Third Year Resident Curriculum

The third year of ophthalmology training is designed to develop advanced skills in history taking and examination of the eye and ocular adnexa, and to develop skills in advanced anterior segment surgery including phacoemulsification, trabeculectomy, combined cataract and glaucoma surgery, penetrating keratoplasty, as well as vitreoretinal surgery, strabismus surgery, and orbit and oculoplastic surgery. Third year residents are responsible for the preoperative, intraoperative, and postoperative management of patients undergoing surgical procedures in their institutions. Specific guidelines for each rotation are outlined in this section.

Third Year Regional Medical Center/Methodist Rotation

Third year residents spend four months at the Regional Medical Center and Medplex Clinic at the Hamilton Eye Institute. During this rotation, senior residents gain broad experience in the management of comprehensive ophthalmology problems in newborns, adults, and geriatric patients. As the only Level I trauma center in the region, the Regional Medical Center rotation provides a unique experience with a large volume of cases of craniofacial trauma, orbital and adnexal trauma, and globe trauma. The Regional Newborn Center also provides residents with experience in the management of neonatal eye disorders. They also see patients referred from Methodist facilities. This is the Methodist Clinic at the Hamilton Eye institute. This is also the referral center for the regional Lions Club, serving children and adults with complex surgical problems such as childhood cataracts, traumatic cataracts, strabismus, nystagmus, anterior segment reconstruction, orbital and craniofacial trauma, and complicated glaucoma. Residents have the opportunity to gain expertise in keratorefractive surgery and clinical management.

Goals

1. To gain advanced experience in the evaluation and management of patients with comprehensive ophthalmology disorders patients with complex eye diseases who are socioeconomically challenged and/or have complex systemic diseases.

2. To refine surgical skills in evaluation and management of craniofacial trauma, orbital and adnexal trauma, and globe trauma.

3. To acquire advanced knowledge and skills in providing consultations for patients with systemic diseases (inpatient and outpatient setting)

4. To lead a team of Ophthalmologists and other healthcare providers to provide complex eye care, both for patients with systemic disease that affects the eye (in cooperation with the rest of the medical team) and for outpatients who may have socioeconomic barriers to proper care.
5. To gain advanced knowledge and skills in anterior segment surgery, cataracts and glaucoma by evaluating patients in clinic, determining good candidates for surgery and performing the procedures, in a graduated, skill-appropriate way with the appropriate attending, with the goal of being able to complete these procedures unassisted by the end of residency.

6. To demonstrate proper evaluation and management of patients for refractive surgery.
   
   a. Determining if the patient is a good candidate for surgery.
   
   b. Evaluating the cornea for surface disease, dry eye, and sufficient tissue for the indicated procedure.
   
   c. Managing patient expectations for a realistic understanding of the outcomes of refractive surgery, including the continuing development of presbyopia.
   
   d. Performance of refractive surgery.
   
   e. Management of post-op care and knowledge of postoperative complications.

**Learning Objectives**

**Patient Care**

1. Perform the pre-operative evaluation, procedure, and post-operative care of the following anterior segment surgical procedures:
   
   a. Extracapsular cataract extraction with intraocular lens implantation
   
   b. Phacoemulsification with intraocular lens implantation
   
   c. Intracapsular cataract extraction
   
   d. Secondary IOL insertion
   
   e. IOL exchange
   
   f. YAG laser capsulotomy
   
   g. Corneoscleral laceration
   
   h. Ruptured globe
   
   i. Pterygium excision
   
   j. Conjunctival laceration
   
   k. Conjunctival flap
   
   l. Conjunctival transplantation
   
   m. Anterior chamber washout

2. Perform the pre-operative evaluation, procedure, and post-operative care of the following cornea surgery procedures:
   
   a. Penetrating keratoplasty
   
   b. Corneal biopsy

3. Perform the pre-operative evaluation, procedure, and post-operative care of the
following glaucoma surgical procedures:

a. Trabeculectomy
b. Trabeculectomy with antimetabolite therapy
c. Shunt procedures (Ahmed, Molteno, Baervaldt, Krupin, etc.)
d. Goniotomy
e. Argon laser iridotomy
f. YAG laser iridotomy
g. Argon laser trabeculoplasty
h. Cyclocryocoagulation of the ciliary body

4. Perform the pre-operative evaluation, procedure, and post-operative care of the following retina and vitreous surgical procedures:

a. Vitreous tap and inject
b. Pars plana vitrectomy
c. Laser retinopexy
d. Panretinal photocoagulation
e. Grid photocoagulation
f. Focal photocoagulation
g. Vitreous injection of anti-VEGF treatments

