

## JINNAH SINDH MEDICAL UNIVERSITY

### OTORHINOLARYNGOLOGY [EAR, NOSE & THROAT DISEASES (ENT )] 2021

This study guide is meant to be used for 4<sup>th</sup> year students of Jinnah Sindh Medical University. The topics have been divided into three main areas: must know, should know and may know.

Topics classified under '**must**' are essential for an MBBS graduate; without their knowledge, students will not be able to pass the module and rotation. Topics and objectives under this category are frequently encountered in the clinical life of a general practitioner and hence warrant maximum importance.

Topics and objectives under '**should**' are important but not essential for a graduate to know. These issues are seen in clinical practice of a general practitioner but are not a matter of daily routine. Knowing these objectives well will gain extra marks for students and will place him/ her above the average student.

Topics and objectives under '**may**' are optional for a graduate to know well. These are topics which may be learnt only by those who are targeting a distinction in the discipline. These topics and objectives are relevant for postgraduate residents.

CLINICAL SCIENCES
HEAD & NECK
By the end of the rotation in ENT, student <b><u>must</u></b> be able to <ul style="list-style-type: none"><li>• Discuss the differential diagnosis for neck mass based on data provided (symptoms, signs, investigations)</li><li>• Diagnose diseases of salivary gland (neoplastic, non-neoplastic and parotitis), thyroid gland and lymph nodes based on clinical presentations and investigation findings</li></ul>
By the end of the rotation in ENT, student <b><u>should</u></b> be able to diagnose Thyroglossal cyst/ sinus, Pre-auricular cyst/ sinus, Branchial Cyst and Branchial Fistula
By the end of the rotation in ENT, student <b><u>may</u></b> be able to <ul style="list-style-type: none"><li>• Justify selection of treatment options for the salivary gland conditions</li><li>• Diagnose cleft palate and hare lip based on clinical presentation and investigation findings</li><li>• Describe the embryological defects and etiology for these conditions</li><li>• Describe treatment options for the above mentioned conditions</li></ul>
BUCCAL CAVITY, ORAL CAVITY, OROPHARYNX
ORAL CAVITY ULCERS
By the end of the rotation in ENT, student <b><u>must</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Aphthus, Thrush & Leukoplakia)

By the end of the rotation in ENT, student <b><u>should</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for Oral Malignant Ulcers
By the end of the rotation in ENT, student <b><u>may</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Traumatic, Vincents Angina, Agranulocytic Tuberculous, Behcet's Disease and Ulcerative lesions of Oral Cavity)
<b>OROPHARYNX</b>
By the end of the rotation in ENT, student <b><u>must</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for Tonsillitis, Peri-tonsillitis and abscess
By the end of the rotation in ENT, student <b><u>should</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for Tumors of tonsils, Sleep apnoea syndrome and Ludwig's angina
By the end of the rotation in ENT, student <b><u>may</u></b> be able to, based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for Pharyngeal & Retro-pharyngeal abscesses
<b>OESOPHAGUS</b>
By the end of the rotation in ENT, student <b><u>should</u></b> be able to <ul style="list-style-type: none"> <li>Describe etiology, pathophysiology, differential diagnosis and investigations for dysphagia (oral, pharyngeal and esophageal)</li> <li>Describe indications, contraindications and complication of Oesophagoscopy</li> </ul>
By the end of the rotation in ENT, student <b><u>may</u></b> be able to <ul style="list-style-type: none"> <li>Classify Oesophageal carcinoma</li> <li>Describe the pathophysiology of Oesophageal carcinoma based on symptoms and signs and, investigation findings</li> <li>Develop treatment and follow plans for Oesophageal carcinoma</li> </ul>
<b>LARYNX</b>
By the end of the rotation in ENT, student <b><u>must</u></b> be able to <ul style="list-style-type: none"> <li>Describe etiology, pathophysiology, investigations and principles of treatment for Vocal Nodules and Vocal cord paralysis</li> <li>Diagnose laryngitis based on symptoms and signs and, investigation findings</li> <li>Develop treatment and follow plans for the above mentioned conditions</li> <li>Describe the etiology and pathophysiology of supraglottitis, laryngitis</li> <li>Classify laryngeal tumors</li> <li>Diagnose Papilloma Larynx, laryngeal Polyps and Laryngeal Carcinoma based on symptoms and signs and, investigation findings</li> <li>Describe indications, contraindications, complications, operation steps and post</li> </ul>

