HANDBOOK OF

THE DEPARTMENT OF PAEDIATRICS

AND

CHILD HEALTH

FACULTY OF CLINICAL SCIENCES

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF PORT HARCOURT

P. M. B. 5323

CHOBA

PORT HARCOURT.

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INTRODUCTION

The Department is one of the clinical Departments in the College of Health Sciences. The department is accredited for undergraduate training by the National University Commission (NUC) and the training of postgraduate doctors by the West African College of Physicians (WACP) and the National Postgraduate Medical College of Nigeria (NPMCN).

PRINCIPLES OF THE DEPARTMENT

The guiding principle of the department is to train medical practitioners who will be able to provide care for children not only in this country but world-wide.

OBJECTIVE OF THE COURSE IN PAEDIATRICS AND CHILD HEALTH

The students trained in this Department are expected, on qualification to:

1. Have knowledge of the normal child and an understanding of the factors that affect his growth, development and survival in our environment.
2. Be in a position to organize comprehensive child care services in his area of practice
3. Be able to organize programmes on health education and immunization in his area of practice
4. Be able to identify the at-risk group e.g. new-born babies and those under 5 years of age
5. Understand that due to limited finance, he should pay particular attention to priorities and cost benefit in planning and organizing child care services
6. Be able to recognize the pattern and presentation of the common diseases of infancy and childhood
7. Offer primary treatment for the common childhood diseases
8. Make individual and community diagnosis of common childhood diseases
9. Recognize serious and rare conditions which require specialist investigations and treatment
10. Judiciously use available modern diagnosis and therapeutic facilities.
11. Be able to organize health care services in a rural area and function effectively as a leader of the health care for children
12. Be able to recognize his limits during the care of a patient and refer the child for further care
13. Be interested in postgraduate work and furtherance of their course in the discipline through update courses and research.

TRAINING IN PAEDIATRICS

The academic programme of the department is carried out during the 9 months of posting allotted to the Department of Obstetrics and Gynaecology and Paediatrics. In the first 2 months, each Department uses a month to deliver the didactic lectures. The next 6 months are divided into 2 periods of 3 months each. During each period of 3 months, half of the students in the class will be posted to either of the department. At the end of the 3 months, the departments exchange their students. The last month of the posting is spent for revisions and examinations. The training in the Department of Paediatrics is achieved through the following activities.

A. Orientation Posting of One Month

This period is spent to introduce the students to the department. The activities covered during this period include:

i Didactic Lectures: The lectures on various aspects of paediatrics are delivered by various lecturers from within and outside the Department. The students are expected to sign an attendance which will be used to compute 75% attendance for eligibility for exams.

ii Bedside teaching: The students are taught on history taking and physical examination (general examination and examination of the 8 body systems).

A test (essay and multiple choice questions) is given at the end of the lectures. The scores at this examination form part of the continuous assessment scores.

B. Main Posting of 6 months

At the start of the clinical posting, each student is expected to purchase the signing booklet which will be used to capture attendance at all clinical exposure.

1. Clinical Work and Teaching: The students are divided into 9 groups and rotate through the various units supervised by different consultants. During this rotation each student is expected to:

   i. Participate in the day-to-day care of the patients, Clerking and follow-up of patients and participation in the procedures necessary for the care of the patient.
   ii. Attend ward rounds and clinic sessions during which they are expected to clerk, do clinical summary and present their patients to the supervising consultants and senior registrars.

iii. Take Calls: This exposes them to the care of emergencies and the continued care for admitted patients outside the normal work period.
iv. Within the posting evaluations (Unit test): Each team uses different evaluation schemes for its students. These include clerking, examinations, tests and assignments. The scores obtained from these evaluations form part of the scores allocated to continuous assessment.
v. Attendance: each student is expected to have the signing booklet which will be signed daily by the unit consultant or senior Registrar. Attendance at weekday and weekend calls should also be signed by the senior Registrar or Registrar on call. Observed procedures and those actually performed are also signed in the signing booklet.

2. Tutorials: This is done once a week on Mondays. The tutorial topics are formed from common ailments/diseases in children that need emphasis, or those that are easily missed and need to be discussed in a group setting. The students are grouped into various tutorial groups different from unit grouping. Students are expected to read/research on the particular topic for the week and make notes before the tutorial. During the tutorials, students participate in discussion on the topics/cases selected for the day facilitated by the consultant and/or senior Registrar. All groups are expected to cover all the topics in the tutorial list. At the end of 3 tutorials, a post-tutorial test is carried out to evaluate learning. In all 4, tutorial tests are done and the scores from these tests form part of the continuous assessment.

