NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

HEAD AND NECK SURGERY SUBSPECIALTY

RESIDENCY TRAINING PROGRAMME

FACULTY OF OTO-RHINO-LARYNGOLOGY (HNS)

APPROVED BY THE SENATE ON 3RD MARCH, 2022

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COLLEGE REGISTRAR

NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

FACULTY OF OTORHINOLARYGOLOGY-HEAD & NECK SURGERY

SPECIALTY RESIDENCY TRAINING PROGRAMME

FACULTY OF OTORHINOLARYNGOLOGY -HEAD & NECK SURGERY

NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

MISSION STATEMENT

TO TRAIN OTOLARYNGOLOGISTS-HEAD AND NECK SURGEONS WHO WILL EXCEL IN CLINICAL DUTIES, COMMUNITY HEALTH SERVICE, EDUCATION AND RESEARCH.

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PREFACE

DESCRIPTION OF RESIDENCY PROGRAMME IN ORLHNS

The programme is a 6-year course which commences in an accredited institution after passing the Primary Fellowship examination of the Faculty. The training is in two parts, the junior and the senior residency programmes.

The **Junior Residency** training is a 3-year programme, which consists of 18 months rotation in ORLHNS of which one month will be spent in Audiology Immersion, 3 months rotation in Accident and Emergency, 6 months rotation in General Surgery, 2 months rotation in either Plastic Reconstruction Surgery or Maxillofacial Surgery, 2 months rotation in Neurosurgery, 2 months rotation in Cardiothoracic Surgery, 2 months rotation in Ophthalmology and one month rotation in Anaesthesia. On completion of the posting, candidate can apply to sit for the Part 1 Fellowship Examination in ORLHNS, submit the log book and must have **acquired** the **minimum surgical skills** approved by **the Faculty Board** before the candidate will be eligible to sit for this exam.

The **senior residency** training is a 3-year programme to be spent in ORLHNS in an accredited institution. The training commences after passing the Part 1 Fellowship Exam. Residents in this cadre will continue to improve their clinical and surgical skills, teach juniors in areas of surgery and patient care and exercise management skills. The Senior Residency is divided into two segments: first year of Otorhinolaryngology-Head and Neck Surgery and a Final two years for super specialty training. In these last two years candidates can choose to continue with General Otorhinolaryngology-Head and Neck Surgery or branch out into one of the following: Otology, Rhinology and Allergy, Head and Neck Surgery, or Paediatric

Otorhinolaryngology. After completion of the 3 years senior residency training rotation and submission of the dissertation to the College, the candidate can apply to sit for the Part II Fellowship Examinations. Candidate must also submit the log book and must have acquired the minimum surgical skills approved by the Faculty Board before the candidate will be eligible to set for this exam.

Candidates may also choose to undertake the Postgraduate Doctor of Medicine in ORLHNS (Postgraduate MD). Those who choose this route will defend their Postgraduate MD thesis at least 30 months after Passing Part I examination, and before sitting for Part II Final Fellowship examination. Those who have successfully defended their postgraduate MD thesis will only sit the oral examination in their Part II Final Fellowship examination (The requirement of Part II Fellowship dissertation is deemed to have been fulfilled by the Postgraduate MD Thesis).

GUIDELINES FOR USE

1. Upon registration as an Associate Fellow in an ORLHNS Residency Programme, each Resident must obtain a Log Book at the current price. It is his/her responsibility to ensure that it is kept safe and intact throughout his/her period of training.
2. It is the Resident's responsibility to enter each case s/he manages and/or operates on in the appropriate column with date and the Supervising Consultant must sign each entry singly. **No block signing of procedures.**
3. Supervising Consultant in each surgical rotation must assess the operative skill of the resident according to the criteria listed in the log book for surgical procedures/clinical skills **performed** by the Resident.
4. When s/he has completed his/her posting and meets the **minimum criteria set by the Faculty Board on surgical skill acquisition in all the rotation and on level of training,** it is his/her responsibility to present himself/herself to his/her Consultant/Trainer.

5. The Consultant will then assess the Resident and complete the column in respect of his/her own judgment as to the level of knowledge and competence demonstrated by the Resident and sign his/her name in the column provided.

6. It is important that the assessment exercise takes place continuously throughout the posting. Both Resident and Consultant must avoid a situation where this Log Book is completed in a rush in the last days of posting.

7. If there are competency areas identified, taught and assessed in a particular training institution that are not contained in the print out, the programme coordinator should feel free to add on such areas in the blank pro-forma included.

……	....……
Secretary,	Chairman,
Faculty Board of ORLHNS.	Faculty Board of ORLHNS.

AIM

The aim of the programme is to train aspiring surgeons in Otorhinolaryngology-Head & Neck Surgery so as to produce specialists who will be well equipped to practice as competent Ear Nose Throat, Head & Neck Surgeons.

LEARNING OBJECTIVE:

The objective of the programme is to train a highly qualified Specialist/ Consultant Otorhinolaryngologist-Head and Neck Surgeon competent to manage all ORLHNS disorders at various levels.

The Trainee by the end of the programme shall:

- Be able to, independently, manage ORLHNS problems to the highest level of competence.
- Be able to set up, organize and manage surgical services in the district/regional/tertiary hospitals.
- Provide consultancy services where ever is needed, and therefore will increase access to quality ORLHNS care,
- Teach residents, medical officers, medical students and other health care providers in ORLHNS.
- Engage in research activities

ADMISSION REQUIREMENT:

Candidates must have a qualification registrable by the Medical & Dental Council of Nigeria.

Candidates must have served the pre-registration year/years in their own country or in any other country accepted by the Medical & Dental Council of Nigeria and must have been fully registered.

Candidates must have had at least one year of post-graduation experience, which should be of general clinical duties acceptable to the College.

COURSE DURATION:

A minimum of 6 years made up of:

- 3 years for the Junior Residency (Part I)
- 3 years for the Senior Residency (Part II) is considered adequate (comprising one year of General ORLHNS and 2 years of super-specialty training in Head and Neck Surgery Specialty).

COURSE STRUCTURE:

The course is structured into:

1. Primary
2. Part I
3. Part II (with or without MD prior to Part II Final Fellowship Examination).

COURSE CONTENT:

COURSE CONTENT FOR PRIMARY IN ORLHNS

This is essentially a Pre-Residency training. It shall consist of the following Basic Sciences subjects.

ORL 910 Anatomy (6 Credit Units)

2.1.1 **Head and Neck**

Osteology of the skull, jaws and cervical vertebrae

The Scalp

The Face
Topography of the Neck
The root of neck (Thoracic Inlet)
Anatomy of the vessels and nerves of the Head and Neck
The lymphatic drainage of the Head and Neck
The oral cavity and contents
Anatomy of the Pharynx, Larynx, Trachea and Oesophagus
Infratemporal and pterygopalatine fossae
Temporomandibular joint
The Orbit and its contents
The Nose and paranasal Sinuses
The Auditory apparatus
The major Salivary glands
Thyroid and Para thyroids

2.1.2 **Developmental Anatomy**

Development of the Pharynx, Larynx, Trachea, Oesophagus, Oral Cavity, Nose and Sinuses. Development of the Ear (External, Middle Ear Cleft, Inner ear), Face and major vessels of the Head and Neck in relation to congenital anomalies of the Ear, Nose and Throat.

2.1.3 **Neuro-Anatomy**

The brain- surface anatomy and major divisions, cranial nerves meninges, venous sinuses and cerebral vessels. Brain stem and its centres and connections. Anatomy of circulation of the cerebrospinal fluid. Essentials of development of brain in relation to ENT Autonomic nervous system.

2.1.4 **Thorax:**

Anatomy of:

- Thoracic wall and diaphragm
- The Thoracic cavity – heart and lungs
- The Tracheobronchial tree and oesophagus

2.1.5 **Abdomen**

Anatomy of the abdominal wall
Gross anatomy of abdominal viscera

2.1.6 **Radiologic Anatomy**

Plain and contrast radiography of the head, neck, thorax and upper gastro-intestinal tract. Ultrasound scan Computerized tomography scanning and Magnetic Resonance imaging (MRI), PET Scan and Interventional radiology.

2.1.7 Histology:

Microscopic structure of normal tissues
Intercellular Anatomy
Basic principles of Histochemistry
Brief introduction to Electron Microscopy
Nasal and Paranasal Sinuses
External, Middle and Inner Ear

Oral cavity – Pharynx, Larynx, Oesophagus, Tracheobronchial tree, Salivary glands, Thyroids and Parathyroids.

ORL 911 APPLIED PHYSIOLOGY: (INCLUDING BIOCHEMISTRY, CHEMICAL PATHOLOGY AND PHARMACOLOGY) (6 Credit Units)

2.2.1 General Physiological Principles:

- Structure of Living Matter

Biological interaction

- The living cell, functions and changes in its mechanism.
- Function of nucleoproteins in the integration of the cell as a unit of living matter.

- Energy Changes in the living system:
- Thermodynamics of the living organism and its potential energy status
- Oxygen – utilisation of the living cell
- Heat production and Heat loss. (Basal metabolism, specific dynamic action, regulation of body temperature)

- Energy transformation
- Homeostasis.

• General Considerations in Water, Electrolytes and Acid-Base Balance:
- Distribution of water and electrolytes in extra and intracellular spaces of the body.
- Brief survey of biological transport of water and solutes
- Water and electrolytes balance
  Causes and effects of dehydration and oedema
  Sodium and Potassium Metabolism

• Acid-Base Balance
- PH Regulation:
  pH of the body fluids and buffer systems of the body
  Respiratory and metabolic acidosis and alkalosis as encountered in surgical practice.

• Enzymes and Co-Enzymes
- Effects of enzymes in intermediary metabolism
- General aspects of metabolism of carbohydrates, lipids and proteins and nucleoproteins.

• General principles of nutrition in surgery including parenteral nutrition, vitamins, folic acid, vitamin deficiencies.

• Mineral Metabolism
- Iron. Calcium/Phosphate/ Magnesium, Vitamin D and Parathyroid Hormones.

• Effects of Physical Agents:
- Radiation
- Hypothermia
- Hyperthermia
- Hyperbaric Oxygen

• Principles of Electronics

ORL 912 Systematic Physiology (4 Credit Units)

2.3.1 Haemodynamics

- Flow – Basic principles of Cardio-Vascular Physiology
- B.P. – Changes in Hypertension, Hypotension, Shock, Syncope
- Venous circulation and venous pressure
- Haemorrhage – Clotting mechanism

2.3.2 Auditory Apparatus:

- Functions of External, Middle and Inner Ear

2.3.3 Respiratory System

- Physiology of the Nose and Paranasal sinuses
- Physiology of the Larynx
- Pulmonary ventilation and control
- Protective mechanism of the lungs

2.3.4 Mouth, Pharynx and Oesophagus

- Mechanism of deglutition
- Oesophageal function

2.3.5 Special Senses

- Taste and smell

2.3.6 Applied Physiology or Muscles

- Electromyography

2.3.7 Endocrines

- Pituitary, Thyroids and Parathyroids
- Adrenals – Steroids, Corticosteroids and their actions
- Metabolic and Endocrine response to surgery

2.3.8 Nervous System

- Consciousness and higher integrated functions.
- Sensation, Motor System, Pyramidal and Extra pyramidal systems, maintenance of muscle tone.