operative care for tracheostomy
<p>By the end of the rotation in ENT, student <b><u>should</u></b> be able to</p> <ul style="list-style-type: none"> <li>Describe the etiology and pathophysiology of Diphtheria</li> <li>Diagnose Diphtheria based on symptoms and signs and, investigation findings</li> <li>Develop treatment and follow plans for the above mentioned condition</li> </ul>
<b>LARYNGEAL TUMUORS</b>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>Describe etiology, pathophysiology, investigations and principles of treatment for Glottic stenosis/ Laryngocoele, Laryngomalacia</li> <li>Describe etiology and pathophysiology for syphilis, leprosy and non-specific laryngitis</li> <li>Diagnose syphilis, leprosy and non-specific laryngitis based on symptoms and signs and, investigation findings</li> <li>Develop treatment and follow plans for the above mentioned conditions</li> </ul>
<b>EAR</b>
<b>EXTERNAL EAR</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>Discuss the etiology, investigations, treatment and complications for- Acute otitis externa</li> <li>Describe management of impacted wax and foreign body</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>should</u></b> be able to</p> <ul style="list-style-type: none"> <li>Describe management plan for dealing with trauma to pinna and traumatic rupture of tympanic membrane</li> <li>Discuss the etiology, investigations, treatment and complications for Malignant otitis externa</li> <li>Discuss the clinical presentations, examination findings, investigations and treatment plans for benign tumours of external ear</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>Discuss the etiology, investigations, treatment and complications for Myringitis bullosa, Perichondritis and Fungal infections</li> <li>Discuss the clinical presentations, examination findings, investigations and treatment plans for malignant tumours of external ear</li> </ul>
<b>MIDDLE EAR</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Acute otitis media, Serous otitis media, and Chronic otitis media</li> <li>Describe the diagnosis and management for complications of otitis media and mastoiditis</li> </ul>

<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Acute necrotising otitis media</li> <li>• Discuss the clinical presentations, examination findings, investigations and treatment plans for benign and malignant tumours of middle ear</li> </ul>
<b>INNER EAR</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Define deafness</li> <li>• List causes of deafness</li> <li>• Interpret investigation findings related to deafness (Audiogram, tympanogram)</li> <li>• Diagnose deafness and mutism in a child</li> <li>• Discuss the differential diagnosis, investigations and treatment of Tinnitus &amp; Acoustic Neuroma</li> </ul>
<ul style="list-style-type: none"> <li>• By the end of the rotation in ENT, student <b><u>may</u></b> be able to discuss the clinical presentations and treatment options for vestibular neuritis, benign paroxysmal positional vertigo, Meniere's Disease, and migraine-associated vertigo</li> </ul>
<b>NOSE</b>
<b>EXTERNAL NOSE</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose fractures of the external nose based on history, clinical findings and investigation findings</li> <li>• Discuss management plan for dealing with trauma to external nose</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose congenital lesions of external nose (choanal atresia) based on clinical and investigation findings</li> <li>• Based on data provided, discuss management plans for external nose deformities</li> </ul>
<b>SEPTUM</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose epistaxis, Deviated nasal septum, Hematoma, septal abscess and perforation</li> <li>• Discuss management plans for epistaxis, Deviated nasal septum, Hematoma, septal abscess and perforation</li> </ul>
<b>RHINITIS</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to describe the etiology, pathophysiology, clinical presentations, investigations and treatment plans for Allergic Rhinitis and rhinitis due to foreign bodies</p>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to describe the etiology, pathophysiology, clinical presentations, investigations and treatment plans for common types of Atrophic Rhinitis, Hyper-Trophic Rhinitis and VMR</p>

<b>POLYPS</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Define Polyps</li> <li>• Diagnose Ethmoidal and Antrochoanal Polypus</li> <li>• Discuss management plans for Ethmoidal and Antrochoanal Polypus</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>should</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose Fungal sinusitis based on data provided</li> <li>• Discuss management plans for Fungal sinusitis</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose Bleeding Polypus</li> <li>• Discuss management plans for Bleeding Polypus</li> </ul>
<b>FOREIGN BODY IN NOSE</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose foreign bodies in nose (i.e. Rhinoliths) based on examination &amp; investigation findings</li> <li>• Discuss management plans for Rhinolith</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Diagnose foreign bodies in nose (i.e. Maggots) based on examination &amp; investigation findings</li> <li>• Discuss management plans for Maggots</li> </ul>
<b>SINUSITIS</b>
<p>By the end of the rotation in ENT, student <b><u>must</u></b> be able to</p> <ul style="list-style-type: none"> <li>• Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations, differential diagnosis and treatment plans for: Acute Sinusitis and Chronic Sinusitis</li> <li>• Based on data provided, diagnose complications of the above mentioned conditions</li> <li>• Suggest treatment plan for these conditions</li> </ul>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to diagnose CSF Rhinorrhoea based on data provided</p>
<b>TUMOURS</b>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations, differential diagnosis and treatment plans for Basal &amp; Squamous Cell Carcinoma, Papilloma &amp; Osteoma</p>
<b>HEADACHE AND ITS ENT CAUSES</b>
<p>By the end of the rotation in ENT, student <b><u>may</u></b> be able to based on data provided, justify diagnosis, investigations, differential diagnosis and treatment plans for headaches with emphasis on ENT causes</p>

