

# **SRI BALAJI VIDYAPEETH**

(Deemed – to be - University u/s 3of UGC Act, 1956)

Pillaiyarkuppam, Puducherry - 607 402

**Mahatma Gandhi Medical College and Research Institute**

**Shri Sathya Sai Medical College and Research Institute**



## **COMPETENCY BASED POSTGRADUATE MEDICAL CURRICULUM M.S. OPHTHALMOLOGY (2020 Onwards)**

(As approved at the 30th Academic Council Meeting held on 28th September 2020)

## **Preface**

Following the promulgation of the much awaited Competency Based Medical Education (CBME) for post graduate by the Medical Council of India (MCI) (superseded by the Board of Governors), adoption of CBME for implementing post-graduate programs is a welcome move. Sri Balaji Vidyapeeth (SBV), Puducherry, Deemed to be University, declared u/s 3 of the UGC Act. and accredited by the NAAC with A grade, takes immense privilege in preparing such an unique document in a comprehensive manner and most importantly the onus is on the Indian setting for the first time with regard to the competency based medical education for post graduate programs that are being offered in the broad specialty departments. SBV is committed to making cardinal contributions that would be realised by exploring newer vistas. Thus, post graduate medical education in the country could be made to scale greater heights and SBV is poised to show the way in this direction.

**Prof. Subhash Chandra Parija,**  
MBBS, MD, PhD, DSc, FRCPath, FAMS, FICPath, FABMS,  
FICAI, FISC D, FIAVP, FIATP and FIMS  
Vice Chancellor,  
Sri Balaji Vidyapeeth, Puducherry.

## Preface

Following roll out of much awaited Competency-Based Medical Education (CBME) for undergraduate by the Medical Council of India (MCI) (superseded by the Board of Governors) , adoption of CBME for post-graduate by it is welcome move.

The MCI has laid down the syllabus course wise, listing competency to some extent, teaching learning methods and the assessment methods as well. The MCI describes competencies in three domains (knowledge, skill, and attitude). However, the most significant problem in competency-based training is the development of appropriate assessment tools.

The salient feature of this document is defining the program educational objectives (PEO) for its postgraduate program as a whole, defining program outcomes (PO) based on the competencies to be practiced by the specialist, course outcomes (CO) and program specific sub-competencies and their progression in the form of milestones. The compilation of the milestone description leads to the formation of the required syllabus. This allows the mentors to monitor the progress in sub-competency milestone levels. It also defines milestone in five levels, for each sub-competency. Although MCI has described three domains of competencies, the domain 'Attitude' is elaborated into 4 more competencies for ease of assessment. The six competency model (ACGME) for residency education: Medical Knowledge, Patient Care, Practice Based Learning and Improvement, Systems Based Practice, Professionalism, Inter personal and Communication Skills gives better clarity and in-depth explanation. The sub-competency and their milestone levels are mapped into the entrustable professional activities (EPA) that are specific to the individual postgraduate program. To make the program more relevant, PEO, PO, CO and EPAs are mapped with each other. EPA's which are activity based are used for formative assessment and graded. EPA assessment is based on workplace based assessment (WPBA), multisource feedback (MSF) and eportfolio. A great emphasis is given on monitoring the progress in acquisition of knowledge, skill and attitude through various appraisal forms including e-portfolios during three years of residency period.



**Prof.M.Ravishankar**  
MBBS, MD (Anaesthesia), FRCP  
Dean, MGMCRI  
Puducherry-607 402



**Dr.Sukumaran Annamalai**  
MBBS, MD., (GM), D.H.H.M.,  
Dean, SSSMCRI,  
Kancheepuram District  
Tamil Nadu - 603 108

## **Foreword**

Medical Specialities are progressing at a phenomenal pace. So are the requirement of the community and the need to satisfy the aspirations of the future specialists who are going to deliver the eye care to the needy.

So there is a need to produce specialists with good knowledge, excellent skills and a compassionate approach to the diseased.

With this in mind, the department of ophthalmology has formulated the following competency based curriculum for the residency programme in ophthalmology

I am sure this document will ensure a skilled, competent and compassionate specialist to take care of the aspirations of the community.

### **SHRAMENA SARVAM SAADHYAM**

Dr.K.Srikanth,  
Professor and HOD  
Department of Ophthalmology,  
MGMCRI, Pondicherry

Dr.S.Venkatesh,  
Professor and HOD  
Department of Ophthalmology,  
SSSMCRI, Kancheepuram

## **List of the Contributors**

### **Members: (Internal)**

- Dr.K.Srikanth, Prof. and HOD of Ophthalmology, MGMCRI, Pondicherry.
- Dr.S.Venkatesh, Prof. and HOD of Ophthalmology, SSSMCRI, Chennai.
- Dr.Kirti Nath Jha, Professor, MGMCRI, Puducherry.
- Dr.A.R.Rajalakshmi, Professor, MGMCRI, Puducherry.
- Dr.Sruthi P Hedge, Professor, Ophthalmology, SSSMCRI, Chennai.
- Dr.N.Swathi, Associate Professor, MGMCRI, Puducherry.
- Dr.V.Muthu Krishnan, Associate Professor, MGMCRI, Puducherry.
- Dr S.N. Deepikadevi, Assistant Professor, MGMCRI, Puducherry
- Dr Asma Syed, Assistant Professor, SSSMCRI, Chennai.

### **Acknowledgement:**

### **Members: (External)**

- Prof. K .Ramesh Babu, Prof. of Ophthalmology, JIPMER, Puducherry.
- Prof. M.Loganathan, Prof. and HOD of Ophthalmology,  
Sri Venkateswara Medical college and Research centre, Puducherry

## Table of Contents

1. Preamble .....	1
2. Program Educational Objectives (PEO) .....	1
3. Program Outcome (PO) .....	2
4. Course and Course Objectives (CO).....	2
4.1 Course 1 (C1): Applied Basic Medical Science Related to Ophthalmology, Refraction & Optics.....	3
4.2 Course 2 (C2): Clinical Ophthalmology .....	3
4.3 Course 3 (C3): Systemic Diseases in Relation to Ophthalmology& Sub Specialities (Ocular Emergencies, Trauma & Rehabilitation; Ocular Oncology) .....	4
4.4 Course 4 (C4): Recent Advances in Ophthalmology and Community Ophthalmology .....	4
4.5 Mapping of PEO, PO and CO .....	4
5. Competencies, Sub-competencies and Milestone.....	6
6. Syllabus.....	27
6.1 Course -I Applied basic medical science related to ophthalmology, Refraction & Optics Basic Sciences.....	27
6.2 Course – II Clinical Ophthalmology .....	27
6.3 Course - III Systemic diseases in relation to Ophthalmology & subspecialty .....	28
6.4 Course - IV Recent advances in Ophthalmology & Community Ophthalmology.....	28
7. Teaching and Learning Methods .....	33
8. Assessment.....	38
8.1 Formative Assessment,.....	38
8.2 Summative Assessment .....	124
9. Blue Print of the Question Paper .....	126
10. Model Question Paper.....	128
11. Recommended Reading .....	132
12. Annexures .....	134

**Sri Balaji Vidyapeeth**  
**Department of Ophthalmology**  
**Post- Graduate Program**

## **1. Preamble**

The competency based curriculum should take into account the needs of the society, both local and global. It needs to outline the demand for the present day as well as future. The curriculum needs to be reviewed at least every five years to address the trending needs, as new knowledge is evolving and communication of the same is seamless. Accordingly the competencies need to meet the societal needs detailing the cognitive, psychomotor and affective domain development for attaining these competencies.

The curriculum indicates to the candidate the knowledge, basic skills and attitudes required to become a competent ophthalmologist. It disciplines the thinking habits for problem solving and discovery of new knowledge in the field of ophthalmology. It defines the Teaching-Learning methods adopted for the resident to achieve the goals of the, and the methods of assessment performed throughout the training period and at the completion of training. The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment.

## **2. Program Educational Objectives (PEO)**

Programme Educational Objectives are broad statements that describe what graduates are expected to attain within few years of completing their programme. These are based on the needs of the society as analysed and outlined by the regulatory body.

So as defined by Medical Council of India (MCI), the PEO for MS Ophthalmology are as follows:

- PEO1:** Specialist who can provide comprehensive care related to Ophthalmology over and above the physician of first contact.
- PEO2:** Leader and team member who understand health care system and act to provide safe patient care with accountability and responsibility.
- PEO3:** Communicator possessing adequate communication skill to convey required information in an appropriate manner in various health care setting.
- PEO4:** Lifelong learner keen on updating oneself regarding the advancement in the health care field and able to perform the role of researcher and teacher
- PEO5:** Professional who understands and follows the principle of bio-ethics / ethics related to health care system.

### 3. Program Outcome (PO)

POs represent broad statements that incorporate many areas of inter-related knowledge and skills developed over the duration of the program through a wide range of courses and experiences. They represent the big picture and describe broad aspects of knowledge, skill and attitude development. They encompass multiple learning experiences.

After a period of 3 years, the resident should be able to attain the following PO's:

- PO1:** Have knowledge of basic sciences in relation to Ophthalmology, & theory and practice of refraction
- PO2:** Able to Identify and treat common extraocular and ocular diseases
- PO3:** Perform common major and minor eye surgeries
- PO 4:** Having adequate knowledge & competence to perform and interpret specialised investigative procedures
- PO5:** Having adequate knowledge / assisted sub speciality surgeries for management of corneal & Retinal diseases, Squint and Glaucoma
- PO6:** Part of community outreach activity, identify and manage ocular trauma & emergencies and ocular oncology.
- PO7:** Communicate with stake holders of the health care system.
- PO8:** Having basic knowledge of Bio medical research; Perform SDL and Critical appraisal of medical literature. Develop & execute a protocol for a scientific research project, collect and analyze the data and scientifically communicate to the others
- PO9:** Informed consent and shared responsibility. Basic knowledge of medico-legal aspects
- PO10:** Knowing the recent developments in technology, therapeutics & diseases of the eye and adnexa

### 4. Course and Course Objectives (CO)

CO's describe the learning that will take place across the curriculum through concise statements, made in specific and measureable terms, of what students will know and /or be able to do after successful completion of each course.

There are four courses for MS Ophthalmology:

Course 1 (C1): Applied basic medical science related to Ophthalmology, Refraction & Optics

Course 2 (C2): Clinical Ophthalmology

Course 3 (C3): Systemic Diseases in Relation to Ophthalmology & Sub specialities (ocular emergencies, trauma & rehabilitation; ocular oncology)

## Course 4 (C4): Recent Advances in Ophthalmology and Community Ophthalmology

At the end of three years post graduate student should be able to

### **4.1 Course 1 (C1): Applied Basic Medical Science Related to Ophthalmology, Refraction & Optics**

#### *Objectives:*

- C1.1** Attain understanding of the structure and function of the eye and its parts in health and disease.
- C1.2** Attain understanding and application of knowledge of the structure and function of the parts of Central Nervous System and other parts of the body with influence or control on the structure and function of the eye.
- C1.3** Attain understanding of and develop competence in executing common general laboratory procedures employed in diagnosis and research in Ophthalmology.
- C1.4** Acquire competence in assessment of refractive errors and prescription of glasses/contact lenses for all types of Refraction problems.
- C1.5** Acquire basic knowledge of manufacture and fitting of glasses/contact lenses and competence of judging the accuracy and defects of the dispensed glasses/contact lenses.
- C1.6** Be able to interpret the diagnosis in correlation with the clinical data and routine materials received in such cases.
- C1.7** Perform Critical appraisal of medical literature. Should have undergone Basic Course in Biomedical Research, Data collection and analysis, scientific communication
- C1.8** Knowledge of ethics and medico-legal aspects.

### **4.2 Course 2 (C2): Clinical Ophthalmology**

#### *Objectives:*

- C2.1** Acquire scientific and rational approach to the diagnosis of ophthalmic cases presented.
- C2.2** Acquire understanding of and develop inquisitiveness to investigate to establish cause and effect of the disease.
- C2.3** To manage and treat all types of ophthalmic cases.
- C2.4** To competently handle and execute safely all routine surgical procedures on lens, glaucoma, lid, sac, adnexa, retina and muscle anomalies.
- C2.5** To competently handle all ophthalmic medical and surgical emergencies
- C2.6** To be familiar with micro-surgery and special surgical techniques.
- C2.7** To demonstrate the knowledge of the pharmacological (including toxic) aspects of

drugs used in ophthalmic practice and drugs commonly used in general diseases affecting the eyes.

### **4.3 Course 3 (C3): Systemic Diseases in Relation to Ophthalmology & Sub Specialities (Ocular Emergencies, Trauma & Rehabilitation; Ocular Oncology)**

#### *Objectives:*

- C3.1** Examine, diagnose and demonstrate understanding of management of the problems of neuro- ophthalmology and refer appropriate cases to neurology and neuro-surgery.
- C3.2** Be proficient to Examine, diagnose and demonstrate understanding of management the ocular manifestations of various systemic diseases both communicable and non-communicable.
- C3.3** Examine, diagnose and demonstrate understanding of management of (medical and surgical) complicated problems in the field of (a) lens, (b) glaucoma, c) cornea, (d) retina, (e) pediatric ophthalmology, (f) orbit & oculoplasty, (g) uvea, (I) ocular surface and (J) genetic problems in ophthalmology in relation to ocular trauma and ocular oncology.
- C3.4** To demonstrate understanding of principles, and competence in prescription and dispensing of low vision aids and ocular prosthesis.

### **4.4 Course 4 (C4): Recent Advances in Ophthalmology and Community Ophthalmology**

#### *Objectives:*

- C4.1** Keep abreast with the advances in ophthalmic diagnosis, therapeutics – medical and surgical and apply the same in practise
- C4.2** The post graduate students should be able to organize and conduct eye camps in accordance to achieve the goal of National program for prevention and control of blindness and visual impairment.
- C4.3** Provide quality care to the community in the prevention, diagnosis and management of common eye diseases including screening and management of cataract, glaucoma, refractive errors, Diabetic retinopathy and childhood blindness.
- C4.4** Counselling for eye donation
- C4.5** They should be able to guide rehabilitation workers in the organisation and training of the visually challenged and blind in the art of daily living and in the vocational training of the blind leading to gainful employment

### **4.5 Mapping of PEO, PO and CO**

Programme mapping facilitates the alignment of course-level outcomes with programme outcomes. It allows faculty to create a visual map of a programme. It is also used to explore how students are meeting program-level outcomes at the course level. Outcomes

mapping focuses on student learning also.

The PEO, PO and the CO are mapped with each other. (Table 1)

**Table1. Mapping of PEO, PO and CO**

	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>C1</b>	Y		Y	Y	Y			Y	Y	
<b>C2</b>	Y	Y	Y	Y	Y	Y	Y	Y	Y	
<b>C3</b>			Y	Y	Y	Y	Y	Y	Y	Y
<b>C4</b>						Y	Y	Y	Y	Y

All courses run concurrently for 3 years with a summative assessment at the end of 3 years. The program is competency based and the competencies, sub-competencies and milestones are detailed. These are mapped to the Entrustable professional activities (EPA) identified as essential for a specialist. Formative assessment is carried out every three months using appropriate tools, for identifying eligibility for transfer of trust.

## 5. Competencies, Sub-competencies and Milestone

The post graduate program is competency based, consisting of six domains of competency. Sub-competencies under these domains, specific to the speciality, have been mentioned in general terms. The progression through the curriculum is detailed in sub-competency milestone levels, that directs the prescribed syllabus. These sub-competency milestones are mapped to the Entrustable Professional Activities (EPAs), identified as essential for a specialist. Formative assessment includes EPA assessment, and is carried out every quarter using appropriate tools, for identifying eligibility for transfer of trust, to the resident.