2.3.9 Physiology of Pain

ORL 913 Pharmacology (4 Credit Units)

2.4.1 General Principles of Pharmacology

- Route of Administration, Absorption, Distribution and Excretion of Drugs
- Mechanisms of Drug Action
- Dose – Effect relationship, biological assay
- Factors Modifying Drug Effects:
  - Age, Body Weight, Route of Administration, Timing, Distribution, Excretion, Environmental and Genetic Factors, Drugs interaction
- Drugs Toxicity
- Development, Evaluation and Control of Drugs: Clinical Trial

2.4.2 Specific Classes of Drugs

- Anaesthetic agents, Antibiotics, Steriods, Chemotherapeutic agents
- Drugs action on the autonomic nervous system
- Choline and anti-choline drugs: Sympathetic and Adrenergic Drugs.
- Drugs acting on the cardiovascular system
- Antituberculous, Antihelminthic and Antiamoebic Drugs
- Cancer Chemotherapy
- Antiretroviral therapy

ORL 914 General **Pathology (3 Credit Units)**

This shall be largely concerned with general pathology, General principles underlying disease process:
Inflammation, Trauma, Degeneration, Repair, Hypertrophy, Hyperplasia, Blood coagulation, Thrombosis, Embolism, Infarction – Ischaemia, Neoplasia, Oedema, Principles underlying tissue replacement.

ORL 915 **Microbiology (3 Credit Units)**

Routine diagnostic methods, identification of Bacteria, Viruses

(HIV, HPV and EBV) and other organisms of surgical importance, Common parasitic and fungal diseases in the tropics.

Principles of sterilization and disinfection

Principles of immunology, toxic antibodies, allergy: the immune diseases

Methods of action of antibodies

ORL 916 Chemical Pathology (3 Credit Units)

Basic principles of fluid and electrolyte balance

Blood chemistry

Liver metabolism: hepatic function tests, jaundice, detoxication

Kidney:

- Principles of urinalysis
- Tests for secretory function
- Renal handling of Na+ and K+

ORL 917 **Haematology (3 Credit Units)**

Blood Groups

Haemoglobin Genotype

Blood Transfusion

- Indications
- Complications

Common Haematological diseases

- Anaemia
- Sickle cell disease
- Leukaemia
- Disorders of coagulation

PART I COURSE:

This is divided into 2 clusters of 12 months and 6 months duration respectively for the ORLHNS I & ORLHNS II and 18 months of surgical specialty training.

ORL 918 ORLHNS I:

12 months in Otorhinolaryngology-Head and Neck Surgery. Candidates should acquire basic skills in examination of patients as well as perform basic operations in ENT such as:

Removal of foreign bodies in the Ear Nose and Throat
Tonsillectomy
Adenoidectomy
Drainage of mastoid abscess
Nasal operations
Para-nasal sinus operation and other head and neck operations
Drainage of abscesses in the head and neck

SURGICAL SPECIALTY TRAINING

18 months of rotation in the following related specialties

ORL 919 2 months in Ophthalmology
ORL 920 2 months in Neurosurgery
ORL 921 2 months in Cardiothoracic surgery
ORL 922 6 months in General Surgery
ORL 923 3 months in Accident and Emergency medicine
ORL 924 2 months in Maxillofacial or Plastic and reconstructive surgery
ORL 925 1 month in Anaesthesia

ORL 926 ORLHNS II:

This should consist of ORLHNS Training of 6 months at a relatively more advanced nature.

Log book should be obtained at the inception of Part I ORLHNS to document operative surgery and other activities.

PART II: FELLOWSHIP IN ORLHNS with or without super-specialty certification

Duration: 3 Years Post Part I

After passing the Part I examination, the candidate must spend three

years acquiring higher surgical/clinical skills in ORLHNS in an accredited institution. Skills must be acquired in the following surgical/Clinical procedures.

Laryngectomy and Voice rehabilitation
Neck dissection
Pharyngectomy
Maxillectomy (partial and total)
Surgery of the Salivary glands

All types Sinus Surgery including Functional Endoscopic Sinus Surgery (FESS)

Plastic operations in ORLHNS
Mastoid Surgery and Middle & Inner Ear Surgery
Microlaryngeal surgery and Laser Surgery
Panendoscopy and Bronchoscopy

ROUTINE FOR RESIDENTS

- Daily morning ward rounds by the Trainee and evening ward rounds by trainee on call.
- Weekly teaching ward rounds with the Consultant.
- Attendance at outpatient clinic with the Consultant available for advice and discussion.
- Weekly tutorials with the Consultant.
- At least twice a week operation session.
- Monthly clinic-mortality and clinical audit meetings with the Consultant.
- Monthly journal club meeting with the Consultant.
- Monthly Clinico-Histopathology Seminars.
- Monthly Clinico-Radiology Sessions.
- Monthly seminars in specific topics with Consultants.
- Weekly head and neck oncology joint clinics.
- Trainees will conduct clinical research and publish a paper with the Consultant.
- The College will organize regular skills workshop for
- Trainees.

COURSE CREDIT UNITS FOR JUNIOR RESIDENCY TRAINING IN OTORHINOLARYNGOLOGY-HEAD AND NECK SURGERY

- One (1) hour of Lecture/Tutorial/Seminar every week for 15 weeks (Semester Equivalent) = 15hours =1 credit unit
- Three (3) hours of Clinical exposure/skills acquisition every week for 15 weeks (Semester Equivalent) =45hours = 1 credit unit
- Clinical exposure/Skills acquisition:
  - ❖ 8 hours regular work day for five working days= 40 hours a week
  - ❖ 40 units of call duty per month (40 X 8 hours) = 320 hours (or 320/4 = 80 hours a week)
  - ❖ Total exposure per week = 40 + 80 = 120 hours
- Residency Program is a continuum except for annual leave; hence 52 Weeks less 4 weeks annual leave = 48 working weeks = 3 semester equivalent

POSTINGS	DURATION IN MONTHS	CONTACT LECTURES HRS/WK	CONTACT CLINICALS HRS/WK	CREDIT UNITS
ORL 918 ORLHNS I	12	5	120	16+128 =144
ORL 919 OPTHALMOLOGY	2	5	120	3+21 =24
ORL 920 NEUROSURGERY	2	5	120	3+21 =24
ORL 921 CARDIOTHORACIC SURGERY	2	5	120	3+21 =24
ORL 922 GENERAL SURGERY	6	5	120	8+64 =72
ORL 923 ACCIDENT AND EMERGENCY	3	5	120	5+32 =37
ORL 924 MAXILLOFACIAL SURGERY OR PLASTIC AND RECONSTRUCTIVE SURGERY	2	5	120	3+21 =24
ORL 925 ANAESTHESIA	1	5	120	1+11 =12
ORL 926 ORLHNS II	6	5	120	8+64 =72

ORL 927 Basic Surgical Skill Course.				2
ORL 928 Temporal Bone Dissection Course				2
ORL 929 Endoscopic Sinus Surgery Course.				2
PMC 901 Advanced Trauma Life Support				2
TOTAL	36			441

A minimum of 441 credit units over a period of 36 months in the appropriate postings will make a candidate eligible to sit for the Part I Fellowship Examinations.

COURSE CREDIT UNITS FOR SENIOR RESIDENCY TRAINING IN OTORHINOLARYNGOLOGY-HEAD AND NECK SURGERY.

- One (1) hour of Lecture/Tutorial/Seminar every week for 15 weeks (Semester Equivalent) = 15hours =1 credit unit
- Three (3) hours of Clinical exposure/skills acquisition every week for 15 weeks (Semester Equivalent) =45hours = 1 credit unit
- Clinical exposure/Skills acquisition:
  - ❖ 8 hours regular work day for five working days= 40 hours a week
  - ❖ 40 units of call duty per month (40 X 8 hours) = 320 hours (or 320/4 = 80 hours a week)
  - ❖ Total exposure per week = 40 + 80 = 120 hours
- Residency is a continuum except for annual leave; hence, 52 Weeks less 4 weeks annual leave = 48 working weeks = 3 semester equivalent

POSTINGS	DURATION IN MONTHS	CONTACT LECTURES HRS/WK	CONTACT CLINICALS HRS/WK	CREDIT UNITS
ORL 930 OTOLOGY I	**3**	**5**	**120**	5+32 =37
ORL 931 RHINOLOGY I	**3**	**5**	**120**	5+32 **=37**
ORL 932 HEAD AND NECK SURGERY, I	**3**	**5**	**120**	5+32 =37
ORL 933 PAEDIATRIC ORL HNS I	**3**	**5**	**120**	5+32 **=37**
ORL 937 HEAD AND NECK SURGERY II	**24**	**5**	**120**	32+256 **=288**
PMC 951 Research Methodology				2
PMC 952 Health Resources Management				2
PMC 953 Ethics in Clinical Practice				2
ORL 999 PART II DISSERTATION	**24**			**12**
TOTAL				**454**

A minimum of 454 credit units over a period of 36 months in the appropriate postings will make a candidate eligible to sit for the Part II FINAL Fellowship Examinations.

Where a candidate has difficulties fixing into appropriate accredited centres in Nigeria, postings in accredited centres acceptable to NPMCN outside the country will be countenanced for ORL 937.

GUIDELINES FOR VETTING OF APPLICATION FORM FOR PART I AND PART II IN THE FACULTY OF ORLHNS

Below are the guidelines for preliminary screening in Faculty of Otorhinolaryngology.

1. Candidate must be an associate fellow and in good standing.
2. Must be presented for examination on a platform of an accredited training institution.
3. Must submit along with the examination form his training Log Book.
4. Must submit at the end of January of every year. Annual report on the trainee duly signed by ORLHNS trainers in the department or the unit of ORLHNS.

   In addition to the above
5. The submitted application form must be screened for
   i. Verification of facts
   ii. Mandatory postings,
   iii. Date of postings.
   iv. Verification of postings and signatures
   v. Verification of fellow who signed the form.
6. Logbook verification
   i. Verification of entries of procedures.
   ii. Verification of cognitive programme and courses

For part I candidate.

