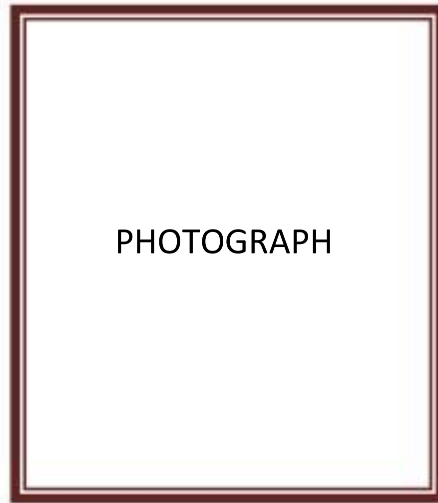
Rawal Institute of Health Sciences

Islamabad

Study Guide & Clerkship Manual

Eye, ENT, Community Medicine

4th Year MBBS



Name: ____

College ID NO: ______________________________________

Class: ____

Batch: ____

STUDENT STUDY GUIDE

FOURTH YEAR MBBS

EYE,ENT AND COMMUNITY MEDICINE

RAWAL INSTITUTE OF HEALTH SCIENCES

ISLAMABAD

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Chief Instructor, ClinicalClerkship	Principal Rawal Medical College	Head, DME

PREFACE

The best way to teach medicine, is to teach on the patients. The idea of introducing clinical clerkship program in 4rth and 5th year MBBS is to expose the students to the patients as much as possible so they can have the real feel of signs and symptoms of different diseases, develop communication skills with the patients, apply their knowledge and be able to learn to manage different diseases. This will in turn make them better doctors and ultimately leading to better patient care. This guide book provides an outline of the whole clerkship program of the current year and will guide the students to build their clinical skills based on sound knowledge more objectively. Students are encouraged to study the subjects extensively utilizing different resources mentioned in these guidelines. Only a sound knowledge will help them become good clinicians as it is said, “The eyes don’t see, what the mind doesn’t know”.

I am extremely thankful to Prof. Azam Zia, Principal Rawal Medical & Dental College, Mr. Khaqan Waheed Khwaja, Chairman RIHS and Ms Saleha Khaqan, Chairperson RIHS, for their guidance and support.

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EYE

Introduction to Ophthalmology Clerkship

Clerkship is full time clinical attachment of 4th year undergraduate student for five weeks. Four days a week (Monday - Thursday), timing 8:00 am Till 2:00 Pm.

Objectives

Objective of this program is to gain the basis competencies by under graduate student that can be applied as a general physician like:

1. Identification of basic ophthalmic pathologies
2. Provide the first line basic eye care in the light of evidence based medicine 3. Identification of cases that can be referred to ophthalmologists

Ophthalmology Team

Teaching Staff	Supportive Staff
HOD & Prof. M. Shakaib Anwar	
Prof. Waseem Akhter	Nursing Staff SaimaMushtaq
Assisstant Professor Erum Yousafzai	Receptionist Mr. SwalehSohail
Post Graduate Resident DrMaham Zahra	Receptionist Mr.Arsalan
Optometrist Miss Noor	

Attendance

Clerkship will start 8:00 am. Attendance will be taken separately for each segment of activities. In case of any segment of activities will be missed, full day absent will be considered.

Activities

8-10 am	Case discussion (PBL)	Ophthalmology tutorial room
10:30 am -12:30 pm	Clinical OPD/OT (TBL)	Ophthalmology OPD RGDH
1-2 pm	Clinical Skills	Ophthalmology OPD RGDH

MINI-CEX (Clinical Evaluation Exercise)

At the end of 2nd week each student will appear in an intermediate assessment, which is meant to high light the deficiencies of each student separately and guide for further improvement. This assessment has the weightage in final assessment score.

Clinical Portfolio

Log book is meant for the evidence for your whole clerkship rotation. It has weightage in your final assessment scores. You need to maintain it throughout your rotation on daily bases.

Final Assessment

At the end of your clerkship whole batch will appear in an OSCE and Viva based assessment. Detailed Weightage of each component is mentioned in your portfolio (Log Book).

STEPS OF CLINICAL SKILL DEVELOPMENT

History Taking

Differential Diagnosis

Competencies for Case Discussions

Clinical Skills

History Taking skills

This sample table can be used to take concise ophthalmic history.

NAME:	AGE:	OCCUPATION:
MARRIED:	SEX:	ROUTE: Outpatient (OPD)/ In patient (IPD/ admitted) or Emergency
PRESENTING COMPLAINT: This lists, in chronological order (newest first), the main complaint(s) (symptoms) that the patient comes to a hospital on a particular day. Most of the presenting complaints are mentioned with their differential diagnosis in next table.		
HISTORY OF PRESENTING COMPLAINT: This part explains the events that led up to the time the symptoms showed up.		
REVIEW OF SYSTEMS: This is a brief over-view of other associated problem the patient might have.		
PAST HISTORY: Any significant history of illness that the patient might have experienced. This might or might not be related to the current illness.		
FAMILY HISTORY: Details about the patient's family, their state of health (or illness).		
PERSONAL HISTORY: This, as the name states, lists personal information about the patient. His occupation, income, addictions (smoking).		
MEDICATIONS: This lists the medicines that the patient has used in the recent past or is still continuing to use.		

EXAMINATION	RIGHT EYE	LEFT EYE
VISUAL ACUITY		
NEAR ACUITY		
TORCH EXAM:		
Brows		
Lids		
Conjunctiva		
Cornea		
Iris		
Lens		
DIGITAL TONOMETRY		
CONFRONTATIONAL VISUAL FIELD		
E.O.M		
REGURGITATION Test		
OPHTHALMOSCOPY Distant Direct: Direct:		
PUPILLARY REACTIONS		
SQUINT* Corneal reflection Cover-Uncover Alternate Cover		
PTOSIS		

INVESTIGATIONS: This part lists the investigations that have been done so far relating to the presenting complaint.

Differential Diagnosis

This component has the differential diagnosis according to the presenting complaints of the patient.

Serial No	PRESENTATION	COMMON DIFFERENTIALS
1	Painless loss of vision (GRADUAL)	1. Refractive errors 2. Cataract (most common senile) 3. Diabetic retinopathy 4. age related macular degeneration (ARMD) 6. Open Angle Glaucoma (most common POAG) 7. Amblyopia (age less than 8 year) 8. Retinitis Pigmentosa (initially loss of night vision) 9. Vit A. Deficiency
2	Painless loss of vision (SUDDEN)	1. Retinal detachment 2. Retinal vascular occlusion (RVO, RAO) 3. Ischemic optic neuropathy 4. Vitreous hemorrhage 5. Optic Neuritis (pain on Extraocular movement)
3	Painful loss of vision (included in D/D of RED EYE)	1. Keratitis/ Corneal Ulcer/ Corneal Erosion 2. Uveitis (Acute Anterior) 3. Angle closure (mostly PACG) 4. Episcleritis&Scleritis 5. Endophthalmitis
4	Watery eye (& OTHER TYPES OF DISCHARGE) (included in D/D of RED EYE)	1. Infectious conjunctivitis (bacterial, viral) 2. Allergic conjunctivitis (++ itching) 3. Foreign body in the eye 4. Dry eye syndrom (included Vit A deficiency) 5. Blepharitis leading to tear film abnormality 6. Lid margin abnormalities (Entropion, Ectropion)
5	Ocular misalignment including lids	1. Non-paralytic squint/ ptosis (Esotropia, Exotropia) 2. Paralytic squint/ ptosis (3rd, 4th, 6th nerves)
6	Swellings & Growths	LIDS: 1. Chalazion 2. Stye 3. Tumors (old age, sun exposure, white skin color) 4. Pre-septal Cellulitis ADENEXA: 1. Dacryocystitis(Acute & chronic) 2.Naso-lacrimal passage obstruction (occupation, hygiene, congenital) CONJUNCTIVA: 1. Pterygium (sun exposure, smoke, dust) 2. Pengicula PROPTOSIS: 1. Thyroid Eye disease 2. Orbital tumors 3. Orbital Cellulitis 4. Rhabdomyosarcoma (Children) Retinal: 1.Retinoblastoma

Competencies for the case discussion

These competencies are to guide the students that must be acquired during this clerkship program, it's not the *to do list*.

Desire competencies

1. History and patient communication
2. Safe and effective clinical examination
3. Formation of differential diagnosis
4. Incorporating evidence based medicine in patient management plans
5. Professionalism

(Professionalism: Respecting colleagues, seniors, patients and attendants. Honest to the duties and responsibilities. Always follow the dress code and decorum of the medical profession.

I: COMPETENCIES FOR REFRACTIVE ERRORS

1. DEFINITIONS
    a. Myopia
    b. Hyperopia
    c. Astigmatism
    d. Presbyopia

2. CLASSIFICATION
    a. Axial
    b. Refractive
    c. Index
    d. Simple & Compound Astigmatism

3. PRESENTATION
    a. Gradual painless loss of vision, improve with pin hole (near or distant)

4. CORRECTION
    a. Spectacles
    b. Contact Lens
    c. Lasers
    d. Surgery

5. SPECIAL CASES
    a. Keratoconus
        1. Definition
        2. Presentation
        3. Correction
            a. Glasses
            b. Contact Lens
            c. Corneal collagen cross linkage with riboflavin (CXL)
            d. Surgery (Keratoplasty)
    b. Pathologic myopia
        1. Definition
        2. Presentation
        3. Correction
            a. Glasses
            b. Contact Lens

II: COMPETENCIES FOR CATARACT

1. DEFINITION & CLASSIFICATION
    a. Onset
        1. Congenital
        2. Acquired
            a. Pre-senile
            b. Senile
    b. Morphology
        1. Cortical
        2. Nuclear
        3. Posterior Sub-capsular
        4. Capsular cataracts
    c. Opacity
        1. Immature
        2. Mature
        3. Hyper-mature
        4. Morgagnian
    d. Mode
        1. Primary (Age Related)
        2. Secondary
            a. Drugs (esp. steroid)
            b. Ocular diseases (Uveitis)
            c. Systemic diseases (Diabetes)
            d. Traumatic
    e. Terminology
        1. Phakic eye
        2. Aphakic eye
        3. Pseudophakic eye
        4. Intra-ocular lens
        5. Biometry
2. PRESENTATION
    a. Gradual, painless loss of vision, one or both eyes
    b. Associated with systemic diseases (DM, Myotonic Dystrophy)
    c. Associated with ocular diseases (Uveitis)
        1. Varying degree of lens opacity
3. EXAMINATION & INVESTIGATIONS
    a. Visual Acuity
    b. Slit Lamp Examination/ Torch Examination
        1. Media Clarity (Cornea, lens, Vitreous)
    c. Fundus Examination
    d. Systemic investigations
        1. Blood sugars, Blood Pressure, Hepatitis profile, cardiac profile(ECG)

4. INTERVENTION
    a. When to intervene
        1. When activities of daily living affected
    b. Step toward management
        1. Biometry
            a. Axial length
            b. Corneal Power (Keratometry)
        2. Surgical procedures
            a. Anesthesia
                a. Topical
                b. Local
                c. General
            b. Procedure
                a. Phacoemulsification with IOL (Treatment of Choice)
                    i. Advantages
                        1. Early wound healing
                        2. Lower astigmatism
                b. Extra-capsular Cataract Extraction with IOL
                c. Intra-capsular Cataract Extraction with AC IOL & without IOL (Aphakia)
5. COMPLICATIONS
    a. Per-operative
        1. Bleeding
        2. Iris Prolapse
        3. PC Rupture
            a. Loss of lens fragment
            b. Vitreous loss
    b. Post-operative
        1. Wound leak
        2. Endophthalmitis
            a. Warning symptoms
                a. Pain
                b. Sudden loss of vision
                c. Red Eye
            b. Management
                a. Culture & Sensitivity of vitreous
                b. Intra-vitreal antibiotics
                c. Oral and Topic Antibiotic
            c. Prognosis
                a. Grave
        3. Posterior Capsular Opacification
            a. Nd:Yag Laser Capsulotomy

6. EXAMINATION OF A PATIENT WITH CATARACT SURGERY
    a. Pseudophakia
        1. Glass like reflex in pupillary area
    b. Aphakia
        1. Deep AC   2. Iris tremulous
        2. Jet black pupillary reflex

III: COMPETENCIES FOR OPEN ANGLE GLAUCOMA

1. DEFINITION & CLASSIFICATION
    - a. Optic neuropathy (Optic Disc Changes) with characteristic VF defects, in which IOP is a risk factor
    - b. Primary & Secondary (only types, not details)

2. PRESENTATION
    - a. Gradual painless loss of vision, bilateral, "silently killer of vision" , initially the peripheral vision
    - b. Patients usually present with moderate to advanced disease

3. MECHANISM OF IOP GENERATION
    - a. Aqueous production & outflow
    - b. Measurement of IOP
        - i. Digital
        - ii. Goldman Applanation
        - iii. Air puff

4. MECHANISM OF GLAUCOMATOUS DAMAGE
    - a. ONH Ischemia
        - i. With Elevated IOP
        - ii. Without elevated IOP (ischemic or re-perfusion injury; NTG)
    - b. Destruction of nerve fiber layer
    - c. Consequent changes in disk and visual field
        - i. Disk notching (loss of NFL in sup + inf quadrant)
            - a. higher density of NF entering the disk
        - ii. Visual Field defects
            - b. Correspond to areas of NFL loss
            - c. In Bjerrum's area (arcuate NFs)
                - i. Para-central scotoma
                - ii. Arcuate scotoma
                - iii. Double arcuate scotoma
                - iv. Tunnel vision

5. DIAGNOSTICS
    - a. Evaluation of Visual Field
        - i. Confrontational
        - ii. Automated perimeters
    - b. Evaluation of Disk
        - i. Slit lamp with fundus lens
        - ii. Automated using OCT/ HRT
            - a. Cup-Disk Ratio; above .4; with notches suspicious
    - c. Evaluation of IOP
        - i. Digital
        - ii. Applanation (normal Range 12-21 mm Hg)

6. MANAGEMENT

a. Achieve target pressure

i. No further damage occurs

ii. Customized for each patient

iii. Based on VF findings or Disk changes

b. Medical management

i. Aqueous suppressants

ii. Aqueous outflow modifiers

a. Single drug

b. Combination drugs

iii. Adverse effects & contra-indications

a. beta-blockers (asthma, heart blocks)

b. CAI (Sulpha allergy)

c. Prostaglandins (inflammatory/ ACG)

c. Surgery

i. Failure of medical therapy

a. Compliance (Cost, frequency)

b. Escalating damage

IV: COMPETENCIES FOR ANGLE CLOSURE

1. DEFINITION

a. Increase in IOP due to aqueous drainage block because of shallow Angle

2. PRESENTATION

a. Sudden, painful loss of vision with a red eye.

b. Hazy/ edematous cornea

c. Shallow AC

d. Mid-dilated non-reactive pupil

e. Circum-corneal congestion

3. MECHANISMS

a. Push factors

i. Phacomorphic glaucoma

ii. Small eye (hypermetropia; Primary ACG)

b. Pull factors

ii. Anterior uveitis (peripheral anterior synechiae)

iii. NVG

4. IMMEDIATE MANAGEMENT

a. Lower IOP

i. Hyper-osmotic agents (Oral, IV; *caution DM; CCF)

ii. Topical pilocarpine, b-blockers, steroids, CAI

iii. Oral analgesics, anti-emetics

iv. Oral CAI

b. Perform YAG laser Peripheral Iridectomy in BOTH Eyes!

