The ROYAL COLLEGE of OPHTHALMOLOGISTS

OST Curriculum 2024

Level 2 Learning Outcomes and descriptors

7 Curriculum Domains (Patient Management and Other)

Patient Management Domain

Special interest areas (SIAs) i-xi

Level 2	
Learning Outcome	**Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities.**
An ophthalmologist achieving this level will:	
These descriptors apply to all special interest areas (i-xi)	▪ Manage patients, with non-complex conditions suitable for management by the generalist, with indirect supervision. ▪ Manage patients, suitable for management by a generalist, at an accepted rate. ▪ Manage time and resources effectively. ▪ Demonstrate effective consultation skills, including effective verbal and non-verbal interpersonal skills. ▪ Identify and manage barriers to communication, including language barriers, sensory and cognitive impairment. ▪ Use the exophthalmometer and interpret the findings with relevance to the specific patient. ▪ Use appropriate tools to assess the cornea e.g. pachymeter and know when to use specular microscopy. ▪ Understand when to use, and competently employ a variety of lenses for binocular fundus and gonioscopy examination with the slit lamp. ▪ Use a portable slit lamp competently. ▪ Use a binocular indirect ophthalmoscope with a variety of lenses, selected to the situation and appropriate indentation. ▪ Perform refraction and understand the relevance and importance of the refraction. ▪ Assess a patient's spectacles using neutralisation techniques and focimetry. ▪ Assess a patient's binocular co-operation and assess whether optical correction for this is necessary. ▪ Select investigations appropriate to the likely diagnosis. Know when they need to be ordered urgently and how to interpret the results. Know their contra-indications, limitations and implications (including cost). ▪ Employ and interpret new methods of assessment and investigation when they are introduced into clinical practice. ▪ Assess the progress of a patient's condition and respond accordingly. This includes observation of the natural history of a disease and clinical improvement or deterioration in response to interventions.

	▪ Understand and apply knowledge of lasers. Apply this knowledge when recommending laser treatment. ▪ Employ safe practice, including complying with local laser safety procedures. ▪ Have knowledge of the common Low Vision Aids and the conditions for which they may provide benefit.
Oculoplastics and Orbit (i)	▪ Be competent in performing a sac wash-out (syringing) and be able to fully interpret the findings.
Cornea and Ocular Surface Disease (ii)	▪ Perform minor ocular surface procedures, including, but not limited to, Contact Lens insertion and removal of corneal foreign body removal, ocular surface suture insertion and removal. ▪ Understand the indications for and use appropriate tools to assess the cornea (e.g. pachymeter, corneal topography, anterior segment OCT) and to recognise obvious deviations from normal.
Cataract and Refractive Surgery (iii)	▪ Understand and apply knowledge of lasers relevant to cataract and refractive conditions. Use this knowledge when discussing or recommending laser treatment.
Glaucoma (iv)	▪ Understand when different methods of intraocular pressure (IOP) measurement are required and how to use them. ▪ Understand use of ultrasound biomicroscopy and anterior segment optical coherence tomography. ▪ Understand and interpret optic nerve imaging. ▪ Understand and interpret visual field-testing methods and glaucomatous changes. ▪ Select investigations appropriate to the likely diagnosis, such as use of ultrasound in paediatric cases and use of IOP phasing. ▪ Perform laser peripheral iridotomy, including in the emergency setting, following practise in a simulated setting.
Uveitis (v)	▪ *No additional descriptors for this area.*
Medical Retina (vi)	▪ Employ appropriately and interpret optical coherence tomography (OCT) scans. ▪ Employ appropriately and interpret fundus fluorescein angiography (FFA). ▪ Understand the principles and basic interpretation of electrophysiology. ▪ Understand and interpret visual field tests with regard to both medical retina conditions and treatments. ▪ Know common and uncommon long-term side effects of laser treatment e.g. reduction of peripheral vision in DR treatment, night blindness, metamorphopsia.
Vitreoretinal Surgery (vii)	▪ Perform effective laser retinopexy (slit lamp with contact lens).

Ocular Motility (viii)	▪ Perform a Hess/Lees screen test and interpret the result.
Neuro-ophthalmology (ix)	▪ Accurately interpret findings from pupil assessment. ▪ Assess anisocoria, including how to perform and interpret appropriate pharmacological tests for specific pupil abnormalities.
Paediatric Ophthalmology (x)	▪ Interpret orthoptic assessments. ▪ Employ a variety of lenses for binocular fundus examination with the slit lamp. ▪ Employ a modified slit lamp examination. ▪ Perform a cycloplegic refraction and understand the relevance and importance of the refraction.
Urgent Eye Care (xi)	▪ *No additional descriptors for this area.*
Learning Outcome	**Refine the differential diagnoses and management plan by application of clinical knowledge.**
An ophthalmologist achieving this level will:	
These descriptors apply to all special interest areas (i-xi)	▪ Create prioritised differential diagnoses and reach a potential diagnosis. ▪ Formulate a management plan based upon clinical assessment and, where appropriate, the results of relevant investigations. ▪ Demonstrate that decisions are made by applying appropriate and clear clinical reasoning. ▪ Recognise when a patient's ocular problem is a manifestation of a systemic disorder and when an ophthalmic diagnosis may indicate an increased risk of a systemic illness. ▪ Know the likely infective organisms in cases of infection, how they are best isolated and identified. ▪ Understand the indications and use of systemic and topical antimicrobials. ▪ Recognise when the management plan involves a level of expertise that is beyond own competence. ▪ Make appropriate referrals to other specialties, in a timely manner, using local pathways. ▪ Understand the rationale behind, and perform or organise the ophthalmic examinations required by protocols in other specialties. ▪ Know when patients should be jointly managed between specialties, and contribute to this management. ▪ Demonstrate the ability to reflect and learn from professional practice and clinical outcomes.