### ENT INSTRUMENT IDENTIFICATION

By the end of the rotation in ENT, student **must** be able to discuss the indications and contraindications (where applicable) of the following instruments:

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| <ol style="list-style-type: none"> <li>1. Adenoid curette</li> <li>2. Ashe's Forceps</li> <li>3. Balenger Swivel Knife</li> <li>4. Boyle Davis mouth gag</li> <li>5. Ear speculum</li> <li>6. Endoscopes</li> <li>7. Endotracheal Tube, Cuffed/Non-cuffed</li> <li>8. Freer elevator</li> <li>9. Head lights</li> <li>10. Indirect laryngoscope mirror</li> <li>11. Jobsons Horne probe</li> <li>12. Knot pusher</li> <li>13. Laryngoscopes</li> <li>14. Luc's forceps</li> </ol> | <ol style="list-style-type: none"> <li>15. McGill Forceps</li> <li>16. Nasal Snare</li> <li>17. Nasal Speculum</li> <li>18. Otoscope</li> <li>19. Posterior Rhinoscopy mirror</li> <li>20. Sucker Pharyngeal</li> <li>21. Tilly's Nasal Dressing Forceps</li> <li>22. Tongue depressor</li> <li>23. Tonsil holding forceps</li> <li>24. Tonsil snare</li> <li>25. Tonsillar artery forceps</li> <li>26. Tracheostomy Tubes</li> <li>27. Trocar and Cannula</li> <li>28. Tuning forks</li> </ol> |
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By the end of the rotation in ENT, student **should** be able to discuss the indications and contraindications (where applicable) of the following instruments:

1. Bronchoscopes (Rigid/flexible)
2. Laryngoscope Macintosh
3. Nasopharyngoscope
4. Oesophagoscopes
5. Suction nozzle
6. Suction, Tube
7. Tracheal Dilator
8. Walsham's Forceps

By the end of the rotation in ENT, student **may** be able to discuss the indications and contraindications (where applicable) of the following instruments:

1. Eustachian Catheter
2. Retractors
3. Sinus forceps

PSYCHOMOTOR SKILLS	
<p>By the end of the ENT rotation, students <b><u>must</u></b> be able to:</p> <ul style="list-style-type: none"> <li>• Take history appropriately from a patient with an ENT related condition</li> <li>• Perform a complete regional examination</li> <li>• Use the tongue blade to aid inspection of the buccal cavity</li> <li>• Use the finger palpation method for examination of oral cavity and tongue</li> <li>• Palpate the neck to assess the lymph-nodes and salivary glands in the neck</li> <li>• Perform examination Cranial nerves relevant to ENT (Olfactory nerve, Trigeminal nerve, Facial nerve, Vestibulocochlear nerve, Glossopharyngeal nerve, Hypoglossal nerve)</li> <li>• Examine the oropharynx and the neck</li> <li>• Use nasal speculum appropriately for examination</li> <li>• Use tuning forks for hearing tests and interpret the findings</li> <li>• Use otoscope to aid in examination of the external auditory canal and the tympanic membrane</li> </ul>	
<p>By the end of the ENT rotation, students <b><u>should</u></b> be able to (under close supervision of a qualified expert):</p> <ul style="list-style-type: none"> <li>• Use Seigle's speculum for pneumatic Otoscopy</li> <li>• Perform Examination of ear for foreign body and of posterior nasal space by posterior Rhinoscopy</li> </ul>	
<p>By the end of the ENT rotation, students <b><u>may</u></b> be able to (under close supervision of a qualified expert) perform Syringing of ear, Anterior Nasal Packing and Indirect Laryngoscopy</p>	
AFFECTIVE SKILLS	
<p>By the end of the ENT rotations, students <b><u>must</u></b> be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate punctuality and regularity in all teaching sessions</li> <li>• Deal with colleagues (peers, seniors and juniors), other members of the health care team and patients and their attendants with respect</li> <li>• Demonstrate compassion and ethical behavior while dealing with patients (i.e. during history taking, examinations and discussions)</li> <li>• Demonstrate empathy towards the health care team members and patients (along with their attendants) through verbal and non-verbal communication</li> <li>• Demonstrate clarity in verbal and written communications at all times</li> <li>• Write clear and focused histories in order to make them accurate and legible for others</li> </ul>	
<b>INTERNAL ASSESSMENT</b>	Internal assessment will be according to JSMU policy. The details of internal assessment will be determined by the respective institutions. Internal assessment carries 20% weightage in the final, end-of-year examination
<b>FINAL EXAMINATION</b>	MCQs and OSCE/OSPE (observed + un observed)
<b>COURSE EVALUATION</b>	Course will be evaluated through a feedback form which will be posted on the JSMU website