5. LONG TERM MANAGEMENT

a. Monitor IOP after Peripheral Iridectomy

i. If IOP in control, continue monitoring by follow-up

ii. If IOP is high start with medical therapy

a. Pilocarpine = still in use

b. Other drugs

iii. If IOP is refractory do trabeculectomy

6. SURGERY

a. General concept

i. Filtration surgery

ii. Many complication for a simple procedure

b. Refractory AC; (NVG)

i. Trab might not work

a. Trab with MMC

b. Valves (basic idea)

V: COMPETENCIES FOR ARMD & RETINITIS PIGMENTOSA

ARMD:

1. DEFINITION

a. Age related changes in the macula leading to deterioration of vision

2. PATIENT PRESENTATION

Gradual, painless loss of vision at ages beyond 60.

DRY: Drusens with pigmentary atrophy

WET: CNVM (grayish-green membrane) with or without hemorrhage.

3. MECHANISM

a. DRY0

i. Concept of Drusen formation

a. Accumulation of lipofuscin like material due to metabolism of photoreceptors & abnormal function of RPE

ii. Change in anatomy of fovea (hypo and hyperpigmentatio)

iii. “morphed” appearance of objects

b. WET (concept)

i. Choroidal ischemia

ii. Neo-vessel formation

iii. break through bruch’s membrane (weakened due to age)

iv. Subretinal CNVM

4. INVESTIGATION

a. Amsler grid (take one*)

i. Micropsia

ii. Macropsia

iii. Scotomas

iv. Morphed objects

b. FFA

c. OCT

5. MANAGEMENT

a. DRY

i. Nutrient support (Anti-Oxidant)

b. WET

i. Anti-VEGF

RETINITIS PIGMENTOSA:

1. DEFINITION

a. Hereditary disorders that affect the photoreceptors (rods) and retinal pigment epithelium (RPE)

2. PATIENT PRESENTATION

a. Night blindness.
b. Visual field constriction
c. Fundus shows RPE hypertrophy as 'bone spicules'

3. MECHANISM

a. Progressive photoreceptor dysfunction and death
i. Apoptosis

4. INVESTIGATION

a. ERG (Concepts)
b. Fundus Exam
i. Bone spicules
ii. Pale 'waxy' disk (photoreceptor death)
iii. Thin vessels (photoreceptor death -> Nutritional requirement)

5. MANAGEMENT

a. Patient Education (genetic Counseling)
b. Low Vision Aids

VI: COMPETENCIES FOR DIABETIC RETINOPATHY

1. DEFINITION

Changes in retina due to microangiopathy of diabetes

2. PATIENT PRESENTATION

a. Usually gradually worsening vision, this is painless, bilateral but can be asymmetrical.
b. At times sudden clouding of vision, which is painless, usually unilateral with objects appearing "red" (vit. hge)
c. At times as above, with severe visual loss (vascular occlusion)
i. At-least micro-aneurysms
ii. Hard-exudates
iii. dot-blot and flame shaped hges
iv. New vessels, Iris neo-vascularization and NVG

3. MECHANISM & CHAIN OF EVENTS

a. Loss of pericytes -> abnormal dilation of vessels (micro-aneurysms) -> hemorrhage & transudation (dot+ blot & flame from abnormal vessels) & formation of hard exudates -> Ischemia ->transient cotton wool spots.
b. exudates cause edema of the retina
i. In macular area affect central vision (CSME)
c. Ischemia causes new vessel formation
i. At disk
ii. Elsewhere
iii. New vessels grow into vitreous with fiber support
d. New vessels bleed -> Vitreous hemorrhage
e. Vitreous hemorrhage can cause traction on retina and detachment
f. detachment can also occur due to fibro-vascular growth in vitreous

4. CLASSIFICATION

a. Non-proliferative diabetic retinopathy

i. At-least micro-aneurysms to less than new vessels

a. Mild B. Moderate C. Severe

b. Proliferative diabetic retinopathy

i. New vessels at disk or elsewhere

ii. Iris neo-vascularization

5. INVESTIGATIONS

a. Blood glucose levels (HBA1C)

b. FFA

i. Concept (retinal blood flow & its changes)

c. OCT (Retinal thickness/ macular edema)

6. MANAGEMENT

a. CONTROL OF DIABETES IS OF PARAMOUNT IMPORTANCE

b. For Diabetic Macular edema

i. Laser (focal/ grid)

ii. Anti-VEGF

c. For New Vessels

ii. Laser (PRP)

iii. Anti-VEGF

7. COMPLICATIONS

a. Vitreous hemorrhage

i. from weakened vessel walls due to AS or dilation. Everything seems red

b. Vascular Occlusion

ii. Secondary to AS.

c. NVG

i. Retinal ischemia leading Iris Neovascularization

d. Tractional Retinal Detachment

VII: COMPETENCIES FOR KERATITIS

1. DEFINITION & CLASSIFICATION

a. Inflammation of the cornea

i. Infectious

ii. Non-infectious (usually near the limbus)

2. PRESENTATION

a. Sudden, painful, loss of vision with a red eye. Usually associated with trauma, CL wear, Immuno-compromised state

i. Circum-corneal congestion

ii. Corneal ulcer* (none in H'e, Nisseria, H'influenza with infiltration)

iii. Corneal thinning and even perforation

iv. Hypopion

v. Associated signs

a. Decreased sensations (HZO)

b. Pustule lesions on face; CN V (HZO)

3. MECHANISM
    a. Invasion of ocular tissue by microbes

4. ETIOLOGICAL AGENTS
    a. Bacteria
    b. Fungi (h/o trauma with vegetative matter)
    c. Viruses (usually HZ; immuno-compromised state)
    d. Protozoa (CL use)

5. MANAGEMENT
    a. Obvious viral
        i. Dendritic ulcer
        ii. HZO signs
            a. Acyclovir 800mg 5 times a day for 14 days
    b. Others
        i. Stop all treatment, if any is taken
        ii. Scrap and swab
            a. Culture
            b. Sensitivity
            c. KOH for fungi
        iii. Start broad spectrum antibiotic &cycloplegic
            a. No anti-fungals till proven
        iv. Review with C/S report
            a. Continue treatment if condition improves
            b. Alter if worsening in light of C/S report
        v. Continue meds 3 days after infiltration clears

6. COMPLICATIONS
    i. Corneal thinning/ perforation
        a. Amniotic membrane graft
        b. Conjunctival graft
        c. Bandage contact lens
    ii. Corneal opacity
        a. Keratoplasty

VIII: COMPETENCIES FOR ANT. UVEITIS

1. DEFINITION & CLASSIFICATION
    i. Inflammation of the uveal tract
    ii. Divided into 3 entities based on anatomical landmarks
    iii. Classified as
        a. Granulomatous or Non-granulomatous
        b. Acute or Chronic
    iv. Strong association with systemic diseases & HLA
        a. Ankylosing spondylitis (AS)
        b. IBD
        c. Arthritis & urethritis (reactive arthritis)
        d. Psoriasis
        e. Granulomatous type associated with TB; Syphilis
f. CHRONIC: Associated with JIA
    v. Most cases are idiopathic

2. PRESENTATION

i. Sudden painful loss of vision with a red eye (Acute)

ii. Chronic presents with gradual loss of vision with minimal symptoms

iii. Presentations:

a. AS presents as unilateral disease which can skip between two eyes
b. IBD, Psoriasis can present with bi-lateral disease
c. JIA usually associated with bilateral disease
d. Co-existing TB; syphilis is a clue to Dx
e. Most cases are idiopathic

iii. ACUTE

a. Circum-corneal congestion
b. Keratic Precipitates KPs (either mutton-fat for granulomatous)
c. Anterior chamber flare and cells (cells indicate active disease)
d. Small, non-reactive & irregular pupil (post. synechiae)
e. Anterior synechiae formation
f. Sterile hypopion in case of severe reaction
g. Rise in IOP depending on degree of CB inflammation vs angle closure

iv. CHRONIC

a. Mild to no symptoms of pain and red eye
b. Might have acute on chronic presentations

c. Patient presents when the vision has deteriorated due to cataract formation

3. MECHANISM

i. Anterior chamber inflammation leading to
ii. Pathological changes in acute inflammation

a. Cells & flare (exudation
b. Keratic Precipitates (KPs)
c. Sticky iris produces ant. & post. synechiae
d. IOP is interplay between inflammation & angle closure

4. ETIOLOGY

Listed above (mostly idiopathic)

5. MANAGEMENT

i.First attack, no investigations only treat (idiopathic)

a. Steroids (or alternate immuno-suppression)

i. Route usually topical

ii. Can be oral or sub. Conjunctival in case of severe infection

b. Cycloplegics

ii. Think of a possible link between a systemic disease and ant. uveitis in case of a first attack

iii. Recurrent attacks. Investigate

a. If symptoms point to a specific etiology:

i. Back ache ->AS -> X-ray cervical and LS-spine
ii. GIT disturbances ->Barium
iii. Infections

a. TB -> CXR; AFB
b. Syphilis -> FTS-AB; VDRL

iv. Young girls with joint pains -> RA factor; X-ray
v. Connective tissue disease ->ANA; ANCA.

6. COMPLICATIONS
- a. Therapy
  - i. Steroids
    - a. Posterior Sub-capsular cataract
    - b. Glaucoma (open angle)
- b. Disease
  - i. Cataract (inflammation in the anterior chamber)

ii. Glaucoma (interplay between synechiae and ciliary body involvement & drug use)

IX: COMPETENCIES FOR CONJUNCTIVITIS, EPISCLERITIS& SCLERITIS

1. DEFINITION & CLASSIFICATION
- a. Inflammation of the conjunctiva
  - i. Non-Infectious
    - a. Allergic
    - b. Following chemical trauma
  - ii. Infectious
    - a. Bacterial
    - b. Viral
    - c. Spirochete (trachoma)
- b. Episcleritis
  - i. Inflammation of episclera
    - a. nodular
    - b. diffuse
- c. Scleritis
  - i. Inflammation of sclera (Necrotizing or Non-Necrotizing)
    - a. Focal (which can be flat or nodular)
    - b. Diffuse

2. PRESENTATION & MANAGEMENT: CONJUNCTIVITIS

ALL TYPES PRESENT WITH A DIFFUSELY CONGESTED EYE!
- a. Non-infectious Conjunctivitis
  - i. Allergic
    - a. Itchy eye
    - b. Mucoid discharge (eiosinophils)
    - c. Papillae
    - d. Seasonal variation OR discrete allergen(s)
      - i. Anti-histamines with mast cell stabilizers
      - ii. Steroids for acute exacerbations
        - a. Counsel steroid use

iii. May lead to keratoconus if excessive rubbing continues from young age

iv. Avoid allergens as much as possible

v. Dark glasses

  - ii. Chemical trauma
    - a. Specific history of chemicals
      - i. Acid
        - a. Forms a crust, no cornea perforation
      - ii. Alkali
        - b. Eats, causes cornea perforation
    - b. Wash with copious amounts of clean water
    - c. Refer to an ophthalmologist <u>after</u> washing

b. Infectious

i. Bacterial

a. Neo-natal

i. Neisseria gonorrhoeae

ii. purulent discharge with sticky eye

iii. Can cause extensive damage iv. Topical antibiotics

v. I/M Cephalosporin + topical drugs

b. Children & Adult

i. Purulent discharge

ii. Sticky Eye

iii. Other eye involvement in 2 days

iv. Broad spectrum antibiotic (Chloremphenicol)

v. Avoid Chloremphenicol in children *bone marrow suppression

ii. Viral

a. “Pink” rather than a “red” eye

b. Profuse watery discharge

c. Seasonal out breaks (epidemics)

d. 2nd eye involvement in 5 days

i. Supportive treatment

a. Cold compresses

b. Anti-histamines

c. Decongesents

ii. Bacterial prophylaxis

iii. Spirochete (now rare; once sight threatening)

i. Trachoma: Poor hygiene

a. Chlamydia trachomatis serotypes A-C

i. Follicular conjunctivitis upper lid

ii. Limbal follicles

iii. Muco-purulent discharge

iv. Scarring of cornea, conjunctiva due to entropion formation

v. rlt’s line (scarring of lid conjunctiva)

vi. Herbert’s pits (scarring of limbal follicles)

vii. 3- to 4-week course of oral tetracycline

a. Tetracycline 1 g/day

b. OR Doxycycline 100 mg/day

c. OR oral erythromycin.

d. WITH topical tetracycline or erythromycin ointment is used twice a day for 5 days each month for 6 months.

b. Adult Inclusion conjunctivitis

i. Chlamydia trachomatis serotypes D-K

ii. transmitted venereally or from hand-to-eye contact

iii. Chronic follicular conjunctivitis

iv. Muco-purulent discharge

v. Cervicitis (F) or urethritis (M) common

vi. Oral Doxycycline 100 mg twice a day

3. PRESENTATION & MANAGEMENT: EPISCLERITIS

a. Presents as a nodule or diffuse episceral inflammation

i. Conjunctival vessels appear normal

ii. Vessels blanch with vaso-constrictors

a. differentiates from scleritis

iii. Might be associated with

a. Dry eyes/ Blepharitis

b. Systemic connective tissue diseases

b. Idiopathic and self-resolving but resilient

i. Accelerate recovery with

a. Topical steroids

b. Topical NSAIDs

c. Lubricants (co-existing dry eyes)

ii. Look for associated systemic features

4. PRESENTATION & MANAGEMENT: SCLERITIS

a. Presents as U/L, B/L alternating inflammation of sclera

a. Focal (nodular/ flat) or Diffuse

b. Either type can be Necrotizing or Non-Necrotizing

i. Necrotizing -> White areas showing avascularity. Pain ++++

a. EXCEPTION:Scleromalaciaperforans is a type of painless necrotizing scleritis that typically occurs in women with a long-standing history of rheumatoid arthritis

i. Yellow nodules (like rheumatoid nodules)

b. Necrosis -> thinning -> perforation

ii. Non-Necrotizing: Pain ++

i. Deep tissue inflammation (eye is violaceous)

ii. Conjunctival &Episcleral vessels engorged

b. Management:

a. Immune suppression

b. Thinning / Perforation

i. Grafting

5. MISCELLANEOUS CONDITIONS

a. Giant papillary conjunctivitis

i. Contact lens wearers

ii. Discontinue wear till resolution

a. Mast cell stabilizers

b. Enzyme system for lens cleaning

b. Toxic follicular conjunctivitis

a. Topical drugs

b. Cosmetics

c. Causes a “trachoma” like reaction minus Herbert’s pits

d. Discontinue use of drugs and/or cosmetics

X: COMPETENCIES FOR RETINAL DETACHMENT

1. DEFINITION AND CLASSIFICATION

a. Separation of the neural retina from the retinal pigment epithelium

b. Types

a. Rhegmategenous

b. Tractional

c. Exudative

2. ETIOLOGY

Rhegmategenous (tear)

a. Requirements of a Rhegmategenous detachment

i. Tear or hole formation

ii. Fluid to move through the tear (liquefied vitreous)

iii. Separation of retinal layers

b. Tear in the neural retina

i. Usually peripheral (thin retina)

ii. Associated with:

a. PVD (Vitreous traction); Old age (tear)

b. Trauma (tear)

c. Pathologic myopia (thinned retina) (hole)

d. Idiopathic (holes; pre-existing)

e. Systemic diseases (Marfan's)

i. Conn. Tissue anomalies

c. Liquefied vitreous

i. Pathologic myopia (degeneration of vitreous)

ii. Age related degeneration of vitreous (PVD)

d. Separation

i. Degree of separation dependent on:

a. Location & number of tear(s)/ hole(s)

b. Nature of vitreous

Tractional (less common)

a. Formation of traction bands in the vitreous

i. Vitreous inflammation

ii. Diabetes

b. Bands contract leading to detachment

c. At times bands can cause a tear formation and lead to rhegmatagenous detachment