Oculoplastics and Orbit (i)	▪ Identify the presence of abnormal findings on CT and MR scans of the orbit. ▪ Assess and recognise sight-threatening orbital emergencies and initiate management e.g. iv antibiotics in orbital cellulitis, lateral canthotomy in orbital haemorrhage.
Cornea and Ocular Surface Disease (ii)	▪ Interpret, and act upon the results of a conjunctival swab or corneal scrape or biopsy.
Cataract and Refractive Surgery (iii)	▪ Plan the optimum refractive outcome for surgical procedures. ▪ Recognise errors in biometry result and identify when they need to be repeated. ▪ Interpret, and act upon the results of a vitreous biopsy.
Glaucoma (iv)	▪ Identify whether the angle is open or closed. ▪ Identify the likely cause in secondary glaucoma cases with ability to identify or exclude whether typical signs are present, e.g. pseudoexfoliation. ▪ Recognise and escalate appropriately where there is high risk of the patient developing vision loss.
Uveitis (v)	▪ Interpret, and act upon the results of a vitreous biopsy.
Medical Retina (vi)	▪ *No additional descriptors for this area.*
Vitreoretinal Surgery (vii)	▪ Interpret, and act upon the results of a vitreous biopsy.
Ocular Motility (viii)	▪ *No additional descriptors for this area.*
Neuro-ophthalmology (ix)	▪ Recognise when neurological problems are present that require the opinion of a neurologist or neurosurgeon. ▪ Recognise and accurately describe findings consistent with heritable optic neuropathies.
Paediatric Ophthalmology (x)	▪ Recognise and enquire about the influence of impaired vision on schooling and general development, make appropriate referrals. ▪ Know when referral for support services (e.g. ATVI, ROVIC, SENCO, social services, safeguarding) is appropriate and make these appropriate referrals.

Urgent Eye Care (xi)	▪ *No additional descriptors for this area.*

Community Ophthalmology (xii)

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	
Be aware of common public health issues and requirements specific to ophthalmology.	▪ Understand the wider determinants of eye health, including demographic structure, ethnicity, deprivation, socio-economic factors, learning disabilities and health determinants such as obesity, smoking, hypertension, stroke. ▪ Recognise the existence of differential health outcomes (general and ophthalmic) for different age, gender, ethnicity, occupation, employment status, level of deprivation (socio-economic factors), disability (e.g. learning disabilities) and other risk factors. ▪ Be aware of specific issues of sight loss in children and young people and risk factors. ▪ Understand the process of Certification of Visual Impairment, including criteria for certification and common conditions for which this may be required. ▪ Understand the process for Referral of Vision Impairment (RVI) and when to use this. ▪ Understand the role of the Low Vision Aid (LVA) clinic in supporting patients with vision impairment. ▪ Be aware of the major patient support groups/organisations for those with specific conditions and with impaired vision. ▪ Know the DVLA standards for driving vision and how to manage patients that are not achieving this standard. Know the role and responsibilities of the health professional in implementing the DVLA standards.
Understand the environmental impact of eye health.	▪ Understand the concept of 'sustainability' and how this applies to the NHS and to the wider health care system, including: - disease prevention and health promotion - patient education and empowerment - professional education and skill development

	- service improvement principles, e.g. lean service delivery and cost reduction, savings and quality improvement - new service delivery models, upskilling and role of new technology ▪ Understand how sustainable models translate to the hospital and community eye health care setting. ▪ Understand the 'carbon footprint' of delivering health care and ways in which this can be reduced e.g. use of AI, digital technologies.

Other Curriculum Domains

Health Promotion

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	
Be aware and respect the impact of social, economic, cultural and religious factors on health.	▪ Recognise the impact of socio-economic determinants on health and the occurrence of disease (for example, education, income, living conditions, disability, access to healthcare, etc.). ▪ Recognise and appreciate the cultural factors that may influence health and disease (for example, cultural factors effecting response to disease and disability, compliance with treatment, expectations from treatment, etc.). ▪ Recognise and appreciate the religious factors that may influence health and disease (for example, the impact of religious practices in the causation of disease and in compliance with treatment, the effect of spirituality on health, etc.).

