

# DEPARTMENT OF ENT

(Head & Neck Surgery)

**SHEIKH ZAYED**

**MEDICAL COLLEGE / HOSPITAL,**

**RAHIM YAR KHAN**



**Department of ENT, Head & Neck surgery at sheikh Zayed medical college/hospital Rahim yar khan is endorsing and adapting the curriculum along with the corresponding policies and plans of the CPSP, UHS, PMDC & Specialized Medical Healthcare & Medical Education Department**



## MISSION STATEMENT

### Sheikh Zayed Medical College/Hospital



## VISION

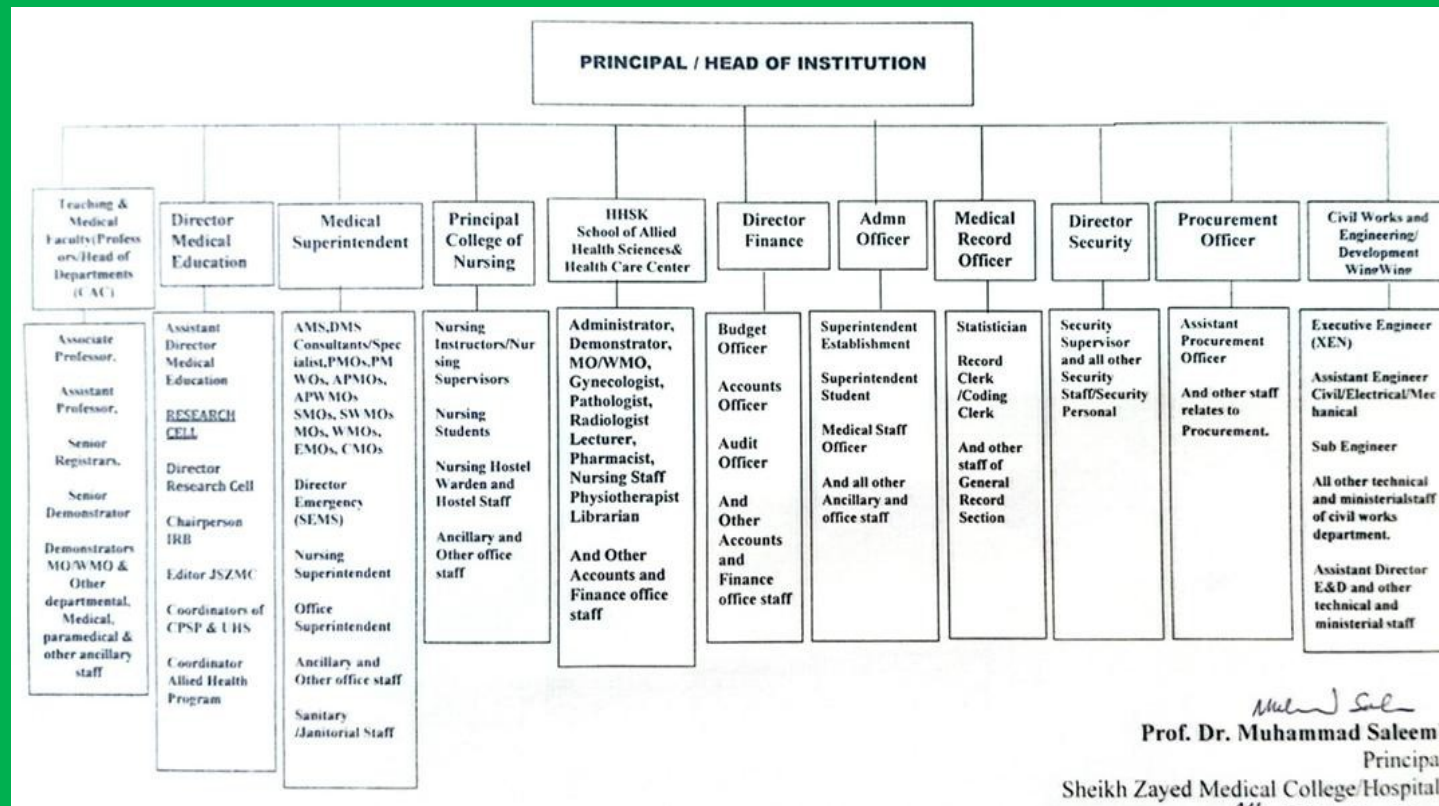
The vision of Sheikh Zayed Medical College is to be globally recognized center of excellence in medical education, research and healthcare delivery with Islamic ethical values.

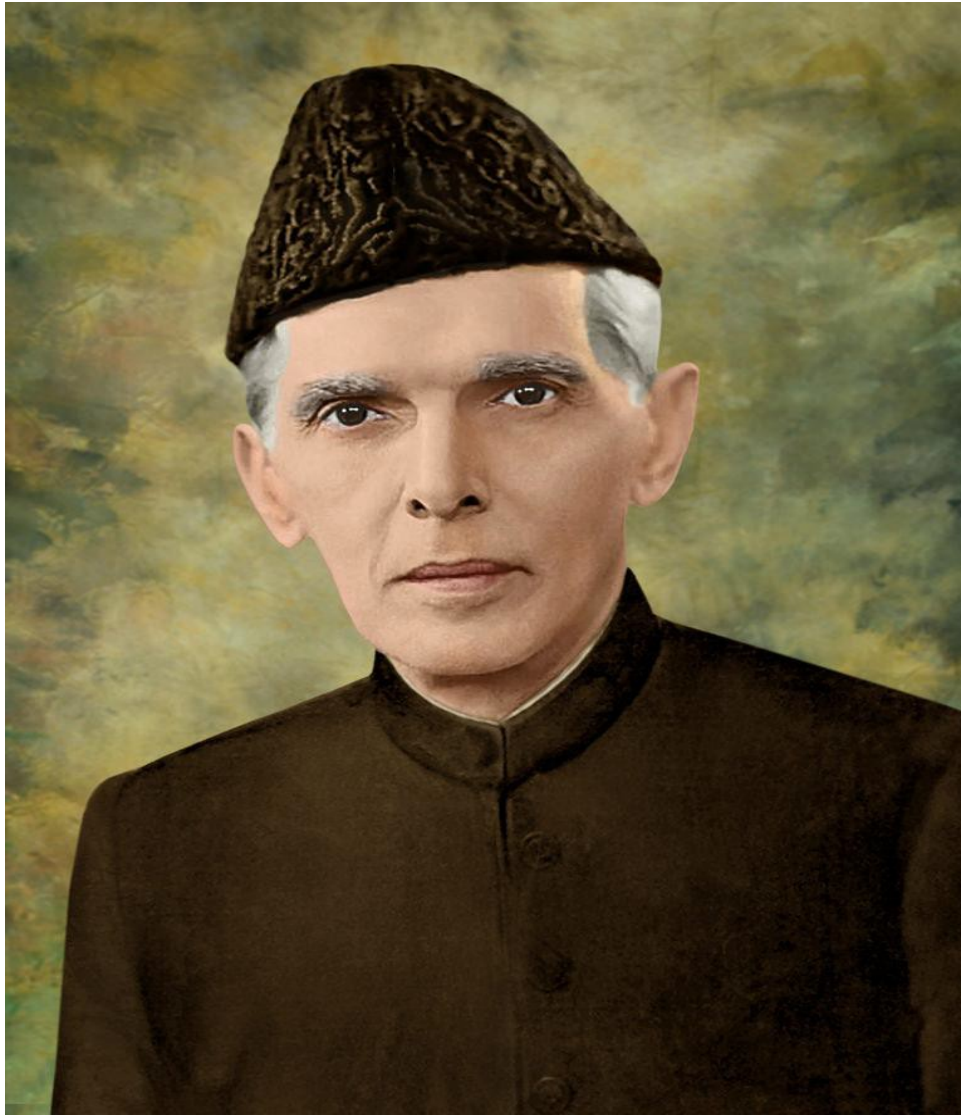
## MISSION STATEMENT

Our mission is to produce exceptional healthcare professionals who have the best knowledge of medical sciences and research, abiding by the principles of ethics and professionalism to promote holistic patient and population- centered health care of highest standard

(Reference: Official website: <https://szmc.edu.pk/>)

## Organogram of Sheikh Zayed Medical College/Hospital









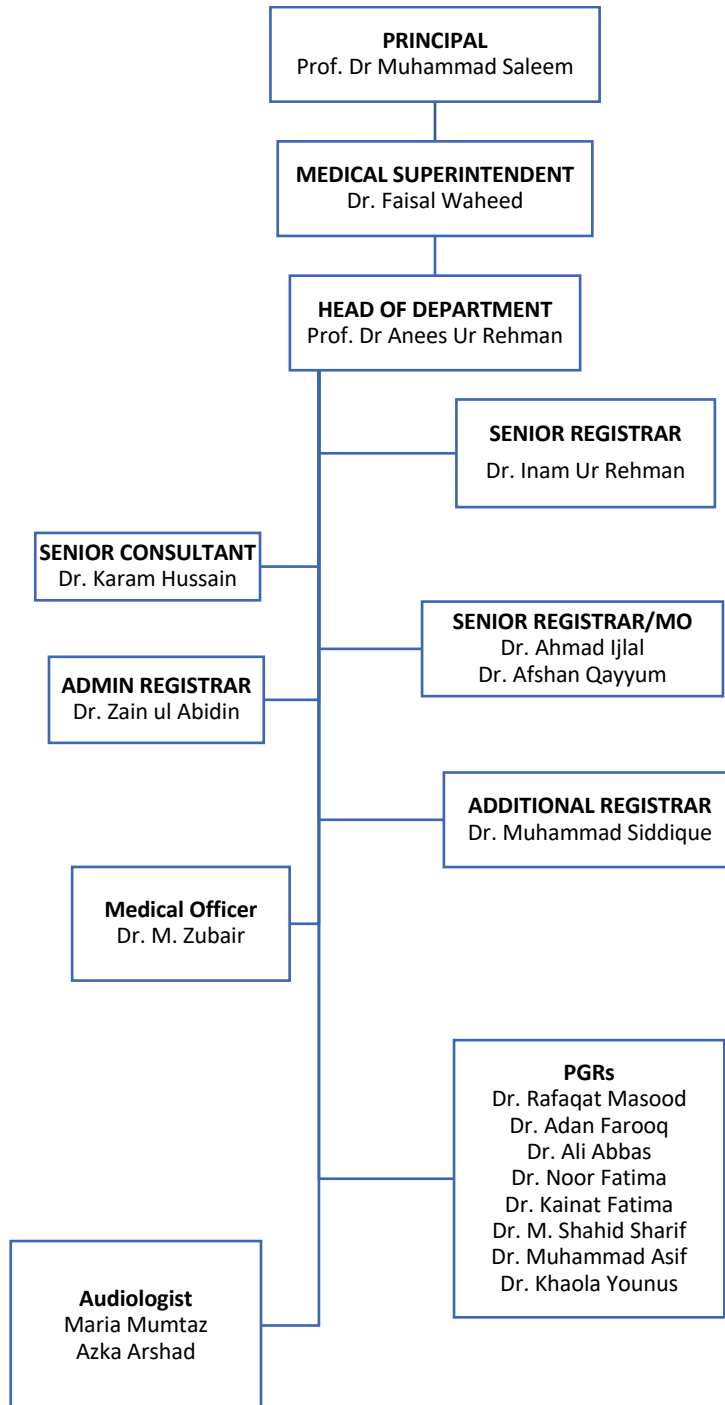


**Principal Prof.**  
**Dr. Muhammad Saleem Leghari**

The principal's message from Sheikh Zayed Medical College (SZMC) in Rahim Yar Khan emphasizes the institution's commitment to quality medical education and patient care, aiming to produce competent and compassionate doctors who serve humanity both locally and globally. The college highlights its recognition by the Pakistan Medical & Dental Council and accreditation for postgraduate training programs, positioning itself as a beacon of hope for the region.




# ORGANOGRAM

## ENT, HEAD & NECK SURGERY DEPARTMENT





## SNAP OF PROFESSOR, SENIOR CONSULTANT, & S.R

<b>Prof. Dr. Anees-ur-Rehman</b> Head of ENT Department	
<b>Dr. Inam-ur-Rehman</b> Senior Registrar , ENT Department	
<b>Dr. Karam Hussain</b> Senior Consultant, ENT Department	

**Dr. Afshan Qayum**  
Senior Registrar/WMO,  
ENT Department



**Dr. Ahmad Ijlal Qazi**  
Senior Registrar/M.O,  
ENT Department



**Dr. Zain ul Abidin**  
Admin Registrar/M.O,  
ENT Department







**Beautiful Garden of SZMC RYK**



**ENT DEPARTMENT SZMC&HOSPITAL**

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## **12.INTRODUCTION:**

Rahim Yar Khan has been an important city of former Bahawalpur State. In 1947, the Nawab of Bahawalpur acceded the state to Pakistan and it became part of the later. Rahim Yar Khan District Head Quarter (DHQ) hospital was established in 1950. Later on this hospital was named Sheikh Zayed Hospital. When the Sheikh Zayed Medical College was established this hospital was affiliated with it as the teaching hospital in 2003.



**Crossroad location of Rahim Yar Khan and its catchment area**

## **THE INSTITUTION: SHEIKH ZAYED MEDICAL COLLEGE / HOSPITAL**

Sheikh Zayed Medical College was a very much needed and highly desirous not only to the Rahim Yar Khan District but also for Rajan Pur and Districts of upper Sindh like Ghotki and Sukkur etc. It also has drainage from the people of areas of Dera Bugti, Dera Murad Jamali and other neighboring districts of Balochistan Province. This is a blessing and long-standing dream that came true, for the people of central part of Pakistan, at the junction of three Provinces.

Sheikh Zayed Medical College was established and started its working in the building of Sheikh Zayed Hospital which is now attached with college. This Hospital was started as civil Hospital in the Municipal Committee building in 1928 with 50 beds strength. The quality of health care in all aspects and number of beds were increased in different phases to a 743 beds hospital at present, with a state of the art emergency department. This number will increase up to more than 1300 beds in a few years. Emergency department will be 120 bedded with all diagnostic, curative and indoor facilities.

Sheikh Zayed Medical College has been established to become a role model for medical education and patient care. With this aim, the first batch for MBBS students of this college started its academic session in Quaid-e- Azam Medical College, Bahawalpur in year 2003. Later Sheikh Zayed Medical College campus started functioning and 1<sup>st</sup> year MBBS class was started here. Later, 2<sup>nd</sup> year MBBS class was called from Quaid e Azam Medical College, Bahawalpur to Sheikh Zayed Medical College Rahim Yar Khan



## Department Introduction:

Sheikh Zayed Hospital was established in 1950 as District Hospital and Department of ENT was started 1987 as one of sub-specialty of General Surgery. After the establishment of Sheikh Zayed Medical College in March 2004, Department of Otorhinolaryngology and Head and Neck Surgery (ENT) was affiliated with the College.

Our faculty members consist of highly qualified and experienced teachers and surgeons. **We have five FCPS residents, four MS residents, one Senior Registrar and one Senior Consultant, two medical officers working as Senior Registrars** and three medical officers with good surgical experience along with two audiologists under survivorship of **Prof. Dr. Anees-ur-Rehman**, Head of ENT Department, Sheikh Zayed Medical College, Rahim Yar Khan.

Our department is well equipped with latest diagnostic and surgical instruments. We have audiology section containing Impedance and Pure tone Audiometer along with BERA and Otoacoustic Emission for the diagnosis of problems related to ear. Latest Operating Microscope furnished with Video Camera and monitor is present in operation theatre. All types of major and minor operations related to Nose, Throat, Ears, Head and Neck regions including Maxillo-facial surgery are performed. All types of rigid endoscopes and bronchoscope with video camera and monitor are present in our department. Recently functional endoscopic sinus surgery with endovision has been installed in ENT operation theatre.

Moreover we have conference room/demonstration room for the purpose of departmental conferences, demonstrations, discussions, teaching of postgraduate and undergraduate students.

We have a departmental library containing important international and national journals of Ears, Nose and Throat and reference books. We have facility of multimedia and internet connection ENT Department.

Our department is rapidly progressing and expanding under the full guidance and support of the Professor Dr. Anees-ur-Rehman, who takes keen interest in the working of the Department.

Our medical officers examine the patients in OPD six days a week and emergency cover is round the clock throughout the week. Consultants also visit ENT, OPD six days a week.



## **Beautiful view of New Building Sheikh Zayed Medical College**

### **HISTORY:**

Department of Otorhinolaryngology was established in DHQ, Rahim Yar Khan in 1981. This Department was affiliated with Sheikh Zayed Medical College as Department of Otorhinolaryngology and Head & Neck Surgery in 2004.

Dr. Anees-ur-Rehman (Professor & HOD)  
From 12-11-2023 to date

Dr. Muhammad Fahim Awan (Professor)  
From 02-11-2018 to 11-11-2023

Dr. Muhammad Irshad -ul- Haq (Professor)  
From 04-02-2014 to 01-11-2018

Dr. Shamim Hassan (Professor)  
From 1-12-2009 to 03-02-2014

Dr. Muhammad Irshad -ul- Haq (Associate Professor)  
From 31-1-2009 to 30-11-2009

Dr. Najumul Hasnain (Professor)  
From 13-11-2008 to 30-1-2009

Dr. Muhammad Irshad-ul-Haq (Associate Professor)  
From 1-6-2006 to 12-11-2008

Dr. Shahzad Hussain Qadri (Assistant Professor)  
From 20-5-2006 to 31-5-2006

## MESSAGE BY HEAD OF DEPARTMENT

### PROF. DR. ANEES-UR-REHMAN



**(MBBS,DLO,FCPS, CHPE)**

As the Head of ENT Department, I am honored to lead a team of dedicated professionals committed to providing the best ENT, head & neck surgeries services in this region of south Punjab.

In the ENT Department, we strive for excellence in every patient care, from diagnosis to treatment and follow-up. This book provides a framework for ensuring that our services meet the highest standards and encourage all staff members to familiarize themselves with its contents. By adhering to these standards we can guarantee that our patients receive the best possible care and that our department maintains its reputation for excellence.

UHS Supervisor ID: ORI-2025-00104



# University of Health Sciences Lahore

*This is to certify that*

Name Anees-ur-Rehman PMDC NO. 32011-P

Designation Professor Institute Shaikh Zayed Medical College, Rahim Yar Khan

*Is registered as Supervisor for University Clinical Postgraduate Programs in*

Specialty Otorhinolaryngology Level III

*Having fulfilled prescribed criteria as per UHS Regulations.*

  
Director Medical Education  
University of Health Sciences Lahore

  
Director Postgraduate Studies  
University of Health Sciences Lahore

  
Pro - Vice Chancellor  
University of Health Sciences Lahore

Date of Approval: 10/02/2025

Valid Till: 10/02/2030



# CERTIFICATE

CPSP ID : 1-2007-548



COLLEGE OF  
PHYSICIANS AND  
SURGEONS  
PAKISTAN

Registration &  
Research Cell

DATE OF ISSUE :	Feb 6, 2020
R&RC REGISTRATION #	ENT-S-110-226
DATE OF APPROVAL :	Feb 1, 2020

**PROVISIONAL**

*This is to certify that*

*Doctor* : ANEES UR REHMAN

*Designation* : ASSISTANT PROFESSOR

*Institution* : SHAIKH ZAYED MEDICAL COMPLEX / DHQ HOSPITAL, RAHIM YAR KHAN

*is registered as Supervisor for training FCPS trainees in the subject of*  
OTORHINOLARYNGOLOGY (E.N.T.)

JAWAID GHAFAR, SENIOR EXECUTIVE OFFICER, R&RC, CPSP

**Note:** This certificate is valid FOR ABOVE-MENTIONED INSTITUTE ONLY. In case of transfer, a fresh registration will have to be obtained.