Exudative (even less common)

a. Accumulation of extensive amount of fluid in sub-retinal space (between neural and pigment retina)

b. Usually associated with long standing malignant HTN

i. Phaeochromocytoma

c. "Shifting" detachment. The detachment shifts as the patient changes posture (movement of fluid)

3. PRESENTATION

Rhegmatagenous

a. Curtain like sudden, painless loss of vision

b. Associated with

i. flashes (vit. traction)

ii. floaters (pigment OR blood)

c. Associated features of trauma

Tractional

a. Curtain like loss of vision

b. Associated with findings of systemic disease or pre-existing ocular disease

c. Other presenting features

i. flashes

ii. floaters

Exudative

a. Loss of vision that tends to "shift"

b. Associated symptoms/ signs of systemic ailments

4. PRINCIPLES OF MANAGEMENT

a. Rhegmatagenous (external and internal approaches)

i. Remove fluid

a. Via an external opening

b. Via the hole/ or tear

ii. Seal hole/ tear

a. Externally by cryo

b. Internally by laser

iii. Provide tamponade to healing retina
a. Externally by band/ buckle
b. Internally by gas or fluids
iv. Provide prophylaxis for other eye (pathologic myopia)
a. “barrier” laser at peripheral retina
b. Tractional
i. Release bands
a. Internally by vitrectomy
ii. Rhegmatagenous RD management
c. Exudative
i. Manage underlying condition

5. COMPLICATIONS
a. Loss of vision
b. Loss of eye (phthisis)

XI: COMPETENCIES FOR VASUCLAR OCCLUSION

1. DEFINITION & CLASSIFICATION
a. Occlusion of central or branch retinal vasculature (arteries and veins)
b. Classification
i. Arterial
a. Central
b. Branch
ii. Venous
a. Central
b. Branch

2. ETIOLOGY
a. Arterial Occlusion (Central or Branch)
i. Atherosclerosis
ii. Embolic
iii. Thrombotic

b. Venous Occlusion
i. Central
a. AS in the Central Artery
b. Malformations (rare)
c. Hypercoagulable states?
d. Thrombus
ii. Branch
a. At Arterio-venous crossing
i. Common adventia
ii. AS in arteries compress veins
b. Local Inflammations (rare)
3. PRESENTATION
a. Central Occlusions
i. Sudden painless loss of vision
a. More in arterial occlusion
b. Varying in venous occlusion
b. Branch Occlusions
i. Sudden painless loss of visual field
ii. Central vision effected if
a. Macular vessels affected
b. fluid accumulation in macula (venous occlusion)

c. SIGNS
a. Central Venous Occlusion
i. “Red” infarct (blood comes in, but can’t be drained)
ii. “Battle field” fundus
a. Scattered hemorrhages all over the retina
b. Hard exudates
iii. Dilated tortuous veins (back pressure)
iv. Cotton-wool spots
b. Branch Vein Occlusion
i. As above but in the quadrant of the occluded vein

c. Central Retinal Artery
i. “White” infarct (blood can’t come in)
ii. Pale fundus with thinned arteries and edematous retina (“one” large cotton wool spot)

4. MANAGEMENT
a. Boils down to preventing other eye from going blind.
i. Manage underlying etiology
b. Macular edema in vein occlusion (if affecting central vision)
i. Steroids
ii. Lasers (branch vein only)
iii. Anti-vegf

5. PROGNOSIS
a. Arterial occlusions usually have a grave prognosis
b. Venous occlusion depends on degree of closure and mac. Edema

6. COMPLICATIONS
a. Venous
i. Neo-vascularization of the retina and iris
ii. NVG
b. Arterial
i. Neo-vascularization (rare)

XII: COMPETENCIES FOR OPTIC NEURITIS

1. DEFINITION & CLASSIFICATION
a. Inflammation of the optic nerve (infectious & non-infectious)
b. Classification
i. Papillitis: Inflammation of the optic nerve head
ii. Retro-bulbar ON: Behind the optic nerve head

2. ETIOLOGY
a. Infectious
i. Viral
b. Non-infectious
i. MS
ii. Optic neuritis can be the first sign of MS
iii. Almost 50% of patients who have optic neuritis go on to develop MS

3. PRESENTATION
a. Sudden painless loss of vision.
b. Visual loss is usually severe down to PL

c. Loss of color vision
d. Loss of contrast sensitivity
e. RAPD
f. Vague complaints of pain on eye movement (retro bulbar type)
g. Examination
i. Papillitis: inflamed, congested optic nerve head
ii. Retro bulbar: Normal looking fundus

4. INVESTIGATIONS:
a. MRI
i. For signs of MS

5. MANAGEMENT
a. Optic Neuritis Treatment Trial (ONTT)
b. 3 days I/V followed by 11 days oral with 3 days taper
c. Alternate: Avonex
d. Attacks can recur and the treatment for recurrence is the same

6. COMPLICATIONS
a. Visual deprivation due to optic atrophy

XIII: COMPETENCIES FOR LIDS

1. DEFINITION & CLASSIFICATION
a. Ptosis: Abnormally lower position of the upper lid
i. Congential
ii. Acquired
a. Myogenic
b. Neurogenic
c. Mechanical
d. Senile
b. Ectropion: Outward turning of lid margin
i. Congenital
a. Short skin
ii. Acquired
a. Cicatricial
b. Spastic
c. Senile
c. Entropion: Inward turning of lid margin
i. Congenital
a. Short lower lid retractor defect
ii. Acquired
a. Cicatricial
b. Paralytic
c. Senile
d. Chalazion: Non-infectious granulomatous swelling of meibomian gland
e. Internal hordeolum: Infection of meibomian gland
f. Stye: Infection of hair follicle
g. Malignant tumors: BCC, SCC, SGC

2. PRESENTAITON
Ptosis
a. Complete or partial obscuration of the palpebral fissure
b. Amblyopia in congenital ptosis
i. Lack of lid crease
ii. Poor levator function
c. High arched brow in senile ptosis

d. Associated CN III palsy signs in paralytic ptosis
e. Associated signs of MG in myogenic ptosis

Ectropion
a. Out turned lower lid -varying degrees
b. Congested palpebral conjunctiva
c. Watering
d. symptoms of dry eyes
i. Poor blink action
ii. Gritty sensation

Entropion
a. Inward turned lower lid margin -varying degrees
b. Trichiasis
c. Watering and conjunctival congestion
d. Corneal ulcers and opacities

Chalazion/ Internal hordeolum / Stye
a. Chalazion
i. Painless swelling on the lid
ii. Slow growing
b. Internal hordeolum
i. Painful swelling on the lid
ii. Acute presentation
c. Stye
i. Painful swelling on lid margin
ii. Associated with cellulitis of the lid at times
iii. May also be associated with conjunctivitis if the lash is pulled during infected state

d. Malignant Tumors
i. As a nodule, ulcer or thickening of the lids
ii. Can masquerade as a recurrent Chalazion
iii. Common in Caucasians, old age, UV exposure

3. INVESTIGATIONS & MANAGEMENT
Ptosis
i. Levator function
ii. Amount of ptosis
iii. Surgical correction
i. Some levator function
a. Levator resection
ii. Poor levator function
a. Frontalis sling

Ectropion
i. Identify the cause
a. Paralytic
i. Give time with supportive therapy
b. Senile
ii. Shorten the inner layers of the lid

Entropion
i. Identify the cause
a. Spastic
i. Release spasm or its cause
b. Senile
ii. Shorten out layers of the lids

Chalazion

i. Warm compresses

ii. Incision and curettage if “i” fails

iii. Rule out tumors in case of recurrent chalazion in the same place

Internal hordeolum&Stye

i. Systemic antibiotics & analgesics

ii. Topical antibiotics for conjunctivitis prophylaxis in stye

Tumors

i. Excision biopsy

ii. Radiation

iii. Reconstruction

XIV: COMPETENCIES FOR ADENEXAL SWELLINGS

1. DEFINITION & CLASSIFICATION

a. Swelling in the adenexa of the eye

b. Classification

i. Benign

a. Chalazion& Int. Hordeolum

b. Stye

c. Dacryocystitis& its sequelae

d. Congenital NL system block

ii. Malignant

a. Squamous Cell Ca

b. Basal Cell Ca

c. Sebaceous Gland Ca

2. PRESENTAITON & MANAGEMENT

Acquired Dacryocystitis

i. Painful swelling of the lacrimal sac

ii. Purulent output on regurgitation test

iii. Associated with:

a. Poor hygiene

b. Pre-existing blockage

b. Managed by oral antibiotics & analgesics

c. Need reconstruction surgery for blocked passage

i. Site of block by

a. Dye disappearance test

b. Regurgitation test

c. Probing &/or syringing

ii. Dacryo-cysto-rhinostomy (DCR)

a. Passage with lacrimal sac and nose

CongentialNaso-lacrimal-duct block

i. Failure of the canicular system to form after birth

ii. Watering with occasional episodes of infection iii.
Massage at sac area till one year of age

iv. Reconstruction surgery after that

a. Probing &/ or syringing

b. DCR

c. Canalicular bypass (in case of canalicular obstruction

XV: COMPETENCIES FOR OCULAR TRUAMA

1. DEFINITION & CLASSIFICATION

    Damage to the ocular structures with or without visual implications

    b. Classification

        i. Ocular

            a. Foreign body
            b. Chemical
            c. Perforation
            d. hemorrhages

                i. Subconjunctival
                ii. Anterior chamber (Hyphema)

            e. Optic nerve avulsion

        ii. Adenexal

            a. Lid hemorrhage (bruise "black" eye, "shiner")
            b. Lid laceration with or without damage to lacrimal system

        iii. Orbital

            a. Fracture of orbital bones

2. PRESENTAITON & MANAGEMENT

    OCULAR

        i. Foreign body

            a. Presents with a red, itchy & usually watery eye. Fluorescein staining might reveal corneal abrasion or ulcer

            b. Foreign body origin

                i. Metal workers
                ii. Airborne

                    a. Dust
                    b. Insects

            c. Remove foreign body & prescribe a broad spectrum antibiotic. If there is a corneal abrasion, patching maybe beneficial

        ii. Chemical

            a. Presents with an intensely red eye with corneal opacification or even perforation if the chemical is strong enough (usually strong alkalis; acids form slough which prevent perforation. Pain can be present and range from mild to severe, again depending on nature of chemical.

            b. Chemical origin

                i. Industrial
                ii. Household

                    a. Toilet/ floor cleaners
                    b. Cooking (Vinegar, hot oil etc)

            c. Wash continuously with clean water and call in a specialist. DO NOT STOP WASHING till he arrives.

        iii. Perforation

            a. Presents with as a painful red eye usually with varying amount of loss of vision, depending on route of entry and final resting place

b. Perforation origin

i. Metal workers, shrapnel

ii. Household items

a. Knives

b. Pencils, esp. children

iii. Bullets.

c. After an eye exam, start oral antibiotics and analgesics. Order an X-ray or CT (no MRI for magnetic objects). Prepare for surgery.

iv. Hemorrhages

a. Usually associated with blunt trauma, though can accompany other types of trauma as well.

b. Origin

i. Subconjunctival

ii. Anterior chamber (hyphema)

c. Subconjunctival hemorrhages self-resolve. They might be a sign of retro-bulbar hemorrhage (hemorrhage behind the eyeball). It is thus essential to find the posterior limit of the hemorrhage by asking the patient to move the eye

c. Hyphema. Bed rest, with IOP reduction (topical and systemic).May cause very high IOP and subsequent optic nerve damage. Non-clearing hyphema might require surgery.

v. Optic nerve avulsion

a. Rare, secondary to acceleration-deceleration trauma to the face. Presents as sudden loss of vision which can be total blindness (PL-) at presentation.

b. Orbital imaging to visualize extent of damage.

ADENEXAL

i. Lid Hemorrhage

a. Presents with a black eye, if large enough can cause mechanical ptosis. Also called a “shiner”. Technical term is ecchymosis

b. Origin

i. Blunt trauma

c. Self-resolving. Get orbital imaging to rule out secondary fracture of the orbit. If eyeball can be seen, examine for damage as well as extra-ocular movements (to rule out orbital fractures).

ii. Lid Laceration

a. Presents with pain and damage to lids. If it involves medial end of the lids the lacrimal system might be damaged (canaliculi)

b. Origin

i. Trauma with sharp objects

c. Surgical repair with reconstruction of the lacrimal system if damaged.

ORBITAL

i. Fracture of orbital bones

a. Presents with facial trauma with large objects (like cricket balls), as compared to ocular trauma which occurs with small objects (like golf balls). May have varying signs of all forms of trauma listed above, esp. hemorrhages. Specific signs include diplopia (double vision, muscle entrapment), sunken eye (enophtalmos; fat herniation from fractured walls) and lower lid anesthesia (damage to Infra-orbital nerve)

b. Origin

i. Ploy trauma, facial trauma

c. Get orbital imaging to look for fractures.

i. No fractures: look for other forms of damage to the eye

ii. Fracture seen

a. No sunken eye and no diplopia: observe

b. Sunken eye or diplopia: Surgical repair

XVI: COMPETENCIES FOR THYROID EYE DISEASE

1. DEFINITION & CLASSIFICATION

Thyroid orbitopathy (Thyroid Eye Disease), Graves' disease, is an immunological disorder that affects the orbital muscles and fat.Hyperthyroidism is seen with orbitopathy at some point in most patients, although the two are commonly asynchronous. Key features are:

i. Middle-aged adults (30-50 years) are affected most frequently.
ii. The disease is seen in women more commonly than in men, in a ratio of 3-4:1.
iii. It is always a bilateral process but is often asymmetrical.
iv. Multiple muscles are involved simultaneously, most commonly the inferior and medial rectus.
v. Limitation of ocular motility due to:
a. Inflammation.
b. Exophthalmos.
c. Pain.
d. Diplopia.

