# F2 Ophthalmology Curriculum

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How to use this curriculum

This document sets out the core knowledge and skills to be acquired by an F2 trainee in Ophthalmology. **However, the list is not exclusive and there will be many learning opportunities within the programme for trainees to acquire additional knowledge and skills over and above the core content defined here**

Trainees will be assessed at intervals in the workplace. The methods of assessments are to be piloted and validated during 2005 so that they can be introduced for the first foundation programmes in August 2005.

The local Postgraduate Deanery will provide each trainee with a portfolio in which to record progress through the programme and to keep records of all assessments. The portfolio will contain details of local arrangement for the management of the programme and precise details of the assessment programme to be adopted in the Deanery.

The curriculum defines the knowledge and skills that trainees should demonstrate that they have learned during an F2 post in Ophthalmology. The curriculum should guide professional development and, as such, it should be used to help prepare Personal Learning Plans as part of the trainee’s educational appraisal process. Core competences, generic and acute care skills are described in the ‘**Curriculum For The Foundation Years In Postgraduate Education And Training**’.

The curriculum is presented in specific sections as listed below.

Introduction

Background to the development of the Foundation post in Ophthalmology.

Section 1. Core Ophthalmological Competences

This section defines the core competences from which all trainees will be formally assessed during their Ophthalmology F2 post.
Section 2. Delivery of Training

The educational philosophy of the programme is described here and the learning opportunities available to trainees.

Section 3. Feedback and Assessment

This section describes the assessment tools that are being developed for the Foundation programme and are likely to be used during the Ophthalmology F2 post. The assessment tools and process are not designed to rank the performance of trainees; rather they are measures of adequate competence.

Section 4. The F2 Ophthalmology Programme Syllabus

This section sets out the specific knowledge and skills that trainees are expected to acquire by the end of the Ophthalmology F2 post.

Appendix

Contains a number of core clinical problems by presenting symptom.
Introduction

From August 2005 all newly qualified doctors in the UK will pursue a two-year Foundation programme. This is a UK-wide strategy supported by the Health Departments in all four home countries within the UK. The Foundation programme curriculum sets out an outcome-based educational process based on acquisition of Defined Clinical Competences with a particular focus on acute care, so that all doctors finishing the programme will be competent to provide initial care of the acutely ill patient. Doctors will learn by building on experience. They will be exposed to clinical problems in different settings and of increasing levels of complexity as the programme progresses. In keeping with specialist training the local Postgraduate Deanery will provide each trainee with a portfolio in which to document their progress through the programme.

Key features of the programme are set out below.

- Doctors in the programme will take responsibility for their own learning and take advantage of all the learning opportunities presented within the day-to-day work of each attachment
- Competence and performance will be objectively assessed throughout the programme
- The programme will instil in doctors the need for continuous Professional Development and Lifelong Learning.
- Successful completion of the first year of the foundation programme will fulfil the criteria for full registration to the GMC.
- Successful completion of the second year will indicate that the doctor is professionally accountable for patient safety and ready to start a programme of further specialist training.

This document offers guidelines aimed to cover the key areas of ophthalmological knowledge and clinical skills deemed important as a basis for clinical practice. It is not intended to be prescriptive in method of teaching or as to how or where these skills are attained. Some of these can be further developed and reinforced during postgraduate training where appropriate.
Ophthalmology is a broad based specialty encompassing many aspects of medicine and surgery. These posts are intended to assist the trainee to:

- Build upon the ophthalmological experience obtained as an undergraduate, so an understanding of clinically relevant anatomy and physiology of the visual system and applied pharmacology is assumed. The posts will facilitate the development of a greater awareness of diagnosis and management of common and important ophthalmological conditions in the primary and secondary care setting.

- Develop confidence in skills, such as direct ophthalmoscopy, cover testing for strabismus.

- Appreciate the interface between ophthalmology and medicine including the relation of co-morbidity with eye disease, such as hypertension, diabetes etc.