Must show evidence that he/she has attended the mandatory courses before sitting for Part I

i. ORL 927 Basic Surgical Skill Course. 2 Credit Units

ii. ORL 928 Temporal Bone Dissection Course. 2 Credit Units
iii. ORL 929 Endoscopic Sinus Surgery Course. 2 Credit Units
iv. PMC 901 Advanced Trauma Life Support (Surgical based Residents) 2 Credit Units.

Where, for logistic reasons, a candidate is able to attend two of the three courses he/she would be allowed to sit the examinations on the proviso that he/she attends the third course before sitting Part II examinations.

For part II candidate
i. PMC 951 Research Methodology 2 credit Units
ii. PMC 952 Health Resources Management 2 credit Units
iii. PMC 953 Ethics in Clinical Practice 2 credit units

TRAINING ASSESSMENT:
1. Primary (entrance examination)

The assessment will be in form of examinations and portfolio for:
1. Part I
2. Part II

PRIMARY: This examination is in multiple choice question formats with questions spread across all aspects in basic medical sciences with emphasis on aspects related to Otorhinolaryngology-Head and Neck Surgery.

Primary Fellowship Examination in Otorhinolaryngology-Head and Neck Surgery (Multiple Choice Questions)

TEST BLUE PRINT 2021
200 questions

SUBJECT	SUBJECT SUB-SPECIALTY						TOTAL
ANATOMY (with emphasis on Head and Neck) **60**	Gross anatomy (ear, nose, pharynx, larynx, thyroid gland, neck) 30	Embryology 6	Histology 6	Osteology 6	Neurology 6	Organs/thorax/ abdomen 6	**60**
PHYSIO/pharmacology **40**	General 6	Respiratory 6	Special senses 14	Cardiovascular 6	Pharmacology 8		**40**
BIOCHEM **30**	General 6	Carbohydrate 6	LIPIDS 6	Nucleic acid 6	Body fluids 6		**30**
PATHOLOGY **60**	General 24	Morbid anatomy 8	Chem. Path 6	Haematology Blood transfusion 10	Immunology 6	Microbiology 6	**60**
OTHERS **10**	Lab investigations 2	Clinical tests/ measurements 4	ENT Clini cal procedures 4				**10 (GRAND TOTAL 200)**

LEVEL OF DIFFICULTY OF TEST ITEMS

The determination of the level of difficulty of test items shall be based on the principles of the Bloom's Taxonomy of Educational objectives. The focus of the questions will be to test the ability of the candidate in application, analysis and synthesis (3, 4, 5 below) which should constitute at least 80-90 percent of the questions. Questions that test knowledge or recall will not be used at this level.

1. Knowledge Recall, or recognition of terms, ideas, procedure, theories, etc.
2. Comprehension Translate, interpret, extrapolate, but not see full implications or transfer to other situations, closer to literal translation
3. Application Apply abstractions, general principles, or methods to specific concrete situations.
4. Analysis Separation of a complex idea into its constituent parts and an understanding of organization and relationship between the parts. Includes realizing the distinction between hypothesis and fact as well as between relevant and extraneous variables.
5. Synthesis Creative, mental construction of ideas and concepts from multiple sources to form complex ideas into a new, integrated, and meaningful pattern subject to given constraints.
6. Evaluation: candidates make judgements about value of ideas, items and materials.

MODIFIED ANGOFF Standard setting method will be used for determining the Pass mark in each segment of the examination.

PART I:

- Formative assessment by log book
- Evaluation through annual report on each Resident by the training Department.
- Attendance at prescribed courses.

Examination: This will be in 3 parts:

1. Written

One paper of MCQ, one essay paper in principles of General Surgery

and ORLHNS and a third paper in operative surgery and surgical pathology in ORLHNS.

LEVEL OF DIFFICULTY OF TEST ITEMS

The determination of the level of difficulty of test items shall be based on the principles of the Bloom's Taxonomy of Educational objectives. For the theoretical components of the examinations, including the MCQs and Essay questions, the focus of the questions will be on the ability of the candidate in application, analysis and synthesis (3, 4, 5 below) which should constitute at least 80-90 percent of the questions. Questions that test knowledge or recall will not be used at this level.

1. Knowledge Recall, or recognition of terms, ideas, procedure, theories, etc.
2. Comprehension Translate, interpret, extrapolate, but not see full implications or transfer to other situations, closer to literal translation.
3. Application Apply abstractions, general principles, or methods to specific concrete situations.
4. Analysis Separation of a complex idea into its constituent parts and an understanding of organization and relationship between the parts. Includes realizing the distinction between hypothesis and fact as well as between relevant and extraneous variables.
5. Synthesis Creative, mental construction of ideas and concepts from multiple sources to form complex ideas into a new, integrated, and meaningful pattern subject to given constraints.
6. Evaluation: candidates make judgements about value of ideas, items and materials.

A Clinical Examination in General Surgery.
A Clinical Examination consisting of long cases in ORLHNS.
Objective Structured Clinical Examination in ORLHNS
An oral Examination in ORLHNS.
There should be external examiner (s) in General Surgery in addition to ORLHNS Examiners.
NPMCN ORLHNS Part 1 Fellowship Examinations in

Theory Papers
Paper 1: MCQ
TEST BLUEPRINT

Specialty	Total questions	Domain of the Test				Remarks
		General principles	Operative surgery	Surgical pathology	OSCE	
Cardiothoracic	**6**	4	2			
Ophthalmology	**6**	2	2		2	
Neurosurgery	**6**	2	2		2	
Accident/Emer	**10**	4		2	4	
Plastic/Maxilo	**12**	4	2	2	4	
General Surgery	**20**	6	6	4	4	
Sub total	*60*	*22*	*14*	*8*	*16*	
Audiology/Hearing Aid	**10**	6			4	
Otology	**30**	14	4	6	6	
Rhinology	**30**	14	4	6	6	
Laryngology	**30**	14	4	6	6	
Allergy	**10**	4		4	2	
Endoscopy	**6**		2	2	2	
Head/Neck Surgery	**20**	6	6	4	4	
Speech/Language	**4**	2		2		
Sub Total	***140***	*60*	*20*	*30*	*30*	
Grand Total	**200**	**82**	**34**	**38**	**46**	

The determination of the level of difficulty of test items shall be based on the principles of the Bloom's Taxonomy of Educational objectives. For the theoretical components of the examinations, including the MCQs and Essay questions, the focus of the questions will be on the ability of the candidate in application,

analysis and synthesis (3, 4, 5 below) which should constitute at least 80-90 percent of the questions. Questions that test knowledge or recall will not be used at this level.

Paper 2: General Principles

a. General Surgery 2 questions

b. Otorhinolaryngology-Head and Neck Surgery. 3 questions (one each in otology, rhinology, head and neck surgery, or Paediatric ORLHNS).

Paper 3: Operative Surgery and Surgical Pathology. 5 questions (distributed evenly over otology, rhinology, head and neck surgery, or Paediatric ORLHNS).

Clinicals and Orals

General Surgery: Long Case

Otorhinolaryngology-Head and Neck Surgery: Long Case
OSCE
Orals

(distributed evenly over otology, rhinology, head and neck surgery, or Paediatric ORLHNS).

A candidate is deemed to have PASSED if he passes in all areas/parts of the examination including a PASS in CLINICALS.
A Candidate is deemed to have FAILED if he FAILS the Clinicals; his passing the other areas/parts of the examination notwithstanding.

The College approved Standard setting method will be used for determining the Pass mark in each segment of the examination:

MCQ: MODIFIED ANGOFF Standard setting method will be used for determining the Pass mark in each segment of the examination.

ESSAY

Borderline regression method shall be used.

CLINICAL

OSCE: Manned Station - Borderline group method shall be used. Unmanned Station - Modified Angoff Method shall be used.

ORALS

Oral examination shall be structured to allow all candidates have the same questions. Standard setting method - Borderline group method shall be used.

PART II

Formative assessment will include

- **The log book**
- **Mandatory Faculty and College courses in Research Methodology, Management Course, and Ethics.**

Examinations

a. Dissertation Defence
b. Oral examination I (Radiology films and histopathology pots specimen)
c. Oral examination II (instruments and operative surgery in ORLHNS/Head & Neck Specialty)
   - A candidate is deemed to have passed if he passes ALL the 2 component parts (Defence of Dissertation and Viva Voce).
   - Where he/she successfully defends the dissertation but fails the Viva component, he is REFERRED in the component he failed.
   - Where he/she did not successfully defend the dissertation but passes the Viva component, he is REFERRED in the component he failed.
   - He/she is expected to resit that component at the next Fellowship examinations. The date of PASS is the date he/she passed the referred component of the examination.

- Candidates who choose the MD route, and successfully defended their thesis, will be deemed to have satisfied the dissertation component of the Part II Final Fellowship Examination. Hence, they will only sit the Orals component of the examination.

- The College approved Standard setting method will be used for determining the Pass mark in each segment of the examination: Oral examination shall be structured to allow all candidates have the same questions. Standard setting method - Borderline group method shall be used.

LEARNING METHODS: This will be through the following:
- Clinical apprenticeship
- Hands-on training in clinic, wards and theatre
- Formal lectures, tutorials, case presentations, seminars
- Self-directed learning, research and reading
- Senior residents to teach and supervise junior residents
- College and faculty courses and workshops (some of which are mandatory)
- Attendance at medical conferences

ORL 918 & ORL 926 JUNIOR OTORHINOLARYNGOLOGY - HEAD AND NECK SURGERY ROTATION (216 Credit Units)

OBJECTIVES
1. Learn and master Basic Ear/Nose/Throat/Head and Neck examination using otoscope, head mirror, head light, pharyngeal/laryngeal mirrors, nasal and ear specula and rigid/flexible endoscopes.
2. Learn and acquire basic knowledge of audiological/ vestibular tests.
3. Learn about the imaging of the Ear, Nose, Throat, Head and Neck and attend joint radiology/ENT seminars.
4. Learn about histopathological specimen and attend joint

histopathology/ENT seminars.

5. Teaching of Clinical interns.
6 Learn, assist and perform basic E.N.T operations.

SURGICAL SKILLS EXPECTED TO BE ACQUIRED DURING ROTATION.