3. Departmental Teaching Programmes: Students are expected to fully participate in the various teaching programmes in the department. These include:

i. Postgraduate Seminars, Case Presentations or Case Analysis which holds every Thursday from 1:30 – 2:30 pm.
ii. Mortality and Perinatal Mortality Meetings - The mortality meeting is held every Wednesday from 9.00am – 10:00am to review patients that died in the preceding week, while the perinatal mortality is held with Obstetrics and Gynaecology department on the last Friday of each month.
iii. Radiology Seminars – Joint meeting with the Radiology Department to review radiographs –holds every Tuesday from 1-2 pm.
iv. Post Mortem examination –holds whenever there are cases. It is a joint meeting with the Morbid Anatomy Department.
v. Seminars/Workshop on various subject of relevance to child health.

4. Visitation to places where children in various circumstances are cared for: These include:
   i. Infant Welfare Clinics to learn the care for healthy children
   ii. Special School for handicapped children

iii. Home for children in difficult circumstances-The Port Harcourt Children's Home (for abandoned or motherless babies), The Remand Home for children undergoing institutionalized corrections and the Home for Handicapped Children.

5. McArthur Clinical Skills Laboratory: where the student watch video modules of system exam. Students are also encouraged to present themselves for video capture to evaluate their proficiency at physical examination

6. Social Visits to the homes of children being cared for in the hospital to ascertain social circumstances including their home environment and to appreciate how these affect the health of the children.

7. End of Posting Test. At the end of the three months of rotation, an end of posting test comprising written and clinical examinations is carried for the students. The scores obtained from this also form part of the scores allocated for continuous assessment.

C. Revision and final examinations

At the end of the rotations through the Departments of Paediatrics and Child Health and Obstetrics and Gynaecology, a two week revision is carried out followed by the final examination which comprises written (essays and multiple choice questions), a clinical examination (Performance and Cognitive Skills Evaluation {PACSE}; Objective Structured Pictorial Evaluation {OSPE}; Clinical Reasoning) and an oral examination. The scores from these aspects of the examination are scaled down to 70% of the total scores in the final examination.

TRAINING CURRICULUM

The student is expected to cover the following areas in Paediatrics. Lectures shall be given to cover these subjects.

1. THE NORMAL CHILD

i. The new-born: Examination and care of the new-born
ii. Growth and development: norms and parameters of growth and development-weight, height, head circumference and skin fold thickness
iii. Principles of development (physical, social, emotional and intellectual)
iv. Method of development assessment:

- Early detection of handicaps
- Use of anthropometry to assess growth

2. THE SICK CHILD

i. History Taking, examination and diagnosis in Paediatrics

ii. Prenatal Diagnosis-the effects of various maternal and environment factors on the foetus

iii. Neonatal Problems:
- Birth Asphyxia
- Congenital abnormalities and malformation
- Neonatal Infections
- Birth Trauma-cephalhaematoma, bone injuries, cerebral trauma, nerve injuries.
- Biochemical – hyperbilirubinaemia, hypogylycaemia, hypocalcaemia, hypomagnesaemia
- Haematological diseases in the newborn
- Prematurity and Low birth weight

iv. Malnutrition

- Protein-energy malnutrition-classification, diagnosis and management. Sequelae of malnutrition.
- Diagnosis of malnutrition in the community and the assessment of the nutrition in the community (anthropometric and biochemical)
- Vitamin deficiencies in infancy and childhood
- Interactions between malnutrition, measles, tuberculosis and pertussis

v. Common Childhood Infections:
- Protozoal-Malaria, Giardiasis and Amoebiasis
- Fungal-Monilia and Cryptococcus
- Helminthic-Ascariasis, Hookworn infestation, Strongyloidiasis, Paragonimiasis, Taeniasis and Filariasis
- Bacterial- C. Tetani, H. influenza, Meningococcus, pertussis, tuberculosis, S. aureus, streptocoous, E. coli, Klebsiella
- Viral-Measles, Herpes simplex variola and varicella, mumps, rubella, poliomyelitis adenovirus, coxsackie virus, Echo virus, rabies and the Human Immunodeficiency Virus.

vi. Cardiovascular System:
- Anatomy and Physiology (including the embryology of the heart)