- Have a greater understanding of the visual problems that affect children and the elderly.
Section 1: Core Ophthalmological Competences

What the F2 Ophthalmology Trainee is able to do
1. Competence in clinical assessment
2. Competence in patient investigation
3. Competence in patient management

1. Competence in clinical assessment, in particular:

a. General Medicine and Paediatrics
   i. Involvement of the eye in diabetes and other systemic disorders e.g. hypertension.
   ii. Common neuro-ophthalmic disorders to include implications of visual field abnormalities.
   iii. Common paediatric ocular problems including squint and amblyopia

b. Community Medicine
   i. Major causes of vision impairment and blindness and their prevention, including cataract, glaucoma, macular degeneration, and acute and gradual visual loss with and without pain.

c. The Eye and its Disorders
   i. Diagnosis and management of red eyes, ocular trauma, visual loss and ophthalmic emergencies.
   ii. Understanding of the basics of refractive errors and their correction.
   iii. Retinal disorders including detachment, retinal vascular disorders and the use of lasers.

d. Clinical Examination Skills
   i. Taking a directed ophthalmic history.
   ii. Vision assessment including visual acuity (Snellen, near), and colour vision (Ishihara plates)
   iii. Visual field assessment by confrontation and Amsler chart, and an understanding of the principles of kinetic and static perimetry
iv. Examination of the pupils including afferent pupillary defect
v. Ocular motility assessment, including the use of the cover test for strabismus
vi. Examination of the eye using a torch and magnifying aid
vii. Slit lamp biomicroscopy including Goldmann applanation tonometry
viii. The use of topical fluorescein, topical local anaesthesia, and drops used for pupil dilatation
ix. Use of the direct ophthalmoscope to examine the fundus ensuring knowledge of how to recognise normal and abnormal optic discs, the macula, signs of diabetic retinopathy, abnormalities of the retinal vasculature, and examination for red reflex including the neonatal eye
x. Directed general medical and neurological history and examination taking into account the associations between systemic and ophthalmic diseases
xi. Formulation of a differential ophthalmological diagnosis for common conditions

2. **Competence in patient investigation**, in particular:
   a. to understand the relevance of ordering investigations appropriate to the clinical problem

3. **Competence in patient management**, in particular:
   a. The formulation of a management plan
   b. The prescription and administration of appropriate local and systemic therapy
   c. The preparation of patients for surgery, including anaesthetic assessment for LA or GA
   d. The recognition and appropriate management of both local and systemic complications of treatment
   e. Immediate management of anaphylaxis, and cardiopulmonary resuscitation
   f. Aware of the rehabilitation services for the visually impaired.
   g. Ask for help?
Section 2: Delivery of Training

The Portfolio

The Postgraduate Deanery will provide every doctor entering the Foundation Programme with a learning portfolio. The portfolio will include a copy of the full list of the competences for the Foundation programme. It is the responsibility of trainees to maintain the portfolio and to record significant events. The competency list will form the basis for personal review of progress throughout the programme.

Learning Models

The learning experience of the Foundation Programme will be workplace-based and trainee-centred. It is vital that doctors in the programme take responsibility for their own learning and take advantage of all the learning opportunities presented within the day-to-day work of each attachment.

The concept of ‘spiral curriculum’\(^1\) will form the basis for the Foundation Programme. This model emphasizes iterative revisiting of topics throughout the programme.

- Topics are revisited at numerous levels of difficulty
- New learning is related to previous learning
- The competence of trainees increases with each experience of revisiting the topic (or skill).

Learning Opportunities

The list of learning opportunities below offers guidance only; there are other opportunities for learning that are not listed here. A more extensive guide to

\(^1\) Harden R, Stamper N (1999) What is a spiral curriculum? Medical Teacher 21(2) 141-143
learning opportunities in clinical training is available from the Conference of Postgraduate Deans of the UK:\(^2\):

1. **Experiential learning opportunities:**
   a. Supervised consultations in out-patient clinics or other settings. Trainees should have the opportunity to assess both new and follow-up patients and discuss cases with the clinical supervisor to allow feedback on communication and diagnostic skills, as well as the ability to plan investigations.
   b. Theatre or laser sessions offer practical opportunities for the acquisition of skills and the understanding of clinically relevant anatomy.