At the end of the MS course in Ophthalmology, the student should have acquired various competencies i.e. medical knowledge, patient care, interpersonal communication skill, system based practice, practice based learning and implementation and professionalism. Details of each with milestone as level is described below.

### Domain of Competencies

1. **Medical Knowledge (MK)** - Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioural sciences, and the application of this knowledge to patient care.
2. **Patient Care (PC)** - Provide patient-centred care that is compassionate, appropriate, for effective management and acquire skills appropriate for teaching and conducting research.
3. **System Based Practise (SBP)** - Demonstrate the ability to follow the standard operating procedures relevant to practices of the organisations for patient care, inculcating quality and economical practices.
4. **Practice Based Learning and improvement (PBLI)** - Demonstrate the commitment to learn by literature search, feedback, practice and improve upon their ability.
5. **Interpersonal Communication skills (IPCS)** - Demonstrate behaviour and skills that result in the effective communication, exchange of information and cooperation with patients, their families, and health professionals
6. **Professionalism (P)** - Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

## PATIENT CARE AND PROCEDURAL SKILLS (PC)

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

- **PC1:** Gather essential and accurate information about patients and their condition through history-taking and available laboratory data, imaging, and other tests.

### PC-1. Patient Interview

Level 1	Level 2	Level 3	Level 4	Level 5
Obtains and documents basic history for ophthalmic complaint.	Acquires relevant and accurate problem focused history for common ocular complaints	Obtains relevant historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated and detailed information that may not often be volunteered by the patient	Demonstrates, for junior members of the healthcare team, role model interview techniques to obtain information from the patient, particularly sensitive of ocular conditions	Incorporates new information from literature to tailor interview questions

**PC2: Perform diagnostic, and essential common investigative procedures PC-2. Patient Examination**

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<p><b>Describes</b> components of complete ophthalmic examination Performs the basic parts of a screening or bedside eye examination without special equipment</p>	<p><b>Performs and documents</b> a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition  Distinguishes between normal and abnormal findings</p>	<p><b>Performs</b> problem-focused exam and documents pertinent positive and negative findings Consistently identifies common abnormalities may identify subtle findings</p>	<p><b>Identifies</b> subtle or uncommon findings of common disorders and typical or common findings of rarer disorders</p>	<p><b>Incorporates into clinical practice</b> new literature about exam techniques</p>

**PC 3: Perform and interprets office diagnostic procedures and special investigation procedures PC-3. Office Diagnostic Procedures**

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<p><b>Describes</b> role of office diagnostic procedures in diagnosis of ophthalmic disease</p>	<p><b>Selects and/or performs</b> appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p>	<p><b>Interprets routine findings;</b> recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual findings,</b> identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence based medicine</p>	<p><b>Performs and interprets</b> findings at subspecialty level</p>

**PC 4: Compile the data and arrive at a diagnosis PC: Disease Diagnosis**

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Describes</b> basic clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)	<b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders	<b>Abstracts and reorganizes</b> elicited clinical findings Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration Generates more focused differential diagnosis and organized final assessment	<b>Organizes</b> clinical facts in a hierarchical level of importance; <b>identifies</b> discriminating features between similar patients <b>Generates</b> focused differential and evaluation strategy to finalize diagnosis Verifies diagnostic assessments of junior members of health care team	<b>Incorporates</b> most current literature findings in formulation of differential diagnoses

**PC 5: Develop and carry out non - surgical patient management PC-5. Non-Surgical Therapy**

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Describes</b> basic concepts of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)	<b>Describes</b> categories of medications (e.g., lubricant, antibiotic, anti-inflammatory, anesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens	<b>Initiates</b> therapy with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections	<b>Manages</b> and individualizes medical therapy for more complex ophthalmic conditions Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioral factors Manages complications Considers non-medical factors, such as cost, convenience, and ability to receive medication  Demonstrates competence in intravitreal injections	<b>Adopts new therapies</b> based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement

**PC 6: Develop and carry out pre-operative evaluation, anaesthesia and post-operative care PC 6. Non-Operating Room (OR) Surgery**

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Describes</b> essential components of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anesthetic and operative technique, potential intra- and post-operative complications)</p>	<p>For each procedure:</p> <ol style="list-style-type: none"> <li><b>Lists</b> indications and describes relevant anatomy and pathophysiology of disorder</li> <li><b>Identifies</b> findings that are indicators for the procedure and potential post-operative complications</li> <li><b>Describes</b> anesthetic and surgical technique, mechanism of effect, and specific instruments required</li> <li><b>Performs</b> directed pre-operative assessment; administers anesthesia and performs procedure <b>with direct supervision</b>; provides appropriate post-operative care</li> </ol>	<p>Administers anesthesia and <b>performs procedure with indirect supervision</b></p> <p><b>Recognizes</b> intra- and post-operative complications</p>	<p>Administers anesthesia and <b>performs procedure with oversight supervision</b></p> <p><b>Manages</b> intra- and post-operative complications</p>	<p><b>Reviews</b> individual outcome and process measures, and <b>participates in practice improvement</b></p>

**PC 7: Perform intraocular and extraocular ophthalmic surgeries**

PC-7. OR Surgery

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Describes</b> essential components of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anesthetic and operative technique, potential intra- and post- operative complications)</p>	<p>For each specified procedure:</p> <ol style="list-style-type: none"> <li><b>Lists</b> indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post- operative care</li> <li><b>Identifies</b> common intra- and post-operative complications, and performs post-operative care managing common complications</li> <li><b>Prepares and drapes</b> for extra- ocular and intra- ocular procedures</li> <li><b>Describes</b> methods for regional and general anesthesia</li> </ol>	<p>Obtains informed consent and <b>performs</b> specified Procedures <b>under closed supervision</b> Identifies and manages less common intra- and post- operative complications</p>	<p>Obtains informed consent and <b>performs</b> specified Procedures <b>under loose supervision</b> Identifies and manages uncommon intra- and post-operative complications</p>	<p><b>Reviews</b> individual outcome and process measures, and participates in practice Improvement in specified surgical procedures</p>

**PC-8. Consultation**

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<p>Describes the role of ophthalmology consultation in systemic disease</p>	<p>Provides specific, responsive ophthalmologic consultation to other medical specialties Recognizes urgent versus non-urgent ophthalmic consultation Examines inpatient at bedside, including visual acuity and field, portable slit lamp exam (+fluorescein stain), intraocular pressure ( IOP) measurement, ophthalmoscopy Communicates findings written and oral) to consulting service</p>	<p>Recognizes ophthalmic emergencies and immediate, necessary interventions Provides appropriate differential diagnosis and initiates non-surgical treatment plan Orders ancillary testing; requests ophthalmic subspecialty involvement when indicated Maintains continuing communication with other involved medical specialists</p>	<p>Identifies consultations requiring surgical intervention, including procedural options and timing Interprets ancillary tests, and formulates and initiates treatment plan independently Coordinates treatment plan with multiple specialties</p>	<p>Participates in ophthalmic subspecialty consultation when indicated</p>

## MEDICAL KNOWLEDGE (MK)

Residents must demonstrate knowledge of established and evolving clinical, epidemiological, and social-behavioural sciences, as well as the application of this knowledge to patient care. Residents must demonstrate level-appropriate knowledge in the following core domains: General Medicine; Fundamentals and Principles of Ophthalmology; Optics and Refraction; Ophthalmic Pathology and Intraocular Tumors; Neuro-Ophthalmology; Pediatric Ophthalmology and Strabismus; Orbit, Eyelids, and Lacrimal System; Cornea, External Disease, and Anterior Segment Trauma; Lens and Cataract; Refractive Management and Intervention; Intraocular Inflammation and Uveitis; Glaucoma; Retina/Vitreous

**MK1:** Knowledge of normal and abnormal structure and function of eye and adnexa

### MK-1. Demonstrate level-appropriate knowledge

Level 1	Level 2	Level 3	Level 4	Level 5
Articulates knowledge of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non-ophthalmologists	Demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists	Demonstrates advanced knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions	Demonstrates advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions	Educates junior residents and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions

- **MK 2:** Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care

**MK-2. Demonstrate level-appropriate knowledge applied to patient management**

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings	<b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis	<b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis	<b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy	<b>Educates</b> junior residents and medical students and acts as a role model

### SYSTEMS-BASED PRACTICE (SBP)

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

**SBP1:** Patient Safety and Systems Approach to Medical Errors: Participate in identifying system errors and implementing potential systems solutions

#### SBP-1. Work effectively and coordinate patient care in various health care delivery systems

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Describes</b> basic levels of systems of care (self-management to societal)	<b>Describes</b> systems of care within residency program Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems	<b>Identifies</b> impediments to safe and efficient transitions of care within and between systems Manages routine transitions safely	<b>Proposes</b> solutions to impediments to safe and efficient transitions of care within and between systems <b>Manages</b> complex transitions of care within and between systems Demonstrates leadership potential for systems changes	<b>Leads</b> systems change at micro and macro levels

SBP2: Cost-effective Care and Patient Advocacy

**SBP-2. Incorporate cost-effectiveness, risk/benefit analysis, and IT to promote safe and effective patient care**

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Describes</b> scenarios in which physician may affect cost-effectiveness in patient care Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p>	<p><b>Describes</b> scenarios in which ophthalmologist may affect cost-effectiveness in patient care Describes specific cost options for most frequently ordered tests and medications Utilizes EHR, where available, to order tests and reconcile medications for patients Uses information systems for patient care, including literature review</p>	<p>Often <b>practices</b> cost-effective care</p>	<p>Consistently <b>practices</b> cost-effective care <b>Applies</b> risk-benefit analyses in ophthalmic care Contributes to reduction of risks of automation and computerized systems by reporting system problems</p>	<p><b>Advocates</b> for cost-effective care and use of risk-benefit analyses within health care system</p> <p><b>Recommends</b> systems re-design for faulty processes</p>

**SBP 3:** Part of professional team to deliver effective care and implement solutions

**SBP-3: Work in inter-professional teams to enhance patient safety, identify system errors, and implement solutions**

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Describes</b> epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p><b>Describes</b> role of teamwork and communication failure as a leading cause of preventable patient harm</p>	<p><b>Reports</b> problematic processes, including errors and near misses to supervisor</p> <p><b>Defines</b> process for safe and efficient patient hand- offs, including basic communication techniques</p>	<p><b>Analyzes</b> causes of adverse events through root cause analysis (RCA)</p> <p><b>Applies</b> process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p><b>Develops content</b> for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p><b>Supervises</b> communication process for patient hand-offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p>	<p><b>Creates</b> curriculum to teach teamwork and communication skills to health care professionals</p>

## PRACTICE-BASED LEARNING AND IMPROVEMENT (PBLI)

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Residents are expected to develop skills and habits to be able to meet specified goals.

### PBLI-1. Self-Directed Learning

1. Identify strengths, deficiencies, and limits in one's knowledge and expertise
2. Set learning and improvement goals
3. Identify and perform appropriate learning activities
4. Use information technology to optimize learning

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Identifies</b> gaps in personal knowledge and expertise Accepts feedback appropriately Demonstrates ability to utilize online resources for patient care	<b>Assesses</b> performance by self-reflection and review of feedback and evaluations Develops a learning plan, based on feedback, with supervision Utilizes review articles or practice guidelines to answer specific questions in clinical practice	<b>Develops</b> learning plan independently with accurate assessment of competence and areas for continued improvement Often utilizes appropriate evidence-based medicine to answer specific questions while providing care	<b>Utilizes</b> self-directed learning with little external guidance Consistently uses evidence-based medicine to answer specific questions while providing care Utilizes system or process for staying abreast of relevant changes in clinical practice	<b>Contributes</b> to development of best evidence supporting clinical practices

**PBLI 2 : Critical Appraisal of Medical Literature and suggest appropriate solutions.**

**PBLI-2. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems**

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Describes</b> basic concepts in clinical epidemiology, biostatistics, and clinical reasoning Categorizes design of a research study</p>	<p><b>Ranks</b> study designs by validity and generalizability to larger populations, and identifies critical threats to study validity <b>Distinguishes</b> relevant research outcomes from other types of evidence Cites evidence supporting several commonly used techniques in own practice</p>	<p><b>Applies</b> a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p>	<p><b>Demonstrates</b> a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p>	<p><b>Independently teaches and assesses</b> evidence- based medicine and information mastery techniques</p>

**PBLI 3:** Systematically analyse practice using quality improvement methods and implement changes with the goal of practice

**PBLI-3. Participate in a quality improvement project**

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Identifies</b> quality gaps in health care delivery	<b>Conducts</b> stakeholder analysis Determines project purpose and goals	<b>Defines</b> project process and outcome measures Displays longitudinal data over time <b>Describes</b> quality improvement (QI) methodology for data analysis and problem solving	<b>Demonstrates</b> effective team leadership Initiates basic steps for implementing change	<b>Leads</b> complex projects <b>Utilizes</b> advanced quality measurement and display tools

## PROFESSIONALISM (PROF)

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

### P 1: Compassion, Integrity, and Respect for Others

**PROF-1.** Compassion, integrity, and respect for others; sensitivity and responsiveness to diverse patient populations

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Recognizes and never participates</b> in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p>	<p>Consistently <b>demonstrates</b> behavior that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion and responsiveness</p> <p>Exhibits integrity, respect, sensitivity, and responsiveness</p> <p>Exhibits these characteristics consistently in most situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p>	<p>Exhibits these characteristics consistently in complex and complicated situations</p> <p><b>Mentors</b> junior members of the health care team</p>	<p><b>Role models behavior</b> demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and education to support the application of these principles</p>

**P2:** Accountability and Responsiveness to the Needs of Patients, Society, and the Profession PROF 2. Responsiveness to patient needs that supersedes self- interest

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty	Almost <b>always completes</b> patient care tasks promptly and completely; is punctual; is appropriately groomed Manages fatigue and sleep deprivation Identifies impact of personal beliefs and values on practice of medicine	<b>Consistently completes</b> patient care tasks promptly and completely Manages personal beliefs and values to avoid negative impact on patient care	<b>Mentors</b> junior members of the health care team to manage barriers to effective patient care	<b>Role models</b> behavior demonstrating compassion and respect for others Develops organizational policies and education to support the application of these principles

**PROF 3:** Protection of patient privacy and patient rights PROF-3. Respect for patient privacy and autonomy

Level 1	Level 2	Level 3	Level 4	Level 5
<b>Conforms</b> to maintain patient privacy and respects regulations	<b>Almost always recognizes</b> and implements required procedures for patient involvement in human research Informs patients of rights; involves patients in medical decision-making	<b>Consistently recognizes and implements</b> required procedures for patient involvement in human research Informs patients of rights; involves patients in medical decision- making Mentors junior members of the health care team regarding protection of patient privacy	<b>Role models behavior</b> regarding protection of patient privacy	<b>Mentors</b> residents involved in administration of research projects involving humans organizational policies and education to support the application of these principles

**PROF 4** : Accountability, ability to manage conflicts within the system PROF-4. Accountability to patients, society, and the profession

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Recognizes and never participates</b> in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education                      Almost always completes medical record-keeping tasks promptly and completely                      Always identifies self as resident to patients</p>	<p>Almost always <b>recognizes</b> simple conflict of interest scenarios                      Consistently completes medical record-keeping tasks promptly and completely                      Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p><b>Consistently recognizes and takes appropriate steps</b> to manage simple conflict of interest scenarios                      Consistently completes medical record-keeping tasks promptly and completely                      Consistently acts within limitations and seeks help when appropriate</p>	<p>Consistently recognizes and takes appropriate steps to <b>manage more complex</b> conflict of interest scenarios</p>	<p><b>Assumes</b> leadership and mentoring role in management of more complex conflict of interest scenarios  <b>Develops</b> organizational policies and education to support the application of these principles</p>