7th Central Street, D.H.A., Phase II, Karachi-75500, Pakistan. Tel: UAN: 111-606-606, (021) 99266400-10, Fax: (021) 992266450



# Pakistan Medical & Dental Council

## Faculty Registration Certificate



PM&DC Regn No. 32011-P

Date 16/01/2017

Valid Upto 31/12/2021

Name ANEES UR REHMAN

Designation/Title ASSISTANT PROFESSOR

Qualification M.B.,B.S.,D.L.O.,F.C.P.S. (OTO - RHINO - LARYNGOLOGY)

in the speciality of E.N.T.

Appointed at (Name of Institution for which this certificate shall be valid for) QUAID-E-AZAM MEDICAL COLLEGE BAHAWALPUR

QUAID-E-AZAM MEDICAL COLLEGE BAHAWALPUR

Has been registered with PM&DC as faculty vide No. 1397/32011-P/M



Deputy Registrar/Registrar

Please study note over leaf carefully



## LIST OF DOCTORS OF ENT DEPARTMENT

Sr. No.	Name	Designation	Qualification
1	Prof. Dr. Anees-Ur-Rehman	Professor	MBBS, DLO, FCPS, CHPE
2	Dr. Inam Ur Rehman	Senior Registrar	MBBS, FCPS
3	Dr. Karam Hussain	Senior Consultant	MBBS, DLO
4	Dr. Afshan Qayum	Senior Registrar/WMO	MBBS, FCPS
5	Dr. Ahmad Ijlal Qazi	Senior Registrar/M.O	MBBS, FCPS
6	Dr. G. Zain-ul-Abidin	Admin Registrar	MBBS, MSPH
7	Dr. Muhammad Zubair	Medical Officer	MBBS, MSPH
8	Dr. Muhammad Siddique	Medical Officer	MBBS
09	Dr. Yumna Sarmad	PGR (FCPS)	MBBS
10	Dr. Rafaqat Masood	PGR (FCPS)	MBBS
11	Dr. Adan Farooq	PGR (MS)	MBBS
12	Dr. Ali Abbas	PGR (FCPS)	MBBS
13	Dr. Noor Fatima	PGR (FCPS)	MBBS
14	Dr. Kainat Fatima	PGR (MS)	MBBS
15	Dr. M. Shahid Sharif	PGR (FCPS)	MBBS
16	Dr. Muhammad Asif	PGR (MS)	MBBS
17	Dr. Khaola Younus	PGR (FCPS)	MBBS
<b>Audiologists:</b>			
01	Mrs. Azka Arshad	Audiologist	B.S, M. Phill
02	Mrs. Maria Murtaza	Audiologist	B.S, M. Phill

## **Para Medical/Ancillary/Technical Staff List**

01	Nursing Staff	04
02	P.A/Stenographer	01
03	Dispenser	01
04	Store Keeper	01
05	Naib Qasid	01
06	Ward Servant	03
07	Sanitary Worker	03




**DEPARTMENT OF ENT-HEAD NECK SURGERY**  
**Sheikh Zayed Medical College/Hospital, Rahim Yar Khan**  
 Ref. No. 288 /ENT/SZMC/H Dated: 28--06-2025



**Duty Roster of MOs-PGRs and On Call Duties Doctors for the Month of July 2025**

OPD		01-07-2025 to 05-07-2025		07-07-2025 to 12-07-2025		14-07-2025 to 19-07-2025		21-07-2025 to 26-07-2025		28-07-2025 to 31-07-2025	
		Dr. M. Asif Meo		Dr. Kainat Fatima		Dr. Noor Fatima		Dr. Ali Abbas		Dr. M. Asif Meo	
1st on Call OPD Roster						Monday		Prof. Dr. Anees-ur-Rehman + Dr. Karam Hussain			
						Tuesday		Dr. Karam Hussain			
						Wednesday		Prof. Dr. Anees-ur-Rehman + Dr. Inam-ur-Rehman			
						Thursday		Dr. Ahmad Ijlal			
						Friday		Dr. Afshan Qayum			
						Saturday		Dr. Ahmad Ijlal + Dr. Afshan Qayum			
OT Roster						Tuesday		Prof. Dr. Anees-ur-Rehman + Dr. Afshan Qayum + Dr. Ahmad Ijlal			
						Thursday		Dr. Afshan Qayum			
						Saturday		Prof. Dr. Anees-ur-Rehman + Dr. Karam Hussain + Dr. Inam-ur-Rehman +			
Date	Day	Morning (08:00am to till the completion of same day assignment)		Evening (2:00pm to 8:00pm)		Night (8:00pm to 8:00am)		Consultant on Call			
		MO-PGR	H.O	MO-PGR	H.O		H.O				
01-07-2025	Tue	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Inam-ur-Rehman			
02-07-2025	Wed	Dr. Rafaqat	Dr. Sumaira	Dr. Rafaqat	Dr. Sumaira	Dr. Rafaqat	Dr. Sumaira	Dr. Ahmed Ijlal			
03-07-2025	Thu	Dr. Adan	Dr. Rashid	Dr. Adan	Dr. Rashid	Dr. Adan	Dr. Rashid	Dr. Afshan Qayum			
04-07-2025	Fri	Dr. Kainat	Dr. Mobin	Dr. Kainat	Dr. Mobin	Dr. Kainat	Dr. Mobin	Dr. Inam-ur-Rehman			
05-07-2025	Sat	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Ahmed Ijlal			
06-07-2025	Sun	Dr. Siddique	Dr. Sumaira	Dr. Siddique	Dr. Sumaira	Dr. Siddique	Dr. Sumaira	Dr. Ahmed Ijlal			
07-07-2025	Mon	Dr. Khaola	Dr. Rashid	Dr. Khaola	Dr. Rashid	Dr. Khaola	Dr. Rashid	Dr. Afshan Qayum			
08-07-2025	Tue	Dr. Ali Abbas	Dr. Mobin	Dr. Ali Abbas	Dr. Mobin	Dr. Ali Abbas	Dr. Mobin	Dr. Inam-ur-Rehman			
09-07-2025	Wed	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Noor	Dr. Adnan	Dr. Ahmed Ijlal			
10-07-2025	Thu	Dr. Asif Meo	Dr. Sumaira	Dr. Asif Meo	Dr. Sumaira	Dr. Asif Meo	Dr. Sumaira	Dr. Afshan Qayum			
11-07-2025	Fri	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Inam-ur-Rehman			
12-07-2025	Sat	Dr. Khaola	Dr. Mobin	Dr. Khaola	Dr. Mobin	Dr. Khaola	Dr. Mobin	Dr. Ahmed Ijlal			
13-07-2025	Sun	Dr. Adan	Dr. Adnan	Dr. Adan	Dr. Adnan	Dr. Adan	Dr. Adnan	Dr. Inam-ur-Rehman			
14-07-2025	Mon	Dr. Kainat	Dr. Sumaira	Dr. Kainat	Dr. Sumaira	Dr. Kainat	Dr. Sumaira	Dr. Afshan Qayum			
15-07-2025	Tue	Dr. Siddique	Dr. Rashid	Dr. Siddique	Dr. Rashid	Dr. Siddique	Dr. Rashid	Dr. Inam-ur-Rehman			
16-07-2025	Wed	Dr. Asif Meo	Dr. Mobin	Dr. Asif Meo	Dr. Mobin	Dr. Asif Meo	Dr. Mobin	Dr. Ahmed Ijlal			
17-07-2025	Thu	Dr. Adan	Dr. Adnan	Dr. Adan	Dr. Adnan	Dr. Adan	Dr. Adnan	Dr. Afshan Qayum			
18-07-2025	Fri	Dr. Ali Abbas	Dr. Sumaira	Dr. Ali Abbas	Dr. Sumaira	Dr. Ali Abbas	Dr. Sumaira	Dr. Inam-ur-Rehman			
19-07-2025	Sat	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Ahmed Ijlal			
20-07-2025	Sun	Dr. Asif Meo	Dr. Mobin	Dr. Asif Meo	Dr. Mobin	Dr. Asif Meo	Dr. Mobin	Dr. Afshan Qayum			
21-07-2025	Mon	Dr. Khaola	Dr. Adnan	Dr. Khaola	Dr. Adnan	Dr. Khaola	Dr. Adnan	Dr. Afshan Qayum			
22-07-2025	Tue	Dr. Kainat	Dr. Sumaira	Dr. Kainat	Dr. Sumaira	Dr. Kainat	Dr. Sumaira	Dr. Inam-ur-Rehman			
23-07-2025	Wed	Dr. Noor	Dr. Rashid	Dr. Noor	Dr. Rashid	Dr. Noor	Dr. Rashid	Dr. Ahmed Ijlal			
24-07-2025	Thu	Dr. Siddique	Dr. Mobin	Dr. Siddique	Dr. Mobin	Dr. Siddique	Dr. Mobin	Dr. Afshan Qayum			
25-07-2025	Fri	Dr. Asif Meo	Dr. Adnan	Dr. Asif Meo	Dr. Adnan	Dr. Asif Meo	Dr. Adnan	Dr. Inam-ur-Rehman			
26-07-2025	Sat	Dr. Khaola	Dr. Sumaira	Dr. Khaola	Dr. Sumaira	Dr. Khaola	Dr. Sumaira	Dr. Ahmed Ijlal			
27-07-2025	Sun	Dr. Ali Abbas	Dr. Rashid	Dr. Ali Abbas	Dr. Rashid	Dr. Ali Abbas	Dr. Rashid	Dr. Ahmed Ijlal			
28-07-2025	Mon	Dr. Adan	Dr. Mobin	Dr. Adan	Dr. Mobin	Dr. Adan	Dr. Mobin	Dr. Afshan Qayum			
29-07-2025	Tue	Dr. Kainat	Dr. Adnan	Dr. Kainat	Dr. Adnan	Dr. Kainat	Dr. Adnan	Dr. Inam-ur-Rehman			
30-07-2025	Wed	Dr. Ali Abbas	Dr. Sumaira	Dr. Ali Abbas	Dr. Sumaira	Dr. Ali Abbas	Dr. Sumaira	Dr. Ahmed Ijlal			
31-07-2025	Thu	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Rafaqat	Dr. Rashid	Dr. Afshan Qayum			
Contact Numbers (CONSULTANTS)				Contact Numbers (PGRs, MOs & HOs)							
Professor Dr. Anees ur Rehman (HOD)				0302-8675972		Dr. M. Zubair (M.O)		0331-3557770			
Dr. Karam Hussain (Senior Consultant)				0333-6471366		Dr. Adan Farooq (PGR)		0306-0264173			
Dr. Inam-ur-Rehman (Senior Registrar)				0333-7333044		Dr. Rafaqat Masood (PGR)		0321-6092997			
Dr. Ahmed Ijlal (S.R)				0333-7470241		Dr. Ali Abbas (PGR)		0307-5764613			
Dr. Afshan Qayum (S.R)				0302-7728407		Dr. Kainat Fatima (PGR)		0331-7349666			
Dr. Zain-ul-Abidin (Admin Registrar)				0305-5179270		Dr. Khaola Younus (PGR)		0330-3489333			
Dr. M. Siddique Mahar (Add. Admin Reg.)				0300-0467708		Dr. Noor Fatima (PGR)		0313-6124485			
						Dr. Asif Meo (PGR)		0335-0212208			
						Dr. Athar Bashir (H.O)		0336-7213416			
						Dr. Aamna Tabassum (H.O)		0302-0497970			
						Dr. Usama Khalid (H.O)		0334-9675750			



Note

All MOs, PGRs & HOs should go to OPD daily at 10:30am sharp otherwise strict disciplinary action will be taken

*Signature*

**Note**

All MOs, PGRs & HOs should go to OPD daily at 10:30am sharp otherwise strict disciplinary action will be taken

Dr. Zain-ul-Abidin  
Admin Reg. of ENT Department  
Sheikh Zayed Medical College-Hospital  
Rahim Yar Khan.

## **Duty Roster for July-2025**

### **OPD Consultant Duties:**

<b>Day</b>	<b>Consultant's Name</b>
Monday	Prof. Dr. Anees ur Rehman, Dr. Karam Hussain
Tuesday	Dr. Karam Hussain
Wednesday	Prof. Dr. Anees ur Rehman, Dr. Inam-ur-Rehman
Thursday	Dr. Ahmad Ijlal Qazi
Friday	Dr. Afshan Qayum
Saturday	Dr. Ahmad Ijlal Qazi / Dr. Afshan Qayum

### **O.T Consultant Duties:**

<b>Day</b>	<b>Consultant Name</b>
Tuesday	Prof. Dr. Anees ur Rehman Dr. Ahmad Ijlal Qazi Dr. Afshan Qayum
Thursday	Dr. Afshan Qayum
Saturday	Prof. Dr. Anees ur Rehman Dr. Inam-ur-Rehman Dr. Karam Hussain

## O.T Duties MOs/PGRs:

Day	MOs/PGRs Name
Tuesday	Dr. Adan Farooq Dr. Noor Fatima Dr. M. Asif Meo
Thursday	Dr. Rafaqat Masood
Saturday	Dr. Kainat Fatima Dr. Ali Abbas Dr. Khaola Younus

## **Academic Activity Details**

**DEPARTMENT OF OTO-RHINO-LARYNGOLOGY**  
**SHEIKH ZAYED MEDICAL COLLEGE RAHIM YAR KHAN**  
**WARD CLASSES FOR UPCOMING BATCH OF 4<sup>TH</sup> YEAR SESSION 2023-24**

### **WARD CLASSES:**

<i><b>Day</b></i>	<i><b>Faculty Member</b></i>
Monday	Prof. Dr. Anees-ur-Rehman
Tuesday	Dr. Ahmad Ijlal Qazi
Wednesday	Dr. Afshan Qayum
Thursday	Dr. Inam-ur-Rehman
Friday	Dr. Ahmad Ijlal Qazi
Saturday	Dr. Afshan Qayum



## **Presentation Schedule for PGRs for July 2025**

### **(ENT Department)**

<b>Sr. No.</b>	<b>Date</b>	<b>Topic</b>	<b>Presenter</b>
01	09-07-2025	CA Larynx	Dr. Adan Farooq
02	16-07-2025	Fluid and Electrolyte Balance	Dr. Kainat Fatima
03	23-07-2025	Tracheostomy	Dr. Khaola Younus
04	30-07-2025	CA Hypopharynx	Dr. Ali Abbas
05	06-08-2025	Tumors of Salivary Gland	Dr. Muhammad Asif
06	13-08-2025	Head & Neck Space Infections	Dr. Rafaqat Masood
07	20-08-2025	CA Lip	Dr. Noor Fatima
08	27-08-2025	Lymphoma	Dr. Adan Farooq

## **Long case / Short Case Schedule for PGRs for July 2025 (ENT Department)**

<b>Sr. No.</b>	<b>Date</b>	<b>Presenter</b>
01	07-07-2025	Dr. Adan Farooq
02	14-07-2025	Dr. Kainat Fatima
03	21-07-2025	Dr. Khaola Yunus
04	28-07-2025	Dr. Ali Abbas
05	04-08-2025	Dr. Muhammad Asif
06	11-08-2025	Dr. Rafaqat Masood
07	18-08-2025	Dr. Noor Fatima

## **Journal Club Schedule for PGRs for July 2025 (ENT Department)**

<b>Sr. No.</b>	<b>Date</b>	<b>Presenter</b>
01	04-07-2025	Dr. Adan Farooq
02	11-07-2025	Dr. Kainat Fatima
03	18-07-2025	Dr. Khaola Younus
04	25-07-2025	Dr. Ali Abbas
05	01-08-2025	Dr. Muhammad Asif
06	08-08-2025	Dr. Rafaqat Masood
07	15-08-2025	Dr. Noor Fatima

## **Department Statistics**

1	Male Beds (Air Conditioned)	20
2	Female Beds (Air Conditioned)	20
3	Sucker Machine	05
4	Oxygen Cylinder	05
5	Laryngoscope	01
6	Umbo bag	02
7	Otoscope	03
8	Headlight	01
9	Video Otoscope	01
10	Dressing Room/Minor O.T.	01
	<ul style="list-style-type: none"> <li>• <b><u>We provide emergency cover round the clock throughout the week.</u></b></li> </ul>	

## **Technical Assistance Aid**

1. <u>Computer</u>	<u>02</u>
2. <u>Multimedia Projector</u>	<u>01</u>
3. <u>Internet (Wi-Fi) 24 Hours</u>	<u>01</u>
4. <u>Printer</u>	<u>01</u>

## **FACILITIES & INSTRUMENTS AVAILABLE IN OUTDOOR PATIENTS DEPARTMENT.**

### 1. ENT Examination Room

- Consultant 01
- Medical Officers 01

### 2. ENT Examination Unit 01

### 3. ENT Diagnostic Set 02

### 4. ENT Examination Set (instruments) 20 Sets

### 5. Oscopes/ Auriscopes 04

### 6. Sucker Machine 04

### 7. Aural Syringes 08

### 8. Head lights 02

### 9. Sterilizer 01

- Consultants also visit OPD six days per week
- Registrar & Medical officer examine the patients in ENT OPD six days a week. We provide emergency cover round the clock throughout the week.

## **AUDIOLOGY SECTION:**

i. Audiology Room (Air Conditioned) 01

ii. BERA 01

iii. Sound proof Booth 01

iv. Pure Tone Audiometer 03

v. Impedance Audiometer 02

Pure tone audiometry and impedance audiometry performed daily whereas BERA is performed on daily only.