- Congenital heart diseases: Ventricular Septal Defect, Fallot's Tetralogy, Atrial Septal Defect and others
- Acquired heart diseases especially Rheumatic Heart Diseases
- Endomyocardial Fibrosis and other cardiomyopathies
- Principles of investigations, diagnosis and treatment of heart diseases
- Cardiac Failure in childhood and its management
- Examination of the Cardiovascular System

vii. Respiratory System
- Wheezing Child and Asthma
- Tuberculosis – Pulmonary and extrapulmonary
- Aetiology, clinical presentation and management of common respiration emergencies – epiglotitis, croup, bronchopneumonia, lobar pneumonia, bronchiolitis, acute respiratory tract obstruction etc.
- Pleural effusion
- Examination of the Respiratory System

viii. Digestive System
- The child with abdominal pain
- Diarrhoeal diseases and their management
- Vomiting in childhood
- Acute Intestinal Obstruction
- Pancreatitis
- Malabsorption Syndromes
- Hepatosplenomegaly
- Examination of the Digestive System

ix. Endocrine Disorders
- Obesity
- Pituitary gland-physiolgy and functions, Diabetes Insipidus, Growth Hormone deficiency, Short stature
- Adrenal gland-physiology and functions, Congenital adrenal hyperplasia, Neuroblastoma, Phaechromocytoma, Addison's Disease
- Pancreas-Diabetes Mellitus
- Gonads-Turner's Syndrome, Klinefelter's Syndrome, Intersex states, Ambiguous genitalia, precocious/delayed puberty.
- Thyroid gland – Hypothyroidism, Hyperthyroidism, Iodine deficiency disorders
- Parathyroid gland-Vitamin D metabolism, calcitonin
- Examination of the Endocrine System

x. Disorders of the Nervous System
- Convulsions in childhood
- Infections-meningitis, poliomyelitis, encephalitis, tetanus
- Hydrocephalus, microcephalus
- Cerebral palsy and the handicapped child
- Intracranial tumours in childhood
- Peripheral nerve and muscles disorders-progressive muscular dystrophy, pyomyositis, spinal muscular dystrophy
- Principles of investigations of CNS disorders
- Psychiatric disorders in children
- Examination of the Nervous System

xi. The Urogenital System
- Anatomy and physiology of the Kidneys
- Development and Structural anomaly of the genitourinary tract
- Investigations of the urinary tract
- Renal function tests
- Urinary Tract Infections
- Glomerulonephritis
- Nephrotic Syndrome
- Renal Failure – acute and chronic
- Renal Replacement Therapy
- Wilm's Tumour
- Haematuria in childhood
- Examination of the Urogenital System

xii. Haemopoietic and Lymphoreticular System
- Common causes of anaemia in the tropics (neonate, infancy and the older child)
- Haemoglobinpathies especially HbSS disease
- Port wine stains and Haemangiomas
- Malignant diseases-Leukaemia, Hodgkin's Disease and Burkitt's Lymphoma
- Bleeding disorders – Haemophylia, Haemorrhagic disease, Disseminated intravascular coagulopathy, Purpura
- Examination of the Haematologic System

xiii. Social Paediatrics
- Pattern of childhood diseases in Nigeria
- Children in especially difficult circumstances
- Child abuse – sexual, physical, emotional

- Adolescent problems
- Population structure in development countries
- Organization of child health services in the community, school health services, infant welfare clinics and under-fives clinics
- Motherless babies, accidents in the home, non-accidental injury
- Illegitimate babies, adoption, foster parents, handicapped children.
- Vital statistics in relation to children
- Population growth and economic factors as restraints in health care delivery
- Palliative Care

xiv. Common Skin Disorder
- Skin lesions – macules, papule, pustule, nodules, patches
- Eczema
- Congenital/hereditary skin disorders e.g. naevus,
- Infections-impetigo, scabies, molluscum contagiosum, Tinea, moniliasis, warts
- Allergic skin conditions-urticaria etc.

xv. Primary Health Care and Community Paediatrics
- Primary Health Care and Child survival strategies
- Out Patient Management of Acute Respiratory Infections using the WHO Guidelines
- Childhood Immunizations and missed opportunity
- Integrated management of childhood illnesses.

xvi. Others
- Communication and Patient Education
- Ethical issues in Paediatrics
- Principles and applications of Preventive Paediatrics
- Genetic disorders – single mutant gene -autosomal (dominant/recessive) and sex chromosomes (dominant/recessive), chromosomal abnormality (Down Syndrome, Edward Syndrome, Patau Syndrome)

TUTORIAL TOPICS

The following topics are covered during the tutorial sessions.