Classification system (NOSPECS)

	Class Signs
0	No signs nor symptoms
1	Only signs are upper eyelid retraction, lid lag, stare
2	Soft tissue signs and symptoms (edema of lids)
3	Proptosis
4	Extra-ocular muscle involvement
5	Corneal involvement secondary to exposure
6	Sight loss secondary to optic nerve compression

2. PRESENTAITON & MANAGEMENT

i. Self-limited.

a. An active phase of inflammation and progression tends to stabilize spontaneously 8-36 months after onset.

b. Produces symmetrical or asymmetrical proptosis

i. Proptosis causes exposure (inability to close eyelids)

b. Symptoms:

i. foreign-body sensation (exposure)
ii. tearing (exposure)
iii. photophobia (exposure)

c. Signs

i. lid retraction (higher lid level; smyph. Activity) ii
.lid lag (symph. Activity)
iii. Lagophthalmos (incomplete eye closure; proptosis)
iv. Exophthalmos:(proptosis; increase in soft tissue mass)

a. Enlargement of the extra-ocular muscles increased
i. Exophthalmos produces a ‘staring’/ ‘shocked’ gaze
ii. Diplopia (double vision)
b. Orbital fat
i. Exophthalmos produces a ‘staring’/ ‘shocked’ gaze
c. Proptosis can cause:
i. Optic nerve compression (mass effect)
ii. Dry eyes (improper closure/ exposure)

ii. Diagnosis:

i. Eyelid retraction with objective thyroid dysfunction
a. Thyroid dysfunction is seen in 25-50% patients
b. Thyroid hormone levels may be elevated, normal, or even low.

OR

ii. Either eyelid retraction or objective thyroid dysfunction with:
a. exophthalmos
i. Exophthalmos produces
a. Exposure
b. optic neuropathy
i. Compression of optic nerve produces:
a. Loss of vision/ color sensitivity
b. RAPD
c. extra-ocular muscle involvement
i. fusiform muscles on MRI
ii. Muscle involvement produces
a. Exophthalmos
b. Diplopia

iii. Management

a. A referral to endocrinologist is indicated
b. Short term goals
i. Maintain useful vision
a. For Exposure -> Lubrication; Eye lid closure (tape, Tarsorrhaphy)
b. Optic nerve compression -> 100mg/day Prednisolone until optic nerve function normalizes. Consider orbital decompression (see below).
c. Diplopia -> Prisms/ Surgery
c. Long term goals
i. Restore Anatomy of orbit
a. Only when disease is stable
b. Orbital decompression
i. Remove orbital boundaries to make way for excess mass

XVII: COMPETENCIES FOR CELLULITIS

1. DEFINITION & CLASSIFICATION
    - i. Pre-septal Cellulitis: Inflammation of pre-septal lid tissue (anterior to orbital septum).
        - a. Etiology: infection of pre-septal lid tissue
            - i. Source:
                - a. Ocular, sinus infections
                - b. Ocular trauma (with infected material)
            - ii. Common organisms:
                - a. Staph species
                - b. HemophilusInfluenzae

    - ii. Orbital Cellulitis: Inflammation of orbital soft tissue (Vision threatening)
        - a. Etiology: infection of orbital soft tissue (posterior to orbital septum)
            - i. Source:
                - a. Spread of pre-septal cellulitis/ Sinus infections
                - b. Post orbit surgery
                - c. Orbital trauma
                - d. Hematogenous (bacteremia) esp. after dental surgery

2. PRESENTAITON & MANAGEMENT
    - i. Pre-septal Cellulitis:
        - a. Presentation:
            - i. Pain + (not on eye movement)
            - ii. Conjunctival congestion
            - iii. Epiphora (watering)
            - iv. Lid Edema (Chemosis)
            - v. Mechanical Ptosis (due to lid edema)
            - vi. Blurring of vision (Ptosis)

        - b. Management:
            - i. Oral antibiotics & NSAIDs
            - ii. CT-Scan can help differentiate between Pre-septal & Orbital cellulitis

    - ii. Orbital Cellulitis:
        - a. Presentation
            - i. Pain ++++ (also on eye movement)
            - ii. Decreased vision (ptosis, optic nerve compression)
            - iii. Loss of optic nerve function
            - iv. Proptosis
            - v. Limitation of extra ocular movements
            - vi. IOP
            - vii. Lid Edema

            - viii. Mechanical Ptosis
                - b. Associated features (esp. Bacteremia)
                    - i. Fever
                    - ii. Malaise

b. Management

i. Hospitalization (till afebrile, return of normal EOM)

ii. Blood works including cultures

iii. I/V antibiotics (1-2 Weeks)

a. Cephalosporin + Metronidazole therapy

b. If suspected fungal etiology add antifungal therapy

iv. Oral antibiotic therapy (2-3 weeks after I/V therapy)

a. Regime as above

v. Supportive therapy

a. Pressure lowering (If IOP is)

b. NSAIDs

Clinical Skills

Under mentioned are the major clinical skills of ophthalmology each student t must know to implement as a physician in medical OPDs and emergencies:

1. Visual Acuity evaluation (Far & Near)
2. Extra-ocular Movement evaluation
3. Ocular alignment (Corneal reflection & Cover uncover)
4. Pupillary Light Responses assessment
5. Confrontation Visual Field Evaluation
6. Distance direct Ophthalmoscopy
7. Direct Ophthalmoscopy
8. Digital tonometry
9. Regurgitation test
10. Eye examination with torch

General rules for performing and of these tests:
Each method should be performed under following steps to make easy to memories.

1. Greeting & Informed consent
2. Prerequisites
3. Core of the method
4. Description of finding
5. Reassurance & Thanks

Every performance should be with full professionalism and humbleness.
Following are the table of these methods.

VISUAL ACUITY EVALUATION

Greeting/ Introduction & Consent	a)Sits the patient at 6 meters b)Asks the patient to put on distance correction (if any) c)Asks if the patient can see Snellen's chart in patient preferred language (or English) d)Moves patient to appropriate distance if he can't see the chart at 6meters e)Asks the patient to properly close one eye at a time	a)Checks VA in both eyes one at a time b)Uses pinhole if required c)Does Light projection/ Perception if required d)Notifies VA in the prescribed format	Thanks the patient

NEAR ACUITY

Greeting/ Introduction & Consent	a)Gives the patient a near vision chart b)Asks the patient to keep at a distance where he WANTS to read (as opposed to where he CAN) c) Asks the patient to put distant correction on if any d)Asks the patient to read (in his preferred language or English) as far down as possible both eyes at time	a) Notifies near acuity in prescribed format	Thanks the patient

EYE EXAMINATION WITH A TORCH

Greeting/ Introduction & Consent	a)Instructs the patient to gaze at a distant target b)Stands at the side of the patient	a)Examines brows b)Examines lids (open and eyes closed) c)Examines naso-lacrimal area d)Examines conjunctiva by moving the eye ball in 4 quadrants e)Examines cornea f)Examines Iris & pupil (appearance) g)Examines lens & patient status h) Estimates AC depth i)Describes any findings using standard terminology	Thanks the patient

CONFRONTATION VISUAL FIELDS

Greeting/ Introduction & Consent	a)Sits at an appropriate distance b)Adjusts for height c)Asks the patient if he/she can see the target prior to beginning the test	a)Closes appropriate eyes b)Checks the visual field (perimeter and area) c)During testing, asks patient whether the target could be appreciated d)Locates the blind spot (if command was given) e)Makes sure the patient keeps a fixed gaze f)Describes findings	Thanks the patient

REGURGITATION TEST

Greeting/ Introduction & Consent	Instructs patient: a)look at a distance b)Stands at the side c)Asks to dim the lights	Checks: a)direct b)Consensual c)Checks RAPD d) Describes findings	Thanks the patient
Greeting/ Introduction & Consent	a)Warms hands b)Nails are clipped c)Explains to the patient what he is about to do	a)Observes area b)Uses the little finger c)Presses in the right area d)Does not use excessive force e)Describes findings	Thanks the patient

PUPILLARY LIGHT RESPONSE

EXTRA-OCULAR MOVEMENTS

Greeting/ Introduction & Consent	a)Sits at the appropriate distance b)Adjusts for patients height c)Give proper command	a)Checks horizontal gaze b)Checks vertical gaze c)Checks oblique gazes d)Checks Convergence & Divergence e)Checks Saccades (if asked to) f)Makes sure patient is not moving his head g)Describes findings	Thanks the patient

DIRECT OPHTHALMOSCOPY

Greeting/ Introduction & Consent	a)Instructs the patient to look into the distance b)Asks to dim the lights c) sks for patient's distant refractive correction	a)Uses the appropriate side/ hand/ eye b)Starts at an arm's length c)Follows the light into the eye d)Gets close enough to get a view e) Describes findings	Thanks the patient

DISTANT-DIRECT OPHTHALMOSCOPYOCULAR ALIGNMENT

Greeting/ Introduction & Consent	Instructs patient: a)look at a distance b)Asks to dim the lights	a)Uses the correct instrument b)Starts at an arm's length c)Shines light at the bridge of the nose d)Both eyes fall in the illumination field e) Describes findings	Thanks the patient
Greeting/ Introduction & Consent	a)Stands at the side of the patient	a)Performs corneal reflection test b)Performs cover test c)Performs Uncover test d)Observes the right eye for tests 'b' and 'c' e)Describes findings	Thanks the patient

DIGITAL TONOMETRY

Greeting/ Introduction & Consent	a) Warms hands b) Nails are clipped c) Explains to the patient what he is about to do	a)Observes area a)Instructs patient to look down b)Uses the index fingers of both hands correctly c)Compares with the other eye	Thanks the patient

Rawal Institute of Health Sciences
Ophthalmology Clerkship

Week 1 Activities

Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theme: Gradual painless Loss of vision					
8am- 9 am	Case Discussion Refractive Errors Dr. M. Shakaib	Case Discussion Cataract Dr. M. Shakaib	Case Discussion Diabetic Retinopathy Dr. Waseem Akhter	Case Discussion Fundus dystrophies & ARMD Dr. Erum Yousafzai	Clinic/SGD
9am- 10 am					
10 am-10:15 am	Break				
10:15am-12:30pm Clinics	All Clinics/Operation Room	Case Discussion POAG Dr. M. Shakaib	All Clinics/Operation Room	All Clinics/Operation Room	Clinic/SGD
12:30pm-12:45pm	Lunch/Prayer				
12:45pm-2:30pm	Clinical skills Visual Acuity/Near Miss. Noor	Clinical skills Torch exam. Ocular adnexa Dr. Maham	Clinical skills Auto-Refraction /Retinoscopy Miss. Noor	Clinical skills Distant Direct Ophthalmoscopy Dr.Maham	Clinic/SGD

Ophthalmology Clerkship Week 2 Activities					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theme: Sudden painful Loss of vision					
8am- 9 am 9am- 10 am	Case Discussion Keratitis Dr. M. Shakaib	Case Discussion Acute angle closure Dr. M. Shakaib	Case Discussion Uveitis Dr, Waseem Akhter	Case Discussion Scleritis/episcleritis& Conjunctivitis	Clinic/SGD
10 am-10:15 am	Break				
10:15am-12:30pm Clinics	All Clinics/Operation Room	All Clinics/Operation Room	All Clinics/Operation Rom	All Clinics/Operation Room	Clinic/SGD
12:30pm-12:45pm	Lunch/Prayer				
12:45pm-2:30pm	Clinical skills Direct Ophthalmoscopy Dr. Maham	Clinical skills Pupillary light reaction Dr. Maham	Clinical skills Extra ocular movement Dr. Maham	Clinical skills Digital tonometry Dr. Maham	Clinic/SGD

Ophthalmology Clerkship Week 3 Activities					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theme: Sudden painless Loss of vision					
8am- 9 am 9am- 10 am	Case Discussion Retinal Detachment Dr. M. Shakaib	Case Discussion Retinal Vascular Occlusion Dr. M. Shakaib	Case Discussion Optic neuritis & Optic Neuropathies Dr. Waseem Akhter	Case Discussion Retinal tumors (RB) Dr. Erum	Clinic/SGD
10 am-10:15 am	Break				
10:15am-12:30pm Clinics	All Clinics/Operation Room	All Clinics/Operation Room	All Clinics/Operation Room	All Clinics/Operation Room	Clinic/SGD
12:30pm-12:45pm	Lunch/Prayer				
12:45pm-2:30pm	Clinical skills Visual Field Dr. Maham	Clinical skills Revision Dr. Maham	Clinical skills OCT/ Visual field analyzer Dr. Maham	Clinical skills Biometry Dr. Maham	Clinic/SGD

Ophthalmology Clerkship Week 4 Activities					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theme: Swellings & Malposition					
8am- 9 am 9am- 10 am	Case Discussion Lid &Conjuctical Growth Including Tumors	Case Discussion Entropion Ectropion & Ptosis Dr. M. Shakaib	Case Discussion Ocular Misalignments Dr. waseem Akhter	Case Discussion Orbit & TED Dr. Erum Yousafzai	Clinic/SGD
10 am-10:15 am	Break				
10:15am-12:30pm Clinics	All Clinics/Operation Room	All Clinics/Operation Room	All Clinics/Operation Room	All Clinics/Operation Room	Clinic/SGD
12:30pm-12:45pm	Lunch/Prayer				
12:45pm-2:30pm	Clinical skills Ocular Lasers Dr. Maham	Clinical skills Ocular Therapeutics	Clinical skills Ocular Alignments Dr. Maham	Clinical skills Surgical Instruments Dr. Maham	Clinic/SGD

Ophthalmology Clerkship Week 5 Activities					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theme: Epiphora & Trauma					
8am- 9 am 9am- 10 am	Case Discussion Nasolacrimal Duct System & Dry Eyes	Case Discussion Ocular Trauma	OSCE	VIVA	Case Presentations
10 am-10:15 am	Break				
10:15am-12:30pm Clinics	All Clinics/Operation Room	All Clinics/Operation Room	Case Presentation	Case Presentations	Case Presentations
12:30pm-12:45pm	Lunch/Prayer				
12:45pm-2:30pm	Clinical skills NLD system Examination Dr. maham	Clinical skills B-Scan Dr. Maham	Case Presentations	Case Presentations	Case Presentations

