

Educational Goals & Objectives for Ophthalmology Residents at Parkland Memorial Hospital (PMH)

PGY2 Residents (4)

GOALS – Residents will learn to provide general ophthalmology medical care to patients in a compassionate and professional manner. In addition, the resident will be introduced to subspecialty care (Neuro-ophthalmology, Retina, Cornea/External Disease, and Glaucoma). Residents will also perform minor surgery as well as eye removal surgery (enucleation/evisceration) during the rotation, and will participate in gross and microscopic pathologic examination.

OBJECTIVES / KNOWLEDGE EXPECTED AT END OF ROTATION

Residents will have the ability to:

- Perform a complete eye examination, including gonioscopy and fundus examination by slit lamp and indirect ophthalmoscopy.
- Diagnose and treat most common eye conditions.
- Perform B-scan examination in eyes with opaque media with some supervision.
- Perform pachymetry.
- Discuss intelligently the differential diagnosis and treatment of most common ophthalmologic disorders.
- Correctly code diagnoses and office-based procedures.
- Be familiar with and able to perform common office-based ocular procedures:
 - Epilation
 - Punctal closure
 - Participation in repair of traumatized eyes
 - Participation in other extraocular procedures (first assist/perform with supervision)

The PMH-IV first year ophthalmology resident participates in the weekly Parkland Neuro-ophthalmology clinic in addition to seeing patients in New and General clinic. As such, the PMH-IV resident is expected to be:

- Familiar with the components of a complete neuro-ophthalmologic examination.
- Familiar with the interpretation of computed tomography and magnetic resonance neuroimaging.
- Able to diagnosis and treat common neuro-ophthalmologic conditions.

The PMH-III first year ophthalmology resident participates in the weekly Parkland Retina clinic and the monthly Parkland Uveitis clinic in addition to seeing patients in New and General clinic. As such the PMH-III resident is expected to be:

- Familiar with the differential diagnosis of uveitis and be able to diagnosis and treat common uveitic conditions.
- Familiar with the differential diagnosis of retinal lesions.
- Able to diagnose and classify diabetic retinopathy.
- Able to recognize and diagnose retinal detachment.

The PMH-II first year ophthalmology resident participates in the weekly Parkland Cornea/External Disease clinic in addition to seeing patients in New and General clinic. As such the PMH-II resident is expected to:

- Recognize and treat common external ocular conditions.
- Recognize and initiate appropriate treatment of corneal ulcers with some supervision.

The PMH-I first year ophthalmology resident participates in the weekly Parkland Glaucoma clinic in addition to seeing patients in New and General clinic. The PMH-I resident also spends two half-days each week in the Ocular Pathology lab. The resident is also the primary surgeon in the weekly Minor Surgery clinic. As such, the PMH-I resident is expected to:

- Be familiar with the differential diagnosis and treatment of glaucoma.
- Understand the side effects and proper usage of classes of glaucoma medications.
- Be able to perform common minor surgical procedures:
 - Incision and drainage of chalazia and hordeola
 - Excision of primary pterygia
 - Biopsy/excision of lid lesions
 - Retrobulbar/peribulbar and facial blocks
- Be familiar with the gross anatomy and histology of the eyelids, lacrimal system, orbit, and ocular structures.
- Understand the pathologic manifestations seen in the eyelids, conjunctiva, orbital tissues, lacrimal drainage system, cornea, and intraocular tissues, including inflammatory, neoplastic, developmental, traumatic, and metabolic processes.
- Understand the differences between age-related ocular tissue changes and those which are pathologic.

- Know the major types of histologic stains and the indications for their use, including the major immunohistochemical antibody preparations.
- Know correct specimen processing manipulation when suspecting lymphoma, sebaceous cell carcinoma, cicatricial pemphigoid, and when other special processing techniques are required.
- Be able to describe the prognostic characteristics of uveal melanoma and retinoblastoma relative to histopathologic presentation.
- Understand the importance of communicating clinical history and surgical plan to the pathologist to facilitate correct specimen handling and diagnosis.

PGY3 Residents (6)

Clinic Chief rotation

GOALS – The Clinic Chief will learn to perform ophthalmic consultations on patients with systemic disease and coordinate care with other services and subspecialties.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

- Demonstrate increasing ability to function independently in clinical management of increasingly complex ophthalmologic problems.
- Demonstrate ability to supervise and instruct junior residents in development of necessary skills for performing ophthalmologic examinations, and decision making for diagnosis and treatment of common ophthalmologic problems.
- Communicate and interact with other services in a professional, collegial manner, and appropriately access the healthcare system to obtain necessary care for patients.

Retina Rotation

GOALS – Residents will learn the diagnosis and differential of common posterior segment diseases and become adept in retinal photocoagulation for common retinopathies.

OBJECTIVES / KNOWLEDGE EXPECTED AT THE END OF THE ROTATION

- Have a command of the information presented in the retina, uveitis, and posterior segment tumor sections of the basic and clinical science course for the common diseases including:
 - Acquired macular diseases
 - Retinal vascular diseases
 - Common retinal degenerations

- The retinal detachments and common syndromes
 - Infectious and non-infectious posterior uveitis
 - Choroidal tumors
 - Retinal tumors
- Be able to perform screening for retinopathy of prematurity with minimal assistance.
 - Be able to interpret fluorescein angiograms with minimal assistance.
 - Be able to perform focal, grid and panretinal photocoagulation for diabetic maculopathy and for proliferative retinopathies.

Cornea / External Disease Rotation

GOALS – The resident will learn the diagnosis and treatment of common corneal and external diseases.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

- Diagnose common external disease and corneal diseases, such as keratoconus, Fuchs' dystrophy, anterior basement membrane dystrophy, herpes simplex keratitis, meibomianitis, blepharitis, and external eye infections and discuss their treatment.
- Recognize and begin appropriate treatment for a corneal ulcer.
- Recognize and begin appropriate treatment for contact lens-related external eye diseases and complications.
- Recognize and begin appropriate treatment for a corneal graft rejection.
- Recognize and begin appropriate treatment for corneal complications of cataract or other ocular surgery.
- Recognize the accepted indications for penetrating keratoplasty.
- Recognize and begin appropriate treatment for common external disease problems associated with contact lens wear.
- Understand the causes and treatment of astigmatism after cataract and transplant surgery.
- Have a basic understanding of the use and limitations of the corneal modeling system, keratometer, and wavefront methods of topographic analysis.
- Become familiar with keratorefractive surgical procedures (PRK, LASIK, C-Cap, etc.) including: indications, refractive examination pre- and post-operative, and follow-up particularly in regard to complications, and indications for retreatment.

- Become familiar with penetrating keratoplasties, including indications, surgical technique and follow-up (in particular post-op astigmatism and rejection, diagnosis and treatment).
- Should have assisted in as many surgical cases as possible.
- Demonstrate professional conduct with patients, faculty, peers and other staff members.
- Coordinate with, and be responsible to, the senior fellow in regard to assignments on a daily basis.
- Ability to determine which patients are good candidates for successful contact lens wear. Select the appropriate initial contact lens based on patient's refractive error, ocular health, corneal topography, and lifestyle.
- Demonstrate basic knowledge of types contact lenses, lens materials, and corresponding solutions.
- Demonstrate proficiency and accuracy in refractions.

Oculoplastics Rotation

GOALS – The resident will learn the diagnosis and treatment of common oculoplastic disorders and be able to perform common lid surgeries.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

- Knowledge of the anatomy of the eyelids, lacrimal system and orbit.
- Proficient in the repair of simple upper and lower eyelid defects.
- Should be able to discuss different ways for reconstruction of complex upper and lower eyelid defects.
- Should be able to diagnose and plan management of oculoplastic and orbital emergencies.
- Full understanding of Graves' orbitopathy.
- Diagnose and plan management of eyelid tumors.
- Diagnose and plan management of eyelid malpositions including: entropion, trichiasis, ectropion, facial nerve palsy and ptosis.
- Repair of most eyelid malpositions.
- Full understanding of the diagnostic techniques and treatment of lacrimal drainage system disorders.
- Diagnosis and management of essential blepharospasm.
- Diagnosis and management of the anophthalmic socket.
- Be familiar with the gross anatomy and histology of the eyelids, lacrimal system, orbit, and ocular structures.
- Understand the pathologic manifestations seen in the eyelids, conjunctiva, orbital tissues, lacrimal drainage system, cornea, and intraocular tissues, including: inflammatory, neoplastic, developmental, traumatic, and metabolic processes.
- Understand the importance of communicating clinical history and surgical plan to the pathologist to facilitate correct specimen handling and diagnosis.

Neuro-ophthalmology Rotation

GOALS – The resident will learn the diagnosis and treatment of common neuro-ophthalmologic disorders.

OBJECTIVES / Performance Standards for the Neuro-Ophthalmology rotation.

By the end of this rotation, the resident will display the following proficiencies:

- Ability to conduct a complete neuro-ophthalmic examination including: directed history, screening neurologic examination, complete neuro-ophthalmic assessment, and interpretation of Goldmann and automated threshold visual fields.
- Acquire a thorough knowledge of the anatomy and physiology of the visual sensory and motor system.
- Obtain a working knowledge of computerized tomography and magnetic resonance imaging as it relates to neuro-ophthalmology including: basic interpretation of the brain, orbits and parasellar region, as well as the relative merits of CT over MR in various clinical settings.
- To become proficient at localizing lesions in the visual and ocular motor pathways, and diagnose and manage the workup and treatment of common neuro-ophthalmic disorders such as: visual loss, optic neuropathies, optic atrophy, cranial nerve palsies, temporal arteritis, myasthenia gravis, diplopia, etc.
- When possible, develop a working knowledge of the approach to optic nerve sheath fenestration surgical procedures including the indications, surgical steps, post-surgical care, and possible complications.

Adult Strabismus Rotation

GOALS – The resident will learn about the diagnosis and treatment of adult strabismus as well as the fitting of contact lenses to correct refractive errors. The resident will also participate in providing general ophthalmologic care, and will function as a resource and example to the first year residents in the Parkland Ophthalmology Clinic.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

Clinical:

- Ability to conduct complete adult strabismus eye examination with attention to motor and sensory abnormalities, and to obtain reliable data from such exam.
- Ability to detect pathological conditions causing adult strabismus including: motor abnormalities (strabismus), cranial nerve palsies, and other associated neurologic conditions, amblyopia, refractive error, and structural abnormalities of the eye.
- Ability to treat above conditions medically, optically, and surgically (as appropriate).

- Perform accurate refractions and keratometry readings.
- Determine the correct contact lens for the patient based on refractive error and lifestyle.
- Basic knowledge of contact lens materials and contact lens solutions.
- Understand the use of topographic mapping and keratometric readings in contact lens fitting.
- Evaluate contact lens complications and determine an appropriate management plan.
- Understand contact lens fluorescein patterns, soft contact lens fit and rotation, and be able to suggest fit adjustments when needed.

Surgical:

- Should have familiarity with adult strabismus procedures including: oblique muscle surgery, surgical correction of vertical strabismus, myopathy and cranial neuropathies.

PGY4 Residents (4)

Surgery Chiefs

GOALS – The residents will be able perform complex intraocular, oculoplastic, and laser procedures, as well the ability to diagnose and repair ocular trauma. The residents will be able to provide preoperative and postoperative care on the surgical patients. As surgery chief, a resident will be responsible for coordinating the surgical schedule, and for helping to administrate a busy inpatient and outpatient ophthalmology service. The residents will gain experience in a traditional inpatient, as well as ambulatory surgery center setting.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

- Diagnosis and management of cataract.
- Surgical management of cataract, including: lens aspiration, lensectomy, extracapsular cataract extraction and phacoemulsification.
- Management of intraoperative complications including: posterior capsular rents, vitreous loss and expulsive hemorrhage.
- Pre- and post-op management of cataract surgery including: post-op astigmatism, inflammation and infection.
- Diagnosis and management of ocular trauma including: corneal and scleral lacerations/ruptures, lid and brow lacerations, orbital trauma and lacrimal drainage

system trauma, including surgical management of canalicular lacerations.

- Diagnosis and management of intraocular and orbital foreign bodies.
- Diagnosis and management of optic nerve trauma.
- Ability to perform Nd:YAG posterior capsulotomy.
- Ability to perform retinal laser photocoagulation, including cases with hazy media.
- Diagnose and surgically manage adult strabismus.
- Demonstrate ability to oversee the administrative functions of the resident ophthalmology service.

Glaucoma Rotation

GOALS – The resident will learn the diagnosis and treatment (medical and surgical) of glaucoma. The resident will be able to perform both laser and filtering surgeries.

OBJECTIVES

By the end of this rotation, the resident will display the following proficiencies:

- Glaucoma laser treatment, including argon and YAG laser peripheral iridectomies and trabeculoplasties.
- Trabeculectomy
- Glaucoma triple procedure
- Glaucoma shunt surgery
- Medical treatment of glaucoma
- Diagnosis and management of different types of glaucoma.
- Full understanding of the pharmacology of the medications used in glaucoma treatment.
- Full understanding of the physiology of the intraocular pressure and of aqueous humor dynamics.
- Full understanding of visual field defects in the glaucoma patient.
- Gonioscopy

Surgical Retina Rotation

GOALS – The resident will learn the diagnosis and management of common retinal disorders and will be able to assist in complex vitreoretinal surgery.

OBJECTIVES

By the end of the rotation, residents are expected to be:

- Familiar with the diagnosis and management of common retinal disorders, including:
 - Acquired macular diseases
 - Retinal vascular diseases
 - Common retinal degenerations
 - Retinal detachments and common syndromes
 - Infectious and non infectious posterior uveitis
 - Choroidal tumors
 - Retinal tumors

- Familiar with pre- and postoperative management of retinal surgery, including:
 - Retinal tears
 - Retinal detachment
 - Macular hole/cyst/pucker
 - Proliferative diabetic retinopathy
 - Ocular trauma involving the posterior segment
 - Intraocular foreign body
 - Endophthalmitis

- Able to perform a detailed fundus examination using indirect ophthalmoscopy, contact lens, and scleral indentation.

- Able to perform photocoagulation, using slit lamp delivery system and laser indirect ophthalmoscope on peripheral retinal disorders.

- Able to perform simple scleral buckle procedure with assistance.

- Familiar with important clinical trials for retinal disorders.