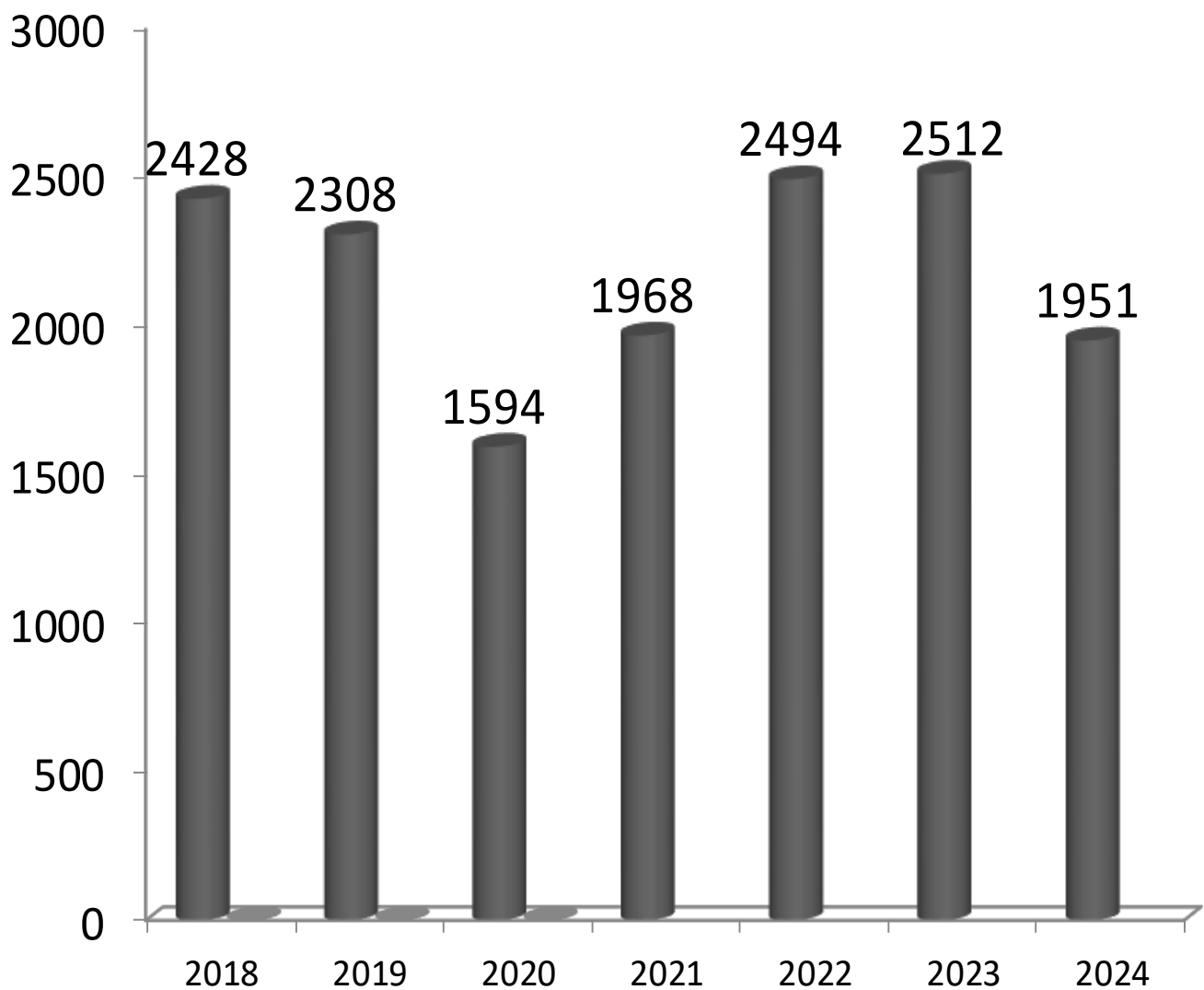
## **INSTRUMENTS AVAILABLE IN OPERATION THEATER.**

1. Operating Microscope with Video Camera, monitor & Observer loop.	01
2. Adult Rigid Bronchoscope set with all Accessories	01
3. Pediatric Rigid Bronchoscope set with all Accessories	01
4. Adult Rigid Oesophagoscope set with all Accessories	01
5. Pediatric Rigid Oesophagoscope set with all Accessories	01
6. Adult Rigid Laryngoscope set with all Accessories	01
7. Pediatric Rigid Laryngoscope set with all Accessories	01
8. Fiber optic Nasopharyngoscopy.	01
9. Tonsillectomy Set	04
10.SMR set	04
11. Rhinoplasty set	02
12.Mastoidectomy Set (Microscopic Instruments)	02
13.Pneumatic Drill Machine	01
14.Electric Drill Machine	01
15.Electric Cautery	02
16.Sucker Machine	03
17.Tympanoplasty Set (Microscopic Instruments)	02
18.Tracheostomy Set	01
19.FESS Set with Endovision	01
20.Head Lights	
i. With video Camera and Monitor	02
ii. Without video Camera	06
21. Video Otoscope	01

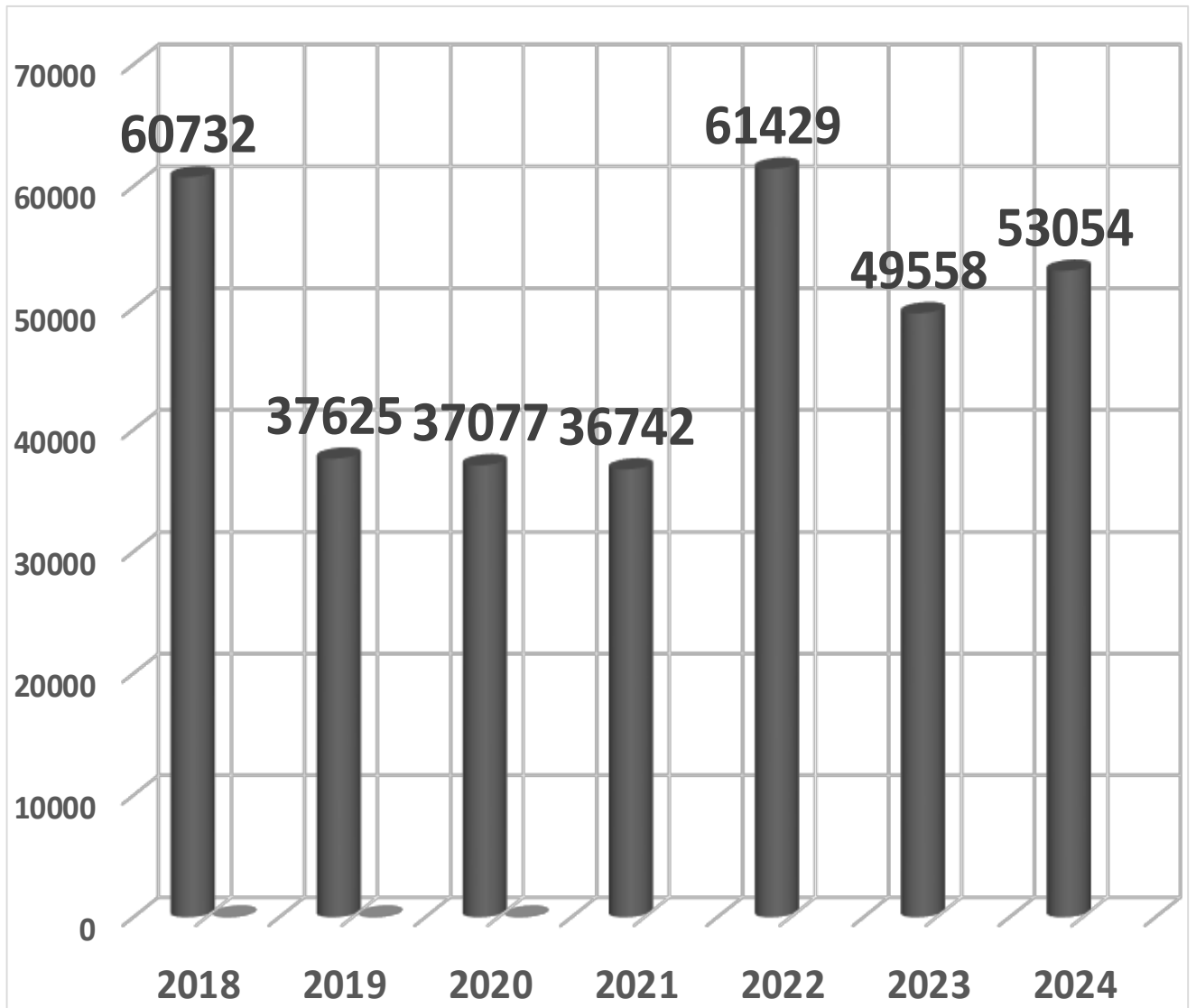
➤ We have five operation theatres for three days per week.

**DEPARTMENT OF OTORHINOLARYNGOLOGY  
SHEIKH ZAYED MEDICAL  
COLLEGE/HOSPITAL, RAHIM YAR KHAN**

**INDOOR ADMISSIONS**



# OUTDOOR PATIENTS



## SHEIKH ZAYED MEDICAL COLLEGE/HOSPITAL, RAHIM YAR KHAN

### 10 Most Common Procedures/Cases last 12 Months

01	Tonsillectomy	112
02	Septoplasty	119
03	AWO	32
04	Tracheostomy	67
05	F.B. Ear, Nose, Throat	252
06	Esophagoscopy	46
07	Bronchoscopy	29
08	D/L Biopsy	66
09	Mastoid Exploration	25
10	Incision Drainage	16
<b>Total</b>		<b>764</b>

# DEPARTMENT OF OTORHINOLARYNGOLOGY

SHEIKH ZAYED MEDICAL COLLEGE / HOSPITAL

RAHIM YAR KHAN

<b>SR #</b>	<b>Designation</b>	<b>Number of Faculty Members</b>	<b>Total Number of Articles Published</b>	<b>No. of Articles Published in National Journals</b>	<b>No. of Articles Published in International Journals</b>	<b>No. of Articles Published in Impact Factor Journals</b>
1	Professor	1	13	12	1	13
2	Senior Registrar	1	1	0	1	1
3	Senior Registrar / Medical Officer	2	3	3	0	3

## List of Journals Available In ENT Departmental Library

Sr. No.	Name of the journals	Subscribed since (Month, Year)
1	Otolaryngologic Clinics of North America	Jan, 2007
2	Laryngoscope	Jan, 2007
3	Pakistan Journal of Otolaryngology	Jan, 2007
4	Journal of College of Physicians and Surgeon Pakistan.	Jan, 2008
5	JLO	Jan, 2008
6	ETN and Audiology News	Jan, 2009



## **List of Books Available In ENT Departmental Library**

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1. Scott-Brown's Otolaryngology.
  2. Logan Turner's Diseases of the Nose, Throat & Ear.
  3. Essential Otolaryngology Head & Neck Surgery.
  4. Diseases of Ear, Nose & Throat by P L Dhingra.
  5. Otolaryngology Head & Neck Surgery by W.Cummings.
  6. Atlas of Ear, Nose & Throat Diseases by Walter Becker.
  7. Surgery of Ear & Temporal bone by Harold F.Schuknecht.
  8. Deafness in the Developing Countries by Syed Shabih Zaidi.
  9. Stuttering by Albert L Menner.
  - 10 Current Diagnosis & Treatment in Otolaryngology.
  - 11 Clinical Methods in ENT by PT Wakode.
-

## Future plans

### Future Vision of the ENT Department

The Department of Otorhinolaryngology is poised for significant expansion and development, with a clear roadmap to enhance patient care, medical education, and research.

#### Infrastructure Development

- **New Departmental Complex:** A fully equipped 40-bed inpatient unit is under development, featuring a **Professorial Chair**, faculty **offices**, a **dedicated ENT departmental laboratory**, a **comprehensive library**, and a **classroom** designed for both undergraduate and postgraduate teaching.
- **FODL Setup:** A state-of-the-art Fiberoptic Diagnostic and Learning (FODL) suite is planned to enhance diagnostic capabilities.

#### ENT Departmental Laboratory

The ENT departmental laboratory will be equipped to perform a variety of specialized ENT-related diagnostic procedures, including:

- Fungal scrapings
- Acid-fast bacilli (AFB) smears
- Skin biopsies
- Patch testing
- Nasal cytology
- Otorrhea cultures
- Other relevant ENT-specific investigations

This lab will support both clinical diagnostics and research, facilitating timely and accurate results for improved patient care.

#### Departmental Library

Our departmental library has already been established and includes a curated collection of high-quality books, academic journals, and educational CDs. With continued support from administration, we aim to further enrich the collection to support faculty, students, and trainees.

#### Academic Expansion

- **Pediatric Otorhinolaryngology Unit:** A dedicated unit is being developed to cater to pediatric ENT cases.
- **Postgraduate Training Programs:** We are preparing to launch **FCPS** and **MCPS** training programs in Pediatric Otorhinolaryngology, contributing to the growth of specialized expertise in this field.

#### Research Endeavors

- To date, **15 research papers** have been successfully published.

- An additional **10 manuscripts** are currently undergoing data analysis or are in the process of publication.

The department is committed to promoting a strong research culture with ongoing and future projects aligned with the latest clinical challenges and innovations.

### **Clinical Facilities**

A fully functional **procedure and treatment room** will be available, equipped for:

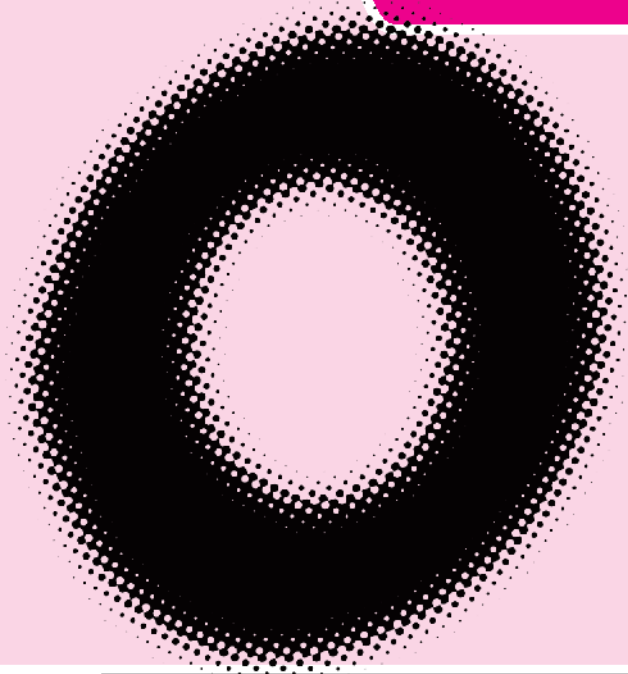
- Incision and drainage
- Wide bore aspirations
- Removal of nasal and aural foreign bodies
- Tracheostomy care
- Wound management and antiseptic dressing

### **Audiology Services**

- The department houses dedicated **audiometric facilities**, including separate sound-proof rooms for **Pure Tone Audiometry (PTA)** and **Brainstem Evoked Response Audiometry (BERA)**.
- **Tympanometry** services are also available to support comprehensive auditory diagnostics.

Requirements for Post IMM Fellowship Training

# OTORHINO- LARYNGOLOGY



College of Physicians and Surgeons Pakistan

## Office Copy



# 2012

# GENERAL INFORMATION

## REGISTRATION AND TRAINING

### GENERAL REGULATIONS

The following regulations apply to all the candidates taking the FCPS-II Examination. Candidate will be admitted to the examination in the name (surname and other names) as given in the MBBS degree. CPSP will not entertain any application for change of name on the basis of marriage / divorce / deed

### ELIGIBILITY REQUIREMENTS FOR ENTERING FCPS PART II TRAINING PROGRAM IN OTORHINOLARYNGOLOGY

- Passed FCPS Part I in Otorhinolaryngology/allowed exemption
- Completed two years RTMC registered training as per Intermediate Module Curriculum

### EXEMPTION FROM FCPS PART-I

An application for exemption from FCPS Part-I must be submitted to the College with all the relevant documents and a bank draft for the prescribed fee.

After due verification, the College may grant exemption from FCPS Part-I to those applicants who have acquired any of the following qualifications in Otorhinolaryngology:

- Diplomate American Board of Specialties
- FCPS Part-I, Bangladesh.

In all other cases, after proper scrutiny and processing, the College shall decide acceptance or rejection of the request for exemption from FCPS-I on case to case basis.

Candidates with FCPS II / equivalent qualification (Recognized by CPSP Council) may be given exemptions of two years basic training in Surgery on application.

Those allowed exemption from training will be issued Training All applicants who are allowed exemption from FCPS I will be issued an EXEMPTION CERTIFICATE on payment of exemption fee.

A copy of this certificate will have to be attached with the application to the Research and Training Monitoring Cell (RTMC) of the CPSP, for registration as FCPS Part-II trainee and later with the application for appearing in FCPS Part-II examination.

### APPROVED TRAINING CENTRES

Training must be undertaken in units/departments/institutions approved by the College. A current list of approved locations is available from the College and its regional offices, as well as on the College website: **[www.cpsp.edu.pk](http://www.cpsp.edu.pk)**.

### REGISTRATION AND SUPERVISION

All training must be supervised and undertaken on whole time basis. The trainees are required to register with the RTMC and submit the name of their supervisor(s) by the date indicated on the registration form. The supervisor will normally be a Fellow of the College. However, another supervisor may be accepted if no Fellow is available to offer appropriate supervision. Only that training will be accepted which is done under a CPSP approved supervisor. Normally, only one supervisor is nominated, and if the trainee spends significant periods working in an area where the supervisor has no personal involvement, the supervisor must certify that suitable supervision is being provided. The nomination of more than one supervisor is needed only if the trainee divides the year between two or more unrelated units, departments or institutions. The trainees are not allowed to work simultaneously in any other department/institutions for financial benefit and /or for another academic qualifications.



## DURATION OF TRAINING IN OTORHINOLARYNGOLOGY

- Total duration of the training is 4 years divided into two phases (IMM and advanced specialty training), all of which is to be undertaken after passing FCPS I, and after registration with RTMC and with an approved Supervisor at a CPSP accredited unit/institution.
- The first two years of training, inclusive of rotations, will constitute the Intermediate Module (IMM), at the end of which the trainee will have to appear in the Intermediate Module examination in Otorhinolaryngology.
- After completing training for IMM, trainee has to undergo post IMM advanced training in the specialty for years 3 & 4.
- Passing of IMM examination is one of the eligibility requirements to appear in FCPS-II examination.
- All training inclusive of rotations is to be completed one month before the date of theory examination for FCPS-II.

## ROTATIONS

A certificate testifying the candidate's attendance is obligatory for admittance to the final examination and an entry in the logbook must also appear to this effect. The Trainer should arrange for the sub-specialty training according to the facilities available.

Six months in General Surgery or rotation in lieu of six months in General Surgery in any two of the following:

1. Neurosurgery,
2. Plastic Surgery,
3. Thoracic Surgery,

*(with a minimum of three months in one specialty).*

## COMPONENTS OF TRAINING

### E-LOGBOOK

The CPSP Council has made e-logbook mandatory for all residency programs trainees inducted in July 2011 and onwards. Upon registration with RTMC each trainee is allotted a registration number and a password to log on and make entries of all work performed and the academic activities undertaken in e-logbook on daily basis. The concerned supervisor is required to verify the entries made by the trainee. This system ensures timely entries by the trainee and prompt verification by the supervisor. It also helps in monitoring the progress of trainees and vigilance of supervisors.

## RESEARCH (DISSERTATION) & MANDATORY WORKSHOPS

One of the training requirements for fellowship trainees is a dissertation or two research papers on a topic related to the field of specialization after obtaining the approval of synopsis. The dissertation or research paper must be submitted six months prior to the examination for which the trainees intend to sit in for.

## GENERAL REQUIREMENTS

Training should incorporate the principle of gradually increasing responsibility, and provide each trainee with a sufficient scope, volume and variety of experience in a range of settings that include inpatients, outpatients, emergency and intensive care.

### Instructional Methodology

Teaching occurs using several methods that range from formal lectures to planned clinical experiences. Aspects covered will include knowledge, skills and practices relevant to the discipline in order to achieve specific learning outcomes and competencies.

The theoretical part of the curriculum presents the current body of knowledge necessary for practice. This can be imparted using lectures, grand teaching rounds, clinico-pathological meetings, morbidity/mortality review meetings, literature reviews and presentations, journal clubs, conferences and seminars along with self directed learning.

Clinical learning is organized to provide appropriate expertise and competence necessary to evaluate and manage common clinical problems. Demonstration in outpatient clinics and wards and procedural skill training on simulators, mannequins and patients are all practical training modalities.

# SUPERVISOR'S

## ROLE AND RESPONSIBILITIES

Training held under the aegis of CPSP is compulsorily supervised. A supervisor is a CPSP fellow or a specialist with relevant postgraduate qualifications recognized by CPSP.

Supervision of a trainee is a multifaceted job. Arbitrarily the task is divided into the following components for the sake of convenience. This division is by no means exhaustive or rigid. It is merely meant to give semblance to this abstract and versatile role.

### EXPERT TRAINER

- This is the most fundamental role of the supervisors. They have to not only ensure and monitor adequate training but also provide continuous helpful feedback (formative) regarding the progress of the training.
- This would entail observing the trainee's performance and rapport with all the people within his work environment.
- He / she should teach the trainee and help him / her overcome the hurdles during the learning process.
- It is the job of the supervisor to make the trainee develop the ability to interpret findings in his patients and act suitably in response.
- The supervisor must be adept at providing guidance in writing dissertation / research articles (which are essential components of training).
- Every supervisor is expected to participate actively in Supervisors' workshops, conducted regularly by CPSP, and do his/her best to implement the newly acquired information/ skills in the training. It is a basic duty of the supervisors to keep abreast of the innovations in their field of expertise and ensure that this information percolates to trainees of all years under them.

### RELIABLE LIAISON

- The supervisor must maintain regular contact with the College regarding training and the conduct of various mandatory workshops and courses.
- It is expected that the supervisor will establish direct contact with relevant quarters of CPSP if any problem arises during the training process, including the suitability of trainee.
- They must be able to coordinate with the administration of their institutions/ organizations in order to ensure that their trainees do not have administrative problems hampering their training.

### PROFICIENT ADMINISTRATOR

- He/ she must ensure that the trainee's have completed the yearly logbooks and have submitted the summary sheets within these logbooks.
- They must provide assessment reports to the College at the end of each year or training period. These reports are used to evaluate a trainee's performance and should indicate if training has been followed satisfactorily. The report must also contain positive and negative aspects of the trainee's performance and any extra academic endeavors made by them. Prolonged absences must also be mentioned in sufficient detail. It is essential that each report be discussed and signed by both the trainer and the trainee before it is sent to the College.
- The supervisors might be required to submit confidential reports on trainee's progress to the College.
- The supervisor should notify the College of any change in the proposed approved training program.
- In case the supervisor plans to be away for more than two months, he/she must arrange satisfactory alternate supervision during the period.

# TRAINEE'S

## ROLE AND RESPONSIBILITIES

Given the provision of adequate resources by the institution, Trainees should:

1. accept responsibility for their own learning and ensure that it is in accord with the relevant requirements;
2. investigate sources of information about the program and potential Supervisor, and play an informed role in the selection and appointment of the Supervisor;
3. seek reasonable infrastructure support from their institution and Supervisor, and use this support effectively;
4. ensure that they undertake training diligently.
5. work with their supervisors in writing the synopsis/ research proposal and submit the synopsis/ research proposal within six months of registration with the RTMC;
6. accept responsibility for the dissertation, and plan and execute the research within the time limits defined;
7. be responsible for arranging regular meetings with the supervisor to discuss any hindrances to progress and document progress etc. If the supervisor is not able/willing to meet with the student on a regular basis, the student must notify the College;
8. provide the supervisor with word-processed updated synopsis and dissertation drafts that have been checked for spelling, grammar and typographical errors, prior to submission;
9. Prior to submission of dissertation, the student should ensure that the supervisor has all the raw data relevant to the thesis;
10. submit completed Dissertation to REU or evidence of publication/ acceptance for publication of two research papers in CPSP approved journal (s) or JCPSP six months before the completion of (last year of) training. The trainee should be the first or second author of both papers and the synopsis of both papers must have a prior approval of REU;
11. follow the Colleges complaint procedures if serious problems arise;
12. complete all requirements for sitting an examination;
13. provide feedback regarding the training post to the College on the prescribed confidential form;

# TRAINING PROGRAM

## CURRICULUM

The Fellowship training program focuses on a few key pegs of viable training; these are knowledge, skills and attitudes. CPSP is inclined to follow an outcome based curricular format, which is a blend of behavioral and cognitive philosophies of curriculum development.

Following is a global and extensive, yet not the total, list of learning outcomes recommended by the College.

### LEARNING OUTCOMES RELATING TO: COGNITION

The learning outcomes will all be at the application level since that is the gold standard. Therefore, the candidate will be able to:

- Relate how body function gets altered in diseased states
- Request and justify investigations and plan management for medical disorders
- Assess new medical knowledge and apply it to their setting
- be up to date with all diagnostic modalities in the field of Otorhinolaryngology and have a comprehensive knowledge of their applications and interpretations
- Apply quality assurance procedures in their daily work.

### SKILLS

#### WRITTEN COMMUNICATION SKILLS

The candidates will be able to:

- Correctly write updated medical records, which are clear, concise and accurate.
- Write clear management plans, discharge summaries and competent letters for outpatients after referral from a general practitioner.
- Demonstrate competence in academic writing



### VERBAL COMMUNICATION SKILLS

The candidates will be able to:

- Establish professional relationships with patients and their relatives or caregivers in order to obtain a history, conduct a physical examination and provide appropriate management.
- Demonstrate usage of appropriate language in seminars, bedside sessions outpatients and other work situations.
- Demonstrate the ability to communicate clearly, considerately and sensitively with patients, relatives, other health professionals and the public.
- Demonstrate competence in presentation skills

### EXAMINATION SKILLS:

The candidates will be able to:

- Perform an accurate physical examination in medical and other complex health problems.
- Interpret physical signs after physical examination so as to formulate further management strategy.

### PATIENT MANAGEMENT SKILLS:

The candidates will be able to:

- Interpret and integrate the history and examinations findings and arrive at an appropriate differential diagnosis and final diagnosis.
- Demonstrate competence in problem identification, analysis and management of the problem at hand by the use of appropriate resources, interpretation of lab results.
- apply the knowledge of the therapeutic interventions used in the field of cardiology for patient management
- Prioritize different problems within a time frame

### SKILLS IN RESEARCH:

The candidates will be able to:

- Use evidence based medicine and evidence based guidelines
- Conduct research individually by using appropriate research methodology and statistical methods.
- Correctly guide others in conducting research by advising about study designs, research methodology and statistical methods that are applicable.
- Interpret and use results of various research articles.

## ATTITUDES

### TOWARDS PATIENTS:

The candidates will be able to:

- Establish a positive relationship with all patients in order to ease illness and suffering
- Facilitate the transfer of information important to the management and prevention of disease
- Demonstrate awareness of bio-psycho-social factors in the assessment and management of a patient
- Consistently show consideration of the interests of the patient and the community as paramount with these interests never subservient to one's own personal or professional interest.

### TOWARDS SELF DEVELOPMENT:

The candidate will be able to:

- Demonstrate, consistently, respect for every human being irrespective of ethnic background, culture, socioeconomic status and religion
- Deal with patients in a non-discriminatory and prejudice-free manner
- Deal with patients with honesty and compassion
- Demonstrate flexibility and willingness to adjust appropriately to changing circumstances
- Foster the habit and principle of self-education and reflection in order to constantly update and refresh knowledge and skills and as a commitment to continuing education.
- Recognize stress in self and others
- Deal with stress and support medical colleagues and allied health workers.
- Handle complaints including self-criticism or criticism by colleagues or patients
- Understand the importance of obtaining and valuing a second opinion.

### TOWARDS SOCIETY:

The candidate will be able to:

- Understand the social and governmental aspects of health care provision
- Offer professional services while keeping the cost effectiveness of individual forms of care
- Apply an understanding of hospital & community-based resources available for patients and care givers in under served areas.

## OBJECTIVES

At the end of the training for FCPS in Otorhinolaryngology a candidate shall be able to:

1. Initially assess the patients seeking surgical treatment for their problems by:
  - obtaining pertinent history.
  - performing physical examination correctly.
  - formulating a working diagnosis.
  - deciding whether the patient requires
    - ambulatory care or hospitalization.
    - referral to other health professionals.
2. Manage patients requiring treatment by an Otorhinolaryngology specialist
  - plan an enquiry strategy i.e. order appropriate investigations and interpret the results.
  - when required perform specified surgical procedures independently and competently.
  - deal effectively and promptly with complications which may occur during the course of disease.
  - when required arrange for rehabilitation of patients.
  - maintain records of patients.
3. Undertake research and publish findings.
4. Acquire new information, assess its utility and make appropriate applications.
5. Recognize the role of team work and function as an effective member/leader of the team.
6. Advise the community on promoting health and preventing diseases.
7. Train paraprofessionals and other junior members of the team.

## CORE COMPETENCIES

The clinical skills, which a specialist must have, are varied and complex. A complete list of the same necessary for trainees and trainers is given below:

The training program comprises:

### A. Academic activities

1. Teaching ward rounds
2. Surgical out patient clinics
3. Audio-vestibular laboratory
4. Clinico-pathological conferences
5. Symposia
6. Journal club meetings
7. Workshops
8. Papers presented and published

### B. Competencies

A candidate is expected to attain the laid down level of competence for the following competencies:

1. Observer status
2. Assistant status
3. Performed under direct supervision
4. Performed under indirect supervision, which means that if needed by the trainee the supervisor must be readily available
5. Performed independently

PROCEDURES	Third Year									
	27 Months		30 Months		33 Months		36 Months		Total Cases 3rd Year	
	Level	Cases	Level	Cases	Level	Cases	Level	Cases		
Routine Patient Care										
Elicit a pertinent history	5	25	5	25	5	25	5	25	25	100
Communicate effectively with patients, families, and the health team	5	25	5	25	5	25	5	25	25	100
Perform a physical examination	5	25	5	25	5	25	5	25	25	100
Order appropriate investigations	5	25	5	25	5	25	5	25	25	100
Interpret the results of investigations	4	25	4	25	4	25	4	25	25	100
Assess fitness to undergo surgery	5	10	5	10	5	10	5	10	10	40
Decide and implement appropriate treatment	5	10	5	10	5	10	5	10	10	40
Postoperative management and monitoring	5	10	5	10	5	10	5	10	10	40
Maintain accurate and appropriate records	5	10	5	10	5	10	5	10	10	40
Presentation skills	5	10	5	10	5	10	5	10	10	40
Preoperative preparation for various ENT surgical procedures	5	10	5	10	5	10	5	10	10	40
Aseptic techniques	5	10	5	10	5	10	5	10	10	40
Positioning of patient for diagnostic and operative procedures	5	10	5	10	5	10	5	10	10	40

PROCEDURES		Third Year										Total Cases 3rd Year
		27 Months		30 Months		33 Months		36 Months		Cases		
		Level	Cases	Level	Cases	Level	Cases	Level	Cases			
Procedures												
Use of common surgical instruments, suture materials and appliances and suture techniques		5	10	5	10	5	10	5	10	5	10	40
Use of operating Microscope (Ear Surgery)		5	10	5	15	5	20	5	20	5	20	65
Use of Flexible Endoscope like Nasopharyngoscope		5	5	5	5	5	5	5	5	5	5	20
Use of Functional Endoscopic Sinus Surgery Instruments		5	5	5	5	5	5	5	5	5	5	20
Nasogastric intubation		5	5	5	5	5	5	5	5	5	5	20
Tracheostomy		4	3	5	3	5	3	5	3	5	3	12
Post-operative dressing		5	5	5	5	5	5	5	5	5	5	20
Anterior nasal packing		5	10	5	10	5	10	5	10	5	10	40
Posterior nasal packing		5	1	5	1	5	1	5	1	5	1	4
Nasal cautery		5	5	5	5	5	5	5	5	5	5	20
Sub-mucosal diathermy		5	2	5	2	5	2	5	2	5	2	8
Proof puncture / Antral lavage		5	4	5	4	5	4	5	4	5	4	16
Drainage of abscesses and boils		5	5	5	5	5	5	5	5	5	5	20
Surgical dressings		5	5	5	5	5	5	5	5	5	5	20
Syringing of ear Aural Toilet		5	10	5	10	5	10	5	10	5	10	40



PROCEDURES	Third Year									
	27 Months		30 Months		33 Months		36 Months		Total Cases	
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	Level	3rd Year
<b>Procedures</b>										
Removal of visible foreign body from nose/ear/throat	5	5	5	5	5	5	5	5	5	20
Endoscopic removal of foreign body under GA	4	3	4	3	4	3	4	3	4	12
Manipulation of nasal fractures	5	3	5	3	5	3	5	3	5	12
Nasal polypectomy	4	3	4	3	4	3	4	3	4	12
Turbinate surgery	4	3	4	3	4	3	4	3	4	12
Intranasal antrostomy	4	3	4	3	4	3	4	3	4	12
Caldwell-sinus antrostomy	4	3	4	3	4	3	4	3	4	12
Direct laryngoscopy and biopsy	4	3	4	3	4	3	4	3	4	12
Oesophagoscopy and biopsy	4	3	4	3	4	3	4	3	4	12
Cortical Mastoidectomy	4	3	4	3	4	3	4	3	4	12
Adenoidectomy	4	3	4	3	4	3	4	3	4	12
Tonsillectomy	4	5	4	5	4	5	4	5	4	20
Ethmoidectomy	2	2	2	2	3	2	3	2	3	8
Mastoidectomy	2	2	2	2	3	2	3	2	3	8
Myringoplasty	2	2	2	2	3	2	3	2	3	8
EUM and myringotomy	3	2	3	2	3	2	3	2	3	8
Endoscopies under GA	2	2	2	2	3	2	3	2	3	8

PROCEDURES		Third Year									
		27 Months		30 Months		33 Months		36 Months		Total Cases 3rd Year	
		Level	Cases	Level	Cases	Level	Cases	Level	Cases		
Procedures											
Laryngectomy		2	1	2	1	2	1	2	1		4
Maxillectomy		2	-	2	-	2	-	2	-		-
Mandibulectomy		2	-	2	-	2	-	2	-		-
Regional or axial flap		2	-	2	-	2	-	2	-		-
Other radical head and neck procedures		2	-	2	-	2	-	2	-		-
Routine radiology for head and neck		5	10	5	10	5	10	5	10		40
CT scan and MRI interpretation		5	5	5	5	5	5	5	5		20
Contrast medium studies of larynx, oesophagus and bronchi		5	2	5	2	5	2	5	2		8
Maintenance of I / V Line		5	5	5	5	5	5	5	5		20
Endotracheal Intubation		5	2	5	2	5	2	5	2		8
Performs and Interpret s Audiograms and Tympanograms		5	5	5	5	5	5	5	5		20
Local Anaesthesia in ENT		5	5	5	5	5	5	5	5		20
Septal surgery		3	5	3	5	3	5	4	5		20
Rhinoplasty		2	2	2	2	2	2	2	2		8

PROCEDURES	Fourth Year									
	39 Months		42 Months		45 Months		48 Months		Total Cases 4th Year	
	Level	Cases	Level	Cases	Level	Cases	Level	Cases		
Routine Patient Care										
Elicit a pertinent history	5	25	5	25	5	25	5	25	5	100
Communicate effectively with patients, families, and the health team	5	25	5	25	5	25	5	25	5	100
Perform a physical examination	5	25	5	25	5	25	5	25	5	100
Order appropriate investigations	5	25	5	25	5	25	5	25	5	100
Interpret the results of investigations	5	25	5	25	5	25	5	25	5	100
Assess fitness to undergo surgery	5	10	5	10	5	10	5	10	5	40
Decide and implement appropriate treatment	5	10	5	10	5	10	5	10	5	40
Postoperative management and monitoring	5	10	5	10	5	10	5	10	5	40
Maintain accurate and appropriate records	5	10	5	10	5	10	5	10	5	40
Presentation skills	5	10	5	10	5	10	5	10	5	40
Preoperative preparation for various ENT surgical procedures	5	10	5	10	5	10	5	10	5	40
Aseptic techniques	5	10	5	10	5	10	5	10	5	40
Positioning of patient for diagnostic and operative procedures	5	10	5	10	5	10	5	10	5	40

PROCEDURES	Fourth Year										Total Cases 4th Year
	39 Months		42 Months		45 Months		48 Months		Level	Cases	
	Level	Cases	Level	Cases	Level	Cases	Level	Cases			
Procedures											
Use of common surgical instruments, suture materials and appliances and suture techniques  Use of operating Microscope (Ear Surgery)  Use of Flexible Endoscope like Nasopharyngoscope  Use of Functional Endoscopic Sinus Surgery Instruments  Nasogastric intubation  Tracheostomy  Post-operative dressing  Anterior nasal packing  Posterior nasal packing  Nasal cautery  Sub-mucosal diathermy  Proof puncture / Antral lavage  Drainage of abscesses and boils  Surgical dressings  Syringing of ear Aural Toilet	5	10	5	10	5	10	5	10	5	10	40
	5	20	5	20	5	20	5	20	5	20	80
	5	5	5	5	5	5	5	5	5	5	20
	5	5	5	5	5	5	5	5	5	5	20
	5	5	5	5	5	5	5	5	5	5	20
	5	3	5	3	5	3	5	3	5	3	12
	5	5	5	5	5	5	5	5	5	5	20
	5	10	5	10	5	10	5	10	5	10	40
	5	1	5	1	5	1	5	1	5	1	4
	5	5	5	5	5	5	5	5	5	5	20
	5	2	5	2	5	2	5	2	5	2	8
	5	4	5	4	5	4	5	4	5	4	16
	5	5	5	5	5	5	5	5	5	5	20
	5	5	5	5	5	5	5	5	5	5	20
	5	10	5	10	5	10	5	10	5	10	40

PROCEDURES	Fourth Year									
	39 Months		42 Months		45 Months		48 Months		Total Cases 4th Year	
	Level	Cases	Level	Cases	Level	Cases	Level	Cases		
Procedures										
Removal of visible foreign body from nose/ear/throat	5	5	5	5	5	5	5	5	5	20
Endoscopic removal of foreign body under GA	5	3	5	3	5	3	5	3	5	12
Manipulation of nasal fractures	5	3	5	3	5	3	5	3	5	12
Nasal polypectomy	5	3	5	3	5	3	5	3	5	12
Turbinate surgery	5	3	5	3	5	3	5	3	5	12
Intranasal antrostomy	5	3	5	3	5	3	5	3	5	12
Caldwell-sinus antrostomy	5	3	5	3	5	3	5	3	5	12
Direct laryngoscopy and biopsy	5	3	5	3	5	3	5	3	5	12
Oesophagoscopy and biopsy	5	3	5	3	5	3	5	3	5	12
Cortical Mastoidectomy	5	3	5	3	5	3	5	3	5	12
Adenoidectomy	5	3	5	3	5	3	5	3	5	12
Tonsillectomy	5	5	5	5	5	5	5	5	5	20
Ethmoidectomy	4	2	4	2	4	2	4	2	4	8
Mastoidectomy	4	2	4	2	4	2	4	2	4	8
Myringoplasty	4	2	4	2	4	2	4	2	4	8
EUM and myringotomy	4	2	4	2	4	2	5	2	5	8
Endoscopies under GA	4	2	4	2	4	2	5	2	5	8

PROCEDURES		Fourth Year									
		39 Months		42 Months		45 Months		48 Months		Total Cases 4th Year	
		Level	Cases	Level	Cases	Level	Cases	Level	Cases		
Procedures											
Laryngectomy		2	1	2	1	2	1	2	1	4	
Maxillectomy		2	-	2	-	2	-	2	-	-	
Mandibulectomy		2	-	2	-	2	-	2	-	-	
Regional or axial flap		2	-	2	-	2	-	2	-	-	
Other radical head and neck procedures		2	-	2	-	2	-	2	-	-	
Routine radiology for head and neck		5	10	5	10	5	10	5	10	40	
CT scan and MRI interpretation		5	5	5	5	5	5	5	5	20	
Contrast medium studies of larynx, oesophagus and bronchi		5	2	5	2	5	2	5	2	8	
Maintenance of I / V Line		5	5	5	5	5	5	5	5	20	
Endotracheal Intubation		5	2	5	2	5	2	5	2	8	
Performs and Interpret s Audiograms and Tympanograms		5	5	5	5	5	5	5	5	20	
Local Anaesthesia in ENT		5	5	5	5	5	5	5	5	20	
Septal surgery		4	5	4	5	4	5	4	5	20	
Rhinoplasty		2	2	2	2	3	2	3	2	8	

# ASSESSMENT

## ELIGIBILITY REQUIREMENTS

- To have passed FCPS Part-I in Otorhinolaryngology, or been granted official exemption.
- To have undertaken four years of the specified training in Otorhinolaryngology, all of which should be after passing FCPS Part-I (a certificate testifying attendance is obligatory for admittance to examination) in an institution recognized by the CPSP
- To provide a certificate of attendance of mandatory workshops.
- To submit a completed and duly attested logbook.
- To provide a certificate of having passed the Intermediate Module in Otorhinolaryngology.
- To provide a certificate of approval of dissertation or acceptance of two research papers for publication in CPSP approved journals, synopsis of which were earlier approved by the REU.

## EXAMINATION SCHEDULE

- The FCPS Part-II theory examination will be held twice a year.\*
- Theory examinations are held in various cities of the country usually at Abbottabad, Bahawalpur, Faisalabad, Hyderabad, Islamabad, Karachi, Lahore, Larkana, Nawabshah, Multan, Peshawar, Quetta and Rawalpindi centers. The College shall decide where to hold oral/practical examination depending on the number of candidates in a city and shall inform the candidates accordingly.\*
- English shall be the medium of examination for the theory/ practical/ clinical and viva examinations.
- The College will notify of any change in the centres, the dates and format of the examination.
- A competent authority appointed by the College has the power to debar any candidate from any examination if satisfied that such a candidate is not a fit person to take the College examination because of using unfair means in the examination, misconduct or other disciplinary reasons.
- Each successful candidate in the Fellowship examination shall be entitled to the award of a College Diploma after being elected by the College Council and payment of registration fees and other dues.