1. Malaria
2. Anaemia in Children
3. Sickle Cell Disease
4. Protein Energy Malnutrition
5. The wheezing Child

6. Pneumonias-aetiology, pathology, signs
7. The Unconscious Child
8. Renal Failure – Acute and chronic
9. Acute Glomerulonephritis
10. Nephrotic Syndrome
11. Urinary Tract Infection
12. Neonatal Jaundice
13. Congenital Heart Disease (TOF &VSD)
14. Cardiac Failure
15. Leukaemia/Lymphoma
16. Birth Asphyxia
17. Newborn Resuscitation
18. Childhood HIV Infection

STUDENTS ASSESSMENT AND EVALUATION

The students are assessed during their posting in the various areas; lecture attendance, clinical rotations, tutorial and the end of posting examinations. For a student to be qualified for Part III MBBS examinations, he/she is expected to achieve a minimum attendance requirement of 75%. Failure to achieve this mandatory 75% attendance in Paediatrics will disqualify the student from writing the main / resit examination that year, in Paediatrics and Obstetrics and Gynaecology and vice versa. The student will be required to repeat the entire posting.

1. Continuous assessment scores: These form 30% of the total final scores. It is computed using the scores obtained at the orientation test, unit tests, post-tutorial tests and end of posting tests. The table below gives a summary of the continuous assessment format in Paediatrics.

	Continuous assessment format	**Scaled Scores**
A	**Orientation tests**	**100**
1	ESSAY	
2	MCQ	
B	**Post-tutorial tests**	**100**
C	**Unit tests (during each posting rotation)**	**250**
1	Clerking and presentation of case	

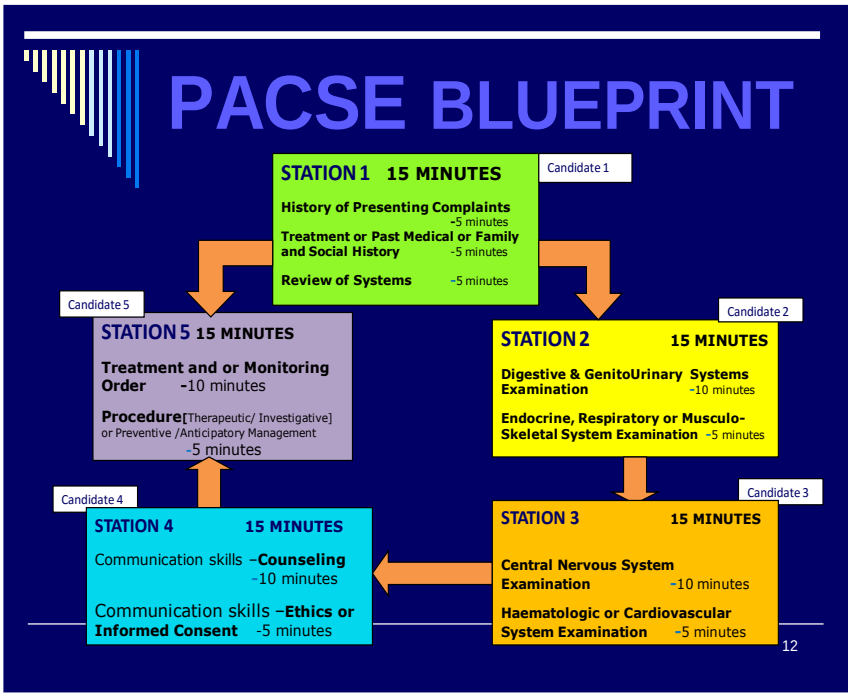
2	Clinical Reasoning Summary	
3	Other group assignments	
4	End of unit rotation test	
D	**End of posting tests**	**300**
1	MCQ	
2	Essay / Short question	
3	Clinical – PACSE, Clinical Reasoning, OSPE, Orals	
E	**Total Collated scores** **Scaled to**	**750** **30%**
F	Additional make up test for resit Total collated scores Scaled to	100 850 30% (new CA)

2. Final Part III MBBS examination scores: The scores obtained at the final examination contribute 70% of the total scores allotted in the department of Paediarics. The Part III MBBS examination in the department comprises different sections.