## INTERPERSONAL AND COMMUNICATION SKILLS (ICS)

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

**ICS-1.** Communicate effectively with patients and families with diverse socioeconomic and cultural backgrounds ICS-1. Communicate effectively with patients and families with diverse socioeconomic and cultural backgrounds

1. Rapport development
2. Interview skills
3. Counsel and educate
4. Conflict management

Level 1	Level 2	Level 3	Level 4	Level 5
<p><b>Develops positive relationship</b> with patients in uncomplicated situations Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments) Engages in active listening, teach-back, and other strategies to ensure patient understanding</p>	<p><b>Develops working relationships in complex situations</b> across specialties and systems of care Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family- related conflicts</p>	<p><b>Uses appropriate strategies</b> to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p><b>Counsels</b> patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p>	<p><b>Counsels</b> patients regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p><b>Mentors</b> junior members of the health care team to improve communication skills</p>

**ICS-2.** Communicate effectively with physicians, other health professionals, and health-related agencies

1. Comprehensive, timely, and legible medical records
2. Consultation requests
3. Care transitions
4. Conflict management

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<p><b>Produces</b> comprehensive timely, and legible non-ophthalmic medical records</p> <p><b>Describes</b> importance and procedure for request of consultation Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p>	<p>Produces comprehensive timely, and legible ophthalmic medical records</p> <p><b>Recognizes</b> need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p><b>Performs</b> more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p>	<p>Effectively and ethically <b>uses</b> all forms of communication, including face-to-face telephone, electronic and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p>	<p><b>Develops</b> models/approaches to managing difficult communications</p> <p><b>Manages</b> conflicts with superiors and payers</p>

ICS-3. Work effectively as a member or leader of a health care team or other professional group Clinical team (outpatient clinic, inpatient consult service) OR team Professional work group (e.g.,

Level 1	Level 2	Level 3	Level 4	Level 5
Understands concept of the medical team with respect to clinical care, medical research, and quality improvement Defines purpose of various teams in which he or she participates	Describes role and responsibility of each team member Prepares for team role and fulfills assignments Follows institutional policies	Implements team activities as directed by team leader Identifies individual vs group collaborative roles	Selects, evaluates, provides feedback, and mediates team members <b>Develops</b> goals and strategies for various departmental team activities Delegates activities to team members and oversees them appropriately	Develops institutional and organizational strategies to improve team functions  <b>Trains</b> physicians and educators to develop effective teams for clinical care, medical research, and quality improvement

ICS-4. Effectively present didactic and case-based educational material to physicians and other health care professionals

Level 1	Level 2	Level 3	Level 4	Level 5
Organizes clear and accurate non-ophthalmic case presentation with level- appropriate diagnostic and management recommendations	Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations  <b>Presents</b> focused literature review, including basic science and pathophysiology data where pertinent Effectively presents material to non-physician medical personnel	<b>Organizes</b> case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate  Effectively presents educational material to physicians in other specialties	<b>Schedules,</b> organizes, and implements case-based and didactic conference program Mentors junior colleagues and critiques their presentations	<b>Provides leadership</b> for conference implementation

## 6. Syllabus

### Course contents:

These are only broad guidelines and are illustrative, there may be overlap between sections.

### 6.1 Course -1 Applied basic medical science related to ophthalmology, Refraction & Optics Basic Sciences

1. Orbital and ocular anatomy

- i. Gross anatomy
- ii. Histology
- iii. Embryology

2. Ocular Physiology

3. Ocular Pathology

4. Ocular Biochemistry

General biochemistry, biochemistry applicable to ocular function

5. Ocular Microbiology

General Microbiology, specific microbiology applicable to the eye

6. Immunology with particular reference to ocular immunology

7. Genetics in ophthalmology

***Optics and refraction***

- a. Basic physics of optics
- b. Applied ophthalmic optics
- c. Applied optics including optical devices
- d. Disorders of Refraction

### 6.2 Course – II Clinical Ophthalmology

- i. Disorders of the lids
- ii. Disorders of the lacrimal system
- iii. Disorders of the Conjunctiva
- iv. Disorders of the Sclera
- v. Disorders of the Cornea
- vi. Disorders of the Uveal Tract
- vii. Disorders of the Lens

- viii. Disorders of the Retina
- ix. Disorders of the Optic Nerve and Visual Pathway
- x. Disorders of the Orbit
- xi. Glaucoma
- xii. Neuro-ophthalmology
- xiii. Pediatric ophthalmology
- xiv. xv. Immune ocular disorders
- xvi. Strabismus and Amblyopia
- xvii. Ocular oncology

### **6.3 Course - III Systemic diseases in relation to Ophthalmology & subspecialty**

Ocular involvement in systemic disease

1. Neurology
2. Cardiology
3. Diabetes & hypertension
4. Rheumatological diseases
5. Dermatology
6. Endocrinology
7. Childhood & congenital diseases
8. Pregnancy related
9. Hemato-oncological diseases.
10. Age related
11. Occupational
12. Head injury/Poly trauma

Neuro ophthalmology Ocular orbital trauma Ocular emergencies

Intra ocular and extra ocular (orbital) malignancies

### **6.4 Course - IV Recent advances in Ophthalmology & Community Ophthalmology**

Community Eye Health

Recent advances in Ophthalmology Diagnostic and therapeutic.

**At the end of the course, the student should acquire following clinical skills: Essential diagnostic skills:**

#### **I Examination techniques along with interpretation**

##### **1. Slit lamp Examination**

- i. Diffuse examination
- ii. Focal examination

- iii. Retroillumination – direct and indirect
- iv. Sclerotic scatter
- v. Specular reflection
- vi. Staining modalities and interpretation

## **2. Fundus evaluation**

- i. Direct/Indirect ophthalmoscopy
- ii. Fundus drawing
- iii. 3-mirror examination of the fundus iv.78-D/90-D/60-D examination
- v. Amsler's charting

## **II. Basic investigations along with their interpretation**

### **1. Tonometry (minimum 20 cases)**

Tonometry - Applanation/Indentation/Non-contact

### **2. Gonioscopy (minimum 10 cases)**

Gonioscopy grading of the anterior chamber angle

### **3. Tear/ Lacrimal function tests (minimum 10 cases)**

- i. Staining- fluorescein and Rose Bengal
- ii. Schirmer test/tear film break up time
- iii. Syringing
- iv. Dacryocystography

### **4. Corneal (minimum 10 cases)**

- i. Corneal scraping and cauterization
- ii. Smear preparation and interpretation (Gram's stain /KOH)
- iii. Media inoculation
- iv. Keratometry - performance and interpretation
- v. Pachymetry
- vi. Corneal topography - if available

### **5. Colour Vision evaluation (minimum 10 cases)**

- i. Ishihara pseudoisochromatic plates ii.Farnsworth Munsell, if available

### **6. Refraction**

- i. Retinoscopy- Streak/ Priestley Smith
- ii. Use of Jackson's cross-cylinder
- iii. Subjective and objective refraction
- iv. Prescription of glasses

## **7. Diagnosis and assessment of Squint**

- i. Ocular position and motility examination
- ii. Synoptophore usage
- iii. Lees screen usage
- iv. Diplopia charting
- v. Assessment of strabismus - cover tests/prisms bars
- vi. Amblyopia diagnosis and treatment
- vii. Assessment of convergence, accommodation, stereopsis, suppression

## **8. Exophthalmometry (minimum 10 cases)**

Usage of Hertel's exophthalmometer - proptosis measurement

## **9. Contact lenses**

- i. Fitting and assessment of RGP and soft lenses
- ii. Subjective verification of over refraction
- iii. Complications arising of contact lens use
- iv. Educating the patient regarding CL usage and imparting relevant knowledge of the complications arising thereon

## **10. Low Vision Aids**

- i. Knowledge of basic optical devices available and relative advantages and disadvantages of each.
- ii. The basics of fitting with knowledge of availability & cost

## **III Special Investigations:**

The post graduate must be well versed with the following investigative modalities although the student may or may not perform it individually. But, she/he should be able to interpret results of the following tests:

1. Fundus photography
2. Fluorescein angiography
3. Ophthalmic ultrasound A-scan/B scan
4. Automated perimetry for glaucoma and neurological lesions
5. Radiological tests - X rays - Antero posterior/ Lateral view PNS (Water's view) / Optic canal views  
Localisation of intra-ocular and intra-orbital FBs Interpretations of -USG/ CT/ MRI Scans
6. OCT and UBM
7. ERG, EOG, and VEP

**IV. Minor surgical procedures – Must know and perform independently (minimum 10 cases)**

- i. Conjunctival and corneal foreign body removal on the slit lamp
- ii. Chalazion incision and curettage
- iii. Pterygium excision
- iv. Biopsy of small lid tumours
- v. Suture removal- skin/conjunctival/corneal/ corneoscleral
- vi. Tarsorrhaphy
- vii. Subconjunctival injection
- viii. Retrobulbar, parabulbar anaesthesia
- ix. Posterior Sub-Tenon's injections
- x. Artificial eye fitting

**V. Surgical procedures**

1. Must know and can perform independently

a. Ocular anaesthesia: **(minimum 10 cases)**

Retrobulbar anaesthesia Peribulbar anaesthesia

Facial blocks- O'Brian / Atkinson/Van lint and modifications Frontal blocks

Infra orbital blocks Blocks for sac surgery

2. Must be able to independently perform and deal with complications arising from the following surgeries :

Lid Surgery – **(minimum 5 cases)**

Tarsorrhaphy

Entropion and entropion Lid repair following trauma Epilation

Destructive procedures **(minimum 2 cases)**

Evisceration with or without implant Enucleation with or without implant Sac surgery **(minimum 5 cases)**

i. Dacryocystectomy

ii. Dacryocystorhinostomy

iii. Probing for congenital obstruction of nasolacrimal duct Strabismus surgery  
(minimum 2 cases)

Recession and resection procedures on the horizontal recti.

Orbit surgery **(minimum 2 cases)**

Incision and drainage via anterior orbitotomy for abscess

Cyclocryotherapy/Cyclophotocoagulation **(minimum 2 cases)**

3. PG Students should be well conversant with use of operating microscope and must be able to perform the surgeries listed below competently under the same:

Cataract surgery **(minimum 30 cases)**

i. Standard ECCE (extracapsular cataract extraction; first year) with or without IOL

- implantation
  - ii. Small incision ECCE with or without IOL implantation and/or Phacoemulsification with PC IOL implantation
  - iii. Intracapsular cataract extraction (second year)
  - iv. Cataract with Phacoemulsification (third year)
  - v. Secondary AC or PC IOL implantation Vitrectomy/Scleral buckling (**minimum 2 cases**)  
Intra-vitreous and intra-cameral (anterior chamber) injection techniques and doses of drugs for the same (**minimum 5 cases**)  
Needs to know the basis of open sky vitrectomy (anterior segment) as well as management of cataract surgery complications.  
Assisting vitrectomy and scleral buckling procedures Ocular surface procedures (**minimum 10 cases**)  
Pterygium excision with modifications Conjunctival cyst excision/foreign body removal Corneal foreign body removal  
Conjunctival flap/ peritomy Glaucoma (**minimum 2 cases**)  
Trabeculectomy Corneal (**minimum 2 cases**)  
Repair of corneo - scleral perforations Corneal suture removal Application of glue and bandage contact lens
4. Should have performed/assisted the following microscopic surgeries (**minimum 2 cases**)
- i. Keratoplasty Therapeutic and optical ii Glaucoma surgery Pharmacological modulation of trabeculectomy Trabeculectomy Goniotomy Glaucoma valve implant surgery
5. Desirable to be able to perform following laser procedures (**minimum 2 cases**)
- Yag Capsulotomy Laser iridotomy Focal and panretinal photocoagulation
6. Should have assisted/knowledge of Keratorefractive procedures

### **Operations:**

The PG is provided with an opportunity to perform operations both extra-ocular and intra-ocular with the assistance of the senior post graduate students and/or under the direct supervision of a faculty member. The student is provided with an opportunity to learn special and complex operations by assisting the senior post graduate student or the faculty in operations of cases of the specialty and be responsible for the postoperative care of these cases.

In **first phase**, the post graduate student is given training in cadaver and goat eyes to familiarise with microscope adjustments, handling of ophthalmic instruments. Then they are trained in preparations of cases for operation, pre-medication and regional anaesthetic blocks. In the **next phase**, the post graduate student assists the operating surgeon during the operations. In the **third phase**, the post graduate student operates independently assisted by senior post graduate student or a faculty member. She/he is required to be proficient in some operations and show familiarity with others.

## **7. Teaching and Learning Methods**

### **Teaching Methodology:**

The theoretical knowledge is imparted to the post graduate student through distinct courses of lecture demonstrations, seminars, symposia and inter- and intradepartmental meetings. The students are exposed to recent advances through discussions in journal clubs and participation in CMEs, and symposia.

### **The post graduate students are imparted clinical training in several ways:**

#### **1. Group Discussion**

The junior post graduate students may present the symposium to their senior postgraduates where it is fully discussed before finally being discussed in front of the faculty or senior eye specialists. A free and fair discussion is encouraged. These discussions enable the post graduate students to prepare for a general discussion in the class.

#### **2. Clinical Case discussion**

a. Bedside discussion on the rounds and outpatient teaching take their toll with patient management. Therefore in addition to these, clinical case discussions should form part of a department's schedule at a fixed time every week. This could range from 1-2 hours and could be held at least once a week. The choice and manner of presentation and discussion varies widely and is left to the discretion of the department. Every effort should be made to include as wide a variety of cases as possible over three years with multiple repetitions. Problem oriented approach is better as it aids in decision making skills.

b. In addition to bedside teaching rounds, at least 5-hr of formal teaching per week are necessary.

c. Consultant case presentation is another approach which should be encouraged as it

aids in solving complex problems and also is forum for discussion of interesting cases.

- d. Case discussions on the patient's records written by the student is to be encouraged as it helps exercise the student's diagnostic and decision making skills. It also helps the consultant in critical evaluation of the student's progress academically.
- e. Case presentation at other in-hospital multidisciplinary forums.
- f. The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
- g. Department should encourage e-learning activities.

### **3. Seminars**

Seminars should be conducted at least once weekly. The duration should be at least one hour. The topics selected should be repeated once in 3 years so as to cover as wide a range of topics as possible. Seminars could be individual presentations or a continuum (large topic) with many post graduate students participating.

### **4. Journal clubs**

Journals are reviewed in particular covering all articles in that subject over a 6 months period and are discussed by the post graduate student under the following headings.

- 1) Aim 2) Methods 3) Observations
- 4) Discussions and 5) Conclusions

The post graduate student to whom the journal is allotted presents the journal summaries to the senior postgraduates. They are expected to show their understanding of the aspects covered in the article and clarify any of the points raised in the article, offer criticisms and evaluate the article in the light of known literature.

- 5. A postgraduate student of a postgraduate degree course in broad Specialities / superspecialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make

him eligible to appear at the postgraduate degree examination.

6. **Out-Patients:** For six months of the training programme, post graduate students may be attached to a faculty member to be able to pick up methods of history taking and ocular examination in ophthalmic practice. During this period the post graduate student may also be oriented to the common ophthalmic problems. After 6 months, the clinical post graduate student may work independently, where he receives new and old cases including refractions and prescribes for them. The post graduate students are attached to a senior post graduate student and faculty member whom they can consult in case of difficulty.
7. **Wards:** Each post graduate student may be allotted beds in the in-patient section depending upon the total bed capacity and the number of the post graduates. The whole concept is to provide the post graduate student increasing opportunity to work with increasing responsibility according to seniority. A detailed history and case record is to be maintained by the post graduate student.

