Irish College of Ophthalmologists

A CAREER AS AN EYE DOCTOR

OVERVIEW

Ophthalmology in the 21st century is an interesting and exciting specialty. It offers the diagnostic dilemmas of a physician as well as the technical challenges of a microscopic surgeon, both on a backdrop of exciting new therapies and innovative technical advances.

Ophthalmology is the branch of medicine that deals with the anatomy, physiology and disease of the eye and visual system. The specialty of ophthalmology in Ireland includes two career structures – medical ophthalmology and surgical ophthalmology.

Medical ophthalmology refers to non-surgical general ophthalmology. However following recent changes to the medical ophthalmology curriculum, the new training pathway allows subspecialty expertise to be developed in certain areas such as pediatrics, glaucoma and medical retina. Especially in the latter area of medical retina, new advances in intraocular injections and laser have revolutionized the treatment of two common sight-threatening conditions, namely age-related macular degeneration and diabetic maculopathy. As these conditions are very responsive to the new therapies, the work is very rewarding. Over the next 20 years Ireland will see a significant increase in both older patients and diabetics. Therefore the number of medical ophthalmologists required to treat these patients is also expected to increase. The medical ophthalmology curriculum is a four-year competence-based curriculum consisting of 3 common core years followed by a year of subspecialty training.

Medical ophthalmologists have varying roles around the country. Once they have successfully completed the medical ophthalmology curriculum, they can take up a post as a community ophthalmic physician, a hospital based ophthalmic physician or set up private practice as an independent practitioner. They can also have public health roles such as running a diabetic screening programme and/or extending eye care to the community.

Surgical ophthalmology refers to ophthalmologists who perform microsurgical intraocular operations such as cataract extraction surgery or retinal detachment repair surgery. Surgical ophthalmologists nearly all perform cataract surgery as well as specialize in one of eleven different surgical subspecialties. Although the eye is a very small organ there are 10 subspecialties involved in the practice of surgical ophthalmology.

- **Cataract and Refractive Surgery**
- **Paediatric Ophthalmology**
- **Corneal and External Diseases**
- **Glaucoma**
- **Vitreoretinal surgery**
- **Neuro-ophthalmology**
- **Oculoplastics**
- **Orbital/lacrimal disorders**
- **Strabismus**
- **Ocular Oncology**

The surgical ophthalmology curriculum is an eight-year competence-based curriculum consisting of 3 common core years followed by 5 years of subspecialty training.

TYPE OF WORK

Ophthalmology is a predominantly outpatient based specialty. Surgical ophthalmologists are based in the eye departments of large tertiary-referral hospital. Medical ophthalmologists can be based in both a hospital as well as a community clinic setting. In the out-patient department patients who require follow-up of an on going ocular condition are seen. Such ocular conditions can be part of aging – cataract, glaucoma or macular degeneration – or may be part of an underlying systemic disease e.g. diabetes, hyperthyroidism, rheumatoid arthritis or multiple sclerosis. In the latter conditions, ophthalmologists work in close collaboration with other specialists including diabetologists, rheumatologists, neurologists, ENT and maxillo-facial surgeons as well as pediatricians and geneticists.

Surgical ophthalmologists usually have two surgical sessions per week. Nearly all surgical ophthalmologists perform cataract surgery. Cataracts are the commonest cause of reversible blindness and cataract surgery is the commonest surgical procedure done in Ireland and indeed worldwide. It is usually performed under local anesthesia as a day case. Cataract extraction or phaco-emulisfication surgery as it is now called, has undergone many technical advances in the last decade. It requires the surgeon to have both high technical skill and excellent hand eye co-ordination, which takes many years of training to acquire.

Both medical and surgical ophthalmologists may have scheduled laser and intravitreal injection sessions. Medical ophthalmologists also provide significant paediatric ophthalmology services both in the community as well as in hospital based clinics. Current clinical lead programmes in Ireland are aiming for more care to be delivered in community care settings. Although ophthalmology is still strongly a hospital-based specialty this is likely to change, as there will be an increasing demand for ophthalmology care to be delivered in treatment centres other than large hospitals. This will require a new type of ophthalmologist, a team leader able to specialize in the three most common areas of patient need – pediatric ophthalmology, glaucoma and medical retina – as well as manage a team of technicians, ophthalmic nurses, orthoptists and retinal photographers and to co-ordinate patient care between hospital and community locations.