MINIMUM REQUIREMENTS

Removal of foreign bodies in the external ear	A(10)	P (5)	
Aural examination and dressing with microscope	A10		P10
Myringotomy under LA in Adults		A5	P5
Myringotomy under GA in children		A5	P5
Myringoplasty		A5	P5
Excision of preauricular sinus		A5	P5
Excision of post auricular cyst		A5	P5
Removal of foreign bodies in nose	A10	P10	
Antral Lavage		A10	P10
Intranasal antrostomy	A10	P10	
Diathermy to turbinates/SMR	A5	P5	
Partial turbinectomy	A5	P5	
Nasal polypectomy		A10	P10
Septal surgery		A5	P5
T & A in children		A10	P5
Tonsillectomy in adults	A10	P5	
Tracheostomy in adults	O5 / A5	P5	
Tracheostomy in children		A10	P5
Removal of foreign body in larynx		A5	P5
Pharyngoscopy Rigid/Flexible		A10	P5
Direct Laryngoscopy Rigid/Flexible	A10	P5	
Oesophagoscopy		A10	P5
Branchial cyst excision	O2/A2	P5	
Removal of superficial lesion	A5	P5	
Drainage of peritonsillar abscess		***A5***	***P5***
Drainage of Retropharyngeal abscess		A5	P5

WHERE

O	**=**	**OBSERVE**
A	**=**	**ASSIST**
P	**=**	**PERFORM**
A/P	**=**	**EITHER ASSIST OR PERFORM**

AUDIOLOGY ROTATION (EMBEDDED IN ORLHNS I)
OBJECTIVES/SKILLS EXPECTED

Resident should be able to:

1. Understand and appreciate the need for standardization and calibration in auditory testing.
2. Perform and interpret accurate air and bone conduction hearing thresholds.
3. Understand the theory of masking techniques and perform.
4. Understand the theory, perform and interpret impedance audiometry with special reference to measurement of middle ear pressure and identification of stapedial reflexes.
5. Perform and interpret speech audiometry.
6. Understand the theory, interpret and to be able to perform evoked response audiometry
7. Understand the theory, interpret and to be able to perform Otoacoustic emission audiometry.
8. Understand the difficulties and the needs of the hard of hearing.
9. Understand the full range of assistive devices for the hard of hearing, and their application.
10. Understand the indications for prescribing a hearing aid.
11. Understand the full range of electronic hearing aids and the advantages and disadvantages of each type.
12. Understand hearing aid batteries and be able to make ear mould.
13. Understand (have participated in) the hearing aid selection procedure.
14. Understand (have participated in) and appreciate the value of

auditory counselling.

15. Understand the risk factors for neonatal hearing loss.
16. Understand neonatal screening programs.
17. Understand the steps to be taken when hearing loss is suspected in a young child.
18. Be aware of the full range of support programs available to the hard of hearing in Nigeria.
19. Understand the theory and construction of cochlear implants, together with patient selection and post implantation auditory assessment and counselling.
20. Be aware of and sensitive to the attitude of the Deaf Community as it relates to intervention by the medical profession. by visiting the Deaf school.
21. Understand the theory, perform and interpret vestibular assessment results.
22. Understand the theory of Speech and Language disorders and the various rehabilitation modalities.

SKILLS EXPECTED TO BE ACQUIRED DURING ROTATION

Pure Tone Audiometry		O5		P10
Speech Audiometry		O5		P10
Tympanometry		O5		P10
Otoacoustic Emission	O5		P10	
ABR		O5		P10
Ear Mould Making		O5		P10
ENG		O5		P10

ORL 919 OPHTHALMOLOGY (24 Credit Units)

Objectives

1. To acquire ophthalmology skills in the management of ENT related diseases
2. Acquiring knowledge/skills in the clinical management and diagnosis of various ophthalmology diseases.

Skills to be acquired	Minimum Requirements	
1. Ophthalmoscopy		P10
2. Removal of FB	A5	
3. Removal of Pterygium	A5	
4. Evisceration		A5
5. Enucleation		A5
6. Cataract Extraction		A5
7. Repair of Laceration of the Eyelid		P5
8. Cannulation of the nasolacrimal duct	A5	P10

ORL 920 NEUROSURGERY (24 Credit Units)

OBJECTIVES

1 To acquire neurosurgical skills helpful in the management of ENT related diseases.
2 Acquiring knowledge/skills in the clinical management and diagnosis of various neurosurgical diseases.

Skills expected to be acquired

1. Exploratory burr holes		A5	P
2. Use of operating microscope in neurosurgical procedures	A5	P	
3. Lumbar Puncture	A	P5	
4. Craniotomy		A5	P
5. Laminectomy		A5	P
6. Shunts		A5	P
7. Excision of Myelomeningoceles	A5	P	

ORL 921 CARDIOTHORACIC SURGERY (24 Credit Units)

OBJECTIVES

1. Assessment of cardiovascular and respiratory systems.
2. Understand the interaction of cardio-pulmonary disease on medical and surgical treatment of otolaryngology head/neck patients.

Skills expected to be acquired

1. Bronchoscopy/Oesophagoscopy	A5	P5	
2. Techniques of arterial/venous access		A10	
3. Thoracentesis		A5	P5
4. Tube Thoracostomy Physiologic monotony techniques O_2 saturation, Cardiac output		P5	
5. Pleural Biopsy		A5	
6. Lung Biopsy		A5	
7. Mediastinoscopy		A5	
8. Thoracotomy		A5	

ORL 922 GENERAL SURGERY (72 Credit Units)

OBJECTIVES

1. Acquire Basic Surgical Skills.
2. Acquire skills in Surgical procedures.
3. Learn the rudiments of pre-operative and post-operative care.
4. Learn to work as a team.

Skills expected to be acquired	**Minimum Requirements**	
1. Incision making/ Skin suturing/Knot tying	A5	P10
2. Selection of abdominal incisions	A5	P10
3. Laparotomy incision and closure of abdominal wall	A5	P10
4. Excision of Skin/ Subcutaneous Lesion	A5	P10
5. I & D Subcutaneous abscess	A5	P10
6. Suture of Laceration	A5	P10
7. Excision of benign/malignant breast lesion	A5	P10
8. Biopsy of enlarged nodes cervical, axillary, inguinal submandibular	A5	P10
9. Endoscopy of Digestive System Proctoscopy / Sigmoidoscopy Oesophagoscopy Gastroscopy Anoscopy	A5	P10
10. Gastric Surgery	A5	P10

Pyloroplasty, Gastroenterostomy
Closure of Perforated Ulcers

11. Intestinal Colostomy A5 P10
Resection and anastomosis of small bowel A5 P10
AP resection A5
Lysis of Adhesions A5
Appendectomy A5 P5
Excision of hemorrhoid A5 P5

12 Liver Incisional Liver Biopsy,
Local Excision of Liver Lesion, A5

13. Biliary Tract
Cholecystostomy Cholecystectomy
Exploration of common bile duct A5

14. Pancreas
Whipple procedure A5

15. Laparotomy for acute abdomen, Splenectomy A5 P5

16. Abdominal sepsis, Drainage of intra abdomen sepsis A5 P5

17. Hernia and abdominal wall A5 P10
Repair of inguinal, femoral and ventral hernia

ORL 923 <u>ACCIDENT & EMERGENCY SURGERY (37 Credit Units)</u>

OBJECTIVES

1. Acquire skill in patient reception/Principles of Triage.
2. Stabilize and care for critically injured and ill patients.
3. Acquire knowledge technical skills and decision making in the management of critically ill patients.
4. Exposure to trauma and polytrauma.

Skills expected to be acquired **Minimum Requirement**

1. Maintenance of airway including orotracheal, nasotracheal Intubation, tracheostomy A5 P10
2. Techniques of Cardiac/Trauma life support A5 P10

3. Techniques of arterial/venous access and venous cut-downs	A5	P10
4. Acquire skills on skin suturing techniques and cast application	A5	P10
5. Initial management of severely injured patients, burns patients, corrosive ingestion	A5	P10
6. Head injuries	A5	P10
7. Initial management of Hand infections Wound debridement and suturing	A5	P10
8. Preoperative management of intestinal obstruction, open and blunt abdominal injury intra-abdominal sepsis, head injury, neck injuries and chest injuries	A5	P10
9. Initial management of simple limb fracture joint dislocations, care of compound fractures A/P	A5	P10
10. Emergency management of urinary retention, hematemesis, epistaxis red eye, FB in nose, ear and throat A/P	A5	P10

ORL 924 PLASTIC/RECONSTRUCTIVE SURGERY OR MAXILLOFACIAL (24 Credit Units)

OBJECTIVES

Comprehension of skin lesions benign and malignant
Wound revision and closure acquire skills in optimal incision
Various method of wound approximation
Wound healing problems e.g. Immunocompromised

Skills expected to be acquired	**Minimum Requirements**	
1. Anticipation of surgical manouvres, gentle traction on tissues etc	A5	P5
2. Excision of skin tumours	A5	P5
2 Skin topical care and preparation of wound closure	A5	P5

3	Variety of wound closure design of incision Z plasty, Flaps	A5	P5
5	Split thickness skin graft	A5	P5
6	Plating of facial fractures jaw wiring	A5	P5
7	Debridement of wounds	A5	P5
8	Local treatment and dressing of burns, eschar removal Occlusive Treatment and dressing	A5	P10
9	Reconstruction of cleft lip	A5	P5
	Reconstruction of cleft palate	A5	P5

ORL 925 ANAESTHESIA (12 Credit Units)

OBJECTIVES

1. To be able to assess, determine suitability and fitness of a patients booked for general anaesthesia.
2. Learn the process and management of general, regional and local anaesthesia. Appreciate the shared airway.
3. Learn **General, regional and local Anaesthetic Agents: injectable and gaseous and their complications.**

Anaesthetic Complications

Skills expected to be acquired

(1)	**Preoperative anaesthetic assessment** A5	P5	
(2)	**Induction of Anaesthesia**	A10	
(3)	Endotracheal Intubation	A5	P5
(4)	Monitoring of patients under General Anaesthesia	O5	A5
(5)	Reversal of Anaesthesia	A5	
(6)	Postoperative monitoring of a patient recovering from Anaesthesia	A5	

PERFORMANCE GRADE	DESCRIPTION
A	Adequate knowledge; Performs skill without supervision; can reproduce skill on request; five to six points on Affective domain.
B	Adequate knowledge ; performs skill with minimal supervision; reproduces skill with minimal guidance; four to five points on Affective domain.
C	Adequate knowledge; performs skill with supervision; barely reproduces skill; 3-4 points on Affective domain.
D	Inadequate knowledge; performs skill with supervision; Unable to reproduce skill ; 2 - 3 points on Affective domain.
E	Gross inadequate knowledge; unable to perform task; unable to reproduce skill; 1-2 points on Affective domain.

COMPETENCE BASED GRADING OF PERFORMANCE GRADES OF PERFORMANCE SCORES

AFFECTIVE DOMAINS FOR ASSESSING CANDIDATES DURING TRAINING:

1. Attendance to work
2. Punctuality
3. Prompt delivery of assignments
4. Group work and interaction
5. Obeying instructions
6. Respect for patient care

GENERAL TRAINING FOR JUNIOR RESIDENTS
OBJECTIVES
Education course
Basic surgical skill course is a compulsory course for all residents

before Part I fellowship examination. It is advisable that resident attend the course shortly after starting residency training or before going on general surgical rotation.
Temporal bone dissection course, Audiology course and Endoscopic sinus surgery course are compulsory courses for all residents before sitting for Part 1 fellowship examination respectively.