2. **Small group learning opportunities:**
   a. Case studies and presentations with small group discussions, particularly of difficult cases, including the topics of quality of care and patient safety, using the electronic classroom where available.
   b. Active participation in regional postgraduate teaching sessions, journal clubs and research presentations.
   c. Involvement in audit meetings including information access and use of evidence in practice.

3. **One to one teaching:**
   a. Review / case presentations with educational supervisor including selected notes, letters and summaries.
   b. Discussion between trainee and trainer about local protocols.
   c. Clinical application and development of practical skills.

4. **Personal study:**
   a. Personal Study including CD ROM and distance (electronic) learning.
   b. Reading journals.

5. **Audit:**

   a. Rationale and methodology.

   b. Trainees should be directly involved in the audit process by undertaking an audit during the foundation years, usually in the second year and jointly with other trainees. This should be seen as a key part of the wider issues of clinical governance and risk management.
Section 3. Feedback and Assessment

The assessment programme outlined here for the F2 year is specifically designed to measure a doctor’s performance in a variety of settings. It is intended to provide objective workplace-based assessments of progress of the trainee through the programme. The assessments will be used by the Postgraduate Deanery to decide whether or not the trainee can be signed up as having satisfactorily completed the programme, that is to say that the assessment programme as a whole is summative. However the assessments are also designed to be supportive.

Assessment will be trainee-led with timing of assessments and choice of assessors being determined by the trainee. It will however be important that assessments are completed within the overall timetable for the assessment programme; this will be made available to the trainees by the local Deanery. All trainees will be expected to keep evidence from these assessments in their portfolio. These results will form part of the basis of the discussions between the trainee and educational supervisor at appraisals.

Ultimately, it is anticipated that the in-work assessments for each trainee will be collated and analysed across all of the clinical and generic skill domains, enabling the production of a summative global assessment for each individual F2 doctor. This will be returned to each Deanery and will enable the Deanery to sign off F2 doctors as having successfully achieved the competences required of the second foundation year.

A suite of approved assessment tools will be available which have the common characteristic of seeking to capture what actually happens in practice. The programme will assess performance in relation to the domains of ‘Good Medical Practice’ and the core competences of the F2 curriculum through sampling a range of common and important problems likely to be seen by all trainees in their ophthalmology F2 post.

Most of the assessment tools described here are (in 2005) still in a developmental stage; some have been well researched whilst others will be further refined during piloting in 2005. It is however the intention of the
Modernising Medical Careers Programme that all assessment tools should be tested for validity and reliability prior to formal introduction in the F2 year which commenced in August 2006. The complete suite of assessment tools will be approved at the UK level. The exact choice of assessment tools may vary slightly from one part of the UK to another, but all trainees will be notified in advance of the exact tools that are to be used.

A suitable suite of assessment tools is likely to include the following domains:

1. **Multi-source Feedback (Mini-PAT: Peer Assessment Tool or Team Assessment of Behaviour)** Collated views from a range of co-workers (previously described as 360° assessment).

2. **Direct Observation of doctor – patient interactions**
   
   a. **Mini Clinical Evaluation Exercise (mini-CEX)**
   
   *Evaluation of an observed clinical encounter with developmental feedback provided immediately after the encounter.*

   Suggest a minimum of 4 observed encounters in F1 and 6 in F2. Mini-CEX is one form of observed clinical encounter.

   Observers may be experienced SpRs, or consultants, including their educational supervisor

   Each mini-CEX represents a different clinical problem amongst the agreed objectives.

   b. **Direct Observation of Procedural Skills (DOPS)**

   *Structured check list for the assessment of practical procedures.*

   DOPS is another doctor-patient observed encounter and could replace or parallel mini-CEX in some circumstances.

   Suggest 1 - 2 observed procedures per placement in appropriate areas of work.

   Observers may be consultants, GPs, SpRs, suitable nurses or AHPs.
Each DOPS should represent a procedure specific to the attachment.