**Relevance of beds and admissions in Ophthalmology has really gone down at present, as most of the surgical and special investigative procedures are being performed on out-patient basis. Most of the teaching has to be imparted in out-patients department and special Clinics.**

#### **8. Practicals in Ocular Histopathology**

The post graduate students may be provided with fully stained slides of the ocular tissues along with relevant clinical data and discuss the diagnosis and differential diagnosis on the basis of the information provided

9. Attend accredited scientific meetings (CME, Symposia, and Conferences).
10. Additional sessions on basic sciences, biostatistics, research methodology, teaching methodology, hospital waste management, health economics, medical ethics and legal issues related to ophthalmology practice are suggested.

**During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of surgical skills laboratories in medical colleges is mandatory.**

**11. E-portfolio:- It is an electronic portfolio to be maintained by the resident to record their activities under the section:**

- EPA,
- Daily log
- Patient care
- Procedure
- Dissertation
- Academic activities (Seminar, symposium, case presentation, journal club)
- Co-curricular activities (Conference, CME, Workshop),
- Teaching Assignments,
- Awards and achievements
- Outreach activities.
- **E-portfolio** shall be checked and assessed periodically by the faculty members. This will enable to monitor progress of the resident, his level of attainment of milestone and impart the training accordingly

**12. Writing thesis following appropriate research methodology, ethical clearance and good clinical practice guidelines.**

### **Practical and Clinical Training**

- Emphasis should be on self-directed learning, group discussions and case presentations.
- Student should be trained about proper History taking, Clinical examination, advising / ordering relevant investigations, their interpretation and instituting medical / surgical management by posting students in OPD, Refraction clinic, specialty clinics, wards, operation theaters, screening camps and community outreach services. Students should be able to perform and interpret Special ophthalmic investigations.

### **Rotations: Specialty clinics**

The student may rotate in the following subspecialty clinics:

Anterior segment and cataract Glaucoma

Oculoplastics

Paediatric ophthalmology and strabismus Retina and Uvea

Cornea, Contact lens and low vision Neuro-ophthalmology

Refractive Clinic

**Rotations:**

Table 2 Details of 3 years posting in the PG programme (6 terms of 6 months each)

	1 <sup>st</sup> Mon	2 <sup>nd</sup> Mon	3 <sup>rd</sup> Mon	4 <sup>th</sup> Mon	5 <sup>th</sup> Mon	6 <sup>th</sup> Mon	7 <sup>th</sup> Mon	8 <sup>th</sup> Mon	9 <sup>th</sup> Mon	10 <sup>th</sup> Mon	11 <sup>th</sup> Mon	12 <sup>th</sup> Mon
1 <sup>st</sup> year	OP/ Ref	OP/ Ref	OP/ Ref	OP/ Ref	SC	SC	SC	SC	SC	SC	SC	SC
2 <sup>nd</sup> year	SC	SC	SC	SC	SC	SC	Obs	Obs	Obs	Obs	Obs	Obs
3 <sup>rd</sup> year	SC	OP/ Ref	OP/Ref	OP/Ref	OP/Ref							

OP – Out patient Ref – Refraction SC - Special clinic

Obs - Observership (External posting) Each PG student will have 1 month observership at a tertiary eye care hospital.

During the 3 year period PGs will be attending community eye care / extension activities.

## 8. Assessment

### 8.1 Formative Assessment,

i.e., during the training

**Formative assessment shall be continual and shall assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, Self-directed learning and ability to practice in the system.**

#### **FORMATIVE ASSESSMENT, i.e, during the training General Principles**

Internal Assessment shall be frequent, cover all domains of learning and used to provide feedback to improve learning; it shall also cover professionalism and communication skills. The Internal Assessment shall be conducted in theory and clinical examination.

Quarterly assessment during the MS training shall be based on following educational activities:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self-directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs
6. EPAs

The Entrustable professional activities (EPAs) are used to assess the activities mentioned every 3/6 monthly. The EPAs are listed as below.

**Table 3 LIST OF EPAs:**

<b>EPA No.</b>	<b>Topics</b>
1.	History taking & initial assessment
2.	Vision Testing / Refraction
3.	External Examination of the Eye
4.	Special Investigation
5.	Cataract Surgery &Trabeculectomy (steps)
6.	Repair of open globe injuries / Lid tear
7.	Minor Procedures
8.	Oculoplastic & Lid Surgeries
9.	Lacrimal sac surgeries

10.	Subspeciality Surgeries - Vitreo - Retinal, Antiglaucoma, Keratoplasty, Squint
11.	Critical appraisal of medical literature, research, medico legal & ethical issues

**Description of Entrustable Professional Activity with relevant domains of competence, domain critical behaviour**

Table 4 EPAs, Competency levels and entrustability

<b>EPA 1: History taking &amp; initial assessment</b>		
<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 1	<p><b>Articulates knowledge</b> of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non-ophthalmologists.</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists.</p>	<p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions.</p> <p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions.</p> <p><b>Educates junior</b> residents and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions.</p>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem- focused history for common</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive,</p>

	<p>ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p>complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of the health care team, role model interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p> <p><b>Incorporates</b> new information from literature to tailor interview questions</p>
PBLI 1	<p><b>Identifies</b> gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p><b>Assesses performance</b> by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p><b>Develops</b> learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p><b>Utilizes self-directed</b> learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p><b>Contributes</b> to development of best evidence supporting clinical practices</p>
PBLI 3	<p><b>Identifies</b> quality gaps in health care delivery</p> <p><b>Conducts</b> stakeholder analysis</p> <p>Determines project purpose and goals</p>	<p><b>Defines project process</b> and outcome measures</p> <p>Displays longitudinal data over time</p> <p>Describes quality improvement (QI) methodology for data analysis and problem solving</p> <p><b>Demonstrates effective</b> team leadership Initiates basic steps for implementing change <b>Leads</b> complex projects</p> <p>Utilizes advanced quality measurement and display tools</p>

<p>SBP 1</p>	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems sensitivity, and responsiveness</p> <p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels care</p> <p>Develops organizational policies and education to support the application of these principles</p>
<p>PROF 2</p>	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost always completes</b> patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors junior</b> members of the health care team to manage barriers to effective patient care</p> <p><b>Role models</b> behavior demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
<p>PROF 3</p>	<p><b>Conforms</b> to Health Insurance Portability and Accountability Act regulations</p>	<p><b>Almost always recognizes</b> and implements required procedures for patient involvement in human research</p> <p>Informs patients of rights; involves patients in medical decision-making</p> <p><b>Consistently recognizes</b> and implements required procedures for patient involvement in human research</p> <p>Informs patients of rights; involves</p>

		<p>patients in medical decision-making</p> <p>Mentors junior members of the health care team regarding protection of patient privacy</p> <p><b>Role models</b> behavior regarding protection of patient privacy</p> <p><b>Mentors residents</b> involved in administration of research projects involving humans</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 4	<p><b>Recognizes</b> and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record- keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p><b>Almost always</b> recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p><b>Consistently recognizes</b> and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p><b>Consistently</b> recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p><b>Assumes leadership</b> and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher- risk disease and intervention; directs patients to resources</p>

	<p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>

<b>EPA 2: Vision Testing / Refraction</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to assess the visual acuity objectively and do refraction and be able to dispense prescription according to the needs of the patient.
<b>2. Most relevant domains of competence:</b>	MK,PC,PBLI,SBP,P,ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 1(3),2(3) PC 2(3),3(4),4(3),5(3) PBLI 1,2-(3) SBP 2(3) P 2(3),3(2) ICS 1(4),3(3)
<b>4. Methods of assessment</b>	1. Direct observation 2. Audit of clinical practice 3. Rating scale/Evaluation forms

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 1	<p><b>Articulates knowledge</b> of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non- ophthalmologists.</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists.</p>	<p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions.</p> <p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions.</p> <p><b>Educates junior</b> residents and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions.</p>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b></p>

	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p>of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient's ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient's ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p>

		<p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 5	<p><b>Describes</b> basic concepts of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)</p> <p><b>Describes</b> categories of medications (e.g., lubricant, antibiotic, anti-inflammatory, anesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens</p>	<p><b>Initiates</b> therapy with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions</p> <p>Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy</p> <p>Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections</p> <p><b>Manages</b> and individualizes medical therapy for more complex ophthalmic conditions</p> <p>Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioral factors</p> <p>Manages complications</p> <p>Considers non-medical factors, such as cost, convenience, and ability to receive medication Demonstrates competence</p> <p><b>Adopts new</b> therapies based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p>

	<p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care</p> <p>Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk-benefit analyses within</p>

	<p>medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>health care system</p> <p>Recommends systems re-design for faulty processes</p>
PROF 2	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost always completes</b> patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors junior</b> members of the health care team to manage barriers to effective patient care</p> <p><b>Role models</b> behavior demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of</p>

	<p>back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p>higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>

<b>EPA 3: External Examination of the Eye</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to do a methodical and thorough examination using appropriate techniques.
<b>2. Most relevant domains of competence:</b>	MK,PC,PBLI,SBP,P,ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 1(3),2(3) PC 2(3),3(4) PBLI 1,2-(3) SBP 1(3) P 1(3),3(2) ICS 1(4)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Mini CEX</li> <li>4. Case logs/registers</li> <li>5. Multisource feedback               <ol style="list-style-type: none"> <li>a. Patient</li> <li>b. Nurses</li> <li>c. Health care workers</li> <li>d. Peers</li> </ol> </li> </ol>

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 1	<p><b>Articulates knowledge</b> of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non- ophthalmologists.</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists.</p>	<p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions.</p> <p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions.</p> <p><b>Educates junior</b> residents and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions.</p>

MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p>

	<p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 1	<p>Recognizes and never participates in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p>

	<p>harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p> <p>Consistently demonstrates behavior that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion, integrity, respect, sensitivity, and responsiveness</p> <p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	<p>Consistently recognizes cultural and socioeconomic issues in patient care</p> <p>Exhibits these characteristics consistently in complex and complicated situations</p> <p>Mentors junior members of the health care team</p> <p>Role models behavior demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p>

	<p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
--	---	--

<b>EPA 4: Special Investigation</b>	
<p><b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.</p>	<p>Residents should be able to select appropriate mode of investigation, counsel the patient, perform and interpret the test results and apply ethics and professionalism during and after the procedure.</p>
<p><b>2. Most relevant domains of competence:</b></p>	<p>MK,PC,PBLI,SBP,P,ICS</p>
<p><b>3. Competencies within each domain critical to entrustment decisions:</b></p>	<p>MK 2(3) PC 1(3),2(3),3(4),4(3), PBLI 1,2(3) SBP 1,3-(3) P 1(3),3(2),4(3) ICS 1(4),2(3),3(3),4(2)</p>
<p><b>4. Methods of assessment</b></p>	<ol style="list-style-type: none"> <li>1. Audit of clinical practice</li> <li>2. Direct observation</li> <li>3. Case logs/registers</li> <li>4. Multisource feedback <ol style="list-style-type: none"> <li>a. Patient</li> <li>b. Nurses</li> <li>c. Health care workers</li> <li>d. Peers</li> </ol> </li> </ol>

Competency	Pre-Entrustable	Entrustable
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem-focused history for common ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of the health care team, role model interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p> <p><b>Incorporates</b> new information from literature to tailor interview questions</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>

	<p>patient's ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best</p>

		evidence supporting clinical practices
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies impediments</b> to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care</p> <p>Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk-benefit analyses within</p>

	<p>most frequently ordered tests and medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>health care system</p> <p>Recommends systems re-design for faulty processes</p>
SBP 3	<p>Describes epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p>Describes role of teamwork and communication failure as a leading cause of preventable patient harm</p> <p>Reports problematic processes, including errors and near misses to supervisor</p> <p>Defines process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p>Analyzes causes of adverse events through root cause analysis (RCA)</p> <p>Applies process for safe and efficient patient hand-offs, including basic communication techniques</p> <p>Develops content for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p>Supervises communication process for patient hand-offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p> <p>Creates curriculum to teach teamwork and communication skills to health care professionals</p>
PROF 1	<p>Recognizes and never participates in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p> <p>Consistently demonstrates behavior that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion, integrity, respect, sensitivity, and</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p> <p>Exhibits these characteristics consistently in complex and complicated situations</p> <p>Mentors junior members of the health care team</p> <p>Role models behavior demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and</p>

	<p>responsiveness</p> <p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	<p>education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies impediments</b> to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 4	<p>Recognizes and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p>Almost always recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p>Consistently recognizes and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p>Consistently recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p>Assumes leadership and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>

<p>ICS 1</p>	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
<p>ICS 2</p>	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care</p>

	<p>records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>transitions</p> <p>Develops models/approaches to managing difficult communications</p> <p>Manages conflicts with superiors and payers</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>
ICS 4	<p>Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations</p>	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p>

		<p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>
--	--	--

<b>EPA 5: Cataract Surgery &amp; Trabeculectomy (steps)</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to identify the appropriate surgical technique, pre-operative counselling & evaluation, take appropriate steps to avoid complications in the work up, perform the steps of surgery and manage post- operative period.
<b>2. Most relevant domains of competence:</b>	MK,PC,PBLI,SBP,P,ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	<p>MK1,2(3)</p> <p>PC 2(3),3(4),4(3),6(4),7(2)</p> <p>PBLI 1,2(3),3(1)</p> <p>SBP 1-3(3)</p> <p>P 1(3),2(3),3(2),4(3)</p> <p>ICS1(4),2(3),3(3), 4(2)</p>
<b>4.Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> <li>5. Multisource feedback <ol style="list-style-type: none"> <li>a. Patient</li> <li>b. Nurses</li> <li>c. Health care workers</li> <li>d. Peers</li> </ol> </li> </ol>

Competency	Pre-Entrustable	Entrustable
MK 1	<p><b>Articulates knowledge</b> of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non-ophthalmologists.</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists.</p>	<p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions.</p> <p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions.</p> <p><b>Educates junior</b> residents and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions.</p>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>

PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient's ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 6	<p>Describes essential components of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p>For each procedure:</p> <ol style="list-style-type: none"> <li>1. Lists indications and describes relevant anatomy and pathophysiology</li> </ol>	<p>Administers anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p>Reviews individual outcome and process measures, and participates in practice improvement</p>

	<p>of disorder</p> <p>2. Identifies findings that are indicators for the procedure and potential post- operative complications</p> <p>3. Describes anaesthetic and surgical technique, mechanism of effect, and specific instruments required</p> <p>Administers anaesthesia and performs procedure with indirect supervision</p> <p>Recognizes intra- and post-operative complications</p>	
PC 7	<p>Describes essential components of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p>	<p>For each specified procedure:</p> <p>1. Lists indications for procedure selection;</p> <p>describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post-operative care</p> <p>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</p> <p>3. Prepares and drapes for extra-ocular and intra- ocular procedures</p> <p>4. Describes methods for regional and general anaesthesia</p> <p>5. Performs portions of selected Level 2 procedures</p> <p><b>Obtains informed</b> consent and performs specified Level 3 procedures</p> <p>Identifies and manages less common intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in practice improvement</p>

<p>PBLI 1</p>	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
<p>PBLI 2</p>	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta- analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>