As well as spending their working week in the out-patients, laser suites, injection rooms and theatre, ophthalmologists also spend time delivering eye care in a dedicated eye casualty or accident and emergency department. Here patients with ocular trauma such as eyelid lacerations, globe perforations, chemical burns and orbital fractures are seen. Other sight-threatening eye emergencies such as giant cell arteritis as well as vascular conditions (central retinal artery occlusions) and glaucoma emergencies (acute angle closure glaucoma) are also seen. Most consultant surgical ophthalmologists take part in an on-call rota but night work is unusual. Medical ophthalmologists do not perform on call duties.

STAGES OF TRAINING

A. Core Training in Ophthalmology (Y 1-3)

Entry into Core Training in Ophthalmology
Entry to the programme is by competitive interview held centrally at the Irish College of Ophthalmologists. Selection criteria are on the ICO website.

The purpose of the foundation years of Core Training in Ophthalmology is to provide a broad based initial training in ophthalmology with attainment of knowledge skills and professional behaviours relevant to the practice of ophthalmology in any specialist discipline. Within these core years of training, much of the content is common across both surgical and medical ophthalmology. *(Syllabus available on ICO website)*.

Following successful completion of Core Training in Ophthalmology (requires passing the MRCSI exam) and depending on career preference and ability, candidates can compete to enter either

B. **Specialist Training in Medical Ophthalmology** or
C. **Specialist Training in Surgical Ophthalmology**

B. Specialist Training in Medical Ophthalmology (Y 4-5)

Entry into Specialist Training in Medical Ophthalmology
After successful completion of the 3 core years of training, trainees can compete to enter medical ophthalmic specialist training provided they meet the selection criteria (available on the ICO website). Entry to the programme is by competitive interview held centrally at the Irish College of Ophthalmologists.

Specialist Training in Medical Ophthalmology (6 month modules x 3)
The *purpose* of the Specialist Training in Medical Ophthalmology Programme is to provide in-depth specialist training so as to equip trainees with skills so that they can independently practice as generalists within ophthalmology, deliver an on-call emergency service and also deliver more specialised services to a defined level. As such the programme has a modular approach and is framed around the three subspecialties located at the core of future independent practice – medical retina, glaucoma and paediatric ophthalmology. Trainees, irrespective of preference and future career choice, need to complete all three modules to successfully complete their training. To reflect the diversity of the future career path of an ophthalmic specialist, training is located both within hospital-based training units as well as in community clinics.

Certificate of Completion of Specialist Training (CCST)
It is essential that trainees achieve both the common and specialty-specific competences defined in the curriculum to be eligible to exit the programme. The European Board of Ophthalmology Diploma or EBOD is the formal exit requirement for the Certificate of Completion of Medical Ophthalmic Specialist Training. Award of the CCST will allow the Medical Ophthalmic Specialist Trainee to be registered on the specialist registrar of the Medical Council and will indicate that the Ophthalmic Specialist has reached the curricular standards of competence to practice independently as a Medical Ophthalmic Specialist in Ireland.

Career models or variants after specialist registration in Ophthalmology
The Medical Ophthalmic Specialist qualified to specialist registration level may

1. Apply for a HSE public post as a Community Ophthalmic Physician.*
2. Apply for a HSE public post as a hospital-based Ophthalmic Physician.
3. Apply for a contract with the HSE to see Medical Card patients.
4. Apply to the Department of Social Protection for a contract to see PRSI entitled patients.
5. Work alongside their surgical consultant colleagues in a tertiary referral unit.
6. Enter private practice.

C. Specialist Training in Surgical Ophthalmology (Y 4-8)

Entry into Specialist Training in Surgical Ophthalmology (Y 4-8)

After successful completion of the 3 core years of training, trainees can compete to enter the Specialist Training in Surgical Ophthalmology programme provided they meet the selection criteria (available on the ICO website). Entry to the programme is by competitive interview held centrally at the Irish College of Ophthalmologists.