*\*The CPSP reserves the right to alter dates, postpone examinations or change venue in the interest of safety and well being of its staff, invigilators and / or candidates.*

## EXAMINATION FEES

- The details of examination fee and fees for change of centre, subject, etc. shall be notified before each examination.
- Applications along with the prescribed examination fees and required documents must be submitted by the last date notified for this purpose before each examination.
- Fees deposited for a particular examination shall not be carried over to the next examination in case of withdrawal/absence/exclusion.

## REFUND OF FEES

If, after submitting an application for examination, a candidate decides not to appear, a written request for a refund must be submitted before the last date for withdrawal with the receipt of applications. In such cases a refund is admissible to the extent of 75% of fees only. No request for refund will be accepted after the closing date for receipt of applications.

If an application is rejected by the CPSP, 75% of the examination fee will be refunded, the remaining 25% being retained as a processing charge. No refund will be made for fees paid for any other reason, e.g. late fee, change of centre/subject fee, etc.

## FORMAT OF EXAMINATIONS

Every candidate vying for the Fellowship of the College of Physicians and Surgeons Pakistan must pass both parts of the Fellowship examination and IMM unless exemption is approved. Since the College is continually seeking to improve its examinations, changes are likely from time to time and candidates will be notified in advance of such changes.

### Theory examination

Two papers each of 3 hours duration:

**Paper I** 10 Short Answer Questions (SAQs) 3 hours

**Paper II** 100 Single Best MCQs 3 hours



**Rationale:** Short answer questions are meant to increase the appropriateness of the examination by increasing the number of topics being tested. In this sense they are better than long essay questions that candidates might be used to. Further, short essay questions are more focused than long essay ones because they are meant to clearly specify what candidates are expected to write.

These types of questions assess higher order thinking, for example critical analysis of a given situation. It is hoped that these questions will encourage originality and creativity in answers. It is also hoped that these questions will discourage bluffing, rambling and undue advantage gained by proficiency in English language without the required level of clinical knowledge.

### Clinical examination

The Clinical section comprises two components, the long case, short cases, and TOACS (Task Oriented Assessment of Clinical Skills)

### Format of TOACS

TOACS will comprise of 12-18 stations of 5 to 8 minutes each with a change time of one minute for the candidate to move from one station to the other. The stations would have an examiner, a patient or both. Structured clinical tasks will be set at each station. The examiners using a global rating scale will assess the performance of each candidate. On stations where no examiner is present the candidates will have to submit written responses to short answer questions on a response sheet.

There will be two types of stations: static and interactive. On static stations the candidate will be presented with patient data, a clinical problem or a research study and will be asked to give written responses to questions asked. In the interactive stations the candidate will have to perform a procedure, for example, taking history, performing clinical examination, counseling, assembling an instrument etc. One examiner will be present at each interactive station and will either rate the performance of the candidate or ask questions testing reasoning and problem-solving skills.

### Format of long case

Each candidate will be allotted one long case and allowed 30 minutes for history taking and clinical examination. Candidates should take a careful history from the patient (or relative) and after a thorough physical examination identify the problems which the patient presents with. During the period a pair of examiners will observe the candidate. In this section the candidates will be assessed on the following areas:

### Interviewing skills

- Introduces one self. Listens patiently and is polite with the patient.
- Is able to extract relevant information.

### Clinical examination skills

- Takes informed consent
- Uses correct clinical methods systematically (including appropriate exposure and re-draping).

### Case presentation/ discussion

- Presents skillfully.
- Gives correct findings.
- Gives logical interpretations of findings and discusses differential diagnosis.
- Enumerates and justifies relevant investigations.
- Outlines and justifies treatment plan (including rehabilitation).
- Discusses prevention and prognosis.
- Has knowledge of recent advances relevant to the case.
- During case discussion the candidate may ask the examiners for laboratory investigations which shall be provided, if available. Even if they are not available and are relevant, candidates will receive credit for the suggestion.

### Format of short cases

- Candidates will be examined in at least four short cases for a total of 40 minutes jointly by a pair of examiners. Candidates will be given a specific task to perform on patients, one case at a time.

**During this part of the examination, the candidate will be assessed in:**

**Clinical examination skills.**

- Takes informed consent.
- Uses correct clinical methods including appropriate exposure and re-draping.
- Examines systematically.
  - Ear: examines both the ears (a) anatomically (b) functionally (uses otoscope and tuning fork)
  - Nose: Inspection (external shape + vestibule), palpation, anterior rhinoscopy, posterior rhinoscopy
  - Throat: Oral cavity, posterior rhinoscopy, indirect laryngoscopy palpates the tongue (when required)
  - Head & Neck: Inspects the neck, palpates the neck (standing) behind the patient, auscultates neck (when required)

**Discussion**

- Gives correct findings.
- Gives logical interpretations of findings.
- Justifies diagnosis/es.

As the time for this section is short, the answers given by the candidates should be precise, succinct and relevant to the patient under discussion.

**THE COLLEGE RESERVES THE RIGHT TO ALTER/AMEND ANY RULES/REGULATIONS**

Any decision taken by the College on the interpretation of these regulations will be binding on the candidate.



# FCPS (IMM & Post-IMM) Otorhinolaryngology

## **Guidelines for Formative Assessment**

## FORMATIVE ASSESSMENT

College of Physicians and Surgeons Pakistan, in order to implement competency based education in letter and spirit, is introducing Work Placed Based Assessment (WPBA) in addition to institutional/ departmental assessments. To begin with college is introducing Mini-CEX and DOPS to ensure that the graduates are fully equipped with the clinical competencies.

- Workplace-Based Assessment (WPBA) tools are entirely formative and should be accompanied by constructive feedback.
- Each Mini Clinical Evaluation Exercise (Mini-CEX) or Direct Observation of Procedural Skills (DOPS) encounter lasts approximately 20 minutes, with an additional 5 minutes allocated for feedback and further action planning.
- Depending on the availability of cases, any of the topics/areas/procedures prescribed below may be covered during the WPBA sessions. However, each session should focus on a different area, topic, or procedure. ***At least one Mini-CEX and one DOPS must be conducted each quarter.***
- The resident has the onus to report to the Parent Supervisor when they are prepared to appear for either a Mini-CEX or DOPS session.
- The Parent Supervisor is responsible for arranging WPBA sessions and may conduct the assessment themselves or delegate it to another competent faculty member or assessor within the department.
- Direct observation of the encounter by the Assessor is a must, followed immediately by specific and constructive feedback to the resident.
- The prescribed assessment forms (sample provided below) are available on the e-portals of both the parent supervisors and the residents. If the parent supervisor conducts the assessment, they are responsible for completing the form and making digital entries via their e-portal. Digital entries can be made directly via a mobile phone or other digital device without the need to first fill out a hard copy. If the assessment is conducted by another assessor, the resident must retrieve the online form from their e-portal and provide it to the assessor. After completing the assessment, the assessor will coordinate with the Parent Supervisor and hand over the filled form for digital entry.
- Once the Parent Supervisor has entered the assessment details, the resident must provide their reflection and indicate their satisfaction with the encounter through their e-portal.
- Entries from both the supervisor and the resident are saved in the e-portal database and are visible to both parties.
- In case of unsatisfactory performance of the resident on any of the prescribed WPBAs, a remedial has to be completed within the stipulated time frame.
- Non-compliance by the resident has to be reported in the quarterly feedback.

## **MINI CLINICAL EVALUATION EXERCISE (Mini-CEX)**

***Mini-CEX encounters will be arranged (by the Supervisor) to cover/assess skills essential to provision of good clinical care including History taking, Physical Examination, Management & Communication skills.***

### **Topics' List for Mini-CEX**

#### **IMM (1<sup>st</sup> & 2<sup>nd</sup> Year)**

- History taking
- General physical examination
- Examination of pharynx & larynx
- Sino-nasal examination (nose and PNS)
- Otological examination
- Head & neck examination

#### **Post-IMM (3<sup>rd</sup> & 4<sup>th</sup> Year)**

- Detailed and pertinent history taking in a major otolaryngology case
- Physical examination and spot diagnosis in a major otolaryngology case
- Interpretation of a set of investigations, including imaging, and communication of the findings to a patient or their attendant in a major otolaryngology case.
- Counseling of a patient & immediate family member prior to a major surgical procedure, such as total laryngectomy
- Referral of a patient
- Communication of examination findings & management plan for a major otolaryngology case, to a patient or family member



COLLEGE OF  
OF PHYSICIANS  
AND SURGEONS  
PAKISTAN

# MINI CLINICAL EVALUATION EXERCISE (CEX)

Specialty: FCPS (IMM & Post-IMM) Otorhinolaryngology

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

**PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES**

Assessor: \_\_\_\_\_ Assessment Date: \_\_\_\_\_

Resident's Name: \_\_\_\_\_

Hospital Name: \_\_\_\_\_ R&RC Number: \_\_\_\_\_

Year of Residency: ☐ R1 ☐ R2 ☐ R3 ☐ R4

Quarter: ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

Setting: ☐ Ward ☐ Outdoor (Hospital/Community) Others: \_\_\_\_\_

Diagnosis of Patient: \_\_\_\_\_ Patient Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Clinical Area: \_\_\_\_\_

Complexity of Case/ Procedure: ☐ Low/Easy ☐ Moderate/Average ☐ High/Difficult ☐ N/A

Focus of Clinical Encounters: ☐ History taking ☐ Physical Examination ☐ Management ☐ Communication Skills ☐ Other

Please grade the following areas on the given scale:	Not Observed / Applicable	Below Expectations		Satisfactory	Above Expectation	Excellent
		1	2			
Informed Consent of patient						
Interviewing Skills						
Systematic Progression						
Presentation of positive & significant negative findings						
Justification of actions						
Professionalism						
Organization/Efficiency						
Overall clinical competence						

Assessor's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvements

Encounter to be repeated ☐ YES ☐ NO

Assessor's Signature

## **DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)**

### **Topics' List for DOPS**

#### **IMM (1<sup>st</sup> & 2<sup>nd</sup> Year)**

- Skin suturing
- Repair of lacerations
- Nasal packing
- Foreign body removal (Ear, Nose & Throat) without general anaesthesia
- Neck node excision
- Incision and drainage of a neck abscess
- Incision and drainage of peri-tonsillar abscess
- Incision and drainage of septal haematoma/abscess
- Incision and drainage of post-aural abscess
- Chemical & Electrocautery
- Vacuum drain fixation and maintenance
- Nasogastric tube insertion
- Tongue-tie excision
- Tracheostomy and its care/Crico-thyroidotomy
- Aural suction
- Punch and wedge biopsies
- Flexible fiberoptic endoscopy

#### **Post-IMM (3<sup>rd</sup> & 4<sup>th</sup> Year)**

- Endotracheal intubation
- Foreign body removal from nose and throat under general anaesthesia
- Foreign body removal from ear using microscope/endoscope under general anaesthesia
- Myringotomy with or without grommet insertion
- Nasal endoscopy under general anaesthesia
- Septal surgery (Local infiltration, incision and flap elevation)
- Tympano-mastoidectomy (Incision and graft acquisition)
- Elevation of posterior meatal flap in ear surgery
- Endoscopic uncinectomy
- Direct laryngoscopy/Oesophagoscopy under general anaesthesia
- Tonsillectomy
- Adenoidectomy
- Sub-mucosal diathermy





## DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Specialty: **FCPS (IMM & Post-IMM) Otorhinolaryngology**

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

**PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES**

Assessor: \_\_\_\_\_ Assessment Date: \_\_\_\_\_

Resident's Name: \_\_\_\_\_

Hospital Name: \_\_\_\_\_ R&RC Number: \_\_\_\_\_

Year of Residency: ☐ R1 ☐ R2 ☐ R3 ☐ R4

Quarter: ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

Setting: ☐ O.T ☐ Procedure Room ☐ Other:

Diagnosis of Patient: \_\_\_\_\_ Patient Age: \_\_\_\_\_ Sex : \_\_\_\_\_

Name of Procedure: \_\_\_\_\_

Complexity of Case/ Procedure: ☐ Low/Easy ☐ Moderate/Average ☐ High/Difficult ☐ N/A

Number of times procedure performed by Resident: \_\_\_\_\_

Please grade the following areas on the given scale:	Not Observed / Applicable	Below Expectation		Satisfactory	Above Expectation	Excellent
		1	2			
Indications, anatomy & steps of procedure						
Informed consent, with explanation of procedure and complications						
Preparation for procedure						
Use of Anaesthesia, Analgesia or sedation						
Observance of asepsis						
Safe use of instruments						
Use of accepted techniques						
Management of unexpected event (or seeks help)						
Post-procedure instructions to patient and staff						
Professionalism						
Overall ability to perform whole procedure						

Assessor's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvement

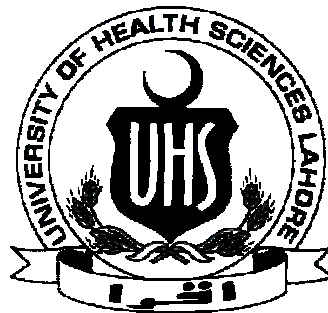
Encounter to be repeated ☐ YES ☐ NO

Assessor's Signature

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**CURRICULUM / STATUTES & REGULATIONS  
FOR  
5 YEARS DEGREE PROGRAMME  
IN  
OTOLARYNGOLOGY  
(MS Otolaryngology)**

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**UNIVERSITY OF HEALTH SCIENCES,  
LAHORE**

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***1. Nomenclature Of The Proposed Course***

The name of degree programme shall be MS Otolaryngology. This name is well recognized and established for the last many decades worldwide.

***2. Course Title:***

MS Otolaryngology

***3. Training Centers***

Departments of Otolaryngology (accredited by UHS) in affiliated institutes of University of Health Sciences Lahore.

***4. Duration of Course***

The duration of MS Otolaryngology course shall be five (5) years (first year in Part I, first two years in Part II and next three years in Part III) with structured training in a recognized department under the guidance of an approved supervisor. The course is structured in three parts:

**Part I** is structured for the 1<sup>st</sup> calendar year. The candidate shall undertake didactic training in Basic Medical Sciences, Behavioural Sciences and Biostatistics & Research Methodology. At the end of first year the examination shall be held in above mentioned disciplines. The clinical training in fundamental concepts of Surgery shall start from the 1<sup>st</sup> day of enrollment.

**Part II** is structured for the 1<sup>st</sup> and 2<sup>nd</sup> calendar year. The candidate shall undertake clinical training in fundamental concepts of Surgery. At the end of 2<sup>nd</sup> year the examination shall be held in fundamental concepts of Surgery. The clinical training in Otolaryngology shall start from 3<sup>rd</sup> year onwards in the in recognized institutions.

**Part III** is structured for 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> calendar years in MS Otolaryngology. It has two components; Clinical and Research. The candidate shall undergo clinical training to achieve educational objectives of MS Otolaryngology (knowledge & skills) along with rotation in relevant fields

Over the five years duration of the course, candidate will spend total time equivalent to one calendar year for research during the training. Research can be done as one block in 5<sup>th</sup> year of training or it can be done in the form of regular periodic rotations over five years as long as total research time is equivalent to one calendar year.

### ***5. Admission Criteria***

- I. For admission in MS Otolaryngology course, the candidate shall be required to have:
  - MBBS degree
  - Completed one year House Job
  - One year experience in Otolaryngology/General surgery/Allied surgical discipline in the given order of preference
  - Registration with PMDC
  - Passed Entry Test conducted by the University & aptitude interview by the Institute concerned
  - Having up to the mark credentials as per UHS rules (no. of attempts in each professional, any gold medals or distinctions, relevant work experience, Rural/ Army services, research experience in a recognized institution, any research article published in a National or International Journal) may also be considered on case to case basis.
- II. Exemptions: A candidate holding FCPS/MRCS/Diplomate/equivalent qualification in General Surgery shall be exempted from Part-I & Part-II Examinations and shall be directly admitted to Part-III Examinations, subject to fulfillment of requirements for the examination.

### ***6. Registration and Enrollment***

- Total number of students enrolled for the course must not exceed 2 per supervisor/year.

- The maximum number of trainees that can be attached with a supervisor at a given point of time (inclusive of trainees in all years/phases of MS training), must not exceed 6.
- Beds to trainee ratio at the approved teaching site shall be at least 5 beds per trainee.
- The University will approve supervisors for MS courses.
- Candidates selected for the courses after their enrollment at the relevant institutions shall be registered with UHS as per prescribed Registration Regulation.

## ***7. Accreditation Related Issues of The Institution***

### **A). Faculty**

Properly qualified teaching staff in accordance with the requirements of Pakistan Medical and Dental Council (PMDC)

### **B). Adequate Space**

Including class-rooms (with audiovisual aids), demonstration rooms, computer lab and clinical pathology lab etc.

### **C). Library**

Departmental library should have latest editions of recommended books, reference books and latest journals (National and International).

- Accreditation of Otolaryngology training program can be suspended on temporary or permanent basis by the University, if the program does not comply with requirements for residents training as laid out in this curriculum.
- Program should be presented to the University along with a plan for implementation of curriculum for training of residents.
- Programs should have documentation of residents training activities and evaluation on monthly basis.
- To ensure a uniform and standardized quality of training and availability of the training facilities, the University reserves the right to make surprise visits of the training program for monitoring purposes and may take appropriate action if deemed necessary.

## AIMS AND OBJECTIVES OF THE COURSE

### **AIM**

The aim of five years MS programme in Otolaryngology is to train residents to acquire the competency of a specialist in the field so that they can become good teachers, researchers and clinicians in their specialty after completion of their training.

### **GENERAL OBJECTIVES**

MS Otolaryngology training should enable a student to:

1. Access and apply relevant knowledge to clinical practice:
  - Maintain currency of knowledge
  - Apply scientific knowledge in practice
  - Appropriate to patient need and context
  - Critically evaluate new technology
2. Safely and effectively performs appropriate surgical procedures:
  - Consistently demonstrate sound surgical skills
  - Demonstrate procedural knowledge and technical skill at a level appropriate to the level of training
  - Demonstrate manual dexterity required to carry out procedures
  - Adapt their skills in the context of each patient and procedure
  - Maintain and acquire new skills
  - Approach and carries out procedures with due attention to safety of patient, self and others
  - Critically analyze their own clinical performance for continuous improvement
3. Design and implement effective management plans:
  - Recognize the clinical features, accurately diagnose and manage neurological problems
  - Formulate a well-reasoned provisional diagnosis and management plan based on a thorough history and examination
  - Formulate a differential diagnosis based on investigative findings

- Manage patients in ways that demonstrate sensitivity to their physical, social, cultural and psychological needs
- Recognize disorders of the nervous system and differentiate those amenable to surgical treatment
- Effectively manage the care of patients with ENT trauma including multiple system trauma
- Effectively recognize and manage complications
- Accurately identify the benefits, risks and mechanisms of action of current and evolving treatment modalities
- Indicate alternatives in the process of interpreting investigations and in decision-making
- Manage complexity and uncertainty
- Consider all issues relevant to the patient
- Identify risk
- Assess and implement a risk management plan
- Critically evaluate and integrate new technologies and techniques.

4. Organize diagnostic testing, imaging and consultation as needed:

- Select medically appropriate investigative tools and monitoring techniques in a cost-effective and useful manner
- Appraise and interpret appropriate diagnostic imaging and investigations according to patients' needs
- Critically evaluates the advantages and disadvantages of different investigative modalities

5. Communicate effectively:

- Communicate appropriate information to patients (and their family) about procedures, potentialities and risks associated with surgery in ways that encourage their participation in informed decision making
- Communicate with the patient (and their family) the treatment options including benefits and risks of each
- Communicate with and co-ordinate health management teams to achieve an optimal surgical environment
- Initiate the resolution of misunderstandings or disputes

- Modify communication to accommodate cultural and linguistic sensitivities of the patient

6. Recognize the value of knowledge and research and its application to clinical practice:

- Assume responsibility for self-directed learning
- Critically appraise new trends in Otolaryngology
- Facilitate the learning of others.

7. Appreciate ethical issues associated with Otolaryngology:

- Consistently apply ethical principles
- Identify ethical expectations that impact on medico-legal issues
- Recognize the current legal aspects of informed consent and confidentiality
- Be accountable for the management of their patients.

8. Professionalism by:

- Employing a critically reflective approach to Otolaryngology
- Adhering with current regulations concerning workplace harassment
- Regularly carrying out self and peer reviewed audit
- Acknowledging and have insight into their own limitations
- Acknowledging and learning from mistakes

9. Work in collaboration with members of an interdisciplinary team where appropriate:

- Collaborate with other professionals in the selection and use of various types of treatments assessing and weighing the indications and contraindications associated with each type
- Develop a care plan for a patient in collaboration with members of an interdisciplinary team
- Employ a consultative approach with colleagues and other professionals
- Recognize the need to refer patients to other professionals.

10. Management and Leadership

- Effective use of resources to balance patient care and system resources
- Identify and differentiate between system resources and patient needs



- Prioritize needs and demands dealing with limited system resources.
- Manage and lead clinical teams
- Recognize the importance of different types of expertise which contribute to the effective functioning of clinical team.
- Maintain clinically relevant and accurate contemporaneous records

11. Health advocacy:

- Promote health maintenance of patients
- Advocate for appropriate health resource allocation
- Promote health maintenance of colleagues and self scholar and teacher

## SPECIFIC LEARNING OUTCOMES

On completion of the training programme, Otolaryngology trainees pursuing an academic pathway will be expected to have demonstrated competence in all aspects of the published syllabus. The specific training component would be targeted for establishing clearly defined standards of knowledge and skills required to practice Otolaryngology at secondary and tertiary care level with proficiency in the Basic and applied clinical sciences, Basic Otolaryngologic care, ENT intensive care, Emergency (A&E) medicine and Complementary surgical disciplines.

1. **Cognitive knowledge:** Describe embryology, applied anatomy, physiology, pathology, clinical features, diagnostic procedures and the therapeutics including preventive methods, (medical/surgical) pertaining to Otolaryngology – Head & Neck Surgery.
2. **Clinical Decision Making Ability & Management Expertise:** Diagnose conditions from history taking, clinical evaluation and investigations and develop expertise to manage medically as well as surgically the commonly encountered, disorders and diseases in different areas as follows:  
  
Otology, Neurology & Skull-base Surgery: External, middle and internal ear diseases, deafness including the common complications associated with middle ear inner facial Nerve palsy, tinnitus, vertigo and other conditions such as acoustic neuroma, malignant tumours, glomus tumor and petrous apex cholesteatoma etc. and to be capable of doing early diagnosis of these conditions and also to acquire adequate knowledge about principles of therapy of these diseases.
3. **Rhinology:** Able to Diagnose and manage Nose and paranasal sinus conditions such as infection, polyps and allergy. Acquire some surgical skills to do septorhinoplasty, septoplasty, functional endoscopic sinus surgery (FESS). Develop capability to do oncologic diagnosis and therapy planning for proper management of such patients in collaboration with radiotherapists and medical oncologists.

4. **Laryngology:** Able to diagnose and manage benign lesions of the larynx including voice-disorders and pharyngeal and nasopharyngeal diseases, viz-adenoids and angiofibroma. Capable to do diagnosis of oncologic conditions such as laryngeal carcinoma and plan its therapy strategies.
5. **Oral cavity/salivary glands:** Learn about Oral cavity and salivary gland diseases, their diagnosis and therapy planning with referral strategies for cancer patients to advanced cancer centers/ Hospital.
6. **Head/Neck conditions/diseases:** Learn about head and neck diseases including Parotid gland and thyroid diseases, neurogenic tumours and neck space infections/and their management.
7. **Broncho-esophageal region:** Learn about broncho-esophageal diseases/disorders such as congenital disorders, diagnosis of Foreign bodies in wind/food pipes with their management policies. Capable to perform panendoscopies for oncologic evaluation in the head-neck region, including oesophageal malignancy.
8. **Plastic reconstruction following major head neck surgery & trauma:** Acquire general principles of reconstructive surgery and its referral needs.
9. **Advanced Surgical methods:** Acquire knowledge about phonosurgery like microlaryngoscopic surgery, palatopharyngoplasty for VPI & Cleft palate, and thyroplasty for voice-disorders.
10. **General principles of newer therapy/Surgery:** Newer knowledge about ENT diseases in general, including technological (Laser) and pharmacologic advances (medicines) and newer method of therapy for certain conditions such as Obstructive sleep apnoea syndrome and asthma.
11. **Traumatology & Facio-maxillary Injury:** Acquire knowledge in the management of Traumatology in general and facio-maxillary injury in particular, including nasal fractures. Be capable of doing screening in the community, of the audiological & speech related disabilities, and also to do early identification of malignancies and create its awareness in the community/ society to eventually get better cooperation from people in health management.
12. **Radiology:** Acquire knowledge about radiology/imaging and to interpret different radiological procedures and imaging in Otolaryngology – Head and

Neck and skull base regions. There should be collaboration with Radiology department for such activities.

13. **Audiology & Rehabilitation:** Perform different audiological and neuro-otological tests for diagnosis of audiological/vestibular disorders/diseases and become capable to interpret these findings and to incorporate their implication in diagnosis and their treatment including the rehabilitative methods in Audiology and speech pathology including hearing aids and other assistive and implantable devices.
14. **Psychologic and social aspect:** Some elementary knowledge in clinical Psychology and social, work management is to be acquired for management of patients, especially those terminally ill and disable-persons and interacting with their relatives.
15. **Preventive Otolaryngology:** Acquire knowledge about prevention of some conditions especially in children such as middle ear and sinus infection, hereditary deafness and early diagnosis of head-neck malignancy. Hence he/she should know about the preventive Otorhinolaryngology (ENT).
16. **Identification of a special areas within the subject:** To further develop higher skills within the specialty in a specialized area such as Otology, Neurology, Rhinology, head and neck oncology, skull base surgery and Audiological medicine, Resident may identify some area of interest, during the Residency Programme in one of such areas like Otology.

17. **Research Experience:**

All residents in the categorical program are required to complete an academic outcomes-based research project during their training. This project can consist of original bench top laboratory research, clinical research or a combination of both. The research work shall be compiled in the form of a thesis which is to be submitted for evaluation by each resident before end of the training. The designated Faculty will organize and mentor the residents through the process, as well as journal clubs to teach critical appraisal of the literature.

**PRACTICAL TRAINING**

1. A Resident doctor, pursuing MS Degree course is expected to perform major and minor surgical procedures first through observation and then under supervision of a supervisor/faculty member till he/she is proficient to perform major and minor surgical maneuvers independently such as:  
(Few examples only given):
  - Tracheostomy
  - Tonsillectomy
  - Adenoidectomy/grommet insertion,
  - Nasal Polypectomy
  - Incision/drainage of quinsy/other abscesses,
  - S.M.R. & Septoplasty
  - Cortical mastoidectomy
  - Modified radical Mastoidectomy.
2. Be able to manage common emergencies like, fracture nasal bone, stridor requiring a tracheostomy, epistaxis, subperiosteal abscess, and Peritonsillar abscess.
3. He/she should be capable to do minor operations independently (Few examples only given)
  - Myringotomy and myringoplasty
  - Antral washout and nasal biopsy
  - Sub-mandibular salivary gland removal
  - Biopsy from a neck mass, such as a node
  - Direct Laryngoscopy
  - Nasopharyngoscopy
  - Flexible Bronchoscopy and Oesophagoscopy
  - Aural polypectomy
4. He/she should be able to do the following operations under supervision/guidance of senior colleagues/ faculty member (Few examples only given):
  - Fibre-optic rigid endoscopy of oesophagus
  - Intranasal ethmoidectomy
  - External ethmoidectomy
  - External fronto ethmoidectomy

- Maxillectomy (Partial and Total)
- Excision of thyroglossal cyst
- Superficial Parotidectomy
- Radical block dissection of the neck for metastatic nodes.
- Total Laryngectomy for cancer.
- Laryngofissure
- Repair of laryngotracheal trauma.
- Ligation external carotid artery

5. He/she should be able to do under guidance/supervision the following specialized operative procedures (Few examples only given):

- Facial nerve decompression
- Pinna-Repair (Post-traumatic)
- Surgery of choanal atresia,
- External canal atresia-surgery,
- Functional endoscopic/sinus surgery,
- Stapedectomy
- Tympanoplasty with mastoid surgery
- Rhinoplasty for cosmetic purposes.
- Fibre-optic bronchoscopy and oesophagoscopy including foreign body removal
- Cryo/Laser surgery in ENT
- Microlaryngoscopic voice-surgery for vocal nodules, polyps/ cyst etc
- Phonosurgery for cord palsy including type I thyroplasty.
- Skull base/parapharyngeal space surgery
- Thyroid surgery,
- Laryngo-tracheal stenosis – surgical correction,
- Facio-maxillary injury etc.

Curriculum/Statutes & Regulations-MS Otolaryngology  
**REGULATIONS**

**1. Scheme of the Course**

A summary of five years course in MS Otolaryngology is presented as under:

Course Structure	Components	Examination
<b>Part I</b>	<b>Basic Medical Sciences</b> Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Behavioural Sciences and Biostatistics & Research Methodology.	Part-I examination at the end of 1st year of MS Otolaryngology programme.  • <b>Written:</b> Paper I: MCQs Paper II: SEQs
<b>Part-II</b>	• <b>Fundamental Concepts in Surgery :</b> Training in basic clinical techniques of Surgery with compulsory rotations for two years starting from first day of enrollment	Part-II examination at the end of 2nd year of MS Otolaryngology programme.  • <b>Written:</b> Papers 1 & 2 : Basic Principles of Surgery  • <b>Oral &amp; Practical/ Clinical Examination</b> • OSCE • Clinical Examination (Long case, Short cases)  • <b>Log Book</b>
<b>Part-III</b>	<u><b>Clinical component of Part III</b></u>  • <b>Professional Education in Otolaryngology :</b>  Training in Otolaryngology during 3rd, 4th & 5th year of MS Otolaryngology programme.  Three years of training with compulsory & optional rotations in relevant fields  <u><b>Research component of Part III</b></u>  Research work/Thesis writing project must be completed and thesis be submitted before the end of training.	Part-III examination in specialized components of Otolaryngology at the end of 5th year of MS Otolaryngology programme.  • <b>Written:</b> Papers 1 & 2: Problem-based questions in the subject  • <b>Oral &amp; Practical/ Clinical Examination</b> • OSCE/ • Clinical Examination (Long case, Short cases )  • <b>Log Book</b>  Part-III thesis examination with defense at the end of fifth (5th) year of MS Otolaryngology programme.

## **2. Examinations**

### **Part-I Examination**

1. All candidates admitted in MS Otolaryngology course shall appear in Part-I examination at the end of 1<sup>st</sup> calendar year.
2. The examination shall be held on biannual basis.
3. The candidate who fails to pass the examination in 3 consecutive attempts availed or un-availed, shall be dropped from the course.
4. The examination shall have two components:

▪ Paper-I MCQs (single best)	100 Marks
▪ Paper-II SEQs	100 Marks
5. Subjects to be examined shall be Basic Sciences relevant to Otolaryngology (Anatomy, Physiology, Biochemistry, Pathology, Pharmacology), Behavioural Sciences and Biostatistics & Research Methodology.
6. To be eligible to appear in Part-I examination the candidate must submit;
  - i. duly filled, prescribed Admission Form to the Controller of Examinations duly recommended by the Principal/Head of the Institution in which he/she is enrolled;
  - ii. a certificate by the Principal/Head of the Institution, that the candidate has attended at least 75% of the lectures, seminars, practical/clinical demonstrations;
  - iii. Examination fee as prescribed by the University
7. To be declared successful in Part-I examination the candidate must secure 60% marks in each paper.



### **Part-II Examination**

1. All candidates admitted in MS Otolaryngology course shall appear in Part-II examination at the end of second calendar year.
2. The examination shall be held on biannual basis.
3. The candidate who fails to pass the examination within 3 years of passing the Part-I examination shall be dropped from the course.
4. The examination shall have the following components:
  - a. Written 200 Marks
  - b. OSCE 50 Marks
  - c. Clinical examination 100 Marks
  - d. Log Book Evaluation 80 Marks (40 marks per year)
5. There shall be two written papers of 100 marks each:

Papers 1 & 2: Principles of General Surgery
6. The types of questions shall be of Short/Modified essay type and MCQs (single best).
7. Oral & practical/clinical examination shall be held in clinical techniques in General Surgery.
8. To be declared successful in Part-II examination the candidate must secure 60% marks in each component and 50% in each sub-component.
9. Only those candidates who pass in theory papers, will be eligible to appear in the Oral & Practical/clinical Examination.
10. The candidates, who have passed written examination but failed in oral & practical/ clinical examination, will re-appear only in oral & practical/clinical examination.
11. The maximum number of attempts to re-appear in oral & practical /clinical Examination alone shall be three, after which the candidate shall have to appear in both written and oral & practical/clinical examinations as a whole.
12. To be eligible to appear in Part-II examination the candidate must submit;
  - i. duly filled, prescribed Admission Form to the Controller of Examinations duly recommended by the Principal/Head of the Institution in which he/she is enrolled;

- ii. a certificate by the Principal/Head of the Institution, that the candidate has attended at least 75% of the lectures, seminars, practical/clinical demonstrations;
- iii. a certificate of having passed the Part-I examination;
- iv. Examination fee as prescribed by the University.

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**Part-III Examination**

1. All candidates admitted in MS Otolaryngology course shall appear in Part-III (clinical) examination at the end of structured training programme (end of 5th calendar year), and having passed the part I & II examinations. However, a candidate holding FCPS / MRCS / Diplomate / equivalent qualification in General Surgery shall be exempted from Part-I & Part-II Examinations and shall be directly admitted to Part-III Examinations, subject to fulfillment of requirements for the examination.
2. The examination shall be held on biannual basis.
3. To be eligible to appear in Part-III examination the candidate must submit;
  - i. duly filled, prescribed Admission Form to the Controller of Examinations duly recommended by the Principal/Head of the Institution in which he/she is enrolled;
  - ii. a certificate by the Principal/Head of the Institution, that the candidate has attended at least 75% of the lectures, seminars, practical/clinical demonstrations;
  - iii. Original Log Book complete in all respect and duly signed by the Supervisor (for Oral & practical/clinical Examination);
  - iv. certificates of having passed the Part-I & part-II examinations;
  - v. Examination fee as prescribed by the University.
4. The Part-III clinical examination shall have the following components:

▪ Written	300 marks
▪ Oral & practical/clinical examination	300 marks
▪ Log Book Evaluation	120 marks (40 marks per year)
5. There shall be two written papers of 150 marks each.
6. Both papers shall have problem-based Short/Modified essay questions and MCQs.
7. Oral & practical/clinical examination shall have 300 marks for:

i. 1 Long Case	100
ii. 4 Short Cases	100(25 marks each)
iii. OSCE	100

8. To be declared successful in Part-III examination the candidate must secure 60% marks in each component and 50% in each sub-component.
9. Only those candidates who pass in theory papers, will be eligible to appear in the Oral & Practical/ Clinical Examination.
10. The candidates, who have passed written examination but failed in Oral & Practical/ Clinical Examination, will re-appear only in Oral & Practical / Clinical examination.
11. The maximum number of attempts to re-appear in oral & practical /clinical Examination alone shall be three, after which the candidate shall have to appear in both written and oral & practical/clinical examinations as a whole.
12. The candidate with 80% or above marks shall be deemed to have passed with distinction.
13. *Log Book/Assignments:* Through out the length of the course, the performance of the candidate shall be recorded on the Log Book.
14. The Supervisor shall certify every year that the Log Book is being maintained and signed regularly.
15. The Log Book will be developed & approved by the Advanced Studies & Research Board.
16. The evaluation will be maintained by the Supervisor (in consultation with the Co- Supervisor, if appointed).
17. The performance of the candidate shall be evaluated on annual basis, e.g., 40 marks for each year in five years MS Otolaryngology course. The total marks for Log Book shall be 200. The log book shall reflect the performance of the candidate on following parameters:
  - Year wise record of the competence of skills.
  - Year wise record of the assignments.
  - Year wise record of the evaluation regarding attitude & behaviour
  - Year wise record of journal club / lectures / presentations / clinico-pathologic conferences attended & / or made by the candidate.

### ***3. Submission / Evaluation of Synopsis***

1. The candidates shall prepare their synopsis as per guidelines provided by the Advanced Studies & Research Board, available on UHS website.
2. The research topic in clinical subject should have 30% component related to basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient numbers of variables to give training to the candidate to conduct research, to collect & analyze the data.
3. Synopsis of research project shall be submitted by the end of the 3<sup>rd</sup> year of MS program. The synopsis after review by an Institutional Review Committee, shall be submitted to the University for consideration by the Advanced Studies & Research Board, through the Principal / Dean /Head of the institution.

### **4. Submission of Thesis**

1. Thesis shall be submitted by the candidate duly recommended by the Supervisor.
2. The minimum duration between approval of synopsis and submission of thesis shall be one year, but the thesis can not be submitted later than 8 years of enrolment.
3. The research thesis must be compiled and bound in accordance with the Thesis Format Guidelines approved by the University and available on website.
4. The research thesis will be submitted along with the fee prescribed by the University.

### **5. Thesis Examination**

1. All candidates admitted in MS course shall appear in Part-III thesis examination at the end of 5<sup>th</sup> year of their training course.
2. Only those candidates shall be eligible for thesis evaluation who have passed Part I, II & III (clinical) Examinations.
3. The examination shall include thesis evaluation with defense.

4. The Vice Chancellor shall appoint three external examiners for thesis evaluation, preferably from other universities and from abroad, out of the panel of examiners approved by the Advanced Studies & Research Board. The examiners shall be appointed from respective specialty. Specialists from General Surgery and Allied surgical Disciplines may also be appointed/co-opted, where deemed necessary.
5. The thesis shall be sent to the external examiners for evaluation, well in time before the date of defense examination and should be approved by all the examiners.
6. After the approval of thesis by the evaluators, the thesis defense examination shall be held within the University on such date as may be notified by the Controller of Examinations. The Controller of Examinations shall make appropriate arrangements for the conduct of thesis defense examination in consultation with the supervisor, who will co-ordinate the defense examination.
7. The thesis defense examination shall be conducted by two External Examiners who shall submit a report on the suitability of the candidate for the award of degree. The supervisor shall act as coordinator.

### **6. Award of MS Otolaryngology Degree**

After successful completion of the structured courses of MS Otolaryngology and qualifying Part-I, Part-II and Part-III examinations, the degree with title MS Otolaryngology shall be awarded.

## CONTENT OUTLINE

### Part I MS Otolaryngology

#### **Basic Sciences:**

Student is expected to acquire comprehensive knowledge of Anatomy, Physiology, Pathology (Microbiology), Biochemistry, Pharmacology relevant to surgical practice appropriate for Otolaryngology

### **1. Anatomy**

- *Clinical and functional anatomy with pathological and operative relevance*
- *Surgical approaches to the ear, nose, larynx and head & neck structures*
- *Histology and embryology of ear, nose, larynx and head & neck structures*
- Cell Biology: Cytoplasm – Cytoplasmic matrix, cell membrane, cell organelles, cytoskeleton, cell inclusions, cilia and flagella.
- Nucleus – nuclear envelope, nuclear matrix, DNA and other components of chromatin, protein synthesis, nucleolus, nuclear changes indicating cell death.
- Cell cycle, mitosis, meiosis, cell renewal.
- Cellular differentiation and proliferation.
- Tissues of Body: Light and electron microscopic details and structural basis of function, regeneration and degeneration. Confocal microscopy.
- The systems/organs of body – Cellular organization, light and electron microscopic features, structure function correlations, and cellular organization.