Research
Residents must key-in into a research work in collaboration with his/her Consultant.

Conferences
Residents are to attend local and International Conferences especially as related to ORLHNS and Surgery.
The Faculty specifically identifies **ORLSON Conference**, and it is a **mandatory** that Residents should attend.
Residents must present at least **one scientific paper** at the conference before sitting for part I fellowship examination.

POSTGRADUATE DOCTOR OF MEDICINE IN ORLHNS

MD by Course work and Thesis
This optional pre-fellowship program is available for Associate Fellows of the National Postgraduate Medical College who are currently at the Senior Resident level. Applicants will be expected to complete the online application available on the College website and in addition submit a 500 word Concept note summarizing their Research proposal and a Compact signed by the prospective supervisor.

MD by Thesis only
This option is available to interested Fellows who passed their part 1 examination, completed their part II training but dissertation was not a prerequisite for their part II examination. Younger Fellows who do not meet the MD by publication criteria can also apply.

Candidates are to complete the online form and submit a 500 word Concept note and a Compact signed with their prospective supervisor. Those who did not complete the NPMCN post part I training will be required to do remedial courses.

MD by Publication

This option is available to senior Fellows of the National Postgraduate Medical College who have been in good financial standing for at least 10 years. Prospective candidates would have contributed maximally to postgraduate medical education primarily in the area of Part 2 Resident Dissertation supervision for any of the listed Colleges or for University Ph.D programs, evidenced by 5 successfully defended dissertations. In addition, the candidates would be accomplished medical researchers who have authored a minimum of 5 original research articles available in Pubmed in a focused narrow area as lead or corresponding author. Fellows of the West African College of Physicians and the West African College of Surgeons with 15 years Post Fellowship who meet the above can also apply.

FACULTY OF OTORHINOLARYNGOLOGY HEAD AND NECK SURGERY MD PROGRAMME COURSE CODES

COLLEGE BASED COURSES

PRE-PART 1 COURSES

- PMC 901 Advanced Trauma Life Support (Surgical based Residents) 2 Credit Units
- POST PART 1 COURSES
- PMC 951 Research Methodology 2 Credit Units
- PMC 952 Health Resources Management 2 Credit Units
- PMC 953 Ethic in Clinical Practice 2 Credit Units

MD COURSES

- PMC 994 Medical Education 2 credit unit
- PMC 995 Advanced Research Methodology 2 credit unit
- PMC 996 Advanced Health Resources Management 2 credit unit
- PMC 997 Assessments and Examination Methods 2 credit unit

SYNOPSES OF COLLEGE BASED M.D. COURSES
MEDICAL EDUCATION PMC 994

This course is designed for medical and dental resident doctors. The need for doctor, involved with teaching in the medical school and postgraduate medical training to have training in teaching is widely recognized. The skills in Medical Education course has been designed to meet this need. The course is aimed at resident doctors who are now to teaching and at Fellows with years of experience who would like an update on current best practice and a greater understanding of the basic principles. The course recognizes that, with appropriate help, all teachers, even those with considerable experience, can improve their skills in teaching. The topics to be taught are, standard setting in educational assessment; assessment of clinical skills, threshold concepts in medical statistics and evidence based practice numeracy issues in learning about research; mapping and revising the learning and teaching of research; e-learning and blended in medical education; problem based learning; programme development; educational; computer communication network; community-institutional relations; reproducibility of result; patient simulation; databases, factual; clinical decision making; selection of medical students.

ADVANCED RESEARCH METHODOLOGY PMC 995

OBJECTIVE

To facilitate acquisition of basic knowledge and necessary skills for research in Medicine and Proposal/Dissertating writing.

COURSE CONTENT

Definition, Spectrum and Types of Health Research Design; defining Research problems; Setting Objectives; Statistics and Research; Methods; writing Research Proposals; (Planning, Protocol Development and Report Writing); Good Clinical Practices and Clinical Trials; Role of Computer in Medical Research (EPI info and SPSS) Literature review; Use of Physical and Virtual Library; Use of Internet; Search Engines; Systematic Reviews and Meta-analysis;

Ethical considerations in medical research. Clinical Governance; Writing-up; presentation and Defenses of Dissertation Faculty Based Group Discussion on Research Proposal (Practical Group Session); Evidence Based Health Care; Statistical Methods (Summary, Inferences and Interpretation); Basic Principles and Method of Writing Papers for Publication Practical Sessions on Processing of Proposal and Presentation to the College.

ADVANCED HEALTH RESOURCES MANAGEMENT PMC 996
OBJECTIVE
To facilitate acquisition of knowledge and necessary skills required for management of health resources in institutions and for programme.

COURSE CONTENT
Principles and application of Management; Strategic Management Health Care Planning; Health Policy formulation and evaluation; Health Resources mobilization; Health Resources allocation; Human Resources Management; Organization; Monitoring and Evaluation of Health Services; Performance Management; Sustainable Development; Problem Solving and Decision Making Skills; Emotional Intelligence; Leadership; Management of Change; Risk Management, Legal Aspect of Medical Practice; Financial Management; Material Resources Management; Quality assurance in health and equity in health; Public/Private Partnership; Case studies/Scenarios.

ASSESSMENT AND EXAMINATION METHODS PMC 997
Multiple Choice Questions and Objective Tests; Oral Examinations; Patient Management Problems; The long clinical case; the objective structured long examination record' (OSLER), the short clinical case; objective structured clinical examination (OSCE); objective structured practical examination (OSPE); objective structured picture examination (OSPICE); workplace–based assessment; mini-CEX (mini-Clinical Evaluation Exercise); direct observation of procedural skill (DOPS) and Multi-source feedback (MSF);

Simulated Patients; Observed Clinical Situations; Ensuring safe and effective patient care through training; Establishing and maintaining an environment for learning; Teaching and facilitating leaning; Enhancing learning through assuagement; Supporting and monitoring educational progress; Guiding personal and professional development; Continuing professional development as an educator; use of standardized patient (SP)encounters; Data gathering technique (history and physical examination); Interpersonal communication; Clinical management (diagnostic strategy and treatment plan) Professional documentation (post encounter note or PEN)' Checklists; Patient Simulators.

FACULTY BASED COURSES:

Candidates may choose any of the following Faculty Based Courses. It is advised as a guide for candidates to choose a course in the specialty where he/she intend to spend the last one year of Senior Residency. The title of candidate's thesis is expected to also fall in line with candidate's choice.

ORL 941 Advanced Otolaryngology/Head and Neck Surgery 2 Credit units
ORL 942 Advanced Otology 2 Credit unit
ORL 943 Advanced Rhinology 2 Credit units
ORL 944 Advanced Laryngology/ Head and Neck Surgery 2 Credit unit
ORL 945 Advanced Pediatric Otorhinolaryngology 2 Credit unit
Seminars and Thesis are compulsory for candidates pursuing MD with Course Work
ORL 998 Seminar 6 credit unit
ORL 999 Thesis/Dissertation 12 credit unit

COURSE SYNOPSES

ORL 941 Advanced Otolaryngology/Head and Neck Surgery 3 credit unit
This is a course that takes care of general otorhinolaryngology. The course content incorporators knowledge on all basic Ear, Nose and

Throat, Head and Neck diseases. The global Otorhinolaryngologcal disease epidemiology and management (Medical and Surgical) are covered. Histopathology, Radiology and audio logical tests/producers are covered.

ORL 942 Advanced Otology 2 Credit
This is a subspecialty course with focus on the study the Ear, its related diseases, management and rehabilitation procedures. The study of temporal bones, skull base, Otological and neurotological disease, relevant audio logical studies (Audiometry, Tympanometry, Otoacoustic Emission, Automated Brain Response Audiometry etc) and rehabilitation are covered. Surgeries of the External, Middle, Inner Ears, Base of the skull and facial nerves are components of the course. The recent advances in this field should also be thought.

ORL 943 Advanced Rhinology and Allergy 2 Credit
It is a subspecialty course in Nose and paranasal sinuses and its diseases. The Histology including through knowledge of the Osteomeatal complexes, Nasal bones, sinuses, skull base are important.

The Management of the Rhinological disorders such as Infections, Trauma, Allergies, Benign/Malignat tumours, Endoscopic Sinus Surgeries and its complications including recent advancements in the field are inherent component of this course.

ORL 944 Advanced Laryngology/Head and Neck Surgery 2 Credit
This is a study of airways, voice and food passages. The related diseases and its management are inherent component of the course. Rehabilitative concepts and methods for voice and post-surgical measures to improve the quality of life are important. Infections, Trauma (including foreign bodies), tumors (Benign/Malignant), voice disorders.

ORL 945 Advanced Peadiatric Otorhinolaryngology/Head and Neck Surgery 2 Credit Unit

This is a course that takes care of general otorhinolaryngology/ Head and Neck Surgery in the peadiatric age group. The course content incorporates knowledge on all basic Ear, Nose and Throat, Head and Neck diseases. The global Otorhinoaryngolocal disease epidemiology and management (Medical and Surgical) are covered. Histopathology, Radiology and logical tests/ procedures are covered.

Admission Criteria for NPMCN Resident Doctors

1. Associate Fellows of the College who have been admitted into the residency program.
2. Passed the NPMCN Part 1 fellowship examination in the Faculty of ORLHNS.
3. Any other qualification deemed equivalent to NPMCN Part 1 and acceptable to the Senate of the College.

The program to be undertaken in a nearby approved center and not necessarily the one the resident is employed.

The seminars which carry 3 units each; and will be presented and graded in the local training center.

Faculty courses will be examined centrally by Faculty College based courses will be examined by College.

Current Residents who may have had their proposals accepted may seamlessly migrate to the MD program if they so desire but the first defense will be at least 15 months after Senate approval of the program.

Admission Criteria for Resident Doctors of other Postgraduate Medical Colleges

These Resident Doctors may be admitted provided that before starting the MD program they would have passed the compulsory

College courses applicable before Part 1 [ATLS] and any compulsory Faculty courses at that level.

Nature of Thesis

1. A recommendation of 50,000 to 100,000 total word count for MD thesis.
2. Candidate may publish aspects of the work before defense in a manner similar to other PhD programs.
3. Arrangement of the other structures to be similar to College Part II dissertation.
4. Successful Defense to take place at least 6 months before final fellowship exam.
5. Dissertation component of Part II to-be waived for successful MD defenses.
6. Binding colors as determined by College.

DUTIES/ROLE OF SUPERVISORS FOR COLLEGE MD PROGRAMME.