3. Case Based Discussion (CBD)

Structured discussion of clinical cases managed by the trainee. Its particular strength is evaluation of clinical reasoning. It may be most helpful if used with trainees in whom anxieties exist surrounding their performance. The CBD can then be targeted to the areas of concern.³

³ Details, guidance notes and forms are available at: http://www.mmc.nhs.uk/pages/assessment
Section 4: The F2 Ophthalmology Programme Syllabus

Core Skills in Relation to Ophthalmology
This section of the curriculum outlines areas in which all F2 ophthalmology trainees should acquire clinical experience and receive training. Generic skills are covered in detail in the ‘Curriculum For The Foundation Years In Postgraduate Education And Training’.

During F2 post the trainee should apply the core competences described in Section 1 of the Curriculum to common and/or important clinical problems as they meet them in everyday practice. Appropriate problems can be classified under the following five subject headings:

1. Gradual/chronic painless loss of vision
2. Sudden/rapid loss of vision
3. The red eye (excluding Trauma)
4. Trauma
5. Change in appearance

Details of those problems that are considered to be of particular importance are given in the Appendix. This list is not intended to be exhaustive or prescriptive and other problem scenarios can be identified and added.

For each of the five subject headings, trainees will demonstrate the knowledge and skills to be able to assess and initiate management of these patients.
# F2 Ophthalmology Curriculum

## Knowledge
- Common presenting symptoms and signs of problems outlined in the Appendix
- Frequently occurring causes of the above
- Clinical interpretation of the history and examination findings
- Appreciate the limitations of one’s knowledge

## Skills (where appropriate)
- Take a focused history
- Visual acuity
- Cover test
- Extra-ocular movements
- Colour vision (Ishihara plates)
- Visual fields to confrontation
- Amsler chart
- Pupil responses including APD
- Slitlamp biomicroscopy
- Goldmann intra-ocular pressure measurement
- Dilated fundoscopy
- Formulation of a differential ophthalmological diagnosis
- Select initial investigations
- Formulate an appropriate management plan
- Refer and seek advice where appropriate
Selection and Interpretation of Investigations

The foundation programme years are a phase of increasing clinical responsibility, a key element of this is the ability of doctors to select appropriate investigations and interpret the reports. Training in selection, requesting and interpretation of results of some investigations may have taken place as an undergraduate, however, it is important that these skills are developed and widened in relation to the patient presenting with ophthalmological disease. It is also vital that trainees learn to critically evaluate when investigations are not required and are not cost effective.
Appendix

Core Clinical Problems By Presenting Symptom

Gradual / Chronic Painless Loss Of Vision
Refractive error including presbyopia
Cataract
Primary open angle glaucoma
Age related maculopathy (dry)
Diabetic retinopathy
Hypertensive retinopathy
Optic nerve – swelling, atrophy, compression
Amblyopia

Sudden/Recent Loss Of Vision
Retinal vascular occlusion – arterial, venous
Optic nerve - optic neuritis, anterior ischaemic optic neuropathy
Intermediate/posterior uveitis
Diseases of the visual pathways
Vitreous haemorrhage
Retinal detachment including flashes and floaters
Age related maculopathy (wet)
Transient ischaemic attack

Red Eye (excluding trauma)
Orbital cellulitis
Ectropion
Entropion
Trichiasis
Conjunctivitis (including Ophthalmia neonatorum)
Blepharitis
Allergy
Episcleritis
Scleritis
Keratitis
Anterior uveitis
Angle closure glaucoma
Post-operative intraocular infection

**TRAUMA**
Minor trauma - corneal abrasion, corneal/tarsal FB
Major blunt trauma - hyphaema
Major trauma - lids
Major blunt trauma - orbit
Major penetrating trauma/IOFB
Chemical

**CHANGE IN APPEARANCE**
Ptosis
Lid retraction
Lid lump – benign – chalazion, hordoleum
Lid lump – malignant – BCC, SCC
Proptosis
Strabismus – concomitant (convergent, divergent), incomitant (IIIN, VIN palsies)
Pupil abnormality - anisocoria