### **Embryology**

- General Features of Human Development
- Features of mitotic and meiotic modes of cell division. Genetic consequences of meiotic division.
- Abnormal mitotic and meiotic divisions of clinical importance.
- Gametogenesis: origin of germ cells.
- Oogenesis: prenatal and postnatal development of ova.
- Spermatogenesis: proliferation and maturation of male germ cells. Abnormal gametes, their clinical significance.
- Ovulation, fertilization and the consequences of fertilization.

#### **Early Embryonic Development:**

- Cleavage, morula and blastocyst formation and implantation.
- Formation of the three primary germ layers.
- List of the derivatives of the respective germ layers.

#### **Period of the Growing Fetus:**

- Various stages and salient features of the fetus development

#### **Extraembryonic Membranes:**

- Development, functions and anomalies of yolk sac, amnion, chorion, allantois, umbilical cord and placenta.

Development of the External Body Form:

- Shaping of the head and neck. Common developmental anomalies associated.

The Branchial Apparatus:

- Development and fate of the branchial grooves, arches and pouches. Their derivatives and anomalies.

Teratogenesis:

- Factors known to be involved in the development of congenital anomalies especially related to the otolaryngological system.
- Concept of critical periods.

## **Histology:**

### **Structural and Functional Organization of the Tissues of Body**

- Classification of tissues and identification of various tissues particularly those related to the musculoskeletal system, in routine histological preparations under the light microscope.

The Epithelial Tissue

- General structure, functions and classification of epithelia
- Their location in the body
- General characters of serous and mucous membranes
- General structural features of exocrine and endocrine glands

The Connective Tissue

- Cartilage
- Structure of bone marrow. Cell lines seen in haemopoiesis.
- Factors required for bone growth.

The Muscular Tissue

- Structural and functional differences between the smooth skeletal and cardiac types of muscle.
- Fine structure of skeletal and cardiac muscle fibers, and its relationship to the mechanism of contraction.
- Specialized conducting tissue of the heart.

The Neural Tissue

- The neuron, morphology of the perikaryon and its processes.
- Coverings of the axons in the peripheral nerves and the central nervous system.
- Types of neuroglia and their functions.
- Process of myelination in the peripheral nerves and the central nervous system.
- Axon terminals and synapses. Nerve fiber degeneration and regeneration.

## **Surface and Imaging Anatomy**

Upper respiratory system including

- Ear (sense of hearing enters via cranial nerve)
- Nose.
- Paranasal Sinuses.
- Oral Cavity
- Pharynx.



- Larynx
- Salivary Glands
- Head and neck
- Blood supply, Nerve supply and the Lymphatic drainage of the ear, nose, throat and trachea, larynx, and accessory sinuses
- Anatomy of the Central Nervous System with particular reference to ear, nose and throat
- Gross Anatomy of neck and chest in relation to trachea and oesophagus
- Comparative study of Anatomy of the ear, nose and throat in relation to lower animals

## **2. Physiology**

- Physiology of ear, nose, throat and oesophagus
- Sound Transmission
- Functions of the nose
- Physiology of olfaction
- Physiology of hearing
- Middle ear impedance transformer mechanism
- Vestibular function in maintaining equilibrium
- Auditory pathway
- Physiology of swallowing
- Speech generation
- Endocrine glandular function, particularly thyroid, parathyroid and pituitary glands
- Shock and circulatory support
- Exocrine glands, particularly salivary glands
- Special senses, particularly hearing, balance and olfaction

## **3. Pharmacology**

- The Evolution of Medical Drugs
- British Pharmacopia
- Introduction to Pharmacology
- Receptors
- Mechanisms of Drug Action
- Pharmacokinetics
- Pharmacokinetic Process
  - Absorption
  - Distribution
  - Metabolism
  - Desired Plasma Concentration
  - Volume of Distribution
  - Elimination
  - Elimination rate constant and half life
  - Creatinine Clearance
- Drug Effect
  - Beneficial Responses
  - Harmful Responses

- Allergic Responses

- Drug Dependence, Addiction, Abuse and Tolerance
- Drug Interactions
- Dialysis
- Drug use in pregnancy and in children
- Ototoxicity and medication

## 4. Pathology

Pathological alterations at cellular and structural level in infection, inflammation, ischaemia, neoplasia and trauma affecting the ear, nose and upper respiratory tract

### Cell Injury and adaptation

- Reversible and Irreversible Injury
- Fatty change, Pathologic calcification
- Necrosis and Gangrene
- Cellular adaptation
- Atrophy, Hypertrophy,
- Hyperplasia, Metaplasia, Aplasia

### Inflammation

- Acute inflammation
- Cellular components and chemical mediators of acute inflammation
- Exudates and transudate
- Sequelae of acute inflammation
- Chronic inflammation
- Etiological factors and pathogenesis
- Distinction between acute and chronic (duration) inflammation
- Histologic hallmarks
- Types and causes of chronic inflammation, non-granulomatous & granulomatous,

### Haemodynamic disorders

- Etiology, pathogenesis, classification and morphological and clinical manifestations of Edema, Haemorrhage, Thrombosis, Embolism, Infarction & Hyperaemia
- Shock; classification etiology, and pathogenesis, manifestations.
- Compensatory mechanisms involved in shock
- Pathogenesis and possible consequences of thrombosis
- Difference between arterial and venous emboli

### Neoplasia

- Dysplasia and Neoplasia
- Benign and malignant neoplasms
- Etiological factors for neoplasia
- Different modes of metastasis
- Tumor staging system and tumor grade

### Immunity and Hypersensitivity

- Immunity
- Immune response
- Diagnostic procedures in a clinical Immunology laboratory
- Protective immunity to microbial diseases

- Tumour immunology
- Immunological tolerance, autoimmunity and autoimmune diseases.
- Transplantation immunology
- Hypersensitivity
- Immunodeficiency disorders
- Immunoprophylaxis & Immunotherapy

### **Related Microbiology**

- Role of microbes in various otolaryngological disorders
- Infection source
- Nosocomial infections
- Bacterial growth and death
- Pathogenic bacteria
- Vegetative organisms
- Spores
- Important viruses
- Important parasites
- Surgically important microorganisms
- Sources of infection
- Asepsis and antisepsis
- Sterilization and disinfection
- Infection prevention
- Immunization
- Personnel protection from communicable diseases
- Use of investigation and procedures in laboratory
- Basics in allergy and immunology

### **Special Pathology**

- Foreign body in Ear, Nose & Throat
- Otitis media
- Otitis externa
- Mastoiditis
- Rupture of tympanic membrane
- Meniere's disease
- Nasal allergy
- Nasal Polyp
- Epistaxis
- Sinusitis
- Hearing Loss
- Tonsillitis and peritonsillar abscess
- Pharyngitis
- Ludwig's Angina
- Hoarseness of voice
- Laryngotracheitis
- Laryngeal obstruction
- Diphtheria
- Indication of tracheostomy
- Carcinoma of Larynx
- Wax in ear, Haematoma auris, Furunculosis

- Indications for and interpretation of results of common biochemical and haematological tests
- Macroscopic and microscopic appearances of common or important diseases found in otolaryngology

## **5. Biostatistics & Research Methodology**

- Introduction to Bio-Statistics
- Introduction to Bio- Medical Research
- Why research is important?
- What research to do?
  - Selecting a Field for Research
  - Drivers for Health Research
  - Participation in National and International Research
  - Participation in Pharmaceutical Company Research
  - Where do research ideas come from
  - Criteria for a good research topic
- Ethics in Health Research
- Writing a Scientific Paper
- Making a Scientific Presentation
- Searching the Literature

## **6. Behavioural Sciences**

- Bio-psycho-social (BPS) model of health care
- Use of non-medicinal interventions in clinical practice
- Communication skills
- Counseling
  - Informational skills
  - Crisis intervention/disaster management
  - Conflict resolution
  - Breaking bad news
- Medical ethics, professionalism and doctor-patient relationship
  - Hippocratic oath
  - Four pillars of medical ethics (autonomy, beneficence, non-maleficence and justice)
  - Informed consent and confidentiality
  - Ethical dilemmas in a doctor's life
- Delivery of culturally relevant care and cultural sensitivity
  - Psychological aspects of health and disease
  - Psychological aspect of health
  - Psychological aspect of disease
  - Stress and its management
  - Psychological aspect of pain
  - Psychological aspect of aging

## **Part II**

# **MS Otolaryngology**

### **Fundamental Principles of Surgery**

- History of surgery
- Preparing a patient for surgery
- Principles of operative surgery: asepsis, sterilization and antiseptics
- Surgical infections and antibiotics
- Basic principles of anaesthesia and pain management
- Acute life support and critical care:
  - Pathophysiology and management of shock
  - Fluids and electrolyte balance/ acid base metabolism
  - Haemostasis, blood transfusion
- Trauma: assessment of polytrauma, triage, basic and advanced trauma
- Accident and emergency surgery
- Wound healing and wound management
- Nutrition and metabolism
- Principles of burn management
- Principles of surgical oncology
- Principles of laparoscopy and endoscopy
- Organ transplantation
- Informed consent and medicolegal issues
- Molecular biology and genetics
- Operative procedures for common surgical manifestations e.g. cysts, sinuses, fistula, abscess, nodules, basic plastic and reconstructive surgery

### **Common Surgical Skills**

#### **Incision of skin and subcutaneous tissue:**

- Langer's lines
- Healing mechanism
- Choice of instrument
- Safe practice

#### **Closure of skin and subcutaneous tissue:**

- Options for closure
- Suture and needle choice
- Safe practice

#### **Knot tying:**

- Choice of material
- Single handed
- Double handed
- Superficial
- Deep

#### **Tissue retraction:**

- Choice of instruments
- Placement of wound retractors
- Tissue forceps

**Use of drains:**

- Indications
- Types
- Insertion
- Fixation
- Management/removal

**Incision of skin and subcutaneous tissue:**

- Ability to use scalpel, diathermy and scissors

**Closure of skin and subcutaneous tissue:**

- Accurate and tension free apposition of wound edges

**Haemostasis:**

- Control of bleeding vessel (superficial)
- Diathermy
- Suture ligation
- Tie ligation
- Clip application
- Plan investigations
- Clinical decision making
- Case work up and evaluation; risk management

**Pre-operative assessment and management:**

- Cardiorespiratory physiology
- Diabetes mellitus
- Renal failure
- Pathophysiology of blood loss
- Pathophysiology of sepsis
- Risk factors for surgery
- Principles of day surgery
- Management of comorbidity

**Intraoperative care:**

- Safety in theatre
- Sharps safety
- Diathermy, laser use
- Infection risks
- Radiation use and risks
- Tourniquets
- Principles of local, regional and general anaesthesia

**Post-operative care:**

- Monitoring of postoperative patient
- Postoperative analgesia
- Fluid and electrolyte management
- Detection of impending organ failure
- Initial management of organ failure
- Complications specific to particular operation
- Critical care

**Blood products:**

- Components of blood
- Alternatives to use of blood products
- Management of the complications of blood product transfusion including children

**Antibiotics:**

- Common pathogens in surgical patients
- Antibiotic sensitivities
- Antibiotic side-effects
- Principles of prophylaxis and treatment

**Safely assess the multiply injured patient:**

- History and examination
- Investigation
- Resuscitation and early management
- Referral to appropriate surgical subspecialties

**Technical Skills**

- Central venous line insertion
- Chest drain insertion
- Diagnostic peritoneal lavage
- Bleeding diathesis & corrective measures, e.g. warming, packing
- Clotting mechanism; Effect of surgery and trauma on coagulation
- Tests for thrombophilia and other disorders of coagulation
- Methods of investigation for suspected thromboembolic disease
- Anticoagulation, heparin and warfarin
- Role of V/Q scanning, CT angiography and thrombolysis
- Place of pulmonary embolectomy
- Awareness of symptoms and signs associated with pulmonary embolism and DVT
- Role of duplex scanning, venography and d-dimer measurement
- Initiate and monitor treatment

**Diagnosis and Management of Common Paediatric Surgical Conditions:**

- Child with abdominal pain
- Vomiting child
- Trauma
- Groin conditions
  - Hernia
  - Hydrocoele
  - Penile inflammatory conditions
  - Undescended testis
  - Acute scrotum
- Abdominal wall pathologies
- Urological conditions
- Constipation
- Head / neck swellings
- Intussusception
- Abscess
- In growing toenail

In terms of general experience it is expected that trainees would have gained exposure to the following procedures and to be able to perform those marked (\*) under direct supervision.

- Elective Procedures
  - Inguinal hernia

- (not neo-natal)
  - Orchidopexy
  - Circumcision\*
  - Lymph node biopsy\*
  - Abdominal wall herniae
  - Insertion of CV lines
  - Management of in growing toenails\*
  - EUA rectum\*
  - Manual evacuation\*
  - Open rectal biopsy
  - Excision of skin lesions\*
- Emergency Procedures
  - Appendicectomy
  - Incision and drainage of abscess\*
  - Pyloromyotomy
  - Operation for testicular torsion\*
  - Insertion of pleural drain\*
  - Insertion of suprapubic catheter\*
  - Reduction of intussusception



## **Part III- MS Otolaryngology**

### **Clinical Component**

Students should be familiar with typical clinical presentation, key physical findings, radiological findings and differential diagnosis, initial treatment, and referral indications for common otolaryngological diseases

### **1. Otology**

- Examination of Ear.
- Aetiopathology of Inflammatory Conditions of External & Middle Ear
- Pathology of Cochlea.
- Pathology of Vestibular System.
- Diseases of External Ear.
- Ear Trauma.
- Plastic Surgery of the Ear.
- Acute Suppurative Otitis Media.
- Management of Acute Suppurative Otitis Media
- Chronic Suppurative Otitis Media.
- Management of Chronic Suppurative Otitis Media.
- Reconstruction of the Ear.
- Complication of Suppurative Otitis Media.
- Otagia.
- Otosclerosis.
- Diseases of Temporal Bone.
- Sensorineural Hearing Loss.
- Sudden & Fluctuant Sensorineural Hearing Loss.
- Vertigo.
- Meniere's disease.
- Ototoxicity.
- Vestibular Schwannoma.
- Epithelial Tumours of External Auditory Meatus.
- Glomus & Other Tumours of the Ear.
- Disorders of Facial Nerve.
- Surgery of the Vestibular System.
- Cochlear Implants.
- Presbycusis.
- Implantable Hearing Devices.

### **2. Rhinology**

- Examination of Nose.
- Conditions of the External Nose.
- Congenital Anomalies of the Nose.
- Evaluation of the Nasal Airway & Nasal Challenge.
- Abnormalities of Smell.
- Mechanism & Treatment of Allergic Rhinitis.
- Food Allergy & Intolerance.
- Infective Rhinitis & Sinusitis.

- Intrinsic Rhinitis.
- Nasal Polyps.
- The Nasal Septum.
- Surgical Management of Sinusitis.
- Complications of Sinusitis.
- Cerebrospinal Fluid Rhinorrhoea.
- The Upper Airways & their relation to the respiratory System.
- Fracture of Facial Skeleton.
- Rhinoplasty.
- Epistaxis.
- Snoring & Sleep Apnoea.
- Non-Healing Granulomas.
- Facial pain & Headache.
- Aspects of Dental Surgery for Otorhinolaryngology.
- Trans-Sphenoidal Hypophysectomy.
- The Orbit.
- Neoplasms of Nose & Paranasal sinuses.

### **3. Laryngology & Head, Neck**

- Examination & endoscopy of the upper aerodigestive tract.
- Oral cavity.
- Acute & chronic infections of pharynx & tonsils.
- Acute & chronic laryngitis.
- Sleep apnoea.
- Adenoidal and tonsillar pathology
- Disorders of voice.
- Management of obstructed airway & tracheostomy.
- Trauma & stenosis of larynx.
- Neurological affections of larynx & pharynx.
- Pharyngeal pouches.
- Tumours of the larynx.
- Angiofibroma.
- Nasopharynx (the postnasal space).
- Tumours of oropharynx & lymphomas of the head & neck
- Benign diseases of neck.
- Malignant neck diseases;
- The thyroid & parathyroid gland.
- Non-neoplastic salivary gland diseases.
- Benign salivary gland tumours.
- Malignant salivary gland tumours.
- Tumours of infratemporal fossa & parapharyngeal space.
- Cysts, granulomas & tumours of the jaw, nose & sinuses.
- The esophagus in otolaryngology.
- Facial plastic surgery.
- Plastic & reconstructive surgery of the head & neck.
- Terminal Care of Patients with head & neck Cancer.

## 4. Audiology

- Acoustics
- Computers in Audiology.
- Epidemiology.
- Otological Symptoms & Emotional Disturbances.
- Clinical tests of Hearing & Balance.
- Pharmacological Treatment of Hearing & Balance Disorders.
- Legal & Ethical Matters.
- Prevention of Hearing & Balance Disorders.
- Hearing Overview.
- Causes of Hearing Disorders.
- Noise & the Ear.
- Diagnostic Audiometry.
- Audiological Rehabilitation.
- Hearing Aids.
- Cochlear Implants.
- Tactile Aids.
- Central Auditory Dysfunction
- Tinnitus
- Overview of Balance
- Causes of Balance Disorders.
- Diagnostic Testing of Vestibular System
- Rehabilitation of Balance Disorders.

## 5. Paediatric Otolaryngology

- Improving Paediatric Otolaryngological Consultation.
- Genetic Factors & Deafness.
- The Causes of Deafness.
- Testing Hearing in Children.
- Screening & Surveillance for Hearing Impairment in Preschool Children.
- Otitis Media with Effusion.
- Acute Suppurative Otitis Media in Children.
- Chronic Suppurative Otitis Media in Children.
- Surgery of Congenital Abnormalities of the External & Middle Ear.
- Management of Hearing Impaired Child.
- Cochlear Implantation in Children.
- Vestibular Disorders in Children.
- Speech & Language.
- Foreign Bodies in the Ear & Nose.
- Congenital Anomalies of the Nose.
- Craniofacial Anomalies.
- Nasal Obstruction & Rhinorrhoea in Infants & Children.
- Tonsils & Adenoids.
- Dental development, Orthodontics, Cleft lip & Cleft palate.
- Sleep Apnoea.
- Stertor & Stridor.
- Congenital Disorders of Larynx, Trachea & Bronchi.
- Stenosis of Larynx.
- Acute Laryngeal Infections.
- Foreign Bodies in Larynx & Trachea.

- Tracheostomy & Decannulation.
- Home care of Tracheostomised Child.
- Neonatal Pulmonary Disorders.
- Diseases of the Esophagus in Children.
- Branchial cleft Anomalies, Thyroglossal cysts & Fistulae.
- Tumours of the Head & Neck in Children.
- Salivary Glands Disorders in Children.
- The Drooling Child.
- Recurrent Respiratory Papillomatosis.
- Paediatric Anesthesia.

## **1. Emergencies in Otolaryngology-Head and Neck Surgery**

- Airway Obstruction.
- Inspired or Ingested Foreign Bodies.
- Sore Throat or Difficulty Swallowing.
- Epistaxis.
- Ear Complaints.
- Head and Neck Infections.
- Laryngeal and Tracheal Trauma.
- Facial Trauma

## **2. Rehabilitation**

- Speech rehabilitation following laryngectomy
- Rehabilitation following maxillectomy – obturator
- Management of hearing loss
- Hearing aids
- Bone anchored hearing aids
- Cochlear implants
- Radiotherapy, Brachytherapy, Chemotherapy, Palliative Care

Recent Advances:

- Advances in laser in ENT applications
- Ultrasonic scalpel
- Gamma Knife
- Computer assisted surgeries
- Intra -Arterial Local Chemotherapy
- Powered instruments

## **Common Otolaryngological Skills and Procedures**

- On completion of the initial training in Part I, the trainees will be competent in all aspects of the basic, operative and non operative care of surgical patients
- During Part II training, they will understand the importance of Otolaryngological care and management with particular reference to common Otolaryngological presentations recognizing and preventing secondary. They will be capable of resuscitating, assessing and initiating the surgical management of patients deteriorating as a result of local and systemic complications. They will demonstrate sound judgment when seeking more senior support, prioritizing medical interventions and escalating the level of medical care.

- Administration of antibiotics in the surgical patient
- Use of blood and its products
- The role/complications of diathermy
- Pain relief in surgery
- Thrombo-embolic
- Prevention and management
- Wound care and nosocomial infection
- Suture techniques and materials
- Initial assessment and management of airway problems
- Initial management of foreign bodies in ENT
- Initial epistaxis and its management
- Initial management of facial fractures

#### **Radiological Interpretations:**

- Plain films of the head, neck, sinuses and chest.
- CT scans of the sinuses, petrous bone, neck, chest and brain
- MRI scans of the sinuses, brain, neck, chest, head
- Contrast radiology of swallowing, sialography
- Ultrasound of the neck

#### **Audiology and vestibular testing**

- Interpretation of report from an Audiologist
- Simple tests for hearing including a pure tone audiogram, loudness discomfort levels and a tympanogram
- Brain stem evoked response audiometry
- Otoacoustic emissions
- Cortical evoked audiometry
- Electronystagmograph
- Equitest
- Rotating chair test
- Familiarity with different types of hearing aids
- Technique of mould impression
- Clinical neurological examination
- Ophthalmoscopy
- Lumbar puncture
- Electromyograph
- Electroneuronograph
- Electroencephalograph

#### **Otology**

- Examination of the ear – Auriscope
- Examination under the microscope – de wax
- External meatus and mastoid cavity
- Suction clearance for otitis externa and insertion of wick
- Removal of simple foreign bodies
- Myringotomy and Grommet insertion
- Incision for mastoid surgery
- Clinical examination of hearing
- Clinical examination of vestibular function

#### **Rhinology**

- Examination of the nose and sinuses – anterior
- Rhinoscopy

- Examination of smell
- Rigid endoscopy
- Flexible nasendoscopy
- Examination of the post nasal space
- Suction under endoscopic control of surgical cavity
- Insertion and removal of nasal pack and or balloon for epistaxis
- Simple polypectomy
- Biopsy of the nose and nasopharynx
- Antral washout in the management of acute sinusitis
- Removal of simple foreign bodies
- Drainage of septal haematoma
- Reduction of fractured nose
- Submucous resection
- Reduction of turbinates

### **Laryngology**

- Examination of the larynx – indirect
- Laryngoscopy
- Flexible laryngoscopy
- Direct laryngoscopy
- Biopsy of the larynx, pharynx and oral cavity (including tongue)
- Adenoidectomy and tonsillectomy
- Removal of simple foreign bodies from the oropharynx and hyper pharynx
- Incision/drainage of Quinsy

### **Neck**

- Examination of the neck
- Emergency and elective tracheostomy
- Fine needle aspiration biopsy of a neck lump

## **Part-III Thesis Component (Fifth year of MS Otolaryngology Programme)**

### **RESEARCH/ THESIS WRITING**

Total of one year will be allocated for work on a research project with thesis writing. Project must be completed and thesis be submitted before the end of training. Research can be done as one block in 5<sup>th</sup> year of training or it can be stretched over five years of training in the form of regular periodic rotations during the course as long as total research time is equivalent to one calendar year.

### **Research Experience**

The active research component program must ensure meaningful, supervised research experience with appropriate protected time for each resident while maintaining the essential clinical experience. Recent productivity by the program faculty and by the residents will be required, including publications in peer-reviewed journals. Residents must learn the design and interpretation of research studies, responsible use of informed consent, and research methodology and interpretation of data. The program must provide instruction in the critical assessment of new therapies and of the surgical literature.

Residents should be advised and supervised by qualified staff members in the conduct of research.

### **Clinical Research**

Each resident will participate in at least one clinical research study to become familiar with:

1. Research design
2. Research involving human subjects including informed consent and operations of the Institutional Review Board and ethics of human experimentation
3. Data collection and data analysis
4. Research ethics and honesty
5. Peer review process

This usually is done during the consultation and outpatient clinic rotations.

### **Case Studies or Literature Reviews**

Each resident will write, and submit for publication in a peer-reviewed journal, a case study or literature review on a topic of his/her choice.

### **Laboratory Research**

#### *Bench Research*

Participation in laboratory research is at the option of the resident and may be arranged through any faculty member of the Division. When appropriate, the research may be done at other institutions.

#### *Research involving animals*

Each resident participating in research involving animals is required to:

1. Become familiar with the pertinent Rules and Regulations of the University of Health Sciences Lahore i.e. those relating to "Health and Medical Surveillance Program for Laboratory Animal Care Personnel" and "Care and Use of Vertebrate Animals as Subjects in Research and Teaching"
2. Read the "Guide for the Care and Use of Laboratory Animals"
3. View the videotape of the symposium on Humane Animal Care

#### *Research involving Radioactivity*

Each resident participating in research involving radioactive materials is required to

1. Attend a Radiation Review session
2. Work with an Authorized User and receive appropriate instruction from him/her.

## METHODS OF INSTRUCTION/COURSE CONDUCTION

As a policy, active participation of students at all levels will be encouraged.

Following teaching modalities will be employed:

1. Lectures
2. Seminar Presentation and Journal Club Presentations
3. Group Discussions
4. Grand Rounds
5. Clinico-pathological Conferences
6. SEQ as assignments on the content areas
7. Skill teaching in ICU, Operation theatres, emergency and ward settings
8. Attend genetic clinics and rounds for at least one month.
9. Self study, assignments and use of internet
10. Bedside teaching rounds in ward
11. OPD & Follow up clinics
12. Long and short case presentations

In addition to the conventional teaching methodologies interactive strategies like conferences will also be introduced to improve both communication and clinical skills in the upcoming consultants. Conferences must be conducted regularly as scheduled and attended by all available faculty and residents. Residents must actively request autopsies and participate in formal review of gross and microscopic pathological material from patients who have been under their care. It is essential that residents participate in planning and in conducting conferences.

### **1. Clinical Case Conference**

Each resident will be responsible for at least one clinical case conference each month. The cases discussed may be those seen on either the consultation or clinic service or during rotations in specialty areas. The resident, with the advice of the Attending Surgeon on the Consultation Service, will prepare and present the case(s) and review the relevant literature.

### **2. Monthly Student Meetings**

Each affiliated medical college approved to conduct training for MS Otolaryngology will provide a room for student meetings/discussions such as:

- a. Journal Club Meeting
- b. Core Curriculum Meetings
- c. Skill Development



***a. Journal Club Meeting***

A resident will be assigned to present, in depth, a research article or topic of his/her choice of actual or potential broad interest and/or application. Two hours per month should be allocated to discussion of any current articles or topics introduced by any participant. Faculty or outside researchers will be invited to present outlines or results of current research activities. The article should be critically evaluated and its applicable results should be highlighted, which can be incorporated in clinical practice. Record of all such articles should be maintained in the relevant department.

***b. Core Curriculum Meetings***

All the core topics of Otolaryngology should be thoroughly discussed during these sessions. The duration of each session should be at least two hours once a month. It should be chaired by the chief resident (elected by the residents of the relevant discipline). Each resident should be given an opportunity to brainstorm all topics included in the course and to generate new ideas regarding the improvement of the course structure

***c. Skill Development***

Two hours twice a month should be assigned for learning and practicing clinical skills.

**List of skills to be learnt during these sessions is as follows:**

1. Residents must develop a comprehensive understanding of the indications, contraindications, limitations, complications, techniques, and interpretation of results of those technical procedures integral to the discipline
2. Residents must acquire knowledge of and skill in educating patients about the technique, rationale and ramifications of procedures and in obtaining procedure-specific informed consent. Faculty supervision of residents in their performance is required, and each resident's experience in such procedures must be documented by the program director.
3. Residents must have instruction in the evaluation of medical literature, clinical epidemiology, clinical study design, relative and absolute risks of disease, medical statistics and medical decision-making.
4. Training must include cultural, social, family, behavioral and economic issues, such as confidentiality of information, indications for life support systems, and allocation of limited resources.
5. Residents must be taught the social and economic impact of their decisions on patients, the primary care physician and society. This can be achieved by attending the bioethics lectures
6. Residents should have instruction and experience with patient counseling skills and community education.

7. This training should emphasize effective communication techniques for diverse populations, as well as organizational resources useful for patient and community education.
8. Residents should have experience in the performance of Otolaryngology related clinical laboratory and radionuclide studies and basic laboratory techniques, including quality control, quality assurance and proficiency standards
9. Each resident will manage at least the following essential Otolaryngological cases and observe and participate in each of the following procedures, preferably done on patients under supervision initially and then independently. (pg. 33-35)

### **3. Annual Grand Meeting**

Once a year all residents enrolled for MS Otolaryngology should be invited to the annual meeting at UHS Lahore.

One full day will be allocated to this event. All the chief residents from affiliated institutes will present their annual reports. Issues and concerns related to their relevant courses will be discussed. Feedback should be collected and suggestions should be sought in order to involve residents in decision making.

The research work done by residents and their literary work may be displayed.

In the evening an informal gathering and dinner can be arranged. This will help in creating a sense of belonging and ownership among students and the faculty.

Curriculum/Statutes & Regulations-MS Otolaryngology

**LOG BOOK**

The residents must maintain a log book and get it signed regularly by the supervisor. A complete and duly certified log book should be part of the requirement to sit for MS examination. Log book should include adequate number of diagnostic and therapeutic procedures observed and performed, the indications for the procedure, any complications and the interpretation of the results, routine and emergency management of patients, case presentations in CPCs, journal club meetings and literature review.

**Proposed Format of Log Book is as follows:**

Candidate's Name: \_\_\_\_\_

Roll No. \_\_\_\_\_

The above mentioned procedures shall be entered in the log book as per format:

**Procedures Performed**

Sr.#	Date	Name of Patient, Age, Sex & Admission No.	Diagnosis	Procedure Performed	Supervisor's Signature
1					
2					
3					
4					

**Emergencies Handled**

Sr. #	Date	Name of Patient, Age, Sex & Admission No.	Diagnosis	Procedure/ Management	Supervisor's Signature
1					
2					
3					
4					

**Case Presented**

Sr.#	Date	Name of Patient, Age, Sex & Admission No.	Case Presented	Supervisor's Signature
1				
2				
3				
4				

**Seminar/Journal Club Presentation**

Sr.#	Date	Topic	Supervisor's signature
1			
2			
3			
4			

**Evaluation Record**

(Excellent, Good, Adequate, Inadequate, Poor)

At the end of the rotation, each faculty member will provide an evaluation of the clinical performance of the fellow.

Sr.#	Date	Method of Evaluation (Oral, Practical, Theory)	Rating	Supervisor's Signature
1				
2				
3				
4				

## **EVALUATION & ASSESSMENT STRATEGIES**

### **Assessment**

It will consist of action and professional growth oriented ***student-centered integrated assessment*** with an additional component of ***informal internal assessment, formative assessment*** and measurement-based ***summative assessment***.

### **Student-Centered Integrated Assessment**

It views students as decision-makers in need of information about their own performance. Integrated Assessment is meant to give students responsibility for deciding what to evaluate, as well as how to evaluate it, encourages students to '**own**' the evaluation and to use it as a basis for self-improvement. Therefore, it tends to be growth-oriented, student-controlled, collaborative, dynamic, contextualized, informal, flexible and action-oriented.

In the proposed curriculum, it will be based on:

- Self Assessment by the student
- Peer Assessment
- Informal Internal Assessment by the Faculty

### ***Self Assessment by the Student***

Each student will be provided with a pre-designed self-assessment form to evaluate his/her level of comfort and competency in dealing with different relevant clinical situations. It will be the responsibility of the student to correctly identify his/her areas of weakness and to take appropriate measures to address those weaknesses.

### ***Peer Assessment***

The students will also be expected to evaluate their peers after the monthly small group meeting. These should be followed by a constructive feedback according to the prescribed guidelines and should be non-judgmental in nature. This will enable students to become good mentors in future.

### ***Informal Internal Assessment by the Faculty***

There will be no formal allocation of marks for the component of Internal Assessment so that students are willing to confront their weaknesses rather than hiding them from their instructors.

It will include:

- a. Punctuality
- b. Ward work
- c. Monthly assessment (written tests to indicate particular areas of weaknesses)
- d. Participation in interactive sessions

### **Formative Assessment**

Will help to improve the existing instructional methods and the curriculum in use

#### ***Feedback to the faculty by the students:***

After every three months students will be providing a written feedback regarding their course components and teaching methods. This will help to identify strengths and weaknesses of the relevant course, faculty members and to ascertain areas for further improvement.

### **Summative Assessment**

It will be carried out at the end of the programme to empirically evaluate cognitive, psychomotor and affective domains in order to award diplomas for successful completion of courses.

# MS Otolaryngology Examinations

## Part I MS Otolaryngology

**Total Marks: 200**

All candidates admitted in MS Otolaryngology course shall appear in Part I examination at the end of first calendar year.

### **Components of Part-I Examination:**

Paper-I, 100 MCQs (single best, having one mark each)	100 Marks
Paper-II, 10 SEQs (having 10 marks each)	100 Marks

### **Topics included in papers:**

	<b>Paper-I</b>	<b>Paper-II</b>
1. Anatomy	(20 MCQs)	(2 SEQs)
2. Physiology	(20 MCQs)	(2 SEQs)
3. Pathology	(20 MCQs)	(2 SEQs)
4. Biochemistry	(15 MCQs)	(1 SEQs)
5. Pharmacology	(15 MCQs)	(1 SEQ)
6. Behavioural Sciences	(05 MCQs)	(1 SEQ)
7. Biostatistics & Research Methodology	(05 MCQs)	(1 SEQ)

## Part II- MS Otolaryngology

**Total Marks: 430**

All candidates admitted in MS Otolaryngology course shall appear in Part II examination at the end of second calendar year.

There shall be two written papers of 100 marks each, Oral & practical/ clinical examination of 150 marks and log book assessment of 80 marks.

### **Topics included in papers 1 & 2:**

Basic Principles of Surgery

### **Components of Part II Examination**

#### **Theory:**

<b>Paper 1:</b>	<b><u>100 Marks</u></b>	<b>3 Hours</b>
10 SEQs (No Choice; 05 marks each)	50 Marks	
50 MCQs	50 Marks	
<b>Paper 2:</b>	<b><u>100 Marks</u></b>	<b>3 Hours</b>
10 SEQs (No Choice; 05 marks each)	50 Marks	
50 MCQs	50 Marks	

Only those candidates, who pass in theory papers, will be eligible to appear in the Oral & Practical/Clinical Examination.

Oral & Practical/ Clinical Examination shall be held in clinical techniques relevant to General Surgery.

**OSCE**

**50 Marks**

10 stations each carrying 05 marks of 10 minutes duration; each evaluating performance based assessment with five of them interactive

**Clinical**

**100 Marks**

Four short cases (each 15 marks)  
One long case:

60 Marks  
40 Marks

**Log Book**

**80 Marks**



**Part III MS Otolaryngology****Total Marks: 920**

All candidates admitted in MS Otolaryngology course shall appear in Part-III examination at the end of structured training programme (end of 5th calendar year and after clearing Part I & II examinations)

There shall be two written papers of 150 marks each, practical/ clinical examination of 300 marks, log book assessment of 120 marks and thesis examination of 200 marks.

**Part III MS Otolaryngology****Clinical Examination****Total Marks: 720****Topics included in paper 1**

- |                             |           |
|-----------------------------|-----------|
| 1. Otology                  | (20 MCQs) |
| 2. Rhinology                | (20 MCQs) |
| 3. Laryngology & Head, Neck | (20 MCQs) |
| 4. Audiology                | (15 MCQs) |

**Topics included in paper 2**

- |                                  |           |
|----------------------------------|-----------|
| 1. Paediatric Otolaryngology     | (40 MCQs) |
| 2. Emergencies in Otolaryngology | (20 MCQs) |
| 3. Rehabilitation                | (15 MCQs) |

**Components of Part III Clinical Examination****Theory**

<b>Paper I</b>	<b><u>150 Marks</u></b>	<b>3 Hours</b>
15 SEQs (No Choice)	75 Marks	
75 MCQs	75 Marks	
<b>Paper II</b>	<b><u>150 Marks</u></b>	<b>3 Hours</b>
15 SEQs (No Choice)	75 Marks	
75 MCQs	75 Marks	

Only those candidates who pass in theory papers, will be eligible to appear in the Oral & Practical/ Clinical Examination.

**OSCE/ Viva**

**100 Marks**

10 stations each carrying 10 marks of 10 minutes duration; each evaluating performance based assessment with five of them interactive

**Clinical**

**200 Marks**

Four short cases (each 25 marks)

100 Marks

One long case:

100 Marks

**Log Book**

**120 Marks**

**Part III MS Otolaryngology**

**Thesis Examination**

**Total Marks: 200**

All candidates admitted in MS Otolaryngology course shall appear in Part-III (thesis examination) at the end of 5<sup>th</sup> year of the MS programme and not later than 8th calendar year of enrolment. The examination shall include thesis evaluation with defense.

RECOMMENDED BOOKS

1. Johnson. A case Approach to Open Structure Rhinoplasty with DVD-ROM
2. Dhingra. Diseases of ENT
3. Lore. An Atlas of Head and Neck Surgery. 4<sup>th</sup> ed.
4. Glasscock. Glasscock-Shambaugh Surgery of the Ear. 5<sup>th</sup> ed.
5. Logan. McMinn's Color Atlas of Head and Neck Anatomy. 3<sup>rd</sup> ed.
6. Prescott. Oxford Hand Book of ENT
7. Miller. The Otolaryngologic Clinics of North America February
8. Kerr. Scott-Brown's Otolaryngology. 6<sup>th</sup> ed.; 1997
9. Watkinson. Stell and Maran's Head and Neck Surgery. 4<sup>th</sup> ed.
10. Bailey. Head and Neck Surgery –Otolaryngology. 3<sup>rd</sup> ed.
11. Masud. Text Book of ENT.
12. Wormald. Endoscopic Sinus Surgery
13. Water. Otolaryngology Basic Science and Review.
14. Grewal. Atlas of Surgery of the Facial Nerve.
15. Hazarika. Clinical and Operative Methods in ENT and Head and Neck Surgery
16. Maniglia. Surgical reconstruction of the Face and Anterior Skull Base.
17. Sheen J. H. Assymetrical Alar Base: Secodary Rhinoplasty Video.
18. Salvi-Hende. Auditory System Plasticityand Regeneration
19. Ballenger. Ballenger's Otolaryngology: Head and Neck
20. Rubin J. S. Diagnosis and Treatment of Voice Disorders. 3<sup>rd</sup> Ed.
21. Yousem M. Head and Neck Surgery: Case Review Series. 2<sup>nd</sup> ed. (PB)
22. CD-ROM – Laryngoscope 1995-96 CD-ROM
23. Aperilla
24. The British Journal of Otolaryngology
25. Journal of Academy of Otolaryngology and Head and Neck Surgery
26. Otolaryngology Clinics of North America
27. American journal of Otolaryngology
28. Scott Brown Text Book of Otolaryngology
29. Fathalla M. F. and Fathalla M. M. F. A Practical Guide
30. for Health Researcher. Cairo: World Health Organization; 2004.
31. Rana M. H., Ali S. Mustafa M. ***A Handbook of Behavioural Sciences for Medical and Dental Students.*** Lahore: University of Health Science; 2007.