reasonable timescale using slit lamp and Volk lens indirect ophthalmoscopy. Patients must have various stages of diabetic retinopathy and related common retinal disorders

- for candidates not performing full disease grading to required levels using digital images within the National Diabetic Eye Screening Programme, they should successfully grade images of at least 20 patients with diabetes in a designated single session

- the assessor for learning outcomes b, h and j must be an ophthalmologist who is the clinical lead of the local diabetic screening programme, or their nominee. The assessor must meet the minimum requirements of the NHS diabetic eye screening programme.[3]

[2] NHS Diabetic Eye Screening Programme, (2012) *Diabetic Eye Screening Revised Grading Definitions version 1.3*. Available from: http://diabeticeye.screening.nhs.uk/gradingcriteria [accessed 3 Mar 2014]

[3] NHS Diabetic Eye Screening Programme, Public Health England (2013) *Slit Lamp Biomicroscopy (SLB) Training and Accreditation for SLB carried out in the NHS Diabetic Eye Screening Programme.* Available from: http://diabeticeye.screening.nhs.uk/nationalguidance [accessed 3 Mar 2014]