1. To sign application letters for Residents.
   The College has developed a research compact with each MD candidate. Please ensure the candidate is working in your field or a field you qualify and are ready to supervise. You will be required to review the candidate's concept paper and work plan and if you are satisfied, you will be expected to sign the research compact with the candidate.
2. To sign Proposals and assist with ethical approval.
   To work with the candidates and help transform his / her concept paper to a workable proposal. This proposal will be handled like the Fellowship proposal- sent to assessors and if approved, you will supervise the candidate through data collection, analysis and write up for thesis defense. Please note that candidates with Part II proposals previously accepted by the College and who may wish to use such for the MD programme will only be requested to attach a letter of acceptance of proposal by the College.
3. To sign Progress reports every semester.

The experience with the residency programme has shown that the residents are a bit slow in presenting their proposals. To guard against this, the supervisors will be expected to present a report each semester to help monitor the progress of residents. This report will be initiated by the MD candidate and sent to the College through the supervisor.

4. Will be required by the College to serve as coordinator for the programme in their centers.
   Each department will appoint one of the supervisors as the Departmental Coordinator. The College will appoint one of the Departmental Coordinators as Center Director. The Center Director will relate with all Departmental Coordinators and report on center and departmental activities at the training center to the College.
5. Will be required to liaise with the Centers Director and Departmental Coordinators on seminar presentations and scoring of same along the guidelines provided by the College. The Departmental Coordinators will report to the Center Director on seminar presentations done in the department.
6. Will be allowed to witness the MD thesis defense as observers only. Supervisors are usually not allowed to attend Fellowship defense but you will be allowed to attend the MD as observers.
7. You are to encourage candidates to go for Faculty and College based courses.
   The course work for the MD programme consists of one (1) Faculty based course and four (4) College based courses. Residents not running the MD programme will be at liberty to attend the Faculty courses. These courses will be held every Wednesday with the College courses alternating with the Faculty courses, each candidate will be required to present a seminar to the others in the Faculty (for the Faculty course) and all the MD candidates (for the College based courses). A pass will be required for both the Faculty courses (in an examination conducted by the Faculty) and seminar presentations to all MD candidates.
8. To encourage the institutions to allow the candidates to attend

courses. Supervisors will be expected to encourage all the MD candidates to attend the Annual Scientific Conference and All Fellows Congress (ASCAF) and other professional association conferences and to encourage the Institutions to sponsor such candidates.

Supervisor/Candidate Compact

Purpose of the compact

The compact between MD candidates and their Supervisors enables their relationship to be open and predictable. The work should be jointly designed by the supervisor and the candidate taking their time in relation to other things into consideration, in order for the research to be completed within the stipulated time. Though the success of the MD programme is not guaranteed by this Compact.

The Persons listed below have gone into a Compact to carry out this MD research programme.

(Name of Candidate) Faculty: Otorhinolaryngology-Head and Neck Surgery.

(Name of Supervisor) Faculty: Otorhinolaryngology-Head and Neck Surgery.

Duties and responsibilities of the Supervisor(s)

1. The Supervisor should familiarize the candidate with the current rules applying to MD programme at the host training institution.
2. The Supervisor should strive to provide the appropriate working conditions for the candidate.
3. The Supervisor should commit to regularly and professionally advise the candidate and should also commit to attending meetings regularly about the work in progress of the candidate, taking into consideration the work plan and the work schedule.
4. The Supervisor should encourage the candidate to work independently and also support the candidate by allowing access to his patients, medical students and residents. He should

also provide access to scientific environments (national and international), by introducing her/him to working groups and scientific networks, by encouraging her/him to take part in seminars, workshops and conferences, by helping her/him to prepare presentations, by providing her/him with information on possibilities to publish articles and by helping her/him in the writing process.

5. The Supervisor should support the candidate regarding her/his career plan and should mention possibilities for further disciplinary and interdisciplinary qualification.
6. The Supervisor should assess the work submitted by the candidate promptly and in a neutral way.
7. If there are any disputes with the candidate, the supervisor should accept arbitration with the Court of Examiners.

Duties and responsibilities of the Candidate

1. The candidate should produce a detailed and structured work plan and work schedule and submit to the supervisor for approval. (S)he must inform the supervisor if there are changes made to the work plan or schedule.
2. The candidate must get permission from the supervisor to attend specific courses related to the programme.
3. The candidate must regularly report on the work in progress to the supervisor(s). The report (approximately 1-page long) should contain a description of the achievements since the last report or since the start of the MD programme, the overall progress on the research, and the participation to lectures, conferences, guest lectures, and specific workshops. In addition, the candidate must submit part of the results (e.g. chapter of the research work, draft of article) to the supervisor(s) following the work plan and the work schedule.
4. The candidate must strive to present her/his scientific results to the scientific community by publishing articles in peer-reviewed journals and by presenting these results at conferences.

The persons signing this Compact agree to comply with the

principles of good scientific practice and ethical guidelines.
Signature: Signature:
Name of Candidate: Name of Supervisor:
Date: Date:
Attachment: -Work plan
Work Schedule

ACADEMIC REGULATIONS FOR POSTGRADUATE DOCTOR OF MEDICINE (MD)

ACADEMIC SESSION: An academic session consists of two semesters. Each semester comprises 15 weeks of teaching and two weeks of examinations.

MODULAR SYSTEM: All postgraduate programmes shall be run on modular system, commonly referred to as Course Unit System. All courses should therefore be sub-divided into more or less self-sufficient and logically consistent Packages that are taught within a semester and examined at the end of that particular semester. Credit weights should be attached to each course.

DEFINITION OF CREDIT UNIT

Credits are weights attached to a course. One credit is equivalent to ONE CREDIT UNIT and consists of:
1 hour / week of lectures or tutorials or Self instruction per semester of 15weeks = [15 Lecture hours] or
3 hours / week of term paper work per semester of 15 weeks = [45 term-paper hours] or
3 hours / week of practicals / clinicals per semester of 15 weeks. = [45 Practicals or Clinicals hours]

REQUIREMENTS FOR GRADUATION OF THE DOCTOR OF MEDICINE (POSTGRADUATE MD PROGRAMME) – A minimum workload of 54 credit units of which:
12 credit units are for the thesis,
30 credit units are for coursework and
6 credit units are for three departmental seminars.

2 credit units for Mandatory College research methodology workshop
2 credit units for Mandatory College Management workshop
2 credit unit for departmental specialty course

SENIOR RESIDENCY TRAINING

OBJECTIVES OF SENIOR ORLHNS/HEAD & NECK SURGERY SPECIALTY

1. Refinement of skills in clinical examination, consultation, radiological imaging and pathology.
2. Teach junior in examination patient care, and surgery.
3. Management skill.
4. Improve surgical skills and operative experience.

SKILLS EXPECTED TO BE ACQUIRED

EAR

1.	Removal of meatal masses		P5	
2.	Surgery of meatal atresia	A5	P5	
3.	Partial reconstruction of the pinna			P5
4.	Surgical approaches to the middle ear and mastoid		A5	P5
5.	Cortical mastoidectomy	A5	P5	
6.	Radial mastoidectomy	A5	P5	
7.	Myringoplasty (P) and Ossiculoplasty		A5	P5
8.	Stapedectomy		A5	P5
9.	Surgery of Glomus Tumours of the ear	A5		
10.	Surgery of the facial nerve	A5		

NOSE

1.	Turbinectomy			P5
2.	Lateral rhinotomy		A5	P5
3.	Surgery of Tumours of the external Nose			

	and Nasal Cavity	A5	P5
4.	Caldwell-Luc and allied operation	A5	P5
5.	Surgery of blow-out injuries of the orbit	A5	P5
6.	Simple and Radical Maxillectomy	A5	P5
7.	Surgery of the pterygopalatine fossa	A5	
8.	Oro-antral fistula surgery		P5
9.	Trephination of the frontal sinus	A5	P5
10.	External operations of frontal ethmoidal and sphenoidal sinuses	A5	P5
11.	Nasoendoscopy	A5	P20
12.	Nasoendoscopy/Biopsy	A5	P10
13.	Endoscopic sinus surgery	P10	

NASOPHARYNX

1.	Adenoidectomy		P5
2.	Transpalatal approach to the post nasal space	A5	P5
3.	Surgery of angiofibroma of nasopharynx	A5	P5

OROPHARYNX

1.	Tonsillectomy by dissection		P5
2.	Division of a long styloid process in the tonsillar fossa		P5
3.	Division of the glossopharyngeal nerve in the Tonsillar fossa		P5
4.	Surgery of Peritonsillar abscess		P5
5.	Surgical treatment of parapharyngeal and retropharyngeal abscess		P5
6.	Tumours of oropharynx	A5	P5

LARYNGO PHARYNX AND OESOPHAGUS

1.	Oesophagoscopy			P5
2.	Pharyngotomy and partial pharyngectomy	A5	P5	
3.	Intubation of the Oesophagus		P5	
4.	Diathermy Treatment of laryngeal pouch		A5	P5
5.	Cricopharyngeal sphincterotomy		A5	P5
6.	Excision of pharyngeal pouch		A5	P5
7.	Pharyngolaryngectomy		A5	
8.	Fibreoptic Laryngoscopy			P20

LARYNX AND TRACHEBRONCHIAL TREE

1.	Laryngoscopy	A5	P5	
2.	Bronchoscopy	A5	P5	
3.	Tracheostomy		A5	P5
4.	Surgery of laryngotracheal stenosis		A5	
5.	Surgery of laryngocoele	A5	P5	
6.	Surgery of laryngeal paralysis		A5	P5
7.	Radical neck dissection		A5	P5
8.	Laryngofissure		A5	P5
9.	Laryngectomy	A5	P5	

OPERATION OF HEAD AND NECK

1.	Ligation of the external carotid artery	A5	P5
2.	Surgical treatment of branchial cyst	A5	P5
3.	Partial parotidectomy	A5	P5
4.	Total parotidectomy	A5	P5
5.	Removal of the submandibular salivary gland	A5	P5

6.	Removal of calculi of salivary ducts	A5	P5
7.	Surgery of cancer of the oral cavity	A5	P5
8.	Neck dissections operation	A5	P5
9.	Head/neck flap reconstruct procedures	A5	P5

COMPETENCE BASED GRADING OF PERFORMANCE

GRADES OF PERFORMANCE SCORES

PERFORMANCE GRADE	DESCRIPTION
A	Adequate knowledge; Performs skill without supervision; can reproduce skill on request; five to six points on Affective domain.
B	Adequate knowledge; performs skill with minimal supervision; reproduces skill with minimal guidance; four to five points on Affective domain.
C	Adequate knowledge; performs skill with supervision; barely reproduces skill; 3-4 points on Affective domain.
D	Inadequate knowledge; performs skill with supervision; Unable to reproduce skill; 2 - 3 points on Affective domain.
E	Gross inadequate knowledge; unable to perform task; unable to reproduce skill; 1-2 points on Affective domain.

AFFECTIVE DOMAINS FOR ASSESSING CANDIDATES DURING TRAINING:

1. Attendance to work
2. Punctuality
3. Prompt delivery of assignments
4. Group work and interaction
5. Obeying instructions
6. Respect for patient care

GENERAL TRAINING FOR SENIOR RESIDENCY

OBJECTIVES

Management course

Resident must endeavour to attend Management Course before sitting for Part 2 Fellowship examination.

Education course

Head and neck surgical dissection course is a **recommended** course for all residents **before** Part 2 Fellowship examination.

Research Training/Methodology

National postgraduate Medical College organizes a research methodology course and it is mandatory that Residents must attend before sitting for Part 2 Fellowship examination. Resident must key-in into a research work in collaboration with his/her consultant.

Conferences

Residents are to attend local and International Conferences especially as related to ORL and Surgery.

The faculty specifically identifies **ORLSON Conference**, and it is a **mandatory** that Residents should attend.

Residents must present at least **one scientific paper** at the conference before sitting for Part 2 Fellowship examination.

ORL 937 HEAD AND NECK SURGERY SUPER SPECIALTY (288 Credit Units)

Eligibility and Basic Requirements: The Fellowship program shall be for two calendar years.

- ✓ Admission to the Head and Neck Surgery fellowship program is based upon completion of an NPMCN accredited residency program in otolaryngology (completed one year of General Otorhinolaryngology post Part I examination in Otorhinolaryngology), general surgery, or plastic surgery or fulfilment of the same by the counterpart sister College - West African College of Surgeons.
- ✓ Upon recommendation of the director of the residency program and his/her documentation that the candidate has satisfactorily completed the residency, the candidate becomes eligible for the fellowship training program.
- ✓ The fellowship program director and/or the director's designee in each individual training institution will be the curriculum advisor and counselor to the candidate.
- ✓ In case of international candidates seeking to undertake the program, it is the responsibility of the individual Fellowship program directors to determine this equivalent status for international candidates applying to his/her program.

Educational Program:

a. Subspecialty programs in head and neck surgery will be accredited only when associated with accredited core program in otolaryngology.

b. The essentials of accredited residencies and the special requirements for residency training in otolaryngology apply to the subspecialty of head and neck surgery in addition to the specific subspecialty requirements.

c. After completing an accredited two-year fellowship in head and neck surgery the surgeon will possess the following unique characteristics:

   i. The ability to manage an “academic” or “tertiary referral”

clinical practice,

ii. The ability to participate in continuing education and

iii. The ability to collaborate in translational research.

2. Fundamental components of the two-year "Head and Neck Surgery" fellowship:

a. Direct participation in the evaluation, management and care of at least **200** patients with head and neck disease.

This includes consultations that focus on either the oncologic or reconstructive care. The fellow must be able to participate in the holistic care of these patients (evaluation, interdisciplinary management, follow-up).

Of these patients, the fellow should participate in a minimum of **100** major surgical procedures within the broad range of head and neck surgeries. This experience should include 100 patient surgical procedures.

Separate procedures performed on the same patient may be counted as separate procedures. For example, a parotidectomy with neck dissection may represent two procedures. Pharyngolaryngectomy with free flap reconstruction may also represent two separate procedures.

b. Intensive exposure to the interdisciplinary management of head and neck oncologic patients throughout the entire year (including tumor board interdisciplinary planning conferences).

c. Participation in the development and implementation of interdisciplinary head and neck oncologic research.

RESOURCES:

a. The subspecialty program in head and neck surgery must be in one tertiary health institution with primary responsibility for the entire program. When the resources of two or more institutions are used; there must be an inter-institutional agreements/ memorandum of understanding in this regard.

b. Institution Support – Facilities, Faculty and Resources.

1. Facilities:

a. Adequate institutional support - meeting rooms, classrooms, office space, computer facilities, library, adequate equipment and diagnostic, therapeutic and research facilities.

b. Adequate funding.

2. Faculty:

a. The program director must be certified by the NPMCN or possess equivalent qualifications.

b. The program director shall have administrative responsibility for the head and neck teaching program and should possess the skills of an administrator, clinician, teacher and researcher.

c. The program director and other teaching staff must be experienced in head and neck surgery and possess equivalent qualifications to insure proper instruction and supervision of trainees.

   At least two faculty members with expertise and at least 5 years of clinical head and neck surgery practice experience in head and neck surgery must be committed to the program.

d. Presence of committed and cooperative disciplines: Oral and Maxillofacial surgery, Plastic Surgery, Imaging Department, Radio-oncology, Endocrinology Unit.

e. Sufficient clinical material must be available to assure exposure to the broad range of conditions and problems associated with the management of head and neck tumors.

EVALUATION:

a. The trainee's abilities in consultation skills, patient management, decision-making and critical analysis of clinical situations must be evaluated as well as structured feedback on performance, including appropriate counseling and necessary remedial effort/s.

b. The teaching faculty program must also be evaluated by the trainee(s) on the teaching ability and commitment, clinical knowledge and scholarly contributions of faculty as may be directed by the Faculty Board of ORLHNS of NPMCN.

Cutaneous Malignancies: At the completion of the fellowship experience, the trainee should demonstrate proficiency in the diagnosis, management and appropriate surveillance for patients with melanoma and non-melanoma skin cancer. He/She should have participated in a minimum number of the following skin cancer surgery procedures:

- Wide local excision of facial skin cancers
- Wide local excision of scalp skin cancers (+/- resection of outer table of calvarium)
- Sentinel lymph node biopsy
- Modified radical and/or radical lymphadenectomy
- Local flap closure of facial skin defects
- Split thickness skin grafting
- Full thickness skin grafting
- Parotidectomy for cutaneous malignancies

Salivary Gland: At the completion of the fellowship experience, the trainee should demonstrate proficiency in the diagnosis, management and appropriate surveillance for patients with salivary gland cancer. He/She should have participated in a minimum number of the following Salivary gland procedures:

- Parotidectomy
    - Superficial
    - Deep/total
- Submandibular gland excision (can be part of a level 1 neck dissection)
- Transcervical approach to the parapharyngeal space and infratemporal fossa
- Transmandibular approach to the infratemporal fossa (if applicable)
- Modified radical and/or radical lymphadenectomy

- Parotid bed reconstruction
- Primary nerve repair
- Cable graft nerve repair in facial nerve injuries
- Sublingual gland excision and excision of ranula

Oral Cavity: By the end of fellowship, the fellows have reach proficiency level of knowledge, skills and attitudes in diagnosis, surgical management and surveillance of potentially malignant disorders and malignant oral cavity diseases. He/She should have participated in a minimum number of the following oral cavity procedures:

- Glossectomy
- Marginal mandibulectomy
- Segmental mandibulectomy and composite resections
- Mandibulotomy and mandibulotomy repair
- Lip resection
- Maxillectomy
- Neck dissection for oral cavity procedures
- Floor of mouth resection
- Reconstruction of oral cavity defect (skin graft, locoregional flaps, free tissue transfer).

Nasopharynx: By the end of the fellowship the trainees are proficient in diagnosis, principles of treatment, surveillance and management of complications of nasopharynx cancers. He/She should be able to:

- Describe the epidemiology of the nasopharyngeal cancer and discuss the role of EBV.
- Identify high risk population for nasopharyngeal carcinoma.
- Recognize signs and symptoms of early stage and advanced stage nasopharyngeal cancer.
- Formulate a diagnostic plan for diagnosis of suspected nasopharynx lesion:
  a. Perform in office flexible nasopharyngoscopy.
  b. Recognize suspicious lesion and recommend biopsy (in

office or operative) in appropriate cases.

c. Formulate a comprehensive plan for assessment of cervical lymphadenopathy that include investigation of nasopharynx.

- Recommend an appropriate, evidence based staging plan for newly diagnosed disease.
  a. Recommend MRI in appropriate cases.
  b. Recommend PET Scan in appropriate cases.
- Stage nasopharyngeal disease based on the current AJCC staging system.
- Recommend evidence based course of treatment based on the stage and current guidelines (NCCN)
- Formulate a comprehensive plan for surveillance of nasopharyngeal cancers.
  a. Discuss the role of EBV titers in surveillance.
- Recognize common complications of treatment such as:
  a. Osteoradionecrosis
  b. Eustachian tube dysfunction
  c. Hypothyroidism
- Recognize suspicious signs of recurrence and plan for confirmation or ruling out of recurrence. Specifically discuss the role of:
  a. Advanced imaging (MRI, PET)
  b. Biopsy

Oropharynx:

- Open approaches to oropharynx including mandibulotomy and mandibulotomy repair.
- Transoral approaches for resection of oropharynx malignancies (TLM or TORS).
- Segmental mandibulectomy and composite resections.
- Neck dissection procedures for oropharynx cancer.
- Reconstruction of oropharynx defects (locoregional flaps, free tissue transfer).

Larynx: By the end of the fellowship the trainees are proficient in diagnosis, principles of treatment, surveillance and management of laryngeal cancers. He/She should be able to have participated in a minimum number of the following procedures:

- Partial laryngectomies
  - Open: vertical hemilaryngectomy, supraglottic laryngectomy, supracricoid laryngectomy).
- Total laryngectomy with or without partial pharyngectomy
- Total laryngopharyngectomy
- Total laryngectomy with total glossectomy
- Neck dissection for laryngeal tumors
- Direct laryngoscopy with biopsy
- Tracheoesophageal puncture procedure with or without cricopharyngeal myotomy
- Zenker's diverticulum repair (endoscopic; open).
- Endoscopic Zenker's diverticulum repair

Tracheal Disease: By the end of the fellowship the trainees are proficient in diagnosis, and management of patients with tracheal neoplasms or stenosis. He/She should have participated in a minimum number of the following procedures:

- Rigid bronchoscopy with or without biopsy or foreign body removal
- Flexible bronchoscopy
- Open tracheostomy
- Tracheal resection and re-anastomosis

He/she should be able to recognize the following common complications of tracheal surgery and how to manage them:

- Tracheostomy tube dislodgement or occlusion
- Low volume hemoptysis
- High volume hemoptysis
- Tracheal granulation tissue
- Recurrent tracheal stenosis

Hypopharynx: By the end of the fellowship the trainees are proficient in diagnosis, principles of treatment, surveillance and management of hypopharyngeal cancers. He/She should been able to have participated in a minimum number of the following procedures:

- Partial pharyngectomy (lateral pharyngotomy, transhyoid)
- Total laryngectomy with partial pharyngectomy
- Total laryngopharyngectomy
- Neck dissection for hypopharyngeal tumors.

By the end of fellowship, the fellows should be familiar with:

- Hypopharyngeal reconstruction with free or pedicled flaps
- Cervical esophagectomy or total esophagectomy with gastric pull-up procedure or visceral interposition.

Skull Base: At the completion of the fellowship experience, the trainee should demonstrate a fundamental level of knowledge regarding the evaluation and management of patients with neoplasms of the skull base, cranium, and adjacent areas and master basic diagnostic and surgical skills as it relates to the evaluation and management of skull base tumors. He/She should be able to have participated in a minimum number of the following procedures:

Compare different approaches to the skull base.

Perform core procedures in skull base surgery as defined by the curriculum.

A. Demonstrate ability to perform surgical procedures (surgical simulation) as:

- External frontal sinusotomy
- Pericranial scalp flap
- Temporalis muscle transposition
- Orbital exenteration
- Medial maxillectomy (external and endonasal approaches)
- Nasoseptal flap

B. Recognize and manage neurological complications

- Describe management of postoperative cerebrospinal fluid leak.
- Identification of signs and symptoms of increased intracranial pressure that could be caused by pneumocephalus and/or intracranial hemorrhage.
- Perform appropriate diagnostic tests.

C. Provide postoperative care in clinic

- Remove nasal packing and splints
- Debride nasal crusting
- Assess for cerebrospinal fluid leak

Head & Neck Paragangliomas: By the end of the fellowship the trainees are proficient in diagnosis, principles of treatment, surveillance and management of Head & Neck Paragangliomas. He/She should be able to

- List the most common head and neck paragangliomas and describe the relevant epidemiology of these tumors
- Discuss the frequency of tumors that are malignant and bilateral
- Describe the histologic make up of paragangliomas and how to determine if a paraganglioma is benign or malignant
- Perform a thorough history and physical examination of head and neck
    - List the risk factors for developing paragangliomas
    - Elicit aspects of the history that may raise suspicion for a secretory tumor
    - Perform a detailed family history and identify familial syndromes that may be related to head and neck paragangliomas
    - Perform a relevant cranial nerve examination based on the location of the tumor
    - Evaluate for other tumors and/or associated lymphadenopathy
    - Perform fiberoptic laryngoscopy to assess for vocal fold

mobility and laryngeal sensation

- Choose the appropriate imaging work-up to complete evaluation of the primary tumor and to assess for multifocal tumors
- Establish an appropriate differential diagnosis for vascular tumors of the head and neck
- Select the appropriate tests to evaluate candidacy for carotid resection and vascular reconstruction
    - What is the false negative rate of this test? (10% stroke risk even following a successful balloon occlusion test)
    - What are options for vascular reconstruction and what additional tests may be needed (saphenous vein mapping)
- Select the necessary tests to evaluate for secreting tumors in patients with a concerning history
- Cite the different staging systems used to classify carotid body and jugular foramen/tympanic paragangliomas
- Describe the options for surgical approaches for carotid body, jugular foramen, tympanic, and vagal paragangliomas
- Recognize the significance of bilateral tumors and how that impacts treatment decision planning and patient counseling
- Perform core surgical procedures on neck paragangliomas such as:
    - Transcervical approach to the parapharyngeal space and infratemporal fossa
    - Transmandibular approach to the infratemporal fossa
    - Preauricular approach to the jugular foramen (with or without associated mastoidectomy)
    - Resection of head and neck paraganglioma
- Recognize indications for adjuvant therapy following surgery for head and neck paragangliomas based on pathologic characteristics and operative findings
- Recognize common complications head and neck paraganglioma surgery.

Neck: By the end of the fellowship the trainees are proficient in diagnosis, principles of treatment, surveillance and management of in patients with unknown primary, thyroid, cutaneous, salivary

gland and mucosal upper aerodigestive tract malignancies. He/She should be able to:

- Stage the neck for unknown primary/oropharynx cancers clinically and pathologically based on the current AJCC classification system
- Describe nodal staging for other head and neck cancers based on the AJCC classification system
- Recognize the indications for PET-CT, to include sensitivity and specificity in the assessment of a cancer of unknown primary, and the importance of the timing of the scan
- Develop a thorough understanding of the incidence of cervical lymph node metastasis by primary tumor site and size.

A. Oral cavity
    - oral tongue
    - floor of mouth
    - maxillary alveolus and hard palate
    - buccal mucosa

B. Oropharynx
    - tonsillar fossa
    - base of tongue
    - soft palate
    - pharyngeal wall

C. Nasopharynx
D. Hypopharynx
E. Larynx
    - supraglottis
    - glottis

F. Major salivary glands
G. Thyroid
H. Cutaneous

- Describe the different types of neck dissection and the difference in technique, structures sacrificed or preserved and level dissected
    A. Selective
    B. Modified Radical
    C. Radical

At the end of the fellowship program, he/he should be able to have participated in a minimum number of the following procedures:

- Open Neck Biopsy
- Selective Neck Dissection (Supraomohyoid I-III; with and without level IIb)
- Selective Neck Dissection (Lateral II-IV; with and without level IIb)
- Selective Neck Dissection (Posterolateral II-V) with dissection of CN XI in the posterior triangle
- Posterior lateral neck dissection (to include suboccipital and retroauricular nodes)
- Modified Radical Neck Dissection (Types I, II, III)
- Radical Neck Dissection (familiarity with sacrifice of CN XI, SCM, IJV)
- Sentinel Lymph Node Biopsy

Thyroid: By the end of the fellowship the trainees would have attained a proficient level of knowledge, skills and attitudes in diagnosis, surgical management and surveillance of benign and malignant diseases of the thyroid gland. And thus would be able to:

- Perform a thorough oncologic examination of head and neck, with emphasis on the thyroid gland,
- Describe the Bethesda Classification for the cytologic interpretations of thyroid lesions
- Indications for molecular testing of indeterminate thyroid FNA specimens

- Recognize the typical presentation of benign or malignant thyroid tumors and certain signs and symptoms that might suggest a more aggressive behavior
- Analyze clinical findings and radiologic studies appropriately to distinguish surgically resectable from unresectable thyroid lesions
- Perform core procedures in surgery on the thyroid gland such as:
    - Thyroidectomy, lobectomy and total
    - Central neck dissection
    - Lateral neck dissection
    - Upper aerodigestive tract resection as a part of ablative procedure for thyroid cancer
    - Laryngotracheal reconstruction
    - Parathyroid autotransplantation
    - Intraoperative nerve monitoring
- Recognize common complications of following thyroid and lateral neck surgery.
- Plan appropriate course of action for treating surgical complications of thyroid procedures.

Parathyroid: By the end of the fellowship the trainees would have attained a proficient level of knowledge, skills and attitudes in diagnosis, surgical management and surveillance for patients with primary, secondary and tertiary hyperparathyroidism and thus would be able to:

- Plan a diagnostic workup for patients presenting with suspected primary hyperparathyroidism
    - Preoperative PTH and calcium levels
    - Role of dexa scan
    - Role of 24-hr urinary calcium and creatinine, rule out FHH
    - Vitamin D levels
- Discuss the scope and limitations/sensitivity and specificity of the radiologic investigations available for localization and select the appropriate study based on patient and disease

characteristics.
    - Ultrasound (surgeon vs radiologist-performed)
    - Tc99 Sestamibi and SPECT/CT fusion
    - MRI
- 4-D CT
- List the indications for surgery in patients with hyperparathyroidism (symptomatic and asymptomatic)
- Appropriately treat Vitamin D deficiency
- Discuss the role of intraoperative recurrent laryngeal nerve monitoring
- Discuss how to utilize intraoperative PTH monitoring as a measure of success of surgery
- Discuss the surgical management of solitary adenoma vs four gland hyperplasia
- Discuss the role of parathyroid auto-transplantation and cryopreservation and perform these procedures in appropriate patients
- Recognize the clinical signs suspicious for diagnosis of parathyroid carcinoma & management
- Discuss and recommend non-surgical options available to patients who are not surgical candidates or who elect to defer surgery such as use of:
    - Bisphosphonates
    - Calcimimetics
    - Ethanol ablation
- Establish working relationship with endocrinologist in management of parathyroid disease.

Microvascular Reconstruction: By the end of the fellowship the trainees should demonstrate understanding of the functional and cosmetic consequences of the full array of soft tissue and bony defects of the head and neck. The fellow should be able to identify defects that are appropriate for advanced reconstructive procedures with an aim to collaborate with head and neck reconstructive surgeons for joint care of patients.

Basic Science: By the end of the fellowship, the trainee is proficient in Fundamentals of Cancer Biology / Immunology in head and neck oncology

REFERENCE

1. J.M. Nedzelki, Derek Birt. Assessment of operative skills – Department of Otolaryngology, University of Toronto, Departmental Handbook. 1995, 144-145.
2. **Harmonized Curriculum for Otorhinolaryngology-Head and Neck Surgery in the Anglophone West African Sub region.**

CRITERIA FOR ACCREDITATION OF INSTITUTIONS FOR TRAINING OF ORLHNS RESIDENTS (2020)

1. QUALIFIED AND EXPERIENCED PERSONNEL (15 points)

S/N	Descriptions and minimum number of staff	Score Guideline	Points scored
1.	ORLHNS Consultant: At least 4 consultants of which minimum of one (1) must not be less than 5 years post Fellowship of the College.	Two (2) points per consultant (10 points max), (2 part time consultants are equivalent to 1 full time consultant)	
2.	Audiologist/Audiometrician – 2;	1 point each (2points max)	
3.	Speech pathologist/therapist – 1	1 point	
4.	ENT trained Nurses deployed in outpatient and wards	1 point each (2points max)	

1. APPROPRIATE INFRASTUCTURE (10 points)

A. Basic: Water, Light, Sewage etc (Maximum 1 point).
B. Core Departments Present – Outpatient Clinic (Maximum of 15 points).

S/N	DESCRIPTION AND MINIMUM NUMBER	SCORE GUIDELINE	POINTS SCORED
1	Consulting stations minimum of 6 ENT consoles with patient chair and Doctors chair (6) Basic ENT Clinic based instruments a. Jobson horne probes (25),b . Suction nozzles(25), c. Tilleys dressing forceps(25), d. Crocodile forceps(25), e. Cawthorne aural forceps(25), f. Nasal specula (50), g. Aural specula(15), h. Tongue depressors(50), i. Tuning forks(20), j. Laryngeal mirrors(50), k. Otoscopes(10), l. Head-mirrors(10), (suction machines (6) optional if consoles requirements are met)	1/2 point per station 1 point each ½ point per set of instrument (maximum 5 points)	
2	Treatment Room with accessories	1 point	

APPENDIX I

ACKNOWLEDGEMENT

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