<u>Mini-CEX</u>

<table>
<tr><td colspan="11">Mini-CEX information: Encircle whichever is applicable</td></tr>
<tr><td colspan="5">Diagnosis:</td><td colspan="3">Case setting: OPD
IPD ER</td><td colspan="3">Patient: New
Follow-up</td></tr>
<tr><td colspan="5">Case complexity: Low Moderate
High</td><td colspan="6">Assessor Position/Rank:</td></tr>
<tr><td colspan="11">Focus of Mini-CEX: History & Physical examination Diagnosis Management
Counseling</td></tr>
<tr><td colspan="11">Mini-CEX Scoring: encircle against N/A if not observed or applicable</td></tr>
<tr><td>Medical Interview</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Physical examination</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Professionalism</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Clinical Judgment</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Counseling & communication Skill</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Overall Rating</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td colspan="11">ssessor’s Comments on Students performance</td></tr>
<tr><td colspan="5">Anything Especially Good</td><td colspan="6">Suggestions For Development</td></tr>
<tr><td colspan="5"></td><td colspan="6"></td></tr>
<tr><td colspan="11">Agreed Actions (To be written by student):</td></tr>
<tr><td>Student Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for observatin:</td></tr>
<tr><td>ssessor’s Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for feedback:</td></tr>
</table>

Assessor Name: Assessor Signature:

A: Clinical Assessment			
#	Activities	MAX Scores %	Score
1	OSCE	70	
2	Clinical Encounters	5	
3	Case Discussions	5	
4	Clinical skills	10	
5	Mini-CEX	10	
TOTAL		100	

Clerkship Director_____________________

B: Theory Assessment			
#	Activities	MAX Scores	Scores
1	MCQs	60	
2	SAQs	40	
TOTAL		100	

Clinical Checklist

Mark tick each competences when gained

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<tr>
<td>Adnexa & Lids
Chalazion ___
Stye _______
Ptosis _____
Entropion ___
Ectropion ___</td>
<td>Uveal Tract
Anterior uveitis ____</td>
<td rowspan="2">Clinical Methods
Visual Acuity ____
Pupils ____
Extra-ocular Movement ___
Corneal Reflection Test ____
Cover & Uncover Test ____
Digital Tonometry ____
Distance direct ophthalmoscopy ____
Direct Ophthalmoscopy ____
Confrontational visual field Test ____
Regurgitation Test ____</td>
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<tr>
<td>Conjunctiva
Conjunctivitis ___
Pterygium _____
Dry Eyes______</td>
<td>Glaucoma
Open angle _____
Angle Closure ___</td>
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<td>Naso-lacrimal system
NLD Block ____
Dacryocystitis ___</td>
<td>Optic Nerve/Retina
Diabetic Retinopathy ____
Retinal Detachment ____
ARMD ____
Optic neuritis ___</td>
<td rowspan="3">Procedures
OCT ___
Biometry ___
Refraction ___
Applanation Tonometry ___
B-Scan ___
Automated Perimetry ___</td>
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Corneal Ulcer ___</td>
<td>Refractive Errors
Myopia _____
Hypermetropia ____
Presbyopia ____</td>
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<tr>
<td>Lens
Cataract _____</td>
<td>Squint/Orbit
Esotropia ____
Exotropia ____
Proptosis ____</td>
</tr>
</table>

ENT

TABLE OF CONTENTS:

S.No.	Topic
1.	Table of Contents
2.	List of Contributors
3.	Introduction of ENT Clerkship
4.	Expectations From The Students
5.	Goals & Outcomes/ Competencies of Clerkship
6.	Learning Situations & Strategies
7.	Duration of ENT clerkship and Contact Hours
8.	ENT Core Clinical Problems
9.	Themes & Core Contents
10.	Learning Objectives for each clinical problem
11.	Clinical Examination (Check Lists)
12.	Weekly time tables of ENT clerkship
13.	Assessment
14.	Team & Person In-charge
15.	Outline for Case Write-up Appendix I
16.	Learning Resources

INTRODUCTION TO ENT CLERKSHIP

Ear, Nose and Throat disorders are very common in our community and form a major portion of clinical practice of a general/ family physician. ENT problems like pharyngitis, tonsillitis, otitis media, rhinosinusitis, nasal allergy, deafness, vertigo & balance problems can be diagnosed by the primary care physician. Majority of these problems can be treated by the general practitioner/ community doctor and only few require specialist referral.

The expected outcomes and objectives of ENT clerkship would be as follows:

EXPECTATIONS FROM THE STUDENTS

The aim of clerkship in ENT is to equip our students with the skills of

- Practical application of the knowledge acquired as a medical student
- To diagnose common ENT problems in the community, provide treatment and if appropriate, refer them for specialist opinion/ management.
- Development of effective communication skills, not only with the patient but also with their senior colleagues
- Educate the patients and community regarding common ENT related health issues.

GOALS & OUTCOMES/ COMPETENCIES OF CLERKSHIP:

By the end of the ENT clerkship module, the students should be able to:

1. Take detailed patient history and make accurate observation of clinical features by performing clinical examination
2. Apply the basic concepts to solve clinical problems
3. Interpret common ENT investigations
4. Communicate effectively with the patient and colleagues
5. Treat common ENT diseases in the community
6. Provide initial management in ENT emergencies
7. Decide when to refer a patient with ENT problem for expert opinion/ management.
8. Educate the patient/ community regarding common ENT related health problems
9. Learn concepts of EBM and lifelong learning

LEARNING SITUATIONS & STRATEGIES:

The venue of various learning activities in ENT clerkship modules are as follows:

- ENT Outpatient clinics
- ENT Male / Female Wards
- ENT Operation Theatre
- Audiology Lab in ENT ward
- Tutorial Room

The teaching strategies will include:

1. Case based Discussion
   - Lectures
   - Short cases in OPD
   - Bedside Discussion
   - Case presentations by students
2. Teaching Ward Rounds
3. Small Group Discussion
4. Observation of ENT operations in OT

DURATION OF ENT CLERKSHIP AND CONTACT HOURS

Duration of ENT clerkship= 5 weeks

Total Contact Hours = 100 (24 Hours per week)

Monday to Thursday (8:00am to 2:00pm)

ENT CORE CLINICAL PROBLEMS

- Deafness
- Nasal obstruction
- Sore throat
- Hoarseness
- Oral ulcer
- Neck mass
- Dysphagia

THEMES & CORE CONTENTS

Course Contents Covered Under ENT Core Clinical Problems & Required Level Of Competencies

THEME	CONTENTS
Deafness	Otitis externa C3 Wax C3 Foreign body C3 Otitis media C3 Otosclerosis C3 Eustachian tube dysfunction C3 Sensorineural Hearing loss C3 Facial nerve paralysis C3 Congenital deafness C2 BPPV C2 Minere's disease C2 Vestibular neuronitis C2 Interpretation of audiological tests C3
Nasal obstruction	Rhino-sinusitis C3 Foreign body nose C3 Deviated nasal septum C3 Nasal polypi C3 Nasal tumor C2 Epistaxis C3 Trauma nose C3 CSF rhinorrhoea C2 Interpretation of X-rays Paranasal sinuses C3 Interpretation of X-rays # Nasal bone C3 Identification of normal radiological anatomy on CT scan nose & paranasal sinuses C2
Sorethroat	Pharyngitis Tonsillitis Neck space abscesses Oesophageal foreign body C2 Oesophageal stricture/web C2 Tumors of pharynx C2 Interpretation of X-rays soft tissue neck lateral view C3
Hoarseness	Laryngitis C3 Laryngeal tumor C3 Laryngomalacia C3 Vocal cord paralysis C3 Foreign bodies tracheobronchial tree C3 Interpretation of X-rays chest of patient with foreign bodies tracheobroncheal tract C3
Oral Ulcer	Apthous ulcers C3 Malignant oral ulcer C3
Neck mass	Cervical lymphadenopathy C3
Dysphagia	Various Diseases of Oesophagus

LEARNING OBJECTIVES RELATING TO CORE CLINICAL PROBLEMS

Theme: DEAFNESS

Learning Objectives
Differentiate among the diseases producing conductive hearing loss in the external ear on the basis of clinical features.
Differentiate among the diseases producing conductive hearing loss in the middle ear cleft on the basis of clinical features.
Differentiate the diseases producing sensorineural hearing loss.
Discuss the ear diseases which produce vertigo
Compare the diseases producing otalgia on the basis of clinical features
Interpret the results of tuning fork test
Interpret the results of pure tone audiometry
Interpret the results of tympanometry
Formulate a treatment plan for a deaf patient.
Demonstrate history taking of ear complaints.
Perform clinical examination of the ear.
Perform aural toilet by mopping and syringing.
Demonstrate the procedure of mastoid dressing.
Counsel the patient with ear disease regarding ear surgery.
Educate the patient of chronic Suppurative Otitis Media regarding precautions to prevent water entry in the ear.
Communicate with the patient regarding the effects of noise pollution on hearing.

Theme: NASAL OBSTRUCTION

Differentiate among the diseases producing unilateral nasal obstruction on the basis of clinical features.
Differentiate among the diseases producing bilateral nasal obstruction on the basis of clinical features.
Differentiate among the diseases responsible for nasal discharge on the basis of clinical features.
Describe the steps of examination of a nasal trauma patient.
Formulate a treatment plan for management of epistaxis.
Demonstrate history taking of nasal complaints.
Perform clinical examination of the nose.
Interpret the findings on X-rays paranasal sinuses
Interpret the findings on X-rays nasal bone in a trauma case
Identify the normal radiological anatomy on CT scan paranasal sinuses
Demonstrate the procedure on nasal packing.
Demonstrate the procedure of foreign body removal from nose.
Counsel the patient with nasal disease regarding surgery.
Educate the patient about preventive measures regarding pollen allergy

Theme: SORETHROAT

Differentiate among the diseases producing sorethroat on the basis of clinical features.
Describe the clinical features of neck space infections
Discuss the management of oesophageal foreign body.
Demonstrate history taking of patient with sorethroat.
Perform clinical examination of the throat.
Interpret the findings on X-rays soft tissue neck lateral view.
Counsel the patient (or parents) of chronic tonsillitis regarding tonsillectomy
Educate the patient about thorat hygiene

Theme: HOARSENESS

Differentiate among the diseases producing hoarseness on the basis of clinical features.
Correlate the pathophysiology of stridor with clinical presentation of laryngeal diseases
Formulate a treatment plan for the emergency management of obstructed upper airway.
Take history of a patient with hoarseness.
Perform indirect laryngoscopy
Interpret the X-rays chest of patients with foreign body tracheobronchial tract
Demonstrate the method of dislodging foreign body impacted in upper aerodigestive tract.
Demonstrate the method of laryngotomy on dummy.
Demonstrate the method of endotracheal intubation on a dummy.
Educate the patient about the effect of smoking in producing throat cancer.
Councel the patient with thorat cancer (Breaking bad news)
Educate the parents about the prevention of foreign body impaction in aerodigestive tract in children.

Theme: ORAL ULCER

Differentiate among the diseases which produce oral ulcer on the basis of clinical features.
Perform clinical examination of oral cavity.
Educate the patient about the effect of Pan &Niswar in producing cancer of oral cavity.

Theme: NECK MASS

Differentiate among the diseases which present as neck mass on the basis of clinical features.
Formulate a treatment plan in a patient with enlarged neck lymph nodes.
Perform clinical examination of neck

Theme: Dysphagia

Causes & types of dysphagia
Clinical diagnosis on the basis of History & examination
How to manage a case of dysphagia

STEPS OF CLINICAL EXAMINATION

Clinical Examination of Nose

1. Introduction to patient
2. Consent for Examination
3. Focusing of light (with headlight)
4. Inspection of nose and Paranasal sinuses
5. Patency test (with metallic tongue depressor)
6. Examination of the nose by tilting the tip of the nose
7. Examination of nose with Killian's nasal speculum
8. Examination of post Nasal space (Posterior Rhinoscopy)
   a. Consent for Examination
   b. Identification of Posterior Rhinoscopic mirror
   c. Warning the mirror and checking the Temperature of Mirror
   d. Depressing the tongue with tongue depressor and proper introduction of Mirror.

Requirements:

- Headlight
- Metallic tongue depressor
- Wooden tongue depressor
- Posterior rhinoscopic mirror
- Lighter to warm the mirror
- Killian's Nasal speculum

Clinical Examination of sense of smell

1. Greet, introduce, explain the procedure & take consent
2. Ask the subject if his/her nose is not blocked due to common cold
3. Check the nasal patency
4. Ask the subject to close his/her eyes & occlude one nostril
5. Now have the subject smell & distinguish the odors of each of the smell substance one by One
6. Repeat the procedure on the other nostril
7. Repeat on other nostril

Requirements:

- Metallic tongue depressor
- Clove oil
- Peppermint oil
- Soap
- Perfume

Clinical Examination of Pharynx & Larynx

1. Greet, introduce and take consent
2. Examination of lips, buccal mucosa, gums, teeth, palate, tongue, floor of mouth with head light & tongue depressor.
3. Examination of oropharynx with tongue depressor
4. Examination of posterior 1/3rd of tongue, larynx, hypopharynx with indirect laryngoscopy
5. Examination of neck including neck nodes
6. Thanks

Requirements:

- Headlight
- Metallic tongue depressor
- Wooden tongue depressor (1 pack)
- Indirect laryngoscopic mirror
- Lighter to warm the mirror
- Guaze 1 pack

Clinical Examination of Ear

Greets the patient.
Introduce himself / herself.
Explain the procedure
Seek permission from the subject.
Wear the head light correctly.
Turn the patient to one side
Focus the light on the ear.
Select & hold the ear speculum of appropriate size correctly.
Introduce the ear speculum by holding the pinna and gently pulling it upward, backward and laterally
Perform otoscopy with the help of otoscope by a) Turn on the otoscope b) Holding the otoscope correctly c) Introducing the otoscope into the ear canal correctly d) Examine the pars flaccid by gently tilting the otoscope upward e) Turn off the otoscope
Thanks

Requirements:

1. Head light
2. Ear speculum (Small, medium, large)
3. Otoscope

Steps of Rinne's Test

Greets the patient.
Introduce himself/ herself.
Explain the procedure
Seek permission from the subject
Strike the tunning fork properly.
Hold the tunning fork properly against the ear tested to check air conduction of sound.
Hold the tunning fork properly against the ear tested to check air conduction of sound.
Place the tunning fork properly on the mastoid process to check bone conduction of sound.
Describe the results of tunning fork test correctly.
Interpret the result of tunning fork test correctly
Thanks

Requirements:

Tuning fork 512 Htz

Steps of Weber test

Greets the patient.
Introduce himself/ herself.
Explain the procedure
Seek permission from the subject
Strike the tunning fork properly.
Hold the tunning fork properly against the ear tested to check air conduction of sound.
Hold the tunning fork properly against the ear tested to check air conduction of sound.
Place the tunning fork properly on the vertex to check bone conduction of sound.
Describe the results of tunning fork test correctly.
Interpret the result of tunning fork test correctly
Thanks

Requirements:

1. Tunning fork 512 Htz

Clinical Examination of Facial Nerve

Greets the patient.
Introduce himself/ herself
Explain the procedure
Seek permission from the subject.
Ask the patient to show teeth & check for any asymmetry of facial movements.
Ask the patient to blow & check for any asymmetry of facial movements.
Ask the patient to tightly close the eyes & check for any asymmetry of facial movements.
Ask the patient to frown & check for any asymmetry of facial movements.
Describe and interpret the findings of clinical examination of facial nerve.

FIRST WEEK ENT CLERKSHIP						
Days/Date	8:00 to 10:00 am	10:00 to 10:20	10:20 to 12:20	12:20pm to 12:45pm	12:45 to 1:30pm	1:30 pm 2:00 pm
Monday	• ENT Clerkship Orientation Session Prof. Col ® DrAshfaq Ahmed Malik ENT OPD /Tutorial Room Diseases of External Ear • Symptoms of Ear diseases + History Taking Prof. Col ® DrAshfaq Ahmed Malik ENT OPD / Tutorial Room • Deafness & its causes Tuning Fork Tests Dr. Mohammad ShafiMohammadi ENT OPD / Tutorial Room	BREAK	Visit to Operation Theater	SGDs (case Senario) • Presbyacusis • Deaf & Mute child Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial room	Lunch & Prayer Break	Case Presentation / Revision Dr Muhammad Usman ENTOPD
Tuesday	Diseases of External Ear/Middle Ear Anatomy of Ear (External, Middle, Inner) Introduction to Diseases of Pinna & External Ear Canal Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi E.T Disorders ASOM OME Barotrauma		ENT OPD / Tutorial Room • Clinical Examination of Ear (Demonstration and practice session) Dr. Mohammad ShafiMohammadi ENT OPD /Tutorial Room	SGD (Case Senario) • Otalgia • Discharging Ear Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Wednesday	Diseases of Middle Ear (cont) Prof. Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi CSOM + Cholesteatoma Complications of CSOM Otosclerosis		• Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, counseling Dr. Mohammad ShafiMohammadi ENT OPD / Tutorial Room Tutorial: Diseases of Middle Ear by Prof Col ® DrAshfaq Ahmed Malik. ENT OPD/ Tutorial Room	SGDs Pure Tone & Speech Audiometry Tympanometry Evaluation of deafness in children Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD

Thursday	Diseases of Middle Ear (cont) Facial Palsy • Tinnitus • Referred Otolgia		Visit to operation Theater	OPD Activity Otoscopic technique Hearing Assessment (Tuning Fork Tests) Ear Syringing Techniques,F.B removal Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Friday	Diseases of Inner Ear Vertigo D/D BPPV+ Vestibular Neuronitis Hearing aid + cochlear Implant PTA Tympanometry Ototoxicity Prof. Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi		• Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, counseling Dr. Mohammad ShafiMohammadi ENT OPD / Tutorial Room Tutorial: Diseases of Middle Ear by Prof Col ® DrAshfaq Ahmed Malik. ENT OPD/ Tutorial Room	SGD(3 Case Senario) • Blocked Ear • Vertigo Prof. Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD

SECOND WEEK ENT CLERKSHIP						
Days/Date	8:00am to 10:00am	10:00 to 10:20 am	10:20 to 12:20	12:20 to 12:45 pm	12:45 to 1:30pm	1:30pm to 2:00pm
Monday	Short Revision Test of Previous Week Course.		Visit to Operation Theater	SGD's (2 Case Senario) • Allergic Rhinitis Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Tuesday	Introduction to Nasal Diseases Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room Anatomy of Nose Diseases of Ext. Nose D/D of nasal Obstruction D/D nasal Discharge	B R E A K	History & Clinical Examination of Nasal Diseases OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, counseling Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD/ Tutorial Room	SGD's(2 Case Senario) • Epistaxis Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	Lunch & Prayer Break	Case Presentation / Revision Dr Muhammad Usman ENTOPD
Wednesday	Nasal Diseases (Cont) Symptoms/ signs of Nasal Diseases, Management I Prof Col ® DrAshfaq Ahmed Malik ENT OPD/ Tutorial Room Allergic Rhinitis Vasomotor Rhinitis Nasal Polyps/Types + Treatment Granulomatous Diseases of Nose		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, counseling Prof Col ® DrAshfaq Ahmed Malik / Dr.MohammaadShafiMohammadi ENT OPD / Tutorial Room	SGD's(2 Case Senario) • Forign Body nose Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Thursday	Diseases of PNS Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room Sinusitis +Its complications		Visit to Operation Theater	SGD's(1 Case Senario) • Trauma nose		Case Presentation / Revision Dr Muhammad Usman ENTOPD

	Neoplasm of Nasal Cavity Neoplasm of P.N.S			Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		
Friday	Diseases of Nose & PNS Tumours of Nose & PNS • X-rays Nose & PNS Prof Col ® DrAshfaq Ahmed Malik / Dr.MohammaadShafiMohammadi ENT OPD /Tutorial Room		OMPs in ENT OPD Short Cases/ Formulate Management plan, counseling Prof Col ® DrAshfaq Ahmed Malik ENT OPD /Tutorial Room	Consolidation/ Revision/ Supervised Learning Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENT OPD

THIRD WEEK ENT CLERKSHIP

Days/Date	8:00am to 10:00am		10:00 to 10:20	10:20 to 12:20 pm	12:20pm to 1:50pm	12:45 to 1:30pm	1:30pm to 2:00pm
Monday	Nasal Diseases(Cont) • Epistaxis • Operation on Nose & PNS Prof Col ® DrAshfaq Ahmed Malik / Dr.MohammaadShafiMohammadi	Diseases of Nasopharynx Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	BREAK	Visit to Operation Theater	SGDs • Acute Tonsillitis • Complications of Tonsillectomy Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	LUNCH & PRAYER BREAK	Case Presentation / Revision Dr Muhammad Usman ENTOPD
Tuesday	Introduction to Throat Diseases Prof Col ® DrAshfaq Ahmed Malik/Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	History & Clinical Examination of Throat Diseases of Oropharynx Prof Col ® DrAshfaq Ahmed Malik /Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, council Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD /Tutorial Room	D/D white Patch Oropharynx Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Wednesday	Symptoms/ signs of Throat Diseases, Management Prof Col ® DrAshfaq Ahmed Malik /Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	Symptoms / signs of Laryngeal Diseases Oropharyngeal Abscesses Operations on Pharynx Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, council Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD /Tutorial Room	D/D of Dysphagia Management of Dysphagia Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Thursday	Diseases of Oropharynx & Hypo pharynx Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room			Visit to Operation Theater	Scenario Management of Compomized upper Airway • First aid measures • Endotracheal Intubation • Cricothyroidotomy • Care of Tracheostomy		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Friday	Symptoms / signs of Laryngeal Diseases Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room			Case Presentation / Revision ENT OPD /Tutorial Room Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi			Case Presentation / Revision Dr Muhammad Usman

FOURTH WEEK ENT CLERKSHIP						
Days/Date	8:00am to 10:00am	10:00 to 10:20 am	10:20 to 12:20 pm	12:20pm to 12:45 pm	12:45 to 1:30pm	1:30pm to 2:00pm
Monday	Hoarseness of vocal D/D • D/D of Hoarsness • X-rays Soft tissue Neck Lat view Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi	B R E A K	Visit to Operation Theater	SGDs (Case Senario) • Oral Ulcer • Dysphagia Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	LUNCH & PRAYER BREAK	Case Presentation / Revision Dr Muhammad Usman ENTOPD
Tuesday	Diseases of Oral Cavity Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		OMPs in ENT OPD • Short Cases/ OMP • Focused history & Clinical Exam • D/D, Order & interpret investigation, • Formulate Management plan, counseling Prof Col ® DrAshfaq Ahmed Malik / Dr Muhammad ShafiMohammadi ENT OPD Tutorial Room	SGDs (Case Senario) • Lateral Neck Mass Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Thursday	Anatomy and Physiology of Vocal cords Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		Visit to Operation Theater			Case Presentation / Revision Dr Muhammad Usman ENTOPD
Friday	Diseases of vocal cords/ Paralysis of vocal cords Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, council Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD /Tutorial Room			Case Presentation / Revision Dr Muhammad Usman ENTOPD

		FIFTH WEEK ENT CLERKSHIP						
		8:00am to 10:00am		10:00 to 10:20	10:20 to 12:20 pm	12:20pm to 12:45pm	12:45 to 1:30pm	1:30pm to 2:00pm
Monday		Carcinoma of larynx Prof Col ® DrAshfaq Ahmed Malik / Dr.MohammaadShafiMohammadi	Diseases of Nasopharynx Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	B R E A K	Visit to Operation Theater	SGDs • Acute Tonsillitis • Complications of Tonsillectomy Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	LUNCH & PRAYER BREAK	Case Presentation / Revision Dr Muhammad Usman ENTOPD
Tuesday		Congenital anomalies of larynx Prof Col ® DrAshfaq Ahmed Malik/Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	History & Clinical Examination of Throat Diseases Prof Col ® DrAshfaq Ahmed Malik /Dr Mohammad ShafiMohammadi ENT OPD/ Tutorial Room		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, council Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD /Tutorial Room	D/D white Patch Oropharynx Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi		Case Presentation / Revision Dr Muhammad Usman ENTOPD
Wednesday		Symptoms/ signs of Throat Diseases and their Management Prof Col ® DrAshfaq Ahmed Malik /Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room	Symptoms / signs of Laryngeal Diseases Prof Col ® DrAshfaq Ahmed Malik / Dr Mohammad ShafiMohammadi ENT OPD /Tutorial Room		OMPs in ENT OPD Short Cases/ OMP Focused history & Clinical Exam., D/D, Order & interpret investigation, Formulate Management plan, council Prof Col ® DrAshfaq Ahmed Malik / Dr. MohammaadShafiMohammadi ENT OPD /Tutorial Room	D/D of Dysphagia Management of Dysphagia Prof Col ® DrAshfaq Ahmed Malik/ Dr Mohammad ShafiMohammadi		Case Presentation / Revision Dr Muhammad Usman ENTOPD

Thursday	Clerk ship Theory Exam
Friday	Clerkship Practical/Viva Exam

Appendix I - OUTLINE FOR CASE WRITE-UP

CASE WRITE-UP

PATIENT IDENTIFICATION DATA

Name: ______________________ Age: ______

Gender: ______ Registration Number: ______ Race: ______

Religion: ______ Marital Status: ______ Occupation: ______

Informants: ______

Date of admission: ______ Date of clerking: ______

MAIN COMPLAINTS/ REASON FOR REFERRAL:

HISTORY OF PRESENTING ILLNESS:

PAST MEDICAL HISTORY:

PAST SURGICAL HISTORY:

DRUG HISTORY

FAMILY HISTORY:

SOCIAL HISTORY:

PHYSICAL EXAMINATION

GENERAL PHYSICAL EXAMINTION

EAR, NOSE & THROAT EXAMINATION:

EAR:

- Examination of Pinna & Post auricular area: (Deformity, inflammation, trauma, scar etc)

Right____

Left ____

- Examination of External Auditory Canal: (Wax, discharge, inflammation, foreign body etc)

Right EAC____

Left EAC____

- Tympanic Membrane (Appearance, Intact/perforated, Position buldging/retracted etc)
   Right
   TM____
   Left
   TM____

- Tuning Fork Tests
   Rinne's Test Rt.___________ Lt. ___________ Weber_________________
   Facial Nerve Examination Rt._____________Lt._______________
- Vestibular tests (Nystagmus, balance etc if required)_____________________________________
   Regional Lymph Nodes____

NOSE:

- Findings on Inspection: (deformity, inflammation, scar, discharge, trauma etc)

____

- Nasal Patency Test____
Examination of vestibule / caudal part of nasal spetum_________________________________
- Anterior Rhinoscopy: (Condition of nasal septum, lateral nasal wall, discharge, mass etc)

____

- Posterior Rhinoscopy:
____
Examination of sensation of Smell
Rt.______________________Lt.__________________________
Regional Lymph Nodes____

THROAT

- Lips & Oral cavity (swelling, mass, inflammation, ulcer, condition of teeth, orodental hygiene, tongue appearance &movements, buccal mucosa, hard palate etc)

____

Examination of orophaynx (tonsils, posterior pharyngeal wall, movement of soft palate etc)

____

- Examination of floor of mouth, bimanual palpation (if required)

____

- Indirect laryngoscopy (Base of tongue, hypopharynx, larynx with appearance & movement of vocal cords)

____

- External examination of neck (mass or swelling) and cervical lymph nodes:

____

SYSTEMIC EXAMINATION:

____

____

PROVISIONAL & DIFFERENTIAL DIAGNOSES: (Discussion & supporting evidence)

____

____

OUTLINE RELEVANT INVESTIGATION DONE, WITH REASONS

____

____

STATE RESULTS OF INVESTIGATIONS DONE SO FAR, WITH YOUR INTERPRETATIONS:

____

____

IDENTIFY PROBLEMS, MANAGEMENT, AND PROGRESS OF PATIENT

____

____

PROGNOSIS & OUTCOME

____

____

____

DISCHARGE/ CLINICAL SUMMARY:

____

____

Mini-CEX

<table>
<tr><td colspan="11">Mini-CEX information: Encircle whichever is applicable</td></tr>
<tr><td colspan="5">Diagnosis:</td><td colspan="3">Case setting: OPD IPD ER</td><td colspan="3">Patient: New Follow-up</td></tr>
<tr><td colspan="5">Case complexity: Low Moderate High</td><td colspan="6">Assessor Position/Rank:</td></tr>
<tr><td colspan="11">Focus of Mini-CEX: History & Physical examination Diagnosis Management Counseling</td></tr>
<tr><td colspan="11">Mini-CEX Scoring: encircle against N/A if not observed or applicable</td></tr>
<tr><td>Medical Interview</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Physical examination</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Professionalism</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Clinical Judgment</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Counseling & communication Skill</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Overall Rating</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td colspan="11">ssessor’s Comments on Students performance</td></tr>
<tr><td colspan="5">Anything Especially Good</td><td colspan="6">Suggestions For Development</td></tr>
<tr><td colspan="5"></td><td colspan="6"></td></tr>
<tr><td colspan="11">Agreed Actions (To be written by student):</td></tr>
<tr><td>Student Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for observatin:</td></tr>
<tr><td>ssessor’s Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for feedback:</td></tr>
</table>

Assessor Name: Assessor Signature:

ASSESSMENT

Summative Assessment

1. MCQs (One best response)
2. OSCE
3. Short Cases
4. SAQs

Formative Assessment

All students will be continuously assessed on the basis of their participation in clinical clerkship session, completion of assigned tasks, punctuality and behavior with patients, teaching faculty and their colleagues.

Feedback:

- At the completion of clerkship (After ward test on Last day of clerkship) - Predesigned Performa

TEAM & PERSON IN-CHARGE

1	Col ® Ashfaq Ahmed Malik	Prof. & HOD ENT
2	Dr Mohammad ShafiMohammadi	Registrar & Clerkship Director

LEARNING RESOURCES

S.No.	Name of book	Author	Ed
1.	Ear, Nose, Throat and Head & Neck Surgery	R.S. Dhillon C.A. East	5th
2.	ABC of Ear, Nose & Throat	Ludman	5th
3.	Lecture Notes on Diseases of Ear, Nose & Throat	Peter Bull	10th
4.	Diseases of Ear, Nose and Throat	P L Dhingra	5th

A: Clinical Assessment			
#	Activities	MAX Scores %	Score
1	OSCE	70	
2	Clinical Encounters	5	
3	Case Discussions	5	
4	Clinical skills	10	
5	Mini-CEX	10	
TOTAL		100	

Clerkship Director______________________

B: Theory Assessment			
#	Activities	MAX Scores	Scores
1	MCQs	60	
2	SAQs	40	
TOTAL		100	

COMMUNITY MEDICINE

Module Team

Chairman Curriculum Committee	Prof. Dr. Mirza InamUlHaq
Module Planner	Dr. Sheikh Kashif Rahim
Clerkship Coordinator	Dr. Asma Abdul Qadeer
In charge group work	Dr. Shakila Bangash

Total Duration = 12 weeks

Total Hrs/per week = 28 hrs

Teaching	170
Research	60
Visit	36
Assessment	70
Total	336

INTRODUCTION

It has been rightly said that "health is not an issue of Doctors, social services and hospitals; it is an issue of social Justice". Contemporary medicine is no longer solely an art and science for the diagnosis and treatment of the disease. It is also the science for the prevention of disease and promotion of health. Health should mean a lot more than escape from death and disease. The test of civilization is the measure of consideration and care which it gives to its weaker members. The secret of health lies in the homes of the people. The study of the disease is really the study of man and his environment and let the waste of the sick should not contaminate the lives of the healthy. The only thing more expensive than health education is ignorance. Despite increase in life expectancy and decrease in maternal mortality, infant mortality and infectious diseases there is still intolerable number of increase in cancers and cardiovascular diseases. The key factors which affect the health of communities are socio-cultural, environment, individual's behavior and availability and use of Health services.

Basic doctrine of disease control in community settings lies in analyzing epidemiological data, study of environmental and occupational hazards, knowledge of population health, application of principles of nutrition in health and disease, primary, secondary and tertiary prevention for the prevention of disease, and ways to mitigate the effects of disease and disability by making improvements in the health status and provision of comprehensive health care

Learning outcomes

By the end of Community health clerkship module students should be able to:

1. Evaluate and apply the mortality and morbidity data in managing the health care for both individuals and community
2. Explain and apply the basic principles of communicable disease control in community and hospital settings
3. Recognize the role of nutrition, environment and occupational health hazards and discuss ways to mitigate it.
4. Make an assessment of common health problemsof public health importance and control of these problems in the community.
5. Demonstrate leadership role (to be a five star Doctor with the capabilities of leader, Manager, Decision maker, Communicator and care provider)
6. Able to implement public health interventions when needed at the community and higher level of health care delivery system.

Educational activities during clerkship

- Teaching Academic
- Quantitative Research
- Portfolio
  - o Visit / Book
  - o News Culling
  - o Day Book
  - o Power point Presentation
  - o Assignment
- Assessment / Daily Feedback

Reference books

1. Parks text book of preventive and social medicine 25th edition

2. Ilyas-shah-Ansari, Public health and community medicine 7th edition

3. Hand book of community medicine and public health 1st edition

Content / Topic	Learning Objectives	Teaching and learning strategy	Assessment Methodology
Health for all	• Describe Man and medicine towards health for all. • Discuss the evolution of medicine. • Enlist different eras of medicine. • Outline different systems of medicine.	SGD	MCQs / SEQs
Community Medicine & Modern medicine	• Define community medicine • Describe the functions of community medicine • Compare scientific medicine, sanitary awakening, Rise of public health and Germ theory of disease • Differentiate between preventive medicine, curative medicine and social medicine	SGD	MCQs / SEQs
	• Describe the changing concepts in public health, and health care revolution • Distinguish between family medicine and community medicine • Outline Millennium development goals • Describe the health related goals and current status in Pakistan	SGD	
Concept of health	• Define health • Describe Concepts and dimensions of health. • Define positive health • Describe concept of well-being • Define Spectrum of health. • Enlist and Describe Determinants of health.	SGD	MCQ / SEQs
Indicators of Health	• Explain Indicators of Health. • Define health care systems. • Describe levels of Health care. • Describe Health for all. • Explain the contents of primary health care.	SGD	MCQ / SEQs

Concept of Disease	• Explain concept of Disease and disease causation (germ theory, epidemiological triad & web of causation). • Demonstrate the concept of iceberg phenomenon of disease.	SGD	MCQs
	• Explain the Natural history of disease • Distinguish between disease, illness & sickness.	SGD	
Concepts of control & prevention	• Define the terms control, elimination, eradication surveillance , monitoring, sentinel surveillance , • Describe levels of prevention and modes of intervention	SGD	MCQ
Epidemiology	• Define Epidemiology • Briefly describe three components of epidemiology (Disease frequency, distribution of disease & determinants of disease) • Enlist Aims of epidemiology • Explain uses of epidemiology • Describe basic measurements in Epidemiology in terms of mortality	SGD	MCQ
	• Describe direct and indirect standardization of age • Describe tools of measurements in epidemiology (rates and ratios) • Describe measurements of morbidity(incidence and prevalence	SGD	MCQ
Epidemiological studies	• Classify epidemiological studies • Describe observational studies (descriptive study)	SGD	MCQ
	• Describe analytical study design • Differentiate between case control and cohort study	SGD	MCQ
	• Describe the experimental studies. • List steps of RCT studies	SGD	OSPE
	• Define epidemic • Explain the steps of investigation of epidemic	SGD	MCQ
	• Define association and causation, • Enlist and explain association and causation	SGD	OSPE
	• Define Case, Carrier, Incubation Period	SGD	MCQ

Dynamics of disease transmission - (Reservoir, Mode of transmission and Susceptible Host)	Define and Describe reservoir (human ,animal and non-living) Define and describe modes of transmission. List direct and indirect modes of intervention.	SGD	MCQ
Susceptible Host	Define susceptible host Describe the measures for prevention and control of disease. Controlling the reservoir, interruption of transmission, reducing the susceptibility of host.	SGD	MCQ
Host defences (specific defences)	Define host defences, Enlist the specific defences (Active and Passive immunity) Describe primary and secondary immune response Describe herd immunity	SGD	MCQ
Vaccines	Enlist and explain immunizing agents Classify vaccines Enlist and Describe immunoglobulin's used as vaccines. Describe immunization protocol	SGD	MCQ/SEQ
Immunization and vaccination	Describe the EPI program Enlist various vaccine used in EPI, routes of administration, side effects and complications Explain cold chain and its importance	SGD	MCQ OSPE
Disease Prevention and control	Enlist three measures for the for the prevention and control Explain how reservoir control, interruption of transmission and susceptibility can be Reduced	SGD	MCQ

Screening	Define screening Describe concept of screening Differentiate between diagnostic and screening test Enlist aims and objectives of screening Describe uses of screening	SGD	OSPE
	List criteria for screening of disease and screening test Describe the measures of evaluation of screening test	SGD	MCQ
Prevention of Respiratory infections	Describe the epidemiology ,prevalence and preventive measures of Respiratory infections Smallpox Chickenpox Acute respiratory infections	SGD	MCQ ---------- OSPE
	Describe the epidemiology prevalence and preventive measures of Measles Rubella Mumps	SGD	OSPE
	Describe the epidemiology prevalence and preventive measures of Influenza Diphtheria Whooping cough Meningococcal meningitis	SGD	OSPE
	Describe the epidemiology prevalence and preventive measures of Tuberculosis	SGD	MCQ
Prevention of Gastrointestinal Infections	Describe the epidemiology prevalence and preventive measures of Poliomyelitis Viral hepatitis	SGD	MCQ
	Describe the epidemiology prevalence and preventive measures of Acute diarrhoeal diseases	SGD	MCQ

	▯ Cholera		
	Describe the epidemiology prevalence and preventive measures of ▯ Typhoid fever ▯ Food poisoning ▯ Amoebiasis	SGD	MCQ
	Describe the epidemiology prevalence and preventive measures of ▯ Ascariasis ▯ Hookworm infections ▯ Dracunculiasis	SGD	MCQ
Prevention of Arthropod- borne Infections	Describe the epidemiology prevalence and preventive measures of ▯ Dengue syndrome ▯ Lymphatic Filarasis	SGD	MCQ
	Describe the epidemicology prevalence and preventive measures of ▯ Malaria Describe the role of Malaria control program	SGD	MCQ
Zoonoses Viral	Describe epidemiology, mode of transmission, management and prevention of a case of: ▯ Rabies infection and ▯ Yellow fever ▯ Japanese encephalitis ▯ KFD ▯ Taeniasis ▯ Hydatid disease ▯ Leishmaniasis	SGD	MCQ

	Describe epidemiology, mode of transmission, management and prevention of a case of: • Brucellosis • Leptospirosis • Plague • Human salmonellosis	SGD	MCQ
	Describe epidemiology, mode of transmission, prevention of a case of: • Rickettsialzoonoses • Scrub typhus • Murine typhus • Tick typhus • Q fever	SGD	MCQ
Surface Infections	Describe epidemiology, Mode of transmission, management and prevention of a case of: • Trachoma • Tetanus	SGD	MCQ
Describe epidemiology mode of transmission Management and prevention	Describe epidemiology, mode of transmission, prevention of a case of: • STD • HIV/AIDS	SGD	MCQ
Describe epidemiology mode of transmission and prevention	Describe epidemiology, mode of transmission & prevention of a case of • Leprosy	SGD	MCQ

Snake bite / Dog Bite	Discuss the types of venomous snakes Describe epidemiology of Snake bite Describe primary secondary and tertiary preventive measures against snake bite. Preventive measures against Dog bite / post bite.	SGD	MCQ,
Epidemiological aspects of CVS	Discuss epidemiology of CVD Describe epidemiology of Coronary heart disease	SGD	MCQ
Risk factors of cardio vascular disease	Define risk factor Classify risk factor (modifiable and non-modifiable) Describe Role of risk factors in causation of CVD	SGD	MCQ
Prevention of cardiovascular diseases and hypertension	Define preventive cardiology Describe different levels of prevention in CVD (primordial, primary, secondary and tertiary), Hypertension and Stroke Describe different cardiovascular surveys.	SGD	MCQ
Cancer	Describe epidemiology of cancer. Describe screening measures of cancers. Describe prevention of cancers	SGD	MCQ
Diabetes & Obesity	Epidemiology and prevention of diabetes mellitus Define obesity. Describe epidemiology of obesity. Assessment of obesity. Enlist hazards of obesity. Describe prevention and control of obesity	SGD	OSPE
Blindness	Define blindness (WHO) Enlist its causes in community Describe epidemiology of blindness Describe the role of vitamin A in the prevention of blindness Explain changing concepts in eye care, vision 2020 (WHO)	SGD	MCQ
Accidents	Define accidents. Enlist types of accidents Describe Prevention of accidents	SGD	OSPE

Smoking	Define addiction and habituation Describe the prevalence of smoking in our environment Enlist the hazards of smoking Describe the preventive measures with regards to health promotion strategy Describe smoking ordinance	SGD	OSPE
Nutritional Health Programs	Enlist and explain in detail various health programs in Pakistan. Enumerate nutritional health program and explain two in detail. (iodine, vitamin A)	SGD	OSPE
Demography	Define demography Describe different stages of demographic cycle	SGD	MCQ
	Describe population pyramid. Describe different types of pyramids according to world population trends	SGD	MCQ
Family Health	Define fertility Describe factors affecting fertility Enlist fertility indicators and explain each of them Describe the measures of mortality	SGD	MCQ
Contraceptive methods	Define family planning Enlist objectives of family planning Describe Modern concept of family planning. Describe health aspects of family planning Define eligible couple, target couple and couple protection rate. Classify contraceptive methods. Describe spacing, Barrier (physical, chemical and combined) methods.	SGD	MCQ
	Describe hormonal methods of family planning. Explain terminal methods of family planning. Enlist merits and demerits of all the family planning methods	SGD	OSPE
Reproductive health	Enlist health related problems across a women's life time. Explain Major MCH problems (malnutrition infection and uncontrolled reproduction) Define reproductive health and its components	SGD	MCQ, OSPE
Maternal Mortality	Define maternal mortality rate and ratio. Enlist the causes and prevalence of maternal deaths Describe Risk factors for maternal mortality Describe WHO strategies for safe mother hood.	SGD	MCQ, OSPE

Antenatal care	Define antenatal care Enlist objectives of antenatal care Enlist the preventive services provided to mothers during antenatal care. Define high risk approach. Describe the identification of high risk pregnancy.	SGD	MCQ
Intra-Natal Care & Post-Natal Care of Mother	Define Intra-Natal care. Describe Domiciliary and Institutional care. Define Post-Natal care Describe objectives of post natal care	SGD	MCQ
School Health	Define the school health services program Enlist the major functions of school health program Evaluate the major public health hazards faced by a child in school Explain the role of health department in provision of school health services	SGD	MCQ
Nutrition	Define nutrition. Describe changing concepts about nutrition. Classify foods by origin, composition, predominant function, and nutritive value.	SGD	MCQ, OSPE
Nutrients	Define Nutrient. Enlist macro and micro nutrients. Enlist the different nutrients and Describe the sources, functions, requirements of fat, protein and carbohydrates.	SGD	MCQ, OSPE
Vitamins	Describe the sources functions, deficiency, Prevention of Vit A, D, and B group of vitamins.	SGD	OSPE
Minerals	Differentiate between major minerals, trace element and contaminants Describe the Antioxidants	SGD	OSPE

Nutritional requirements	Describe nutritional requirements of an adult person. Describe measurement of energy, reference man and women, Energy requirement, Explain Requirement of protein fat and carbohydrate. Describe balanced diet.	SGD	OSPE
	Describe Nutritional problems in public health. Nutritional factors in selected diseases (cardiovascular, Diabetes, obesity, cancer)	SGD	OSPE
Assessment of nutritional status	Describe nutritional assessment methods, Describe food hygiene, milk hygiene, Meat and fish. Enlist food borne disease Define adulteration of food	SGD	OSPE
Endemic Goiter	Define endemic goiter Describe the prevalence and distribution. Describe prevention of endemic goiter	SGD	OSPE
Drug Addiction	Differentiate between drug abuse and drug addiction Describe the phases of drug addiction Describe the pattern of drug use Describe the treatment of drug addiction and rehabilitation measures Describe the social aspects of drug addiction	SGD	MCQ
Water	Define safe and whole some drinking water Differentiate between potable, clean, polluted and contaminated water. Daily water requirement. Enlist Uses of water Explain the terms Aridity, Drought, Desertification, Water stress.	SGD	MCQ
Sources of water supply	List all important sources of water supply in the community Differentiate two types of well Describe Natural methods of purification. Describe different types of water pollution. Differentiate between temporary and permanent hardness of water. Describe at least 3 methods of removal of hardness	SGD	MCQ