a. Written examination: This consists of: (i) 100 multiple choice questions ("True or False"). The first 20 questions explore the student's ability to review the 8 body systems. The remaining 80 questions cover all the topics in paediatrics.
(ii) Five Essay questions which a student is expected to answer all.

b. Clinical Examination:

i. Clinical Reasoning (Structured Multiple Choice Questions)
ii. Objective Structured Pictorial Evaluation (OSPE)
iii. Viva Voce (oral examinations):The oral examination is a short discussion of Social Paediatrics as well as general and topical issues in Paediatrics.
iv. Performance and Cognition Skills Evaluation (PACSE). Below are the different PACSE blue prints used:



PACSE EXAMINATION BLUE PRINT 90MINUTES TABLE A

Station	Performance/Cognition Activity	Mins	Roles – Candidates/Examiners	Scores
Station 1	History of Presenting Complaints	5	Read instruction and write/Read Script and Score	4
	Treatment History	5	Read instruction and write/Read Script and Score	4
	Review of Systems	5	Read instruction and write/Read Script and Score	4
Station 2	Digestive and Genitourinary System Examination	10	Read instruction & perform/Observe and Score	8
	Respiratory System Examination	5	Read instruction & perform/Observe and Score	4
Station 3	Central Nervous System Exam	10	Read instruction & perform/Observe and Score	8
	Haematologic System Exam	5	Read instruction & perform/Observe and Score	4
Station 4	Communication Skills – Counselling	10	Read instruction & perform/Listen and Score	8
	Communication Skills - Ethics	5	Read instruction & perform/Listen and Score	4
Station 5	Treatment and/or Monitoring order		Read instruction and write/Read Script and Score	8 4
	Procedure: Investigative or Therapeutic		Read instruction and write/Read Script and Score	
Intervals	3 mins interval between 5 Stations		Fill name and sign sheets/Enter Scores	0
Total		90		60

PACSE EXAMINATION BLUE PRINT 90MINUTES TABLE B

Station	Performance/Cognition Activity	Mins	Roles – Candidates/Examiners	Scores
Station 1	History of Presenting Complaints	5	Read instruction and write/Read Script and Score	4
	Family & Social History	5	Read instruction and write/Read Script and Score	4

	Review of Systems	5	Read instruction and write/Read Script and Score	4
Station 2	Digestive and Genitourinary System Examination Endocrine System Examination	10 5	Read instruction & perform/Observe and Score Read instruction & perform/Observe and Score	8 4
Station 3	Central Nervous System Exam Cardiovascular System Exam	10 5	Read instruction & perform/Observe and Score Read instruction & perform/Observe and Score	8 4
Station 4	Communication Skills – Counselling Communication Skills – Informed Consent	10 5	Read instruction & perform/Listen and Score Read instruction & perform/Listen and Score	8 4
Station 5	Treatment and/or Monitoring order Preventive/Anticipatory Management	10 5	Read instruction and write/Read Script and Score Read instruction and write/Read Script and Score	8 4
Intervals	3 mins interval between 5 Stations	15	Fill name and sign sheets/Enter Scores	0
Total		90		60

PACSE EXAMINATION BLUE PRINT 90MINUTES TABLE C

Station	**Performance/Cognition Activity**	**Mins**	**Roles – Candidates/Examiners**	**Scores**
Station 1	History of Presenting Complaints Past Medical History Review of Systems	5 5 5	Read instruction and write/Read Script and Score Read instruction and write/Read Script and Score Read instruction and write/Read Script and Score	4 4 4
Station 2	Digestive and Genitourinary System Examination Musculoskeletal System Examination	10 5	Read instruction & perform/Observe and Score Read instruction & perform/Observe and Score	8 4
Station 3	Central Nervous System Exam Cardiovascular System Exam	10 5	Read instruction & perform/Observe and Score Read instruction & perform/Observe and Score	8 4
Station 4	Communication Skills – Counselling Communication Skills - Ethics	10 5	Read instruction & perform/Listen and Score Read instruction & perform/Listen and Score	8 4
Station5	Treatment and/or Monitoring order Procedure: Investigative or Therapeutic	10 5	Read instruction and write/Read Script and Score Read instruction and write/Read Script and Score	8 4
Intervals	3 mins interval between 5 Stations	15	Fill name and sign sheets/Enter Scores	0
Total		90		60