Have detailed knowledge of National Screening Programmes especially with reference to Ophthalmic diseases.	▪ Understand how patient management pathways are configured to ensure an effective and robust failsafe system for Hospital Eye services and Diabetic Screening Services. ▪ Understand the importance of accurate disease registers in the context of screening. ▪ Understand the quality assurance (QA) processes that are necessary to be implemented in national screening programmes e.g. diabetic retinopathy screening. ▪ Understand the distinction between systematic and opportunistic screening. Understand how outcomes of screening are dealt with. ▪ Have detailed knowledge of grading classification and referral criteria for the major national screening programmes including diabetic retinopathy and glaucoma screening. ▪ Attend and observe diabetic retinopathy screening, ROP screening and community vision screening in children.

Leadership and Team Working

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	
Document and evidence leadership behaviours.	▪ Demonstrate awareness of and write a reflective piece on own abilities, including: skills in communication, dealing with feedback, coping with stresses, tenacity and appetite for challenge. ▪ Reflect on leadership styles that fit own strengths. ▪ Think critically about decision-making, reflect on decision-making processes and explain those decisions to others in a transparent way.
Practice within a multidisciplinary team including to develop leadership projects.	▪ Promote and effectively participate in multidisciplinary and inter-professional team working, appreciating the roles of all members of the multidisciplinary team. ▪ Show awareness of own leadership responsibilities as a clinician and why effective clinical leadership is central to safe and effective care. ▪ Demonstrate leadership within own teams, for example: chairing a meeting, learning appraisal skills, designing or managing a rota, undertaking human factors training.

Patient Safety and Quality Improvement

Level 2

Learning Outcome	Descriptors
An ophthalmologist achieving this level will, in addition:	
Apply clear and appropriate clinical reasoning to make safe decisions.	▪ Use a logical thought process in their clinical reasoning, to ensure safe decisions and will be able to justify their conclusions.
Practise in line with latest evidence.	▪ Demonstrate an understanding of the principles of Good Medical Practice. ▪ Continually review medical and grey literature adopting changes to guidelines and evaluating the need to adopt emerging treatments and techniques with an appropriate evidence base.
Maintain appropriate audits of practice.	▪ Maintain a continuous audit of cataract surgery, using the RCOphth online electronic logbook. ▪ Review and reflect on all cases where complications occur. ▪ Undertake and audit of at least 50 consecutive cataract operations where the surgery is performed within three calendar years of the CCT date. ▪ Consider other areas of practice with defined standards, both surgical and non-surgical, and ensure personal audits are conducted.
Apply quality improvement methods.	▪ Understand the different methods of quality improvement and when they are most effectively employed. ▪ Select an appropriate quality improvement technique for all projects undertaken, and justify the selection.

Safeguarding and Holistic Patient Care

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	
Recognise where specialised management techniques may be necessary for those with special needs.	▪ Understand the limitations of clinical tests and assessment, especially in patients with additional needs. ▪ Understand the legal requirements for consent, particularly in those with additional needs, or under the age of 16 years, including the ability of others to consent or refuse consent on behalf of a patient. ▪ Recognise other factors that will affect a patient's decision-making process. ▪ Recognise the effect that treatment will have on patients, and be sensitive when patients' views and choices differ from one's own.

	▪ Support patients in decision making and considering their personal context including effects on the patient, relationships, and integration in society. Allow patients to freely question and discuss their management whilst reassuring them that such discussions will not compromise their care. ▪ Understand and apply knowledge of medical sociology to ophthalmic practice. ▪ Understand the effects of lifestyle on a patient's ophthalmic conditions. ▪ Be aware of the effects of diet and nutrition on ophthalmic diagnoses and understand how to provide support to patients who may find it difficult to afford or access adequate nutrition or dietary supplements. ▪ Understand and apply the criteria for the certificate of visual impairment. ▪ Consider the benefits, and any possible disadvantages, to registration as sight impaired, and be able to advise patients in a sensitive manner regarding the process. ▪ Understand the options for additional support for patients who may be unable to meet visual standards for driving, occupation or other requirements, due to additional needs.

Education and Training

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	
Plan and provide education and training activities for medical trainees and other professionals.	▪ Document formal teaching activities in own portfolio, involving different professional groups and types of teaching, e.g. practical skills to undergraduates, case presentations to colleagues. ▪ Solicit, reflect and respond to feedback on teaching.
Give constructive feedback on learning activities.	▪ Provide timely, supportive developmental feedback, both verbally and in writing, to learners and doctors in training.

Research and Scholarship

Level 2	
Learning Outcome	**Descriptors**
An ophthalmologist achieving this level will, in addition:	

Implement an evidence-based approach to shared decision making and enhancing patient outcomes.	▪ Demonstrate secure understanding of principle qualitative, quantitative, bio-statistical and epidemiological research methods. ▪ Identify a research question relevant to clinical practice and undertake a literature review to identify what is known on the topic. ▪ Publish at least one peer-reviewed review (systematic or literature) on subject of trainee's choice (in close collaboration with clinical supervisor).
Demonstrate competencies for commencing clinical research.	▪ Collect evidence for portfolio that demonstrates ability to apply knowledge encompassing research ethics, research design, literature/database searching, evidence appraisal skills, statistical approaches, funding for research.
Distil research, deliver poster presentations and improve oral presenting.	▪ Critically appraise one published clinical trial and present to local postgraduate teaching / journal club.