5. Perform the pre-operative evaluation, procedure, and post-operative care of the following orbit and oculoplastics surgical procedures:

a. Eyelid laceration
b. Chalazion
c. Excision of eyelid neoplasms
d. Tarsorrhaphy
e. Blepharoplasty
f. Ectropion repair
g. Entropion repair
h. Ptosis repair
i. DCR
j. Orbital fracture repair
k. Orbitotomy
l. Enucleation
m. Evisceration
n. Exenteration
o. Canalicular repair
p. Temporal artery biopsy

6. Perform the pre-operative evaluation, procedure, and post-operative care of the following strabismus surgical procedures:

a. Muscle/tendon weakening procedures
b. Muscle/tendon strengthening procedures
c. Adjustable sutures
d. Chemodenervation using botulinum toxin
7. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following cornea and refractive surgery procedures:
   a. Penetrating keratoplasty
   b. Lamellar keratoplasty
   c. Corneal biopsy
   d. PRK
   e. LASIK/Intralase
   f. Epilasik
   g. Intacs

Medical Knowledge

1. Evaluate patients with the following disorders, outline an appropriate differential diagnosis, order and evaluate diagnostic studies, determine a final diagnosis, and formulate a treatment plan:

b. Optic nerve disorders
   • Optic disc edema
   • Anterior ischemic optic neuropathy
   • Posterior ischemic optic neuropathy
   • Optic neuritis
   • Compressive optic neuropathy
   • Infiltrative optic neuropathy
   • Toxic/nutritional optic neuropathy
   • Dominant optic neuropathy
   • Leber hereditary optic neuropathy
   • Optic nerve drusen
   • Congenital optic disc abnormalities
   • Optic nerve trauma
   • Optic atrophy
   • Lesions of the optic chiasm
   • Disorders of visual integration

c. Pupil disorders
   • Argyll Robertson pupil
   • Parinaud dorsal midbrain syndrome
   • Pretectal afferent pupillary defects
   • Anisocoria
   • Lesions of the parasympathetic system
   • Lesions of the sympathetic system

d. Abnormalities of the ocular motor system:
   • Nystagmus
   • Diplopia
   • Myopathies
• Myoneural junction disease

• Internuclear ophthalmoplegia
• Cranial nerve palsies (III, IV, VI, multiple)

e. Abnormalities of the facial nerve
• Disorders of underactivity
• Disorders of overactivity

f. Systemic conditions with neuro-ophthalmologic signs
• Multiple sclerosis
• Myasthenia gravis
• Myopathies
• Neurocutaneous syndromes
• Thyroid ophthalmopathy
• Pregnancy associated neuro-ophthalmologic disorders
• Cerebrovascular disease
• Cerebral aneurysms
• Arteriovenous malformations
• Dissecting aneurysms
• Cerebral venous and dural sinus thrombosis
• Migraine and tension type headache
• Ice pick pains and stabbing headache
• Cluster headache
• Facial pain
• AIDS
• Lyme disease
• Fungal infections
• Cat-scratch disease

h. Strabismus
• Esodeviations
  ➢ Pseudoesotropia
  ➢ Infantile
  ➢ Accommodative
  ➢ Nonaccommodative acquired
  ➢ Incomitant deviations

• Exodeviations
  ➢ Pseudoxotropia
  ➢ Exophoria
  ➢ Intermittent
  ➢ Constant
  ➢ Convergence insufficiency
  ➢ Convergence paralysis

• Vertical deviations
  ➢ Comitant deviations
  ➢ Incomitant deviations
- A and V patterns
- Special forms of strabismus
  - Congenital abducens palsy
  - Duane syndrome
  - Mobius syndrome
  - Oculomotor nerve palsy
  - Graves disease
  - CPEO
  - Myasthenia gravis
  - Congenital fibrosis syndrome
  - Internuclear ophthalmoplegia
  - Congenital motor apraxia

i. Nystagmus
   - Congenital
   - Acquired

j. Neonatal ophthalmology disorders
   - Eyelid disorders
   - Infectious ocular diseases
   - Lacrimal drainage system disorders
   - Cornea and anterior segment
   - Iris abnormalities
   - Glaucoma
   - Cataracts and other lens disorders
   - Uveitis
   - Retina and vitreous diseases
   - Optic nerve
   - Ocular tumors
   - Phakomatoses
   - Cranio facial malformations
   - Inborn errors of metabolism
   - Decreased vision in infants and children

k. Orbital disorders
   - Congenital orbital anomalies
   - Infectious and inflammatory disorders
   - Orbital neoplasms
     - Congenital orbital tumors
     - Vascular tumors
     - Neural tumors
     - Mesenchymal tumors
     - Lymphoproliferative disorders
     - Lacrimal gland tumors
     - Secondary orbital tumors
     - Metastatic tumors
   - Orbital trauma
- Midfacial fractures
- Orbital fractures
- Intraorbital foreign bodies
- Orbital hemorrhage
- Traumatic visual loss

- Anophthalmic socket

1. Eyelid disorders
   - Congenital anomalies
   - Eyelid inflammation
   - Eyelid neoplasms
   - Eyelid trauma
   - Ectropion
   - Entropion
   - Symblepharon
   - Trichiasis
   - Blepharoptosis
   - Eyelid retraction
   - Involutional periorbital changes
   - Eyelid dyskinesis

m. Lacrimal system disorders
   - Congenital tearing
   - Acquired tearing

n. Ocular surface disorders
   - Dermatoses affecting the ocular surface
   - Noninflammatory vascular anomalies
   - Tear deficiency states
   - Nutritional and physiologic disorders
   - Structural and exogenous disorders
   - Limbal stem cell dysfunction

o. Infectious diseases of the eyelids, conjunctiva, cornea, and sclera
   - Viral infections
   - Microbial and parasitic infections of the eyelid margin and conjunctiva
   - Microbial and parasitic infections of the cornea and sclera

p. Immune-mediated diseases of the eyelids, conjunctiva, cornea and sclera

r. Congenital anomalies of the cornea and sclera

s. Corneal dystrophies and metabolic disorders involving the conjunctiva, cornea, and sclera
   - Anterior corneal dystrophies
   - Ectatic disorders
   - Metabolic disorders

t. Degenerative disorders of the conjunctiva, cornea, and sclera
   - Conjunctival degenerations
   - Corneal degenerations
   - Drug-induced deposition and pigmentation
- Scleral degenerations
u. Toxic and traumatic injuries of the anterior segment
  - Injuries caused by temperature and radiation
  - Chemical injuries
  - Concussive trauma
  - Nonperforating mechanical trauma
  - Perforating trauma
  - Surgical trauma

v. Anterior uveitis
  - Acute anterior nongranulomatous iritis and iridocyclitis
  - Chronic iridocyclitis

w. Intermediate uveitis and pars planitis
x. Posterior uveitis
  - Infectious diseases
  - Immunologic diseases
  - Masquerade syndromes

y. Panuveitis
  - Infectious diseases
  - Immunologic and granulomatous diseases
  - Masquerade syndromes

z. Endophthalmitis
aa. Ocular involvement in AIDS
bb. Open angle glaucoma
  - Primary open angle glaucoma
  - Glaucoma suspect
  - Normal-tension glaucoma
  - Secondary open angle glaucoma

cc. Angle closure glaucoma
  - Primary angle closure glaucoma with pupillary block
  - Primary angle closure glaucoma without pupillary block
  - Secondary angle closure glaucoma with pupillary block
  - Secondary angle closure glaucoma without pupillary block

dd. Combined mechanism glaucoma

ee. Childhood glaucoma
ff. Congenital and developmental lens defects
gg. Cataracts
  - Congenital and infantile cataracts
  - Age-related cataracts
  - Metabolic cataracts
  - Cataracts associated with uveitis
  - Cataracts associated with skin diseases

hh. Drug-induced lens changes
ii. Lens trauma
jj. Exfoliation syndromes
kk. Lens-induced uveitis
ll. Lens-induced glaucoma

mm. Acquired diseases affecting the macula
   • Central serous chorioretinopathy
   • Age-related macular degeneration
   • Other causes of choroidal neovascularization
   • Vitreoretinal interface abnormalities
   • Valsalva retinopathy
   • Purtscher's retinopathy
   • Terson syndrome

nn. Retinal vascular diseases
   • Systemic arterial hypertension
   • Diabetic retinopathy
   • Sickle cell retinopathy
   • Peripheral retinal neovascularization
   • Venous occlusive disease
   • Arterial occlusive disease
   • Vasculitis
   • Cystoid macular edema
   • Coat's disease
   • Parafoveal retinal telangiectasis
   • Macroneurysms
   • Phakomatosis

oo. Choroidal diseases
   • Choroidal hemangioma
   • Choroidal ischemia
   • Uveal effusion syndrome

pp. Congenital and stationary retinal disease
   • Color vision abnormalities
   • Night vision abnormalities

qq. Hereditary retinal and choroidal dystrophies
   • Diffuse photoreceptor dystrophies
   • Macular and RPE dystrophies
   • Choroidal dystrophies
   • Inner retinal and Vitreoretinal dystrophies

rr. Retinal degenerations associated with systemic diseases

ss. Peripheral retinal abnormalities
   • Retinal breaks
   • Posterior vitreous detachment
   • Lesions predisposing to retinal detachment
   • Lesions not predisposing to retinal detachment
   • Rhegmatogenous retinal detachment
   • Tractional retinal detachment
   • Exudative retinal detachment

tt. Vitreous disorders
- Developmental abnormalities
- Familial exudative vitreoretinopathy
- Asteroid hyalosis
- Cholesterolosis
- Amyloidosis
- Vitreous hemorrhage
- Inflammation
- Parasitic infestation
- Pigment granules

uu. Posterior segment trauma
- Blunt trauma
- Penetrating injuries
- Perforating injuries
- Intraocular foreign bodies
- Posttraumatic endophthalmitis
- Sympathetic ophthalmia
- Avulsion of the optic disc

vv. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following cornea and refractive surgery procedures:
  h. Penetrating keratoplasty
  i. Lamellar keratoplasty
  j. Corneal biopsy
  k. PRK
  l. LASIK/Intralase
  m. Epilasik
  n. Intacs

2. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following anterior segment surgical procedures:
   a. Extracapsular cataract extraction with intraocular lens implantation
   b. Phacoemulsification with intraocular lens implantation
   c. Intracapsular cataract extraction
   d. Secondary IOL insertion
   e. IOL exchange
   f. YAG laser capsulotomy
   g. Corneoscleral laceration
   h. Ruptured globe
   i. Pterygium excision
j. Conjunctival laceration
k. Conjunctival flap
l. Conjunctival transplantation
m. Anterior chamber washout

3. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following corneal surgery procedures:
   a. Penetrating keratoplasty
   b. Lamellar keratoplasty
   c. Corneal biopsy

4. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following glaucoma surgical procedures:
   a. Trabeculectomy
   b. Trabeculectomy with antimetabolite therapy
   c. Shunt procedures (Ahmed, Molteno, Baervaldt, Krupin, etc.)
   d. Goniotomy
   e. Argon laser iridotomy
   f. YAG laser iridotomy
   g. Argon laser trabeculoplasty
   h. Ciliary body ablation

5. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following retina and vitreous surgical procedures:
   a. Vitreous tap
   b. Pars plana vitrectomy
   c. Scleral buckle
   d. Intraocular foreign body
   e. Laser retinopexy
   f. Panretinal photocoagulation
   g. Grid photocoagulation
   h. Focal photocoagulation
i. Cryotherapy

6. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following orbit and oculoplastics surgical procedures:
   a. Eyelid laceration
   b. Chalazion
   c. Excision of eyelid neoplasms
   d. Tarsorrhaphy
   e. Blepharoplasty
   f. Ectropion repair
   g. Entropion repair
   h. Ptosis repair
   i. DCR
   j. Orbital fracture repair
   k. Orbitotomy
   l. Enucleation
   m. Evisceration
   n. Exenteration
   o. Canalicular repair
   p. Temporal artery biopsy

7. Review the indications, pre-operative evaluation, surgical techniques, intraoperative and post-operative complications, and post-operative care for the following pediatric ophthalmology and strabismus surgical procedures:
   a. Nasolacrimal duct probing
   b. Examination under anesthesia
   c. Pediatric cataract extraction (with/without intraocular lens)
   d. Muscle/tendon weakening procedures
   e. Muscle/tendon strengthening procedures
   f. Adjustable sutures
   g. Transposition procedures
   h. Chemodenervation using botulinum toxin
Practice-based Learning and Improvement

1. Teach medical students and junior residents on service.

2. Participate in all mandated conferences, including presentation of assigned Journal Club articles, Grand Rounds OKAP review presentations, and Morbidity/Mortality Conference.

3. Evaluate patient care practices, discuss how they meet standards, and develop ways to improve these practices.

4. Demonstrate improvement in clinical management.

5. Implement preferred practice patterns into current patient care practices.

6. Obtain information from a variety of sources in ophthalmology and related fields.

7. Learn techniques/take responsibility for developing lifelong learning skills, including individual study to prepare for examinations, research for specific patient care issues, or attendance of Continuing Medical Education activities sponsored by the University and the Department of Ophthalmology.

8. Use information technology such as Up-To-Date, PubMed or Ovid to enhance patient care.

9. Use patient care errors and near misses to teach residents and students.

Interpersonal and Communication Skills

1. Carefully listen to patients to assess the patient’s health problems including verbal and non-verbal communications.

2. Communicate and establish a therapeutic relationship with patients.

3. Develop respectful and considerate attitudes towards patients and their families, especially when delivering news of untreatable vision loss or poor outcomes.

4. Demonstrate the ability to listen and communicate effectively, establishing therapeutic relationships, with patients from various ethnic, religious, and socioeconomic backgrounds.

5. Demonstrate understanding of the special issues regarding effective communication skills with patients, especially in communications addressing
decisions involving (potential) permanent loss of vision.

6. Present cases accurately and succinctly to faculty and peers in the clinical setting as well as in departmental patient care conferences.

7. Provide timely, legible, thorough, succinct medical record documentation - histories and physical examinations, admission notes, progress notes, procedure notes and discharge summaries.

8. Provide education and counseling to patients, and families using non-technical and clear language.

9. Demonstrate skill in handling a variety of difficult patient care situations.

10. Clearly speak when addressing patient issues and management plans with patients, families, and health care colleagues.

11. Be willing to spend adequate time with patients addressing their questions and concerns.

12. Use both non-verbal and verbal communication skills to effectively deliver education and counseling to patients, families, and colleagues.

13. Work well within a team context relating to students, residents, attending physicians, nurses/technicians, and patients.

14. Function effectively as a consultant for specialty and subspecialty care.

15. Communicate effectively when discussing patient conditions and health care practices with fellow residents, attending physicians and other health care providers.

Professionalism

1. Interface with referring and consulting physicians and appropriate hospital staff in a professional and respectful manner, recognizing and instituting the core competencies.

2. Professionally interact with patients, attending physicians and allied health care personnel, including adherence to dress policy as outlined in the Residents’ Manual.

3. Establish trust with patients and staff by providing reliable and appropriate care to patients.

4. Demonstrate respect, compassion, integrity, punctuality, reliability, and honesty
with regards to patients and colleagues.

5. Show regard for the opinions of others.

6. Display initiative and leadership.

7. Acknowledge errors, and alert patients and appropriate health care providers.

8. Create a plan of action to minimize errors.

9. Demonstrate concern for educational development of students and residents.

10. Volunteer for activities for the good of the institution and community.

11. Ask for help when needed, and seek and accept feedback.

12. Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.


14. Demonstrate understanding of the ethical concerns about pharmaceutical and patient gifts.

15. Compassionately respond to issues of culture, age, gender, ethnicity, and disability in patient care.

**Systems-based Practice**

1. Demonstrate ability to practice medicine in a county hospital with a large indigent and tertiary care patient base.

2. Demonstrate knowledge of different types of medical practice and health delivery systems and know how this affects patient care.

3. Demonstrate knowledge of business aspects of medical practice including coding and insurance.

4. Work with ancillary team members (discharge planners, case managers, and social workers) to provide high quality cost-effective care.

5. Use systematic approaches to reduce errors.

6. Practice effective allocation of health care resources to avoid compromising quality of care.
7. Serve as a patient advocate in the outpatient and inpatient setting.

8. Direct care in inpatient and outpatient settings as a member of a multidisciplinary team.

9. Demonstrate knowledge of how the health care system including other physicians, nurses, and health care professionals affect their patient care practices.

10. Keep medical records review and signage up to date.

11. Record on call patients, procedures, and duty hours as required by the University and Department.

12. Attend University of Tennessee Graduate Medical Education’s System Based Lecture series, or view session online if unable to attend.

Resources

- BCSC (all sections)
- Principles and Practice of Ophthalmology (Albert & Jakobiec)

Evaluation

- Faculty evaluations of core competencies
- Faculty evaluations of Grand Rounds and Journal Club participation
- Peer evaluations
- Co-worker evaluations
- Patient evaluations
- Surgical encounter evaluation forms
- Surgical/procedure logs
- Medical Records deficiency reports
- Duty hour and surgical log deficiency reports
- Evaluation Portfolio documents (Grand Rounds presentations and others)
- Mid-year examinations/Mock Orals
- OKAP examination
Third Year VA Medical Center Rotations (C, D, E)

Third year residents are assigned to the VA Medical Center for four months. Residents gain extensive experience in the management of adults and geriatric patients with a wide variety of medical and surgical disorders. Many of the patients have numerous complex medical problems as well as complex ophthalmologic disorders. Residents perform a large number of anterior segment, cornea, glaucoma, retina and vitreous, and oculoplastics procedures during this rotation.

Goals

1. To acquire advanced knowledge and skills (particularly surgical) in the management of adults and geriatric patients with complex ophthalmologic diseases and disorders.

2. To refine the techniques of consultation for patients with multiple systemic diseases and complex ophthalmologic disorders.

3. To organize and lead a team of Ophthalmologists in taking care of complex inpatient consults in a government run health care system. This includes managing complex (mostly geriatric) patients, and consulting with the other medical departments in managing complex multi-disease inpatient consultations.

Learning Objectives

Patient Care

1. Perform the pre-operative evaluation, procedure, and post-operative care of the following anterior segment surgical procedures:
   a. Extracapsular cataract extraction with intraocular lens implantation
   b. Phacoemulsification with intraocular lens implantation
   c. Intracapsular cataract extraction
   d. Secondary IOL insertion
   e. IOL exchange
   f. YAG laser capsulotomy
   g. Corneoscleral laceration
   h. Ruptured globe
   i. Pterygium excision
   j. Conjunctival laceration
   k. Conjunctival flap
   l. Conjunctival transplantation
   m. Anterior chamber washout
2. Perform the pre-operative evaluation, procedure, and post-operative care of the following cornea surgery procedures:
   a. Penetrating keratoplasty
   b. Corneal biopsy

3. Perform the pre-operative evaluation, procedure, and post-operative care of the following glaucoma surgical procedures:
   a. Trabeculectomy
   b. Trabeculectomy with antimetabolite therapy
   c. Shunt procedures (Ahmed, Molteno, Baervaldt, Krupin)
   d. Argon laser iridotomy
   e. YAG laser iridotomy
   f. Argon laser trabeculoplasty
   g. Cyclocryocoagulation of the cilary body