Marking scheme

a. The multiple choice questions- usually 100 in number, have a main stem each and 5 options to which a candidate answers true or false. Each correct answer scores a point, a wrong answer leads to the loss of one mark and failure to answer a question attracts no score. The total score 500 is scaled down to the mark allocated

for MCQ in that part of the examination i.e 50 mark at the orientation and end of posting tests and 80 marks at the final examinations.

b. Essay question – There are usually 5 essay questions. All essay question carry equal marks and students are expected to answer all. At the continuous assessment tests, an open marking scheme, where a minimum of 0 and a maximum of 20 marks can be scored for each of the 5 questions, is used. At the final examination, in line with the college's marking scheme, a closed system of marking is used – with minimum scores of 6 and maximum of 14 indicative of very poor performance (6), average performance – pass (10) and excellent performance(14). The 100 marks obtained is scaled to 25 at the orientation test, 50 at the end of posting test and 100 at the final examination.

FINAL RESULT

The final score is the sum of the main examination scores scaled down to 70% and the continuous assessment accounting for 30%.
To obtain a pass the candidate must

Score 50% or above in the clinical examination
and 50% or above in the overall score.

A candidate who passed the clinical examination and fails in the overall score **OR** failure in both sections of the examination is said to have failed (**F)**
A failure in the clinical examination and a pass in overall is said to fail clinical (**FC**)

THE RESIST EXAMINATION

The resist examination is held at least 12 weeks after the main examination following the same pattern as described above. Students are encouraged to participate in the various teaching sessions with the consultants and departmental activities to improve their learning during this period. A make up test is organized which is added to their initial scores and used to recalculate the continuous assessment scores. The conduct and marking of the examination is same as in the main examination.

THE ACADEMIC STAFF IN THE DEPARTMENT:

The Department has 21 full time lecturers, there are 7 (seven) Professors, 2 (two) Readers, 10 (ten) Senior Lecturers and 2 (two) Lecturer I. With 160 students, the full time staff: student ratio is 1:8 during the clinical postings. The names and qualifications of the full time staff are as follows:

S/N	NAME	QUALIFICATION	RANK	SUBSPECIALTY
1	Prof. F. Eke	FRCH,FWACP,FMC	Professor	Nephrology
2	Prof. K. E. O. Nkanginieme	FMCPaed, FWACP	Professor	Medical Education/ Haematology
3	Prof. A. R. Nte	FWACP	Professor	Community/Preventive Paediatrics
4	Prof. I. C. Anochie	FWACP	Professor	Nephrology
5	Prof. A. U. Eneh	FWACP	Professor	Neonatology/Infectious Disease
6	Prof. N. A. Akani	FMCPaed	Professor	Oncology/Social Pead.
7	Dr. E. A. D. Alikor	FWACP	Professor	Neurology/ Respiratory
8	Dr. Angela I. Frank-Briggs	FMCPaed	Reader	Neurology/ Respiratory
9	Dr. R. O.Ugwu	FWACP	Reader	Infectious Disease/Neonatology
10	Dr. B. E. Otaigbe	FWACP	Snr. Lecturer	Cardiology
11	Dr. I. George	FMCPaed	Snr. Lecturer	Haematology
12	Dr. G. Eke	FWACP	Snr. Lecturer	Oncology/ Nutrition
13	Dr. P. Opara	FWACP	Snr. Lecturer	Neonatology
14	Dr. P. Tabansi	FWACP/FMCPaed	Snr. Lecturer	Cardiology
15	Dr. L. Yaguo-Ide	FMCPaed	Snr. Lecturer	Community / Preventive Paediatrics
16	Dr. B. Alex-Hart	FWACP	Snr. Lecturer	Community Paediatrics
17	Dr. T. Jaja	FMCPaed	Snr. Lecturer	Endocrinology
18	Dr. N. Paul	FWACP	Snr. Lecturer	Infectious Disease
19	Dr. Boma Okoh	FWACP/FMCPaed	Snr. Lecturer	Neurology/ Respiratory
20	Dr. I. Yarhere	FWACP	Lecturer I	Endocrinology
21	Dr. J. Okagua	FWACP	Lecturer I	Neonatology

Teachings are also carried out by the staff of the department in the Teaching Hospital which comprises 25 senior registrars, 14 registrars and variable numbers of house officers and nurse of all grades. Part time lecturers comprising of Lecturers in Orthopaedic Surgery, Paediatric Surgery, Psychiatry and Radiology are also involved in lecturