## STUDY GUIDE- FOURTH YEAR MBBS

- •19th August 5th September 2024
- Duration: 3 Weeks

# **ENT MODULE**







## **STUDY GUIDE FOR EAR NOSE & THROAT (ENT) MODULE**

| S.No | CONTENTS                               | Page<br>No. |
|------|--|-------------|
| 1    | Overview                               | 3           |
| 2    | Introduction to Study Guide            | 4           |
| 3    | Learning Methodologies                 | 5           |
| 4    | Module: ENT                            | 7           |
| 4.1  | Introduction                           | 7           |
| 4.2  | Objectives and Learning Strategies     | 8           |
| 5    | Learning Resources                     | 14          |
| 6    | Assessment Methods                     | 15          |
| 7    | LNMC Examination Rules and Regulations | 16          |
| 8    | Schedule                               | 17          |

Module name: Ear, Nose, and Throat (ENT) Year: Four Duration: 3 weeks (Aug-Sept. 2024)

Timetable hours: Interactive Lectures, Case-Based Learning (CBL), Clinical Rotations, Tutorials, Skills, Practicals, Self-Directed Learning

#### **MODULE INTEGRATED COMMITTEE**

| MODULE COORDINATOR: | • Prof. Dr. Shakil Aqil ( <b>ENT</b> ) |
|---------------------|--|
| CO-COORDINATOR:     | Dr. Yusra Nasir                        |

#### **DEPARTMENTS & RESOURCE PERSONS FACILITATING LEARNING**

| BASIC HEALTH SCIENCES   | CLINICAL DEPARTMENTS   |  |  |
|---|--|--|--|
| <ul><li>COMMUNITY MEDICINE</li><li>Dr. Saima Zainab</li></ul>   | <ul><li>Ear, Nose and Throat</li><li>Dr. Ahmad Nawaz</li></ul> |  |  |
| PATH  | HOLOGY   |  |  |
| Prof. Dr. Naveen Faridi   |  |  |  |
| DEPARTMENT of HEALTH PROFESSIONS EDUCATION                      |  |  |  |
| <ul><li>Professor Nighat Huda</li><li>Dr. Yusra Nasir</li></ul> | or Sobia Ali • Dr. Afifa Tabassum                              |  |  |
| LNH&MC N  | MANAGEMENT   |  |  |
|   | kki, Principal LNH&MC<br>ni, Director A.A & R.T LNH&MC         |  |  |

#### **STUDY GUIDE COMPILED BY:**

Muhammad Javed, Department of Health Professions Education

#### **INTRODUCTION**

#### WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how the student learning program of the module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules, and regulations

#### THE STUDY GUIDE:

- Communicates information on the organization and management of the module. This will help the student to contact the right person in case of any difficulty.
- Define the objectives which are expected to be achieved at the end of the module.
- Identify the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial, and case-based learning that will be implemented to achieve the module objectives.
- Provide a list of learning resources such as books, computer-assisted learning programs, web-links, and
  journals, for students to consult to maximize their learning.
- Highlights information on the contribution of continuous on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focus on information about examination policy, rules, and regulations.

**INTEGRATED CURRICULUM** comprises system-based modules such as Neuroscience II Reproductive system II, Eye/ENT, Urinary II, Rehabilitation & Orthopedics, Dermatology, and Endocrinology II which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to better understand basic sciences when they repeatedly learn about clinical examples.

**LEARNING EXPERIENCES**: Case-based integrated discussions, Task-oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, and learning experiences in clinics, and wards.

#### **LEARNING METHODOLOGIES**

The following teaching/learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Practicals
- Skills session
- Self-Directed Learning

**INTERACTIVE LECTURES:** In large groups, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

**SMALL GROUP SESSION:** This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient cases, interviews, or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials, and self-study. The facilitator asks probing questions, summarizes, or rephrases to help clarify concepts.

**CASE-BASED LEARNING (CBL)**: A small group discussion format where learning is focused on a series of questions based on a clinical scenario. Students discuss and answer the questions by applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concerned department.

**CLINICAL LEARNING EXPERIENCES:** In small groups, students observe patients with signs and symptoms in hospital wards, clinics, and outreach centers. This helps students relate knowledge of the module's basic and clinical sciences and prepare for future practice.

CLINICAL ROTATIONS: In small groups, students rotate in different wards like Neuroscience II Reproductive system II, Eye/ENT, Urinary II, Rehabilitation & Orthopedics, Dermatology, and Endocrinology II. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

**PRACTICAL:** Basic science practicals related to pharmacology, microbiology, forensic medicine, and community medicine have been scheduled for student learning.

**SKILLS SESSION:** Skills relevant to the respective module are observed and practiced where applicable in the simulated-learning environment such as a skills laboratory.

**SELF-DIRECTED LEARNING:** Students assume responsibilities for their learning through individual study, sharing and discussing with peers, and seeking information from Learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college's scheduled hours of self-study.

#### **MODULE 4: ENT**

#### **INTRODUCTION**

The Head and Neck and special Senses – II module is related to diseases of the Ear, Nose and Throat (ENT). ENT diseases are serious public health problems because of their universal distribution, and the morbidities associated thereof, which they cause due to inherent physiological function that take place in head and neck region. This study guide is to be used for 4<sup>th</sup> year's students to Liaquat National Medical College.

### **MODULE OBJECTIVES AND STRATEGIES**

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

#### **COMMUNITY MEDICINE**

| TOPICS & OBJECTIVES                                     | LEARNING<br>STRATEGIES   |
|---|--------------------------|
| 1. Noise Pollution                                      |                          |
| · Describe Noise & Vibration                            |                          |
| · Identify Noise sources & measurements                 |                          |
| · Explain adverse health effects of noise               | l cotume / CDL /         |
| · Discuss Noise Management                              | Lecture / CBL / Tutorial |
| 2. Cancers related to Head and Neck                     | Tutoriai                 |
| · Describe various cancers of Head & neck               |                          |
| · Identify risk factors of head & neck cancers          |                          |
| Explain the control & prevention of head & neck cancers |                          |

## **ENT**

| TOPICS & OBJECTIVES  | LEARNING<br>STRATEGIES |
|--|------------------------|
| 1. Diseases of External Ear (wax / foreign body)   |                        |
| • Discuss the etiology, clinical presentation, investigations, treatment and complications of  |                        |
| impacted was, frunculosis and foreign body   | -                      |
| Diagnose pre-auricular cyst/ sinus   | -                      |
| Discuss the etiology, clinical presentation, investigations, treatment and   |                        |
| complications for: Myringitis bullosa and Perichondritis   |                        |
| 2. Trauma to external ear  | _                      |
| Describe etiology, clinical presentation, investigations, treatment and complications  |                        |
| of trauma to pinna and traumatic rupture of tympanic membrane.   | _                      |
| 3. Acute Otitis externa  |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and<br/>complications for- Acute otitis externa</li> </ul> |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and</li> </ul>   |                        |
| complications for Fungal infections of ear   |                        |
| 4. Malignant Otitis Externa I  |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and</li> </ul>   |                        |
| complications for Malignant otitis externa.  |                        |
| 5. Malignant Otitis Externa II   |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and</li> </ul>   | Lecture / CBL /        |
| complications for Malignant otitis externa   | Tutorial               |
| 6. Benign tumors of external ear   |                        |
| Discuss the etiology, clinical presentation, investigations, treatment and   |                        |
| complications for Benign tumors of external ear  |                        |
| 7. Malignant tumors of external ear  |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and</li> </ul>   |                        |
| complications for Malignant tumors of external ear   |                        |
| 8. Acute otitis Media-I  |                        |
| <ul> <li>Discuss the etiology, clinical presentation, investigations, treatment and</li> </ul>   |                        |
| complications of Acute otitis Media-I  |                        |
| Discuss the etiology, pathophysiology, clinical presentation, examination findings,  | 1                      |
| investigations and treatment plan for: Acute necrotizing otitis media  |                        |
| 9. Acute otitis Media-II   | 1                      |
| Discuss the etiology, clinical presentation, investigations, treatment and   | -                      |
| - Discuss the ethology, chinear presentation, investigations, treatment and  |                        |

2024 Page | 8

complications of Acute otitis Media-II

• Discuss the etiology, pathophysiology, clinical presentation, examination findings, investigations and treatment plan for: Acute necrotizing otitis media

#### 10. Chronic suppurative otitis media- I

- Discuss the etiology, clinical presentation, investigations, treatment and complications of Chronic suppurative otitis media- I
- Describe the diagnosis and management of the complications of otitis media
- Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Serous otitis media
- Describe the diagnosis and management of the complications of otitis media and mastoiditis.

#### 11. Chronic suppurative otitis media- II

- Discuss the etiology, clinical presentation, investigations, treatment and complications of Chronic suppurative otitis media- II.
- Describe the diagnosis and management of the complications of otitis media
- Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Serous otitis media
- Describe the diagnosis and management of the complications of otitis media and mastoiditis.

#### 12. Deafness & Audiogram-I

- Define deafness
- List causes of deafness
- Interpret investigation findings related to deafness (Audiogram, tympanogram) I

#### 13. Deafness & Audiogram-II

- Define deafness
  - List causes of deafness
- Interpret investigation findings related to deafness (Audiogram, tympanogram)- II

#### 14. Vertigo & Tinnitus

 Discuss the clinical presentation and treatment options for vestibular neuritis, benign paroxysmal positional vertigo, Meniere's Disease, and migraine-associated vertigo.

#### 15. Epistaxis

• Discuss the etiology, clinical presentation, investigations, treatment and complications of Epistaxis

#### 16. Deviated nasal septum

• Discuss the etiology, clinical presentation, investigations, treatment and complications of Deviated nasal septum

#### 17. Nasal Polyps

- Define Polyps
- Diagnose Ethmoidal and Antrochoanal Polyps based on history, clinical findings and investigation findings.

Lecture / CBL / Tutorial

#### LIAQUAT NATIONAL MEDICAL COLLEGE

- Discuss management plans for Ethmoidal and Antrochoanal Polyps
- Diagnose Bleeding Polyps based on data provided
- Discuss management plan for Bleeding Polyps

#### 18. Nasal Septal diseases

- Classify Nasal Septal diseases
- Discuss the etiology, clinical presentation, investigations, treatment and differential diagnose of Nasal Septal diseases
- Describe etiology and pathophysiology for syphilis and leprosy.
- Diagnose syphilis and leprosy based on symptoms and signs and, investigation findings
- Develop treatment and follow plans for the above mentioned conditions

#### 19. Acute and chronic sinusitis

- Discuss the etiology, pathophysiology, clinical presentation, examination findings, investigations, differential diagnosis and treatment plans for: Acute Sinusitis and Chronic Sinusitis
- Based on data provided, diagnose complications of the above mentioned conditions.
- Suggest treatment plan for these conditions

#### 20. Rhinoliths

- Diagnose Rhinoliths based on examination & investigation findings
- Discuss management plan for Rhinoliths

#### 21. Fungal sinusitis

- Diagnose Fungal sinusitis based on data provided
- Discuss management plan for Fungal sinusitis

#### 22. Diseases of Salivary glands

- Diagnose diseases of salivary gland (benign neoplastic, non- neoplastic and parotitis), thyroid gland and lymph nodes based on clinical presentations and investigation findings.
- Justify selection of treatment options for the salivary gland conditions.

#### 23. Oral cavity ulcers

- Justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Aphthus ulcers, Thrush & Leukoplakia).
- Justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Traumatic, Vincents Angina, Agranulocytic Tuberculous Behcet's Syndrome and Ulcerative lesions of Oral Cavity)

#### 24. Neoplastic conditions of Oral cavity

- Classify Neoplastic conditions of Oral cavity
- Justify diagnosis, investigations, differential diagnosis and treatment plans for Neoplastic conditions of Oral cavity.
- Diagnosis, investigations, differential diagnosis and treatment plans for Oral Malignant Ulcers.

#### 25. Neoplasms of salivary glands

Classify Neoplasms of salivary glands

Lecture / CBL / Tutorial

Lecture / CBL / Tutorial

• Justify diagnosis, investigations, differential diagnosis and treatment plans for Neoplasms of salivary glands

#### 26. Tonsils

• Justify diagnosis, investigations, differential diagnosis and treatment plans for Tonsillitis, Peri-tonsillitis and abscess.

#### 27. Adenoids

 Justify diagnosis, investigations, differential diagnosis and treatment plans for Adenosis

#### 28. Acute and chronic inflammations of larynx

- Diagnose laryngitis based on symptoms and signs, and investigation findings
- Develop treatment and follow up plans for the above mentioned conditions.
- Describe the etiology and pathophysiology of supraglottitis and laryngitis
- Justify diagnosis, investigations, differential diagnosis and treatment plans for supraglottitis and laryngitis.

#### 29. Vocal Nodules and Paralysis

 Describe the etiology, pathophysiology, investigations and principles of treatment for Vocal Nodules and Vocal cord paralysis

#### 30. Diphtheria

- Describe the etiology and pathophysiology of Diphtheria
- Diagnose Diphtheria based on symptoms and signs and, investigation findings
- Develop treatment and follow plans for the above mentioned condition

#### 31. Dysphagia

- Describe etiology, pathophysiology, differential diagnosis and investigations for dysphagia (oral, pharyngeal and esophageal).
- Describe indications, contraindications and complication of Esophagostomy.
- Justify diagnosis, investigations, and differential diagnosis for common conditions of the hypo-pharynx (including Plummer- Vinson or Paterson-Kelly syndrome, pharyngeal pouch (zenker diverticulum).

#### 32. Neck masses and fistulas

- Classify Neck masses and fistulas
- Justify diagnosis, investigations, differential diagnosis and treatment plans for Neck masses and fistulas
- Diagnose Hypoglossal cyst/sinus, Branchial Cyst and Branchial Fistula

 Justify diagnosis, investigations, differential diagnosis and treatment plans for Ludwig's angina

• Justify diagnosis, investigations, differential diagnosis and treatment plans for Pharyngeal and Retropharyngeal abscesses

#### 33. Sleep apnea syndrome

• Justify diagnosis, investigations, differential diagnosis and treatment plans for Sleep apnea syndrome

#### 34. Tracheostomy

Lecture / CBL / Tutorial

#### LIAQUAT NATIONAL MEDICAL COLLEGE

• Describe the indications, contraindications, complications, operation steps and postoperative care for tracheostomy

#### 35. Benign & Malignant laryngeal tumors

- Classify Laryngeal tumors
- Diagnose Papilloma Larynx, Laryngeal Polyps based on symptoms and signs, and investigation findings
- Discuss the etiology, symptoms and signs and, investigation findings, and differential diagnosis of Laryngeal Carcinoma
- justify diagnosis, investigations, and differential diagnosis for pyriform fossa carcinoma, and post cricoid carcinoma

#### 36. Radiology of ENT

• Identify and describe the radiological findings on different x-ray related to the ear, nose and throat

#### **PATHOLOGY**

#### 1. Pathogens causing infections of the ear

- List the pathogens causing infections of the ear
- Discuss the pathophysiology and clinical features of the infections.

#### 2. Pathogens causing infections of the nose

- List the pathogens causing infections of the nose
- Discuss the pathophysiology and clinical features of the infections.

#### 3. Pathogens causing infections of the throat

- List the pathogens causing infections of the throat
- Discuss the pathophysiology and clinical features of the infections

Lecture / CBL / Tutorial

Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered



#### **LEARNING RESOURCES**

| SUBJECT   | RESOURCES   |
|---|---|
| COMMUNITY MEDICINE  | 1. Community Medicine by Parikh 2. Community Medicine by M Ilyas 3. Basic Statistics for the Health Sciences by Jan W Kuzma |
| EAR NOSE AND THROAT (ENT)   | 1. Logan's Turner 2. P. L Dhingra   |
| PATHOLOGY/MICROBIOLOGY  1. Robbins & Cotran, Pathologic Basis of Disease,9 <sup>th</sup> edition. 2. RapidReviewPathology,4 <sup>th</sup> edition by Edward F. Goljan MD  WEBSITES:  1. http://library.med.utah.edu/WebPath/webpath.html 2. http://www.pathologyatlas.ro/ |   |

#### **ASSESSMENT METHODS:**

- Best Choice Questions(BCQs) also known as MCQs (Multiple Choice Questions)
- Objective Structured Practical/Clinical Examination (OSPE or OSCE)

#### **Internal Evaluation**

- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added to JSMU final exam. That 20% may include class tests,
   assignments, practicals, and the internal exam which will all have specific marks allocation.

#### **Formative Assessment**

Individual departments may hold quizzes or short answer questions to help students assess their learning. The marks obtained are not included in the internal evaluation

#### For JSMU Examination Policy, please consult the JSMU website!

More than 75% attendance is needed to sit for the internal and final examinations



#### **LNH&MC EXAMINATION RULES & REGULATIONS**

- Student must report to examination hall/venue, 30 minutes before the exam.
- Exam will begin sharply at the given time.
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- Cell phones are strictly not allowed in the examination hall.
- If any student is found with a cell phone in any mode (silent, switched off, or on) he/she will not be allowed to continue their exam.
- No students will be allowed to sit in an exam without University Admit Card, LNMC
   College ID Card, and Lab Coat
- Students must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

# **SCHEDULE:**

3 WEEKS EAR NOSE AND THROAT (ENT)

5th September 2024