4. Perform the pre-operative evaluation, procedure, and post-operative care of the following retina and vitreous surgical procedures:
   a. Vitreous tap
   b. Pars plana vitrectomy
   c. Laser retinopexy
   d. Panretinal photocoagulation
   e. Grid photocoagulation
   f. Focal photocoagulation

5. Perform the pre-operative evaluation, procedure, and post-operative care of the following orbit and oculoplastics surgical procedures:
   a. Eyelid laceration
   b. Chalazion
   c. Excision of eyelid neoplasms
   d. Tarsorrhaphy
   e. Blepharoplasty
   f. Ectropion repair
   g. Entropion repair
   h. Ptosis repair
   i. DCR
   j. Orbital fracture repair
   k. Orbitotomy
   l. Enucleation
   m. Evisceration
   n. Exenteration
   o. Canalicular repair
   p. Temporal artery biopsy

6. Perform the pre-operative evaluation, procedure, and post-operative care of the following pediatric ophthalmology and strabismus surgical procedures:
   a. Muscle/tendon weakening procedures
   b. Muscle/tendon strengthening procedures
Medical Knowledge

1. Evaluate patients with the following disorders, outline an appropriate differential diagnosis, order and evaluate diagnostic studies, determine a final diagnosis, and formulate a treatment plan:

b. Optic nerve disorders
   - Optic disc edema
   - Anterior ischemic optic neuropathy
   - Posterior ischemic optic neuropathy
   - Optic neuritis
   - Compressive optic neuropathy
   - Infiltrative optic neuropathy
   - Toxic/nutritional optic neuropathy
   - Dominant optic neuropathy
   - Leber hereditary optic neuropathy
   - Optic nerve drusen
   - Congenital optic disc abnormalities
   - Optic nerve trauma
   - Optic atrophy
   - Lesions of the optic chiasm
   - Disorders of visual integration

c. Pupil disorders
   - Argyll Robertson pupil
   - Parinaud dorsal midbrain syndrome
   - Pretectal afferent pupillary defects
   - Anisocoria
   - Lesions of the parasympathetic system
   - Lesions of the sympathetic system

d. Abnormalities of the ocular motor system:
   - Nystagmus
   - Diplopia
   - Myopathies
   - Myoneural junction disease
   - Internuclear ophthalmoplegia
   - Cranial nerve palsies (III, IV, VI, multiple)

e. Abnormalities of the facial nerve
   - Disorders of underactivity
   - Disorders of overactivity

f. Systemic conditions with neuro-ophthalmologic signs
   - Multiple sclerosis
   - Myasthenia gravis
• Myopathies
• Neurocutaneous syndromes
• Thyroid ophthalmopathy

• Pregnancy associated neuro-ophthalmologic disorders
• Cerebrovascular disease
• Cerebral aneurysms
• Arteriovenous malformations
• Dissecting aneurysms
• Cerebral venous and dural sinus thrombosis
• Migraine and tension type headache
• Ice pick pains and stabbing headache
• Cluster headache
• Facial pain
• AIDS
• Lyme disease
• Fungal infections
• Cat-scratch disease
• Strabismic
• Anisometropic
• Isoametropic
• Deprivation

h. Strabismus
• Esodeviations
  ➢ Pseudoesotropia
  ➢ Infantile
  ➢ Accommodative
  ➢ Nonaccommodative acquired
  ➢ Incomitant deviations

• Exodeviations
  ➢ Pseudoexotropia
  ➢ Exophoria
  ➢ Intermittent
  ➢ Constant
  ➢ Convergence insufficiency
  ➢ Convergence paralysis

• Vertical deviations
  ➢ Comitant deviations
  ➢ Incomitant deviations

• A and V patterns
• Special forms of strabismus
  ➢ Duane syndrome
  ➢ Mobius syndrome
  ➢ Oculomotor nerve palsy
  ➢ Graves disease
i. Orbital disorders
   - Congenital orbital anomalies
   - Infectious and inflammatory disorders
   - Orbital neoplasms
     - Vascular tumors
     - Neural tumors
     - Mesenchymal tumors
     - Lymphoproliferative disorders
     - Lacrimal gland tumors
     - Secondary orbital tumors
     - Metastatic tumors
   - Orbital trauma
     - Midfacial fractures
     - Orbital fractures
     - Intraorbital foreign bodies
     - Orbital hemorrhage
     - Traumatic visual loss
   - Anophthalmic socket

j. Eyelid disorders
   - Eyelid inflammation
   - Eyelid neoplasms
   - Eyelid trauma
   - Ectropion
   - Entropion
   - Symblepharon
   - Trichiasis
   - Blepharoptosis
   - Eyelid retraction
   - Involutional periorbital changes
   - Eyelid dyskinesis

k. Lacrimal system disorders
   - Acquired tearing

l. Ocular surface disorders
   - Dermatoses affecting the ocular surface
   - Noninflammatory vascular anomalies
   - Tear deficiency states
   - Nutritional and physiologic disorders
   - Structural and exogenous disorders
   - Limbal stem cell dysfunction
m. Infectious diseases of the eyelids, conjunctiva, cornea, and sclera
   • Viral infections
   • Microbial and parasitic infections of the eyelid margin and conjunctiva
   • Microbial and parasitic infections of the cornea and sclera
n. Immune-mediated diseases of the eyelids, conjunctiva, cornea and sclera
o. Neoplastic diseases of the eyelids, conjunctiva, cornea, and sclera
   • Cysts of the epithelium
   • Tumors of epidermal origin
   • Glandular tumors of the conjunctiva
   • Tumors of ectodermal origin
   • Vascular and mesenchymal tumors
   • Lymphatic and lymphocytic tumors
   • Metastatic tumors
   • Epibulbar choristomas
p. Congenital anomalies of the cornea and sclera
q. Corneal dystrophies and metabolic disorders involving the conjunctiva, cornea, and sclera
   • Anterior corneal dystrophies
   • Ectatic disorders
   • Metabolic disorders
r. Degenerative disorders of the conjunctiva, cornea, and sclera
   • Conjunctival degenerations
   • Corneal degenerations
   • Drug-induced deposition and pigmentation
   • Scleral degenerations
s. Toxic and traumatic injuries of the anterior segment
   • Injuries caused by temperature and radiation
   • Chemical injuries
   • Concussive trauma
   • Nonperforating mechanical trauma
   • Perforating trauma
   • Surgical trauma
t. Anterior uveitis
   • Acute anterior nongranulomatous iritis and iridocyclitis
   • Chronic iridocyclitis
u. Intermediate uveitis and pars planitis
v. Posterior uveitis
   • Infectious diseases
   • Immunologic diseases
   • Masquerade syndromes
w. Panuveitis
   • Infectious diseases
   • Immunologic and granulomatous diseases
- Masquerade syndromes
  x. Endophthalmitis
  y. Ocular involvement in AIDS
  z. Open angle glaucoma
    • Primary open angle glaucoma
    • Glaucoma suspect
    • Normal-tension glaucoma
    • Secondary open angle glaucoma
  aa. Angle closure glaucoma
    • Primary angle closure glaucoma with pupillary block
    • Primary angle closure glaucoma without pupillary block
    • Secondary angle closure glaucoma with pupillary block
    • Secondary angle closure glaucoma without pupillary block
  bb. Combined mechanism glaucoma
  cc. Congenital and developmental lens defects
  dd. Cataracts
    • Age-related cataracts
    • Metabolic cataracts
    • Cataracts associated with uveitis
    • Cataracts associated with skin diseases
  ee. Drug-induced lens changes
  ff. Lens trauma
  gg. Exfoliation syndromes
  hh. Lens-induced uveitis
  ii. Lens-induced glaucoma
  jj. Acquired diseases affecting the macula
    • Central serous chorioretinopathy
    • Age-related macular degeneration
    • Other causes of choroidal neovascularization
    • Vitreoretinal interface abnormalities
    • Valsalva retinopathy
    • Purtscher's retinopathy
    • Terson syndrome
  kk. Retinal vascular diseases
    • Systemic arterial hypertension
    • Diabetic retinopathy
    • Sickle cell retinopathy
    • Peripheral retinal neovascularization
    • ROP
    • Venous occlusive disease
    • Arterial occlusive disease
    • Vasculitis
    • Cystoid macular edema
- Coat's disease
- Parafoveal retinal telangiectasis
- Macroaneurysms
- Phakomatoses

II. Choroidal diseases
- Choroidal hemangioma
- Choroidal ischemia
- Uveal effusion syndrome

mm. Congenital and stationary retinal disease
- Color vision abnormalities
- Night vision abnormalities

nn. Hereditary retinal and choroidal dystrophies
- Diffuse photoreceptor dystrophies
- Macular and RPE dystrophies
- Choroidal dystrophies
- Inner retinal and Vitreoretinal dystrophies

oo. Retinal degenerations associated with systemic diseases

pp. Peripheral retinal abnormalities
- Retinal breaks
- Posterior vitreous detachment
- Lesions predisposing to retinal detachment
- Lesions not predisposing to retinal detachment
- Rhegmatogenous retinal detachment
- Tractional retinal detachment
- Exudative retinal detachment

qq. Vitreous disorders
- Developmental abnormalities
- Familial exudative vitreoretinopathy
- Asteroid hyalosis
- Cholesterolosis
- Amyloidosis
- Vitreous hemorrhage
- Inflammation
- Parasitic infestation
- Pigment granules

rr. Posterior segment trauma
- Blunt trauma
- Penetrating injuries
- Perforating injuries
- Intraocular foreign bodies
- Posttraumatic endophthalmitis
- Sympathetic ophthalmia
- Avulsion of the optic disc
Practice-based Learning and Improvement

1. Teach medical students and 1st year residents on service.

2. Participate in all mandated conferences, including presentation of assigned Journal Club articles, Grand Rounds OKAP Review, and Morbidity/Mortality Conference.