Water related disease	Describe the epidemiology and prevalence of : - Poliomyelitis - Hepatitis - Cholera - Acute diarrheal diseases - Typhoid fever - Food poisoning Describe the life cycle and prevention of: - Amoebiasis - Ascariasis - Hookworm infection - Dracunculiasis - Water borne disease along with their prevention.	SGD	MCQ
Purification of water	Explain the methods of purification of water on - Large scale - Small scale	SGD	MCQ,OSPE
Disinfection of water	Define chlorination - List Methods of chlorination - Discuss break point chlorination.	SGD	MCQ,OSPE
water quality Standards	Describe water quality, Criteria and Standards according to WHO criteria	SGD	OSPE
Air & Ventilation	Describe the composition of air and its need for human beings. - Enlist indices of thermal comfort and comfort zones. - Explain vitiation of air, and air composition of an occupied room. - Define the air pollution and its sources. - Enlist air pollutants. - Explain health hazards of air pollution.	SGD	MCQ

	• Enlist indicators of air pollution. • Describe prevention and control of air pollution		
Ventilation	• Define and classify ventilation o Enlist the standards of ventilation	SGD	MCQ
Lighting	• Enlist the requirements of good lighting. • Describe the measurement of light. • Describe artificial and natural lighting.	SGD	MCQ,
Noise	• Define noise • Describe properties of noise • Enlist sources of noise pollution • describe effects of noise exposure (auditory and non-auditory) • Describe control of noise - prevention & control of noise.	SGD	MCQ
Radiation	• Explain sources of radiation • Enlist types of radiation and its measurement. • Describe effects of radiation • Describe protection from radiation	SGD	MCQ
Housing	• Define housing, and enlist the social goals of housing • Describe the criteria for healthful housing. • Enlist Housing standards • Enumerate effects of housing on health. • Define overcrowding and explain its accepted standards. • Enlist the indicators of housing	SGD	MCQ
Solid Waste Disposal	• Define solid waste • Describe hazards of solid waste • Enlist sources, storage, collection and methods of solid waste disposal. • Describe septic tank and Modern Sewage treatment	SGD	OSPE
Hospital waste management	• Enlist and Explain Hospital waste • Enlist sources of health care waste • Describe health hazards of health care waste. • Describe treatment and disposal technologies of health care waste.	SGD	OSPE
Mosquito	• Enlist the arthropods of medical importance and disease spread by them • Describe the principles of arthropod control.	SGD	MCQ,OSPE

House Fly Sand Fly	Describe life history of House fly and its control measures Describe life history of Sand fly and its control measures	SGD	OSPE
Scabies	Describe scabies as a community health problem Describe the epidemiology of scabies Describe management of a case of scabies from a clinical scenario Describe the prevention of scabies Enlist the drugs used for treatment of scabies	SGD	OSPE
Pediculosis	Define Pediculosis Describe clinical features of different types of Pediculosis Describe preventive measures to control Pediculosis	SGD	OSPE
Fleas, Ticks and Mites	Describe life history, disease transmitted and prevention of Fleas, Ticks and Mites	SGD	OSPE
Disaster	Define disaster, types of disasters. Describe disaster management	SGD	OSPE
Occupational Diseases	Define occupational health Classify occupational hazards Enlist & briefly explain occupational diseases caused by: Lead poisoning Occupational cancers Hazards to agriculture workers	SGD	
	Discuss Pneumoconiosis and preventive measures to reduce the incidence.	SGD	MCQ
Occupational Diseases	Describe measures to prevent occupational diseases Describe occupational hazards of agricultural and health care workers	SGD	MCQ
	Describe measures for health protection of workers Medical measures, Engineering measures, legislative measures	SGD	OSPE
Population genetics	Define population genetics Describe the factors which influence the gene frequencies Enumerate and describe preventive and social measures for the prevention of genetic	SGD	OSPE

	disorders.		
Mental health	- Define mental health and mental disorders - Enlist Characteristics of mentally healthy person - Enlist warning signals of poor mental health - Causes of poor mental heath - Describe crucial points in the life cycle of human beings. - Describe preventive aspects of mental health	SGD	MCQ
Alcoholism	- Define drug dependence and alcoholism. - Describe epidemiology in relation to agent host and environment perspective. - Enlist and explain preventive measures	SGD	OSPE
Biostatistics	- Define biostatistics - Define data and classify different types of data - Describe different methods of presentation of statistical data	SGD	MCQ,OSPE
	- Describe measures of central tendency and dispersion.	SGD	MCQ,OSPE
	- Describe normal distribution curve - Define sampling and Describe commonly used sampling methods.	SGD	MCQ,OSPE
	- Describe tests of significance	SGD	MCQ,OSPE
Communication	- Describe communication process - Barriers of communication - Describe health communication - Define health education - Enlist aims and objectives of health education - Describe approaches to health education.	SGD	OSPE
Health Education	- Explain health education models - Discuss the contents of health education	SGD	MCQ
Health Education	- Explain Principles of Health. - Describe information, education and communication model.	SGD	MCQ
Planning	- Define planning - Define objectives, target and goals. - Explain planning cycle. - Define management	SGD	OSPE

	Describe methods based on behavioural sciences and quantitative analysis.		
Health Program	Explain various health programs in Pakistan. Define the terms of comprehensive health care. Explain the differences between personnel and impersonal health services Describe efforts to improve the overall health of the nation Describe the primary health care approaches and Describe the problems in achieving the MDGs	SGD	OSPE
Personal hygiene	Describe the role of personal hygiene in prevention of disease	Interactive tutorial	OSPE
International Health	Enlist and explain the role of International Health Agencies in Pakistan Describe the WHO and its region	SGD	OSPE
Visits	Visit to BHU,RHC Visit to NGO Visit to Primary School Visit to MCH Centre , Family Planning Centre , LHW House Tertiary Hospital waste disposal Visit to Industry Visit to Rehabilitation Centre		
Research	Define Research? Describe Types of Research? Describe Research Protocol. Describe Data & Data Collection Tools.	SGD	MCQ

RAWAL INSTITUTE OF HEALTH SCIENCES

1

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (1ST WEEK) (CLERKSHIP PROGRAM)

THEME: PRIMARY HEALTH CARE

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday				TEA BREAK	Assignments / PPT Presentation	
	Introduction to Clerkship	Pre Test MCQ's	History of Public Health Concept of Health		Concept of Well being	Group Discussion Primary Health Care
Tuesday	Health Education -I	Health Determinants	Health Indicator Indicators of Pakistan		Students PresentationPrimary Health Care	Group Discussion MDG / SDG
Wednesday	Health Education -II	Risk factors concept of control	Spectrum of Disease		Students PresentationMDG / SDG	Group Discussion Concept of disease / iceberg natural history of disease
Thursday	Health Communication	Health Planning	International Health		Students PresentationConcept of Disease	Group Discussion Modes of Intervention Level of presentation
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (2ND WEEK)(CLERKSHIP PROGRAM)

2

THEME: RESEARCH

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
					Presentation	
Monday	Feed Back Class	Introduction to Research	Qualitative & Quantitative Research	T E A	Students Presentation Health Communication	Group Discussion SPSS
Tuesday	Feed Back Class	Research proposal writing	Research Writing Literature Review	B R E A K	Students Presentation Research Writing	Group Discussion SPSS
Wednesday	Feed Back Class	Epidemiology - I	Definitions of Infectious disease Epidemiology		Students Presentation Dynamics of Disease	Group Discussion SPSS
Thursday	BHU VISIT – I					
Friday	Lectures I,II,III, SGD, Tutorial					

3

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (3RD WEEK)(CLERKSHIP PROGRAM)

THEME: EPIDEMIOLOGY

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday	Feed Back	Epidemiology-I	Definition of Infection Disease Epidemiology	T E A B R E A K	Assignments / PPT Presentation Dynamics of Disease	Group work and Assignment
Tuesday	Feed Back	Epidemiology-II	Mode of Transmission		Incubation Isolation, Quarantine Communicable	Group work and Assignment
Wednesday	Feed Back	Epidemiology-III	Host Defenses		Immunology + EPI / Health advises to Travellers	Group work and Assignment
Thursday	Feed Back	Epidemiology-IV	Cold Chain Adverse reaction		Epidemiology Case Designs + EPI Tray	Group work and Assignment
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (4TH WEEK)(CLERKSHIP PROGRAM)

4

THEME: EPIDEMIOLOGY

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday	Feed Back	Epidemiology-V	Investigations of Epidemic	T E A	Assignments / PPT Presentation Association and Causation	Group work and Assignment
Tuesday	Feed Back	Epidemiology-VI	Disinfection / Sterilization	B R E A K	Emerging and Hospital Acquired Infections	Group + Assignment Preparation
Wednesday	EPI VISIT – II					
Thursday	CLASS TEST				Epidemiology	Group + Assignment preparation
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (5TH WEEK)(CLERKSHIP PROGRAM)

THEME: DEMOGRAPHY

5

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
					Assignments / PPT Presentation	
Monday	Biostat - I	Screening - I	Break	TEA BREAK	Validity Yield Sensitivity Specificity	Group work and Assignment
Tuesday	Biostat - II	Screening - II	Personal Hygiene		Exercise on Biostat	Group work and Assignment
Wednesday	Feed Back	Biostat - III	Demography – I		Population Parameter Pyramid Distribution Curve	Group Work
Thursday	Feed Back	Biostat - IV	Demography - II		Transition Cycle / Test of Significance	Group Work
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (6TH WEEK)(CLERKSHIP PROGRAM)

6

THEME: OCCUPATIONAL HEALTH

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday	Feed Back	Family Planning - I	Synopsis Writing	TEA BREAK	Assignments / PPT Presentation Contraceptive Tray	Group work and Assignment
Tuesday	Feed Back	Family Planning - II	Research Writing		Entomology	Group Work
Wednesday	Feed Back	Occupational Health - I	Nutrition – I		Pneumoconiosis Food Groups Caloric Needs	Group Work
Thursday	Feed Back	Occupational Health - II	Nutrition - II		Nutrition requirement in different age group	Group Work
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (7TH WEEK)(CLERKSHIP PROGRAM)

THEME: ENVIRONMENT

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050- 1110	1110-1300	1300- 1500
Monday				TEA BREAK	Assignments / PPT Presentation	
	Hospital Visit of Incinerator - Visit – III				Nutrition - IV	
Tuesday	Feed Back	Water - I	Food Hygiene Nutrition - V		Canteen Visit - IV	
Wednesday	Feed Back	Water - II	Water - III		Filtration on Large Scale + Small Scale	Group Work
Thursday	Class Test		Break			Group Work
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (8TH WEEK)(CLERKSHIP PROGRAM)

THEME: MATERNAL & CHILD HEALTH (MCH)

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday				TEA BREAK	Assignments / PPT Presentation	
	Feed Back	MCH - I	TEST		Screening / Biostat / Demography / Family Planning	Group Work
Tuesday						
	Feed Back	Solid Waste Management	MCH - II		Air / Noise Pollution	Group Work
Wednesday						
	Feed Back	Septic Tank	MCH - III		Radiation / Ventilation	Group Work
Thursday						
	Feed Back	SHS	MCH - IV		Growth Chart Breast Feeding	Group Work
Friday	PATHOLOGY					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (9TH WEEK)(CLERKSHIP PROGRAM)

THEME: COMMUNICABLE DISEASES (CD)

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday				TEA BREAK	Assignments / PPT Presentation	
	Feed Back	Malaria	MCH – V		Handicap Children JuvenilaDeliquency Geriatric	Group Work
Tuesday	Feed Back	Dengue	Insecticides		Housefly Mosquito Tick / Mites	Group Work
Wednesday	T.B	Mumps, Measles, Rubella	Influenza / SAR's		Sandfly / Lice	Group Work
Thursday	Polio	Hepatitis	Typhoid		Small Pox / Chicken Pox	Group Work
Friday	Lectures I,II,III, SGD, Tutorial					

4th YEAR MBBS

WEEKLY TRAINING PROGRAM (10TH WEEK) (CLERKSHIP PROGRAM)

THEME: NON COMMUNICABLE DISEASES (NCD)

Time/ Days	0800 - 0850	0900 - 0950	1000-1050	1050-1110	1110-1300	1300- 1500
Monday				TEA BREAK	Assignments / PPT Presentation	
	Food Poisoning	Diarrheal Diseases	Rabies		Worm Infestation	Assignment
Tuesday						
	Feed Back	Tetanus	Snake Bite		Plague Leishmaniasis	Assignment
Wednesday						
	Feed Back	NCD - I	NCD - II		STD's / HIV (Poster Presentation)	Assignment
Thursday						
	Feed Back	Disaster	Research Final Proposal		Mental Health	Assignment
Friday	Lectures I,II,III, SGD, Tutorial					

Mini-CEX

<table>
<tr><td colspan="11">Mini-CEX information: Encircle whichever is applicable</td></tr>
<tr><td colspan="5">Diagnosis:</td><td colspan="3">Case setting: OPD IPD ER</td><td colspan="3">Patient: New Follow-up</td></tr>
<tr><td colspan="5">Case complexity: Low Moderate High</td><td colspan="6">Assessor Position/Rank:</td></tr>
<tr><td colspan="11">Focus of Mini-CEX: History & Physical examination Diagnosis Management Counseling</td></tr>
<tr><td colspan="11">Mini-CEX Scoring: encircle against N/A if not observed or applicable</td></tr>
<tr><td>Medical Interview</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Physical examination</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Professionalism</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Clinical Judgment</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Counseling & communication Skill</td><td>N/A</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Overall Rating</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td colspan="11">ssessor’s Comments on Students performance</td></tr>
<tr><td colspan="5">Anything Especially Good</td><td colspan="6">Suggestions For Development</td></tr>
<tr><td colspan="5"></td><td colspan="6"></td></tr>
<tr><td colspan="11">Agreed Actions (To be written by student):</td></tr>
<tr><td>Student Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for observatin:</td></tr>
<tr><td>ssessor’s Satisfaction</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>Time for feedback:</td></tr>
</table>

Assessor Name: Assessor Signature:

A: Clinical Assessment			
#	Activities	MAX Scores %	Score
1	OSCE	70	
2	Clinical Encounters	5	
3	Case Discussions	5	
4	Clinical skills	10	
5	Mini-CEX	10	
TOTAL		100	

Clerkship Director______________________

B: Theory Assessment			
#	Activities	MAX Scores	Scores
1	MCQs	60	
2	SAQs	40	
TOTAL		100	