PBLI 3	-	<p><b>Identifies</b> quality gaps in health care delivery</p> <p><b>Conducts</b> stakeholder analysis</p> <p>Determines project purpose and goals</p> <p><b>Defines</b> project process and outcome measures</p> <p>Displays longitudinal data over time</p> <p>Describes quality improvement (QI) methodology for data analysis and problem solving</p> <p><b>Demonstrates</b> effective team leadership</p> <p>Initiates basic steps for implementing change</p> <p><b>Leads</b> complex projects</p> <p>Utilizes advanced quality measurement and display tools</p>
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care</p> <p>Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p>
	<p>ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and</p>	<p>Advocates for cost-effective care and use of risk-benefit analyses within health care system</p> <p>Recommends systems re-design for</p>

	<p>medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>faulty processes</p>
SBP 3	<p>Describes epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p>Describes role of teamwork and communication failure as a leading cause of preventable patient harm</p> <p>Reports problematic processes, including errors and near misses to supervisor</p> <p>Defines process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p>Analyzes causes of adverse events through root cause analysis (RCA)</p> <p>Applies process for safe and efficient patient hand- offs, including basic communication techniques</p> <p>Develops content for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p>Supervises communication process for patient hand- offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p> <p>Creates curriculum to teach teamwork and communication skills to health care professionals</p>
PROF 1	<p>Recognizes and never participates in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p> <p>Consistently demonstrates behavior that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion, integrity, respect, sensitivity, and responsiveness</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p> <p>Exhibits these characteristics consistently in complex and complicated situations</p> <p>Mentors junior members of the health care team</p> <p>Role models behavior demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and education to support the application of these principles</p>

	<p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	
PROF 2	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost</b> always completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role model</b> behaviour demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>

<p>PROF 4</p>	<p>Recognizes and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p>Almost always recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p>Consistently recognizes and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p>Consistently recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p>Assumes leadership and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>
<p>ICS 1</p>	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>

	<p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p> <p>Develops models/approaches to managing difficult communications</p> <p>Manages conflicts with superiors and payers</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>

ICS 4	Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and</p> <p>includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>
-------	--	---

<b>EPA 6: Repair of open globe injuries / Lid tear</b>	
<b>1. Description of the activity:</b>	Residents should be able to promptly recognize a patient who requires urgent or emergent care, initiate evaluation and management, and seek help if essential. This EPA often calls for simultaneously recognizing need and initiating a call for assistance.
<b>2. Most relevant domains of competence:</b>	MK, PC, PBLI, SBP, P, ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 2(3) PC 1(3),2(3),3(4),4(3),5(3),6(4),7(2) PBLI1(3),2(3) SBP 1-3-(3) P 1(3),2(3),3(2),4(3) ICS1(4),2(3),3(3),4(2)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> <li>5. Multisource feedback               <ol style="list-style-type: none"> <li>a. Patient</li> <li>b. Nurses</li> <li>c. Health care workers</li> <li>d. Peers</li> </ol> </li> </ol>

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem-focused history for common ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of the health care team, role model</p>

		<p>interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p> <p><b>Incorporates</b> new information from literature to tailor interview questions</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem</b>-focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p>

		<p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 5	<p><b>Describes basic concepts</b> of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)</p> <p><b>Describes categories</b> of medications (e.g., lubricant, antibiotic, anti-inflammatory, anaesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens</p>	<p><b>Initiates therapy</b> with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions</p> <p>Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections</p> <p><b>Manages and individualizes</b> medical therapy for more complex ophthalmic conditions</p> <p>Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioural factors</p> <p>Manages complications</p> <p>Considers non-medical factors, such as cost, convenience, and ability to receive medication Demonstrates competence in intravitreal injections</p> <p><b>Adopts</b> new therapies based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement</p>

PC 6	<p><b>Describes essential components</b> of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p><b>For each procedure:</b></p> <ol style="list-style-type: none"> <li>1. Lists indications and describes relevant anatomy and pathophysiology of disorder</li> <li>2. Identifies findings that are indicators for the procedure and potential post- operative complications</li> <li>3. Describes anaesthetic and surgical technique, mechanism of effect, and specific instruments required</li> <li>4. Performs directed pre-operative assessment; administers anaesthesia and performs procedure with direct supervision; provides appropriate post- operative care</li> </ol> <p><b>Administers anaesthesia</b> and performs procedure with indirect supervision Recognizes intra- and post-operative complications</p>	<p><b>Administers</b> anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in practice improvement</p>
PC 7	<p><b>Describes essential components</b> of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p>	<p><b>For each specified procedure:</b></p> <ol style="list-style-type: none"> <li>1. Lists indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post-operative care</li> <li>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</li> <li>3. Prepares and drapes for extra-ocular and intra- ocular procedures</li> <li>4. Describes methods for regional and</li> </ol>

		<p>general anaesthesia</p> <p>5. Performs portions of selected Level 2 procedures</p> <p><b>Obtains informed consent</b> and performs specified Level 3 procedures</p> <p>Identifies and manages less common intra- and post-operative complications</p> <p><b>Obtains informed</b> consent and performs specified Level 4 procedures</p> <p>Identifies and manages uncommon intra- and post- operative complications</p> <p><b>Reviews individual</b> outcome and process measures, and participates in practice improvement</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>

PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta- analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk- benefit analyses within</p>

	<p>most frequently ordered tests and medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>health care system</p> <p>Recommends systems re-design for faulty processes</p>
SBP 3	<p>Describes epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p>Describes role of teamwork and communication failure as a leading cause of preventable patient harm</p> <p>Reports problematic processes, including errors and near misses to supervisor</p> <p>Defines process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p>Analyzes causes of adverse events through root cause analysis (RCA)</p> <p>Applies process for safe and efficient patient hand- offs, including basic communication techniques</p> <p>Develops content for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p>Supervises communication process for patient hand- offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p> <p>Creates curriculum to teach teamwork and communication skills to health care professionals</p>
PROF 1	<p>Recognizes and never participates in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p> <p>Consistently demonstrates behavior that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion, integrity, respect, sensitivity, and responsiveness</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p> <p>Exhibits these characteristics consistently in complex and complicated situations</p> <p>Mentors junior members of the health care team</p> <p>Role models behavior demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and education to support the application</p>

	<p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	of these principles
PROF 2	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost</b> always completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role model</b> behaviour demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Conforms</b> to Health Insurance Portability and Accountability Act regulations</p>	<p><b>Almost always recognizes</b> and implements required procedures for patient involvement in human research</p> <p>Informs patients of rights; involves patients in medical decision-making</p> <p><b>Consistently recognizes</b> and implements required procedures for patient involvement in human research</p> <p>Informs patients of rights; involves patients in medical decision-making</p> <p><b>Mentors</b> junior members of the health care team regarding protection of patient privacy</p> <p><b>Role models</b> behavior regarding protection of patient privacy</p> <p><b>Mentors residents</b> involved in administration of research projects involving humans</p> <p>Develops organizational policies and education to support the application of these principles</p>

<p>PROF 4</p>	<p><b>Recognizes</b> and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p><b>Almost always</b> recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p><b>Consistently recognizes</b> and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p><b>Consistently</b> recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p><b>Assumes leadership</b> and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>
<p>ICS 1</p>	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient- related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>

	<p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p> <p>Develops models/approaches to managing difficult communications</p> <p>Manages conflicts with superiors and payers</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical</p>

		care, medical research, and quality improvement
ICS 4	Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>

<b>EPA 7: Minor procedures</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to identify the appropriate surgical technique/ procedure, pre-operative counselling & evaluation, take appropriate steps to avoid complications in the work up, perform the steps of surgery and manage post- operative period.
<b>2. Most relevant domains of competence:</b>	MK, PC, PBLI, SBP, P, ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 2(3) PC 2(3),3(4),4(3),6(4), 7(2) PBLI1,2 -(3) SBP 1,2-(3) P 1(3),2(3),3(2) ICS 1(4),2(3),3(3), 4(2)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> <li>5. Multisource feedback <ol style="list-style-type: none"> <li>a. Patient</li> <li>b. Nurses</li> <li>c. Health care workers</li> <li>d. Peers</li> </ol> </li> </ol>

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient's ocular complaints and medical condition</p> <p>Distinguishes between normal and</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p>

	abnormal findings	<b>Incorporates</b> into clinical practice new literature about exam techniques
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence- based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 6	<p><b>Describes essential components</b> of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p><b>For each procedure:</b></p>	<p><b>Administers</b> anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in</p>

	<ol style="list-style-type: none"> <li>1. Lists indications and describes relevant anatomy and pathophysiology of disorder</li> <li>2. Identifies findings that are indicators for the procedure and potential post-operative complications</li> <li>3. Describes anaesthetic and surgical technique, mechanism of effect, and specific instruments required</li> <li>4. Performs directed pre-operative assessment; administers anaesthesia and performs procedure with direct supervision; provides appropriate post-operative care</li> </ol> <p><b>Administers anaesthesia</b> and performs procedure with indirect supervision Recognizes intra- and post-operative complications</p>	<p>practice improvement</p>
<p>PC 7</p>	<p><b>Describes essential components</b> of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post-operative complications)</p>	<p><b>For each specified procedure:</b></p> <ol style="list-style-type: none"> <li>1. Lists indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post-operative care</li> <li>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</li> <li>3. Prepares and drapes for extra-ocular and intra- ocular procedures</li> <li>4. Describes methods for regional and general anaesthesia</li> <li>5. Performs portions of selected Level 2 procedures</li> </ol> <p><b>Obtains informed consent</b> and performs specified Level 3 procedures Identifies and manages less common intra- and post-operative complications</p>

		<p><b>Obtains informed</b> consent and performs specified Level 4 procedures</p> <p>Identifies and manages uncommon intra- and post-operative complications</p> <p><b>Reviews individual</b> outcome and process measures, and participates in practice improvement</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence- based medicine and</p>

		information mastery techniques
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care</p> <p>Applies risk-benefit analysis in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk-benefit analyses within health care system</p> <p>Recommends systems re-design for faulty processes</p>
PROF 1	<p>Recognizes and never participates in verbal or physical abuse of patients, peers, staff, or supervisors, or sexual harassment</p> <p>Recognizes and never participates in discrimination based on gender, age, culture, race, religion, disability, sexual orientation, or socioeconomic status</p> <p>Consistently demonstrates behavior</p>	<p>Exhibits these characteristics consistently in most relationships and situations</p> <p>Consistently recognizes cultural and socioeconomic issues in patient care</p> <p>Exhibits these characteristics consistently in complex and complicated situations</p> <p>Mentors junior members of the health care team</p>

	<p>that conveys caring, honesty, and genuine interest in patients and families</p> <p>Demonstrates compassion, integrity, respect, sensitivity, and responsiveness</p> <p>Exhibits these characteristics consistently in common and uncomplicated situations</p> <p>Usually recognizes cultural and socioeconomic issues in patient care</p>	<p>Role model behavior demonstrating compassion and respect for others, and for cultural and socioeconomic issues in patient care</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 2	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost</b> always completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role model</b> behaviour demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of</p>

	<p>communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p>care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p> <p>Develops models/approaches to managing difficult communications</p>

		Manages conflicts with superiors and payers
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>
ICS 4	Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p>

		<p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>
--	--	--

EPA 8: Ocular Plastic & Lid Surgeries	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to identify lid conditions which can give rise to loss of vision and be able to take perform non-surgical as well as surgical management.
<b>2. Most relevant domains of competence:</b>	MK, PC, PBLI, SBP, P, ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 2(3) PC 1(3),2(3),3(4),4(3),5(3),6(4),7(2) PBLI 1,2(3) SBP 1,3-(3) P 1(3),2(3),3(2),4(3) ICS 1(4),2(3),3(3), 4(2)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> </ol>

Competency	Pre-Entrustable	Entrustable
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem-focused history for common ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of</p>

		<p>the health care team, role model interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p> <p><b>Incorporates</b> new information from literature to tailor interview questions</p>
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of</p>

		<p>junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 5	<p><b>Describes basic concepts</b> of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)</p> <p><b>Describes categories</b> of medications (e.g., lubricant, antibiotic, anti-inflammatory, anaesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens</p>	<p><b>Initiates therapy</b> with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions</p> <p>Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections</p> <p><b>Manages and individualizes</b> medical therapy for more complex ophthalmic conditions</p> <p>Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioural factors</p> <p>Manages complications</p> <p>Considers non-medical factors, such as cost, convenience, and ability to receive medication Demonstrates competence in intravitreal injections</p> <p><b>Adopts</b> new therapies based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement</p>
PC 6	<p><b>Describes essential components</b> of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p><b>For each procedure:</b></p> <ol style="list-style-type: none"> <li>1. Lists indications and describes relevant anatomy and pathophysiology of disorder</li> <li>2. Identifies findings that are indicators for the procedure and potential post- operative complications</li> <li>3. Describes anaesthetic and surgical</li> </ol>	<p><b>Administers</b> anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in practice improvement</p>

	<p>technique, mechanism of effect, and specific instruments required</p> <p>4. Performs directed pre-operative assessment; administers anaesthesia and performs procedure with direct supervision; provides appropriate post- operative care</p> <p><b>Administers anaesthesia</b> and performs procedure with indirect supervision Recognizes intra- and post-operative complications</p>	
PC 7	<p><b>Describes essential components</b> of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p>	<p><b>For each specified procedure:</b></p> <ol style="list-style-type: none"> <li>1. Lists indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post- operative care</li> <li>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</li> <li>3. Prepares and drapes for extra-ocular and intra- ocular procedures</li> <li>4. Describes methods for regional and general anaesthesia</li> <li>5. Performs portions of selected Level 2 procedures</li> </ol> <p><b>Obtains informed consent</b> and performs specified Level 3 procedures Identifies and manages less common intra- and post-operative complications</p> <p><b>Obtains informed</b> consent and performs specified Level 4 procedures Identifies and manages uncommon intra- and post- operative complications</p> <p><b>Reviews individual</b> outcome and process measures, and participates in practice improvement</p>

PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>
SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and</p>

		macro levels
SBP 2	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care</p> <p>Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk-benefit analyses within health care system</p> <p>Recommends systems re-design for faulty processes</p>
SBP 3	<p>Describes epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p>Describes role of teamwork and communication failure as a leading cause of preventable patient harm</p> <p>Reports problematic processes, including errors and near misses to supervisor</p> <p>Defines process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p>Analyzes causes of adverse events through root cause analysis (RCA)</p> <p>Applies process for safe and efficient patient hand-offs, including basic communication techniques</p> <p>Develops content for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p>Supervises communication process for patient hand-offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p> <p>Creates curriculum to teach teamwork and communication skills to health care professionals</p>
PROF 1	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost</b> always completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role model</b> behaviour demonstrating</p>

		<p>compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 2	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 4	<p>Recognizes and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p>Almost always recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and</p>	<p>Consistently recognizes and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p>Consistently recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p>Assumes leadership and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and</p>

	<p>completely Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p>education to support the application of these principles</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments) Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families Actively seeks information from multiple sources, including consultations Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care Demonstrates effective integration of all available sources of information when gathering patient-related data Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated Mentors junior members of the health care team to improve communication skill</p>
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records Describes importance and procedure for request of consultation Lists steps for appropriate care transition Manages one-on-one conflicts Produces comprehensive, timely, and legible ophthalmic medical records Recognizes need for, identifies, and requests appropriate consultant Performs appropriate basic</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed Manages conflicts within department Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media Coordinates multiple consultants Manages complex multisystem care transitions</p>

	ophthalmology care transition Manages conflicts within peer group	Develops models/approaches to managing difficult communications Manages conflicts with superiors and payers
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>
ICS 4	Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p>

		Provides leadership for conference implementation
--	--	---

<b>EPA 9: Lacrimal sac surgeries</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able to identify, assess and manage disease of lacrimal sac. They should be able to do proper pre-operative work up, steps of surgery and follow up in the post-operative period.
<b>2. Most relevant domains of competence:</b>	MK, PC, PBLI, SBP, P, ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 2(3) PC 1(3),2(3),3(4),4(3),5(3),6(4),7(2) PBLI 1,2(3) SBP 1,3-(3) P 1(3),2(3),3(2),4(3) ICS 1(4),2(3),3(3), 4(2)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> </ol>

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem-focused history for common ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of the health care team, role model interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p>

		<b>Incorporates</b> new information from literature to tailor interview questions
PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of</p>

		<p>junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 5	<p><b>Describes basic concepts</b> of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)</p> <p><b>Describes categories</b> of medications (e.g., lubricant, antibiotic, anti-inflammatory, anesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens</p>	<p><b>Initiates therapy</b> with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions</p> <p>Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections</p> <p><b>Manages and individualizes</b> medical therapy for more complex ophthalmic conditions</p> <p>Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioral factors</p> <p>Manages complications</p> <p>Considers non-medical factors, such as cost, convenience, and ability to receive medication Demonstrates competence in intravitreal injections</p> <p><b>Adopts</b> new therapies based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement</p>
PC 6	<p><b>Describes essential components</b> of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p><b>For each procedure:</b></p> <p>1. Lists indications and describes relevant anatomy and pathophysiology</p>	<p><b>Administers</b> anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in practice improvement</p>

	<p>of disorder</p> <p>2. Identifies findings that are indicators for the procedure and potential post- operative complications</p> <p>3. Describes anaesthetic and surgical technique, mechanism of effect, and specific instruments required</p> <p>4. Performs directed pre-operative assessment; administers anaesthesia and performs procedure with direct supervision; provides appropriate post- operative care</p> <p><b>Administers anaesthesia</b> and performs procedure with indirect supervision Recognizes intra- and post-operative complications</p>	
PC 7	<p><b>Describes essential components</b> of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p>	<p><b>For each specified procedure:</b></p> <p>1. Lists indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post- operative care</p> <p>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</p> <p>3. Prepares and drapes for extra-ocular and intra- ocular procedures</p> <p>Describes methods for regional and general anaesthesia</p> <p>5. Performs portions of selected Level 2 procedures</p> <p><b>Obtains informed consent</b> and performs specified Level 3 procedures</p> <p>Identifies and manages less common intra- and post-operative complications</p> <p><b>Obtains informed</b> consent and performs specified Level 4 procedures</p>

		<p>Identifies and manages uncommon intra- and post- operative complications</p> <p><b>Reviews individual</b> outcome and process measures, and participates in practice improvement</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>

<p>SBP 1</p>	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
<p>SBP 2</p>	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care</p> <p>Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and medications</p> <p>Utilizes EHR, where available, to order tests and reconcile medications for patients</p> <p>Uses information systems for patient care, including literature review</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk- benefit analyses within health care system</p> <p>Recommends systems re-design for faulty processes</p>
<p>SBP 3</p>	<p>Describes epidemiology of medical errors and differences between medical errors, near misses, and sentinel events</p> <p>Describes role of teamwork and communication failure as a leading cause of preventable patient harm</p> <p>Reports problematic processes, including errors and near misses to supervisor</p>	<p>Analyzes causes of adverse events through root cause analysis (RCA)</p> <p>Applies process for safe and efficient patient hand-offs, including basic communication techniques</p> <p>Develops content for and facilitates patient safety morbidity and mortality (M&amp;M) conference focusing on systems-based errors in patient care</p> <p>Supervises communication process for</p>

	<p>Defines process for safe and efficient patient hand-offs, including basic communication techniques</p>	<p>patient hand-offs and on-call responsibilities</p> <p>Analyzes shared team experience (e.g., procedure) with debriefing to solve problems</p> <p>Creates curriculum to teach teamwork and communication skills to health care professionals</p>
PROF 1	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost always</b> completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role models</b> behaviour demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 2	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to</p>

	<p>safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p>safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 4	<p>Recognizes and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p>Almost always recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p>Consistently recognizes and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p>Consistently recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p>Assumes leadership and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>
ICS 1	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient-related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including</p>

	<p>for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p> <p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	<p>clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p> <p>Develops models/approaches to managing difficult communications</p> <p>Manages conflicts with superiors and payers</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p>

	<p>assignments</p> <p>Follows institutional policies</p>	<p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>
ICS 4	<p>Organizes clear and accurate non-ophthalmic case presentation with level-appropriate diagnostic and management recommendations</p>	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case-based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>

<b>EPA 10: Subspecialty Surgeries - Vitreo - Retinal, Antiglaucoma, Keratoplasty, Squint</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be able diagnose and choose the appropriate surgical option in relation to various sub specialities and should be able to assist the surgeries and provide post-operative care
<b>2. Most relevant domains of competence:</b>	MK, PC, PBLI, SBP, P, ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 2(3) PC 1(3),2(3),3(4),4(3),5(3),6(4),7(2) PBLI 1,2(3) SBP 1(3) P 1(3),3(2),4(3) ICS 1(4),2(3),3(3)
<b>4. Methods of assessment</b>	<ol style="list-style-type: none"> <li>1. Direct observation</li> <li>2. Audit of clinical practice</li> <li>3. Rating scale</li> <li>4. In-training examination</li> </ol>

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 2	<p><b>Articulates</b> knowledge of pathophysiology, clinical findings, differentiate between normal and abnormal findings</p> <p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical findings, and able to arrive at a diagnosis</p>	<p><b>Demonstrates</b> basic knowledge of pathophysiology, clinical Findings and arrive at a differential diagnosis</p> <p><b>Demonstrates advanced knowledge</b> of pathophysiology, clinical findings, and plan for therapy</p> <p><b>Educates</b> junior residents and medical students and acts as a role model</p>
PC 1	<p><b>Obtains</b> and documents basic history for ophthalmic complaint</p> <p><b>Acquires</b> accurate and relevant problem-focused history for common ocular complaints</p> <p>Obtains and integrates outside medical records</p>	<p><b>Obtains relevant</b> historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient</p> <p><b>Demonstrates</b>, for junior members of the health care team, role model interview techniques to obtain subtle and reliable information from the patient, particularly for sensitive aspects of ocular conditions</p> <p><b>Incorporates</b> new information from literature to tailor interview questions</p>

PC 2	<p><b>Describes components</b> of complete ophthalmic examination</p> <p>Performs the basic parts of a screening or bedside eye examination without special equipment</p> <p><b>Performs</b> and documents a complete ophthalmic examination targeted to a patient’s ocular complaints and medical condition</p> <p>Distinguishes between normal and abnormal findings</p>	<p><b>Performs problem-</b>focused exam and documents</p> <p>pertinent positive and negative findings</p> <p>Consistently identifies common abnormalities; may identify subtle findings</p> <p><b>Identifies subtle</b> or uncommon findings of common disorders and typical or common findings of rarer disorders</p> <p><b>Incorporates</b> into clinical practice new literature about exam techniques</p>
PC 3	<p><b>Describes role</b> of office diagnostic procedures in diagnosis of ophthalmic disease</p> <p><b>Selects</b> and/or performs appropriate routine diagnostic tests and imaging procedures based on a patient’s ocular complaints and medical condition</p> <p><b>Interprets routine</b> findings; recognizes indications for advanced diagnostic tests and imaging procedures</p>	<p><b>Interprets unusual</b> findings, identifies artifacts; employs routine and advanced diagnostic tests and imaging procedures according to evidence-based medicine</p> <p><b>Performs</b> and interprets findings at subspecialty level</p>
PC 4	<p><b>Describes basic</b> clinical features of common ophthalmic disorders, (e.g., red eye, glaucoma, cataract, diabetic retinopathy)</p> <p><b>Recalls</b> and presents clinical facts of the history and basic eye exam without higher level of synthesis, and generates at least one item of the differential diagnosis for common ophthalmologic disorders</p>	<p><b>Abstracts</b> and reorganizes elicited clinical findings</p> <p>Prioritizes potential causes of patient complaint; compares and contrasts diagnoses under consideration</p> <p>Generates more focused differential diagnosis and organized final assessment</p> <p><b>Organizes</b> clinical facts in a hierarchical level of importance; identifies discriminating features between similar patients</p> <p>Generates focused differential and evaluation strategy to finalize diagnosis</p> <p>Verifies diagnostic assessments of</p>

		<p>junior members of health care team</p> <p><b>Incorporates</b> most current literature findings in formulation of differential diagnoses</p>
PC 5	<p><b>Describes basic concepts</b> of ophthalmic pharmacotherapy (e.g., most common topical diagnostic and therapeutic agents)</p> <p><b>Describes categories</b> of medications (e.g., lubricant, antibiotic, anti-inflammatory, anaesthetic); describes basic pharmacology of drug therapy and broad indications/contraindications for medical therapy of common ophthalmic conditions; describes routes of drug administration (e.g., topical, oral, periocular, intravenous) and dosing regimens</p>	<p><b>Initiates therapy</b> with medication for common ophthalmic diseases; monitors for adverse drug reactions and interactions</p> <p>Describes indications for oral and intravenous therapy; recognizes possible racial, gender, and genomic differences in outcomes of medical therapy Demonstrates ability to use electronic prescribing; demonstrates competence in periocular injections</p> <p><b>Manages and individualizes</b> medical therapy for more complex ophthalmic conditions</p> <p>Recognizes indications for alternative therapies, including surgical intervention; integrates environmental/behavioural factors</p> <p>Manages complications</p> <p>Considers non-medical factors, such as cost, convenience, and ability to receive medication Demonstrates competence in intravitreal injections</p> <p><b>Adopts</b> new therapies based on continuing medical education (CME) and literature review; identifies gaps in care and process for improvement</p>
PC 6	<p><b>Describes essential components</b> of care related to non-OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p> <p><b>For each procedure:</b></p> <p>1. Lists indications and describes relevant anatomy and pathophysiology</p>	<p><b>Administers</b> anaesthesia and performs procedure with oversight supervision</p> <p>Manages intra- and post-operative complications</p> <p><b>Reviews</b> individual outcome and process measures, and participates in practice improvement</p>

	<p>of disorder</p> <p>2. Identifies findings that are indicators for the procedure and potential post- operative complications</p> <p>3. Describes anaesthetic and surgical technique, mechanism of effect, and specific instruments required</p> <p>4. Performs directed pre-operative assessment; administers anaesthesia and performs procedure with direct supervision; provides appropriate post- operative care</p> <p><b>Administers anaesthesia</b> and performs procedure with indirect supervision Recognizes intra- and post-operative complications</p>	
PC 7	<p><b>Describes essential components</b> of care related to OR surgery (e.g., informed consent, indications and contraindications for surgery, pertinent anatomy, anaesthetic and operative technique, potential intra- and post- operative complications)</p>	<p><b>For each specified procedure:</b></p> <p>1. Lists indications for procedure selection; describes relevant anatomy and instrumentation for procedures, including calibration and operation of the microscope; describes necessary post-operative care</p> <p>2. Identifies common intra- and post-operative complications, and performs post-operative care managing common complications</p> <p>3. Prepares and drapes for extra-ocular and intra- ocular procedures</p> <p>4. Describes methods for regional and general anaesthesia</p> <p>5. Performs portions of selected Level 2 procedures</p> <p><b>Obtains informed consent</b> and performs specified Level 3 procedures Identifies and manages less common intra- and post-operative complications</p> <p><b>Obtains informed</b> consent and performs specified Level 4 procedures</p>

		<p>Identifies and manages uncommon intra- and post- operative complications</p> <p><b>Reviews individual</b> outcome and process measures, and participates in practice improvement</p>
PBLI 1	<p>Identifies gaps in personal knowledge and expertise</p> <p>Accepts feedback appropriately</p> <p>Demonstrates ability to utilize online resources for patient care</p> <p>Assesses performance by self-reflection and review of feedback and evaluations</p> <p>Develops a learning plan, based on feedback, with supervision</p> <p>Utilizes review articles or practice guidelines to answer specific questions in clinical practice</p>	<p>Develops learning plan independently with accurate assessment of competence and areas for continued improvement</p> <p>Often utilizes appropriate evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes self-directed learning with little external guidance</p> <p>Consistently uses evidence-based medicine to answer specific questions while providing care</p> <p>Utilizes system or process for staying abreast of relevant changes in clinical practice</p> <p>Contributes to development of best evidence supporting clinical practices</p>
PBLI 2	<p>Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p>Ranks study designs by validity and generalizability to larger populations, and identifies critical threats to study validity</p> <p>Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p>Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta- analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p>Demonstrates a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p>Independently teaches and assesses evidence-based medicine and information mastery techniques</p>

SBP 1	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>
PROF 1	<p><b>Recognizes</b> and never demonstrates refusal to perform assigned tasks, answer pages or calls, or avoidance of scheduled call duty</p> <p><b>Almost</b> always completes patient care tasks promptly and completely; is punctual; is appropriately groomed</p> <p>Manages fatigue and sleep deprivation</p> <p>Identifies impact of personal beliefs and values on practice of medicine</p>	<p><b>Consistently</b> completes patient care tasks promptly and completely</p> <p>Manages personal beliefs and values to avoid negative impact on patient care</p> <p><b>Mentors</b> junior members of the health care team to manage barriers to effective patient care</p> <p><b>Role model</b> behaviour demonstrating compassion and respect for others</p> <p>Develops organizational policies and education to support the application of these principles</p>
PROF 3	<p><b>Describes basic levels</b> of systems of care (self-management to societal)</p> <p><b>Describes systems</b> of care within residency program</p> <p>Demonstrates awareness of need for safe transitions of care; lists potential impediments to safe and efficient transitions of care within and between systems</p>	<p><b>Identifies</b> impediments to safe and efficient transitions of care within and between systems</p> <p>Manages routine transitions safely</p> <p>Proposes solutions to impediments to safe and efficient transitions of care within and between systems</p> <p>Manages complex transitions of care within and between systems</p> <p>Demonstrates leadership potential for systems changes</p> <p><b>Leads systems</b> change at micro and macro levels</p>

<p>PROF 4</p>	<p>Recognizes and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record-keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p>Almost always recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p>Consistently recognizes and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p>Consistently recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p>Assumes leadership and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>
<p>ICS 1</p>	<p><b>Develops positive</b> relationship with patients in uncomplicated situations</p> <p>Describes factors that affect communication (e.g., language, use of interpreters, other family in the room, anger, depression, anxiety, and cognitive impairments)</p> <p>Engages in active listening, teach-back, and other strategies to ensure patient understanding</p> <p><b>Develops working</b> relationships in complex situations across specialties and systems of care</p> <p>Counsels patients at appropriate level for comprehension regarding disease, and engages in shared decision-making</p> <p>Negotiates and manages simple patient/family-related conflicts</p> <p><b>Uses appropriate</b> strategies to communicate with vulnerable populations and their families</p>	<p><b>Sustains working relationships</b> during complex and challenging situations, including transitions of care</p> <p>Demonstrates effective integration of all available sources of information when gathering patient- related data</p> <p>Counsels patients regarding impact of higher-risk disease and intervention; directs patients to resources</p> <p>Negotiates and manages conflict in complex situations</p> <p><b>Counsels patients</b> regarding unusual or experimental therapies, including clinical trial participation when indicated</p> <p>Mentors junior members of the health care team to improve communication skill</p>

	<p>Actively seeks information from multiple sources, including consultations</p> <p>Counsels patients regarding emotionally difficult information, such as blindness; uses appropriate technique for "breaking bad news"</p>	
ICS 2	<p>Produces comprehensive, timely, and legible non-ophthalmic medical records</p> <p>Describes importance and procedure for request of consultation</p> <p>Lists steps for appropriate care transition</p> <p>Manages one-on-one conflicts</p> <p>Produces comprehensive, timely, and legible ophthalmic medical records</p> <p>Recognizes need for, identifies, and requests appropriate consultant</p> <p>Performs appropriate basic ophthalmology care transition</p> <p>Manages conflicts within peer group</p>	<p>Performs more complex subspecialty care transitions; ensures accurate documentation and face-to-face communication where needed</p> <p>Manages conflicts within department</p> <p>Effectively and ethically uses all forms of communication, including face-to-face, telephone, electronic, and social media</p> <p>Coordinates multiple consultants</p> <p>Manages complex multisystem care transitions</p> <p>Develops models/approaches to managing difficult communications</p> <p>Manages conflicts with superiors and payers</p>
ICS 3	<p><b>Understands concept</b> of the medical team with respect to clinical care, medical research, and quality improvement</p> <p>Defines purpose of various teams in which he or she participates</p> <p><b>Describes role</b> and responsibility of each team member</p> <p>Prepares for team role and fulfills assignments</p> <p>Follows institutional policies</p>	<p><b>Implements team</b> activities as directed by team leader</p> <p>Identifies individual vs. group collaborative roles</p> <p><b>Selects, evaluates,</b> provides feedback, and remediates team members</p> <p>Develops goals and strategies for various departmental team activities</p> <p>Delegates activities to team members and oversees them appropriately</p> <p><b>Develops institutional</b> and organizational strategies to improve team functions</p> <p>Trains physicians and educators to develop effective teams for clinical care, medical research, and quality improvement</p>

<b>EPA 11: Critical appraisal of medical literature, research, medico legal &amp; ethical issues</b>	
<b>1. Description of the activity:</b> This included a brief rationale and a list of the functions required for the EPA.	Residents should be research oriented, develop attitude for research and be able to critically assess medical literature in a methodical manner; have a basic knowledge of biomedical research; practice ethically and be knowledgeable of the medico- legal issues
<b>2. Most relevant domains of competence:</b>	MK,PBLI,SBP,P,ICS
<b>3. Competencies within each domain critical to entrustment decisions:</b>	MK 1(3) PBLI 2(3),3(1) SBP 2(3) PROF 4(3) ICS 4(2)
<b>4.Methods of assessment</b>	1. Rating scale/evaluation form

<b>Competency</b>	<b>Pre-Entrustable</b>	<b>Entrustable</b>
MK 1	<p>Articulates knowledge of pathophysiology, clinical findings, and therapy for ophthalmic conditions routinely managed by non-ophthalmologists</p> <p>Demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for common ophthalmic conditions routinely managed by ophthalmologists</p>	<p><b>Demonstrates advanced</b> knowledge of pathophysiology, clinical findings, and therapy for commonly encountered ophthalmic conditions and demonstrates basic knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered conditions</p> <p><b>Demonstrates</b> advanced knowledge of pathophysiology, clinical findings, and therapy for less commonly encountered ophthalmic conditions</p> <p><b>Educates junior residents</b> and medical students and contributes to the body of knowledge for pathophysiology, clinical findings, and therapy for ophthalmic conditions</p>

<p>PBLI 2</p>	<p><b>Describes basic concepts</b> in clinical epidemiology, biostatistics, and clinical reasoning</p> <p>Categorizes design of a research study</p> <p><b>Ranks study</b> designs by validity and generalizability to larger populations, and identifies critical threats to study validity Distinguishes relevant research outcomes from other types of evidence</p> <p>Cites evidence supporting several commonly used techniques in own practice</p>	<p><b>Applies</b> a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines</p> <p>Critically evaluates information from others, including colleagues, experts, pharmaceutical representatives, and patients</p> <p><b>Demonstrates</b> a clinical practice that incorporates principles and basic practices of evidence-based practice and information mastery</p> <p><b>Independently</b> teaches and assesses evidence-based medicine and information mastery techniques</p>
<p>PBLI 3</p>	<p>-</p>	<p>Identifies quality gaps in health care delivery</p> <p>Conducts stakeholder analysis</p> <p>Determines project purpose and goals</p> <p>Defines project process and outcome measures Displays longitudinal data over time Describes quality improvement (QI) methodology for data analysis and problem solving</p> <p>Demonstrates effective team leadership Initiates basic steps for implementing change</p> <p>Leads complex projects</p> <p>Utilizes advanced quality measurement and display tools</p>

<p>SBP 2</p>	<p>Describes scenarios in which physician may affect cost-effectiveness in patient care Explains the role of the Electronic Health Record (EHR) in prevention of medical errors</p> <p>Describes scenarios in which ophthalmologist may affect cost-effectiveness in patient care</p> <p>Describes specific cost options for most frequently ordered tests and medications Utilizes EHR, where available, to order tests and reconcile medications for patients Uses information systems for patient care, including literature review</p>	<p>Often practices cost-effective care</p> <p>Consistently practices cost-effective care Applies risk-benefit analyses in ophthalmic care</p> <p>Contributes to reduction of risks of automation and computerized systems by reporting system problems</p> <p>Advocates for cost-effective care and use of risk-benefit analyses within health care system Recommends systems re-design for faulty processes</p>
<p>PROF 4</p>	<p><b>Recognizes</b> and never participates in: deception regarding level of education and experience; demeaning other practitioners; plagiarism, falsification of records, misrepresentation of education</p> <p>Almost always completes medical record- keeping tasks promptly and completely</p> <p>Always identifies self as resident to patients</p> <p><b>Almost always</b> recognizes simple conflict of interest scenarios</p> <p>Consistently completes medical record- keeping tasks promptly and completely</p> <p>Almost always recognizes limitations and requests help or refers patients when appropriate</p>	<p><b>Consistently recognizes</b> and takes appropriate steps to manage simple conflict of interest scenarios</p> <p>Consistently completes medical record-keeping tasks promptly and completely</p> <p>Consistently acts within limitations and seeks help when appropriate</p> <p><b>Consistently</b> recognizes and takes appropriate steps to manage more complex conflict of interest scenarios</p> <p><b>Assumes leadership</b> and mentoring role in management of more complex conflict of interest scenarios</p> <p>Develops organizational policies and education to support the application of these principles</p>

ICS 4	Organizes clear and accurate non-ophthalmic case presentation with level- appropriate diagnostic and management recommendations	<p>Organizes case presentation for basic ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents focused literature review, including basic science and pathophysiology data where pertinent</p> <p>Effectively presents material to non-physician medical personnel</p> <p>Organizes case presentation for more complex ophthalmic conditions, with diagnostic and management recommendations</p> <p>Presents comprehensive literature review and includes randomized controlled clinical trials and preferred practice guidelines where appropriate</p> <p>Effectively presents educational material to physicians in other specialties</p> <p>Schedules, organizes, and implements case- based and didactic conference program</p> <p>Mentors junior colleagues and critiques their presentations</p> <p>Provides leadership for conference implementation</p>
-------	---	---

**Table 4 .Mapping of PO, CO, EPA, Competency and Sub-competency with level**

		General										
EPA		Program outcomes										Domains and levels of competency
1	History taking & initial assessment	1	2	3	4							MK 1(3),2(3) PC 1(3) PBLI 1(3),2(3),3(3) SBP 1(3) P 1(3),2(3),3(2),4(3) ICS 1(4),3 (3)
2	Vision Testing / Refraction	1	2	3	4		6					MK 1(3),2(3) PC 2(3),3(4),4(3),5(3) PBLI 1,2-(3) SBP 2(3) P 2(3),3(2) ICS 1(4),3(3)



10	Subspecialty Surgeries - Vitreo - Retinal, Antiglaucoma, Keratoplasty, Squint	1	2	3	4	5				9	10	MK 2(3) PC 1(3),2(3),3(4),4(3),5(3) ,6(4),7(2) PBLI 1,2(3) SBP 1(3) P 1(3),3(2),4(3) ICS 1(4),2(3),3(3)
11	Critical appraisal of medical literature, research, medico legal & ethical issues	1	2		4					8		MK 1(3) PBLI 2(3),3(1) SBP 2(3) PROF 4(3) ICS 4(2)

## 8.2 Summative Assessment

### i.e., assessment at the end of training

The summative examination would be carried out as per the Rules given in

### POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

**The Post Graduate examination shall be in three parts:**

#### 1. Thesis:

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the post graduate student to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.

Thesis topic shall be finalised within first six months of joining the course. Thesis shall be submitted at least six months before the Theory and Clinical /Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners. From regulations)

#### 2. Theory Examination:

The examinations shall be organised on the basis of 'Grading' or 'Marking system' to evaluate and to certify post graduate student's level of knowledge, skill and competence at the end of the training.

Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for M.D./ MS shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

**There shall be four theory papers.**

Paper I: Basic Sciences related to Ophthalmology, Refraction & Optics

Paper II: Clinical Ophthalmology

Paper III: Systemic Diseases in Relation to Ophthalmology & subspecialty

Paper IV: Recent Advances in Ophthalmology and Community Ophthalmology

**3. Clinical/Practical and oral/viva voce examination**

**(Total 300 marks) Clinical (Total 200 marks)**

**1 Long case (75 marks)**

History & Clinical examination	25 marks	Interpretation and diagnosis	25 marks
Discussion	25 marks		

**2 Short cases with different problems (50 marks)**

For each case

History, Clinical examination & Diagnosis	25 marks
Discussion	25 marks

**2 fundus Cases (50 marks)**

For each case

Clinical examination & diagnosis	12.5 marks
Discussion	12.5 marks

**1 refraction case (25 marks)**

**Oral/Viva voce (Total 100 marks)**

**Examination shall be comprehensive enough to test the**

**post graduate student's overall knowledge of the subject and shall include:**

- i. Instruments (10 marks)
- ii. Pathology & microbiology charts/specimens (10 marks)
- iii. Drugs (10 marks)
- iv. X-rays, USG/OCT/CT/MRI Scans, etc. (10 marks)
- v. Visual fields and other ophthalmic diagnostic charts (10 marks)
- vi. Clinical, systemic & community ophthalmology (50 marks)

## 9. Blue Print of the Question Paper

### DEPARTMENT OF OPHTHALMOLOGY

### BLUE PRINT FOR THEORY PAPER

### M.S (OPHTHALMOLOGY)

#### Paper I: Basic Sciences related to Ophthalmology, Refraction & Optics

10X10=100 Marks

S.NO	Discipline	Weightage	Marks Allotted	No of questions (10)
1.	Anatomy	20 %	20	2
2.	Physiology	20 %	20	2
3.	Pathology	10%	10	1
4.	Pharmacology	10%	10	1
5.	Biochemistry	10%	10	1
6.	Microbiology	10%	10	1
7.	Clinical Optics and Refraction	10%	10	1
8.	Research Methodology and Statistics	10%	10	1

#### Paper II:

10X10=100 Marks

S.NO	Discipline	Weightage	Marks Allotted	No of questions (10)
1.	Lids, Lacrimal System & Orbit	10%	10	1
2.	Cornea /Conjunctiva/ Sclera/Ocular Surface Disorders	20 %	20	2
3.	Lens	10%	10	1
4.	Glaucoma	20 %	20	2
5.	UVEA	10%	10	1
6.	Retina & Vitreous	20 %	20	2
7.	Pediatric Ophthalmology & Strabismus	10%	10	1

**Paper III: Systemic Diseases in Relation to Ophthalmology & Subspeciality**

**10X10=100 Marks**

<b>S.NO</b>	<b>Discipline</b>	<b>Weightage</b>	<b>Marks Allotted</b>	<b>No of questions (10)</b>
1.	Systemic Ophthalmology	20 %	20	2
2.	Neuro Ophthalmology	20 %	20	2
3.	Ocular & Orbital Trauma	20 %	20	2
4.	Ocular Malignancies	20 %	20	2
5.	Ophthalmic Emergencies	20 %	20	2

**Paper IV: Recent Advances in Ophthalmology and Community Ophthalmology**

**10X10=100 Marks**

<b>S.NO</b>	<b>Discipline</b>	<b>Weightage</b>	<b>Marks Allotted</b>	<b>No of questions (10)</b>
1.	Recent Advances Covering The Entire Clinical Ophthalmology & Refraction and Advances In Surgery	80%	80	8
2.	Community Ophthalmology	20%	20	2

The paper setter can chose to increase the number of questions from a particular discipline (topic) provided all the chapters are covered in the question paper.

## **10. Model Question Paper**

### **PG DEGREE EXAMINATION**

#### **BRANCH III MS OPHTHALMOLOGY**

##### **Paper I: Basic Sciences related to Ophthalmology, Refraction & Optics**

###### **Model Question paper**

Maximum Marks: 100

**Write short essay questions on:**

**(10X10=100)**

1. Describe the anatomy of optic chiasma with diagram.
2. Describe the maintenance of corneal transparency.
3. Discuss about anti fibroblastic agents used in the management of glaucoma.
4. Describe the pathology of thyroid ophthalmopathy
5. Describe the surgical spaces of orbit and their clinical significance.
6. Explain the physiological basis of dark adaptation.
7. Discuss about laboratory investigation of Acanthamoeba keratitis.
8. Discuss the metabolism of human crystalline lens and the changes in cataract.
9. Discuss about theories of accommodation and its related anomalies.
10. Discuss sample size calculation.