3. Evaluate patient care practices, discuss how they meet standards, and develop ways to improve these practices.

4. Demonstrate improvement in clinical management.

5. Implement preferred practice patterns into current patient care practices.

6. Obtain information from a variety of sources in ophthalmology and related fields.

7. Learn techniques/take responsibility for developing lifelong learning skills, including individual study to prepare for examinations, research for specific patient care issues, or attendance of Continuing Medical Education activities sponsored by the University and the Department of Ophthalmology.

8. Use information technology such as Up-To-Date, PubMed or Ovid to enhance patient care.

9. Use patient care errors and near misses to teach residents and students.

Interpersonal and Communication Skills

1. Carefully listen to patients to assess the patient’s health problems including verbal and non-verbal communications.

2. Communicate and establish a therapeutic relationship with patients.

3. Develop respectful and considerate attitudes towards patients and their families, especially when delivering news of untreatable vision loss or poor outcomes.

4. Demonstrate understanding of the special issues regarding effective communication skills with patients, especially in communications addressing decisions involving (potential) permanent loss of vision.

5. Present cases accurately and succinctly to faculty and peers in the clinical setting as well as in departmental patient care conferences.
6. Provide timely, legible, thorough, succinct medical record documentation - histories and physical examinations, admission notes, progress notes, procedure notes and discharge summaries.

7. Provide education and counseling to patients, and families using non-technical and clear language.

8. Demonstrate skill in handling a variety of difficult patient care situations.

9. Clearly speak when addressing patient issues and management plans with patients, families, and health care colleagues.

10. Be willing to spend adequate time with patients addressing their questions and concerns.

11. Use both non-verbal and verbal communication skills to effectively deliver education and counseling to patients, families, and colleagues.

12. Work well within a team context relating to students, residents, attending physicians, nurses/technicians, and patients.

13. Function effectively as a consultant for specialty and subspecialty care.

14. Communicate effectively when discussing patient conditions and health care practices with fellow residents, attending physicians and other health care providers.

Professionalism

1. Interface with referring and consulting physicians and appropriate hospital staff in a professional and respectful manner, recognizing and instituting the core competencies.

2. Professionally interact with patients, attending physicians and allied health care personnel, including adherence to dress policy as outlined in the Residents’ Manual.

3. Establish trust with patients and staff by providing reliable and appropriate care to patients.

4. Demonstrate respect, compassion, integrity, punctuality, reliability, and honesty with regards to patients and colleagues.

5. Show regard for the opinions of others.

6. Display initiative and leadership.
7. Acknowledge errors, and alert patients and appropriate health care providers.
8. Create a plan of action to minimize errors.
9. Demonstrate concern for educational development of students and residents.
10. Volunteer for activities for the good of the institution and community.
11. Ask for help when needed, and seek and accept feedback.
12. Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
14. Demonstrate understanding of the ethical concerns about pharmaceutical and patient gifts.
15. Compassionately respond to issues of culture, age, gender, ethnicity, and disability in patient care.

**Systems-based Practice**

1. Demonstrate ability to practice medicine in a VA Hospital System, including use of the EMR.
2. Demonstrate knowledge of how this medical care system impacts patient care delivery when compared to other types of medical practice and health delivery systems.
3. Work with ancillary team members (discharge planners, case managers, and social workers) to provide high quality cost-effective care.
4. Use systematic approaches to reduce errors.
5. Practice effective allocation of health care resources to avoid compromising quality of care.
6. Serve as a patient advocate in the outpatient and inpatient setting.
7. Direct care in inpatient and outpatient settings as a member of a multidisciplinary team.
8. Demonstrate knowledge of how the health care system including other physicians, nurses, and health care professionals affect their patient care practices.
9. Keep medical records review and signage up to date.

10. Record on call patients, procedures, and duty hours as required by the University and Department.

11. Attend University of Tennessee Graduate Medical Education’s System Based Lecture series, or view session online if unable to attend.

Resources

- BCSC (all sections)
- Principles and Practice of Ophthalmology (Albert & Jakobiec)

Evaluation

- Faculty evaluations of core competencies
- Faculty evaluations of Grand Rounds and Journal Club participation
- Peer evaluations
- Co-worker evaluations
- Patient evaluations
- Surgical encounter evaluation forms
- Surgical/procedure logs
- Medical Records deficiency reports
- Duty hour and surgical log deficiency reports
- Evaluation Portfolio documents (Grand Rounds presentations and others)
- Mid-year examinations/Mock Orals
- End of rotation glaucoma oral exam
- OKAP Examination