Specialist Training in Surgical Ophthalmology

The *purpose* of the Specialist Training in Surgical Ophthalmology is to provide in-depth surgical training so as to equip trainees with skills both in cataract surgery as well as in the surgical subspecialties of anterior segment surgery (corneal transplant), glaucoma (trabeculectomy), strabismus (squint surgery), orbit (enucleations), vitro-retinal (retinal detachment repair), nasolacrimal and oculoplastic surgery. Trainees, irrespective of preference and future career choice, need to complete training in all subspecialties to successfully complete their training. Most trainees go on to complete a Fellowship in the subspecialty of their choice.

Certificate of Completion of Specialist Training (CCST)

It is essential that trainees achieve both the surgical and clinical, personal and professional competences defined in the surgical curriculum to be eligible to exit the program. An exit exam is taken in the final years of training (usually year 7 or 8). Award of the CCST will allow the Trainee to be registered on the ophthalmic surgery registrar of the Medical Council and will indicate that the trainee has reached the curricular standards of competence to practice independently as a Ophthalmic Surgeon in Ireland.

How to Apply: To apply for the Core Training in Ophthalmology Programme a trainee needs to be registered with the Medical Council of Ireland and eligible for trainee specialist registration.

Ophthalmology, especially surgical ophthalmology, is a highly competitive specialty in Ireland. Entry on to the Programme is by competitive interview held at the Irish College of Ophthalmologists. Applicants can access the current scoring system on the ICO website. Consideration is given to an honours medical degree, prizes/medals (see below) achieved during undergraduate years, postgraduate degrees and presentations, research and /or publications. Personal and professional attributes such as, ability to work as a team, communications skills and personal motivation are also important.

Any interested graduate can contact *Siobhan Kelly at the Irish College of Ophthalmologists*. She can put you in touch with the Dean of Postgraduate Education and/or Ophthalmologists in Eye Departments throughout the country, whose team, either junior and senior, would be happy to talk to you about a career in Ophthalmology.

Additional information

Ophthalmology in the 21st century is an interesting and exciting specialty. It offers the diagnostic dilemmas of a physician as well as the technical challenges of a microscopic surgeon, both on a backdrop of exciting new therapies and innovative technical advances.

Cataract surgery for example has changed significantly in the last 20 years. It is now a keyhole procedure utilizing a very small incision of only 2.2mm. Ultrasound energy is used to break up and remove the cataract. New intraocular lens designs incorporating flexible materials enable intraocular lenses to be inserted in a folded position through the small incision, minimizing post-operative astigmatism and speeding up visual recovery. Surgical outcomes have also improved with over 95% of patients who undergo cataract surgery having excellent outcomes. This makes cataract surgery a very rewarding and satisfying procedure to perform.

Refractive laser surgery, which alters the refractive power of the eye by changing the corneal topographic surface, is one of the most rapidly evolving areas in ophthalmology. A whole generation of myopes have taken the option of discarding their corrective spectacles, opting instead for refractive surgery. Laser delivery, corneal flap construction and clear lens extraction are but a few areas that have improved so that refractive surgery is no longer limited to mild to moderate myopes but can also be suitable , in the right hands, for high myopes, hyperopes and patients with astigmatism.

New innovative techniques for ocular imaging take full advantage of the eye's transparent media. They help screen and diagnose ocular conditions making ophthalmology an ideal specialty for future tele-medicine advances.

Genetic discoveries have leapt forward on the last 5 years with some of the first genetic treatments and stem cell treatments in medicine being carried out in the specialty of ophthalmology in conditions such as Lebers congenital amaurosis and retinitis pigmentosa. Ireland has an excellent track record in ophthalmic research in glaucoma, conreal disease and in the genetics of retinal disease. Some of this work is carried ouy in centres of excellence such as University College Dublin, Trinity College Dublin, Galway University Hospital and the Royal Victoria Eye and Ear Hospital, Dublin.

Any trainees who are interested in a career in Ophthalmology can contact the Irish College of Ophthalmologists www.eyedoctors.ie