**PG DEGREE EXAMINATION**

**BRANCH III M.S OPHTHALMOLOGY**

**Paper II: Clinical Ophthalmology**

**Model Question paper**

Maximum Marks: 100

**WRITE SHORT ESSAY QUESTIONS ON:**

**(10X10=100)**

1. Classify Entropion. Describe the etiopathogenesis, clinical features and management of involutional entropion
2. Describe the etiology, clinical features and management of peripheral ulcerative keratitis
3. Describe the etiology, clinical features and management of congenital cataract
4. Discuss the role of lasers in management of primary open angle glaucoma
5. Discuss the management of Acute Angle closure Glaucoma.
6. Describe clinical features and management of CMV retinitis
7. List the causes for vitreous haemorrhage. Describe the management of post traumatic vitreous haemorrhage
8. Discuss the evaluation of a case of posterior uveitis
9. How will you classify scleritis? Discuss the etiology, clinical features and management of nodular scleritis.
10. Describe the aetiopathogenesis and clinical features and management of congenital esotropia

**PG DEGREE EXAMINATION**

**BRANCH III MS OPHTHALMOLOGY**

**SYSTEMIC DISEASES IN RELATION TO OPHTHALMOLOGY &  
SUBSPECIALITY**

**Model Question paper**

Maximum Marks: 100

**Write short Essay Questions on:**

**(10X10=100)**

1. What are the criteria for CSME? Describe the types and management of diabetic maculopathy
2. Describe the ocular manifestations of tuberculosis.
3. Classify optic atrophy. Explain the pathogenesis and clinical features of various forms of optic atrophy
4. Describe pseudotumor cerebri
5. Discuss the Ocular manifestations of blunt trauma to the eye
6. Explain the patho-mechanism, clinical features and management of blow out fracture of Orbital floor.
7. How will you manage a case of alkali burns to the eye?
8. What are the types of OSSN? Discuss the management options.
9. Discuss the management of anophthalmic socket
10. Describe the aetiology, clinical features and management of perforated corneal ulcer

**PG DEGREE EXAMINATION BRANCH III MS OPHTHALMOLOGY**

**PAPER IV RECENT ADVANCES IN OPHTHALMOLOGY AND  
COMMUNITY OPHTHALMOLOGY**

**Model Question paper**

Maximum Marks: 100

**Write short essay questions on:**

**(10X10=100)**

1. Describe the Express mini- glaucoma shunt
- 2 List the treatment options for keratoconus. Describe Corneal Collagen Cross-linking
3. Discuss the recent advances in the management of dry eye
4. Discuss the role of Femtosecond lasers in Ophthalmology
5. What are the recent advances in IOL design?
6. What are transition spectacles? What are the pros and cons?
7. Discuss low vision aids. Add a note on ARGUS II implant
8. Define blindness. Write a note on corneal blindness in India
9. Discuss the activities of DBCS.
10. Discuss the recent advances in drug dispensing system

## 11. Recommended Reading

### Books (latest edition)

1. Ophthalmic Surgery: Principles and Techniques. Blackwell Science. Albert DM.
2. Principles and Practice of Ophthalmology. Albert DM, Jakobiec. W B Saunders
3. Principles & Practice of Ophthalmology. Gholam A Paymen
4. The Current American Academy of Ophthalmology Basic and Clinical Science Course (13 volumes)
5. Duke Elder's Practice of Refraction. Abrams D. Churchill Livingstone.
6. Retina. Stephen J Ryan:
7. Ophthalmic Ultrasound: Sandra Byrne and Ronald Green.
8. Cornea: Fundamentals, Diagnosis, and Management. Krachmer JH, Mannis MJ, Holland EJ. Mosby Elsevier.
9. Ophthalmology. Yanoff N, Duker JS. Mosby Elsevier.
10. Review of Ophthalmology. Friedman NJ, Kaiser PK, Trattler WB. Elsevier Saunders, Philadelphia.
11. Corneal Transplantation. Vajpayee RB. Jaypee Brothers Medical Publishers (P) Ltd, New Delhi.
12. Fundamentals of Clinical Ophthalmology Series. Coster D. Cornea. Blackwell Publishing Limited.
13. The Contact Lens Manual. A practical guide to fitting. Gasson A, Morris A J. Butterworth Heinemann Elsevier.
14. Steinert's cataract surgery.
15. Shields Text book of glaucoma
16. Smith and Nozik : Uvea
17. Rootman's diseases of the orbit
18. Eyelid, conjunctival and orbital tumors. An atlas and textbook. Shields JA, Shields CL. Philadelphia: Lippincott Williams & Wilkins.
19. Intraocular tumors. An atlas and textbook. Shields JA, Shields CL.
20. Pediatric Ophthalmology. Taylor and Hoyt: Saunders Ltd.
21. Management of Strabismus and Amblyopia. Pratt-Johnson and Tilson: Thieme Verlag.
22. Handbook of Pediatric Eye and Systemic disease. Wright, Spiegel and Thompson.
23. Binocular Vision and Ocular Motility. Theory and Management of Strabismus. Von Noorden GK. Mosby.
24. Surgical Management of Strabismus. Helveston:
25. Strabismus: A Decision Making Approach. Von Noorden and Helveston:
26. Thyroid Eye Diseases. Char DR. Williams and Wilkins, Baltimore.
27. A Manual of Systematic Eyelid Surgery. Collin JRO (ed). Churchill Livingstone, Edinburgh.
28. Refractive Surgery. Agarwal A, Agarwal A, Jacob Soosan. Jaypee.
29. LASIK Complications, Prevention and management. Gimbel HV, Penno EEA. Slack Inc.

30. Management of Complications of Refractive Surgery. Alio JL, AzarDT.Springer.
31. Quality of Vision: Essential Optics for the Cataract and Refractive Surgeon.Holladay JT. Slack Inc.
32. Ocular Pharmacology: Havener
33. Anatomy: Wolff 's Anatomy of the Eye and Orbit
34. Physiology: Adler's Physiology of the Eye
35. Textbook of Ophthalmology (2 volumes). Easty DL, Sparrow JM.Oxford Oxford Medical Publications.
36. The Eye. Basic Sciences in Practice. Forrester JV, Dick AD, McMenamin PG, Lee WR. W B Saunders.
37. A Stereoscopic Atlas of Macular Diseases: Diagnosis and Treatment. GassJDM.
38. Neurophthalmology. Glaser JS. Lipincott Williams & Wilkins. .
39. Clinical Ophthalmic Pathology. Harry J, Misson G. Butterworth/Heinemann.
40. Inherited Retinal Diseases. A Diagnostic Guide. Jimenez Sierra JM, Ogden TE, VanBoemel GB. Mosby.
41. Clinical Ophthalmology. Kanski JJ. Butterworth/Heinemann.
42. ABC of Resuscitation. Colquhoun, M. C., Evans, T. R., Handley, A. J. BMJ Publishing Group.
43. Walsh and Hoyt's Clinical Neuroophthalmology (5 volumes). MillerNR, Newman NJ, Williams and Wilkins.
44. The human eye. Oyster CW Sinauer Associates.Sunderland. Massachusetts
45. Paediatric Ophthalmology. Taylor D. Blackwell Science.
46. Decision Making in Ophthalmology. Van Heuven WAJ, Zwann J. Mosby.
47. Parsons' Diseases of the eye. Sihota and Tandon.
48. Wills Eye Manual
49. International Council of Ophthalmology Residency Curriculum available at <http://www.icoph.org/>

### **Journals**

03-05 international Journals and 02 national (all indexed) journals Survey of Ophthalmology  
 American journal of Ophthalmology Ophthalmology  
 British journal of Ophthalmology Journal of cataract and refractive surgery Indian journal of ophthalmology  
 Journal of clinical and ophthalmic research Delhi journal of ophthalmology

## 12. Annexures

### Annexure-1: Entrust able Professional Activities Assessment

**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY**

Entrustable Professional Activities Assessment Form MS Ophthalmology

Residents Name of the Resident:

UNI No:

#### Levels of competence:

- **Level I:** Knowledge only; can observe
- **Level II(A):** Can assist properly
- **Level II(B):** Can do under strict supervision
- **Level III:** Can do under loose supervision (Entrustability decision to be made based on milestones)
- **Level IV:** Can do independently
- **Level V:** Has expertise to teach others

EPAs	On the day joining	After 1 month	1 <sup>st</sup> Quarter		2 <sup>nd</sup> Quarter		3 <sup>rd</sup> Quarter		4 <sup>th</sup> Quarter		1 <sup>st</sup> Half		2 <sup>nd</sup> Half		3 <sup>rd</sup> Half		4 <sup>th</sup> Half		
	Frist year of the residency										Second year of the residency				Third year of the residency				
	Resident	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty	Resident	Faculty
History taking & initial assessment																			
Vision Testing / Refraction																			
External Examination of the Eye																			
Special Investigation																			

Cataract Surgery & Trabeculectomy (steps)																		
Repair of open globe injuries / Lid tear																		
Minor Procedures																		
Oculo Plastic & Lid Surgeries																		
Lacrimal sac surgeries																		
Subspeciality Surgeries - Vitreo - Retinal, Antiglaucoma, Keratoplasty, Squint																		
Critical appraisal of medical literature, research, medico legal & ethical issues																		
<b>Signature of the resident</b>																		
<b>Signature faculty</b>																		
<b>Signature of the HOD</b>																		

## Annexure 2: Quarterly Appraisal Form

**SRI BALAJI VIDYAPEETH  
PILLAIYARKUPPAM, PUDUCHERRY – 607 402  
DEPARTMENT OF OPHTHALMOLOGY**

### Postgraduate Students Appraisal Form

Name of the PG Student: .....

UNI No: .....

Period of Training FROM ..... TO .....

Sr. No.	PARTICULARS	Not Satisfactory			Satisfactory			More Than Satisfactory			Remarks
		1	2	3	4	5	6	7	8	9	
1.	Journal based / recent advances learning										
2.	Patient based /Laboratory or Skill based learning										
3.	Self-directed learning and teaching										
4.	Departmental and interdepartmental learning activity										
5.	External and Outreach Activities / CMEs										
6.	Thesis / Research work										
7.	E-portfolio Maintenance										

---

\*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

Signature of assesse

Signature of the faculty

Signature of HOD

**Annexure 3: Multisource feedback**  
**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY**  
**EVALUATION SHEET FOR POSTGRADUATE CLINICAL WORK**  
(To be completed by Patient/Relative)

Name of the Resident: ..... UIN No.: .....

Name of the Respondent: ..... Date: .....

Sl. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1.	Shows a caring attitude to patients			
2.	Is respectful towards patients			
3.	Shows no prejudice in the care of patients			
4.	Communicates effectively with patients			
5.	Empathetic counselling of patient's relatives			
6.	Effectively counsels patients preoperatively and postoperatively			
7.	Takes religious and social considerations into account when making decisions			
8.	Allows patients to make an informed decision regarding management and allows them to express their doubts and concerns			
9.	Takes financial situation of patient into consideration when making decisions			
10.	Discusses each step of the management with the patient and relatives			
		Total score:		
General Comments:				
Highlights in performance (strengths)				
Possible suggested areas for improvement (weakness)				
		Signature:		

**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY EVALUATION SHEET FOR**  
**POSTGRADUATE CLINICAL WORK**  
 (To be completed by Peer)

Name of the Resident: .....

UIN No.: .....

Name of the Respondent: .....

Date: .....

Sl. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1.	Shows a caring attitude to patients			
2.	Is respectful towards patients			
3.	Shows no prejudice in the care of patients			
4.	Communicates and counsels effectively patients and patient's relatives			
5.	Critically evaluates and uses patient outcomes to improve patient care			
6.	Communicates effectively with colleagues			
7.	Communicates effectively with other health professionals			
8.	Acknowledges gaps in personal knowledge and expertise, and frequently asks for feedback			
9.	Regularity and punctuality of attendance			
10.	Works constructively in the health care system			
		Total score:		
	General Comments:			
	Highlights in performance (strengths)			
	Possible suggested areas for improvement (weakness)			
	Signature:			

**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY EVALUATION SHEET FOR**  
**POSTGRADUATE CLINICAL WORK**

(To be completed by Nurse / Technician / Other Health Professionals)

Name of the Resident: ..... UIN No.: .....

Name of the Respondent: ..... Date: .....

Sl. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1.	Shows a caring attitude to patients			
2.	Is respectful towards patients			
3.	Shows no prejudice in the care of patients			
4.	Communicates effectively with patients			
5.	Empathetic counselling of patient's relatives			
6.	Communicates effectively with colleagues			
7.	Communicates effectively with other health professionals			
8.	Allows them to express their doubts or concern regarding clinical decisions			
9.	Proper and complete documentation			
10.	Works constructively in the health care system			
		Total score:		
	General Comments:			
	Highlights in performance (strengths)			
	Possible suggested areas for improvement (weakness)			
	Signature:			

**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY**  
**EVALUATION SHEET FOR POSTGRADUATE CLINICAL WORK**

(To be completed by respective Unit Head)

Name of the Resident: ..... UIN No.: .....

Name of the Faculty: ..... Date: .....

Sl. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1.	History taking and physical examination			
2.	Regularity and punctuality			
3.	Ability to identify patient's problems			
4.	Patient management skills			
5.	Procedural skills / range of clinical technical skills			
6.	Self directed learning			
7.	Communication skills			
8.	Proper and complete documentation			
9.	Relationship with peers			
10.	Works constructively in the health care system			
		Total score:		
	General Comments:			
	Highlights in performance (strengths)			
	Possible suggested areas for improvement (weakness)			
	Signature:			

## Annexure 4: Work Place Based Assessment (WPBA)

**SRI BALAJI VIDYAPEETH**

**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**

### DEPARTMENT OF OPHTHALMOLOGY EVALUATION SHEET FOR POSTGRADUATE (WPBA)

Name of the Resident: ..... UIN No.: .....

Name of the Faculty : ..... Date: .....

Designation : .....

No. of Mini-CEX Observed: 

0	1	2	3	4	5-9	>9
---	---	---	---	---	-----	----

Clinical 

OPD	IP	A&E
-----	----	-----

 Setting New / Follow up:

Clinical problem:

Complexity of the case:

Low	Avg.	High
-----	------	------

No. of times patient seen by the student 

0	1	2	3	4	5-9	>9
---	---	---	---	---	-----	----

	Below expectation	Borderline	Meet expectation	Above expectation	Not observed
History taking skill					
Physical examination skill					
Communication skill					
Clinical judgement					
Professionalism					
Organisational efficiency					
Overall clinical care					
Anything good:			Suggestions for improvement:		
<b>Agreed upon action:</b>					
<b>Signature of the Faculty:</b>			<b>Signature of the resident:</b>		

**Annexure 5: Journal Club**  
**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY**  
**EVALUATION SHEET FOR POSTGRADUATE JOURNAL CLUB**

(To be marked individually by each faculty)

Name of the Resident: .....

UIN No.: .....

Name of the Faculty: .....

Date: .....

S. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1	Relevance of article chosen			
2	Identifies the problem addressed in the paper			
3	Completeness of presentation			
4	Analyses and gives comments on methodology and statistics			
5	Brief summary of results			
6	Comparison of work with other published work			
7	Merits and demerits of the paper			
8	Summary and take home message			
9	Time management			
10	Overall performance – relevant answers to questions, attitude during presentation and confidence			
		Total score:		
	General Comments:			
	Highlights in performance (strengths)			
	Possible suggested areas for improvement (weakness)			
		Signature:		

**Annexure 6: Feedback for Seminar**  
**SRI BALAJI VIDYAPEETH**  
**PILLAIYARKUPPAM, PUDUCHERRY – 607 402**  
**DEPARTMENT OF OPHTHALMOLOGY**  
**EVALUATION SHEET FOR POSTGRADUATE SEMINAR**

(To be marked individually by each faculty)

Name of the Resident: .....

UIN No.: .....

Name of the Faculty: .....

Date: .....

S. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1	Introduction of subject and its importance / Objectives			
2	Completeness of presentation			
3	Cogency of presentation			
4	Consulted all relevant literature			
5	Use of audio-visual aids			
6	Understanding of subject			
7	Summary and take home message			
8	Cites appropriate references / suggests further reading			
9	Time management			
10	Overall performance – relevant answers to questions, attitude during presentation and confidence			
		Total score:		
1	General Comments:			
2	Highlights in performance (strengths)			
3	Possible suggested areas for improvement (weakness)			
		Signature:		

## Annexure 7: Feedback for Case presentation

SRI BALAJI VIDYAPEETH

PILLAIYARKUPPAM, PUDUCHERRY – 607 402

DEPARTMENT OF OPHTHALMOLOGY

### EVALUATION SHEET FOR POSTGRADUATE CASE PRESENTATION

(To be marked individually by each faculty)

Name of the Resident: .....

UIN No.: .....

Name of the Faculty: .....

Date: .....

S. No.	Criteria to be assessed	Score		
		Below par (1)	At par (2)	Above par (3)
1	Logical order in presentation (History taking)			
2	Cogency of presentation			
3	Accuracy and completeness of general and local physical examination			
4	Other systemic examination			
5	Summarizes the case and analyses the appropriate differential diagnoses			
6	Whether the diagnosis follows logically from history and findings			
7	Investigations required : Completeness of list, relevant order, interpretation of investigations			
8	Management principles and details			
9	Time management			
10	Overall performance – relevant answers to questions, attitude during presentation and confidence			
		Total score:		
	General Comments:			
	Highlights in performance (strengths)			
	Possible suggested areas for improvement (weakness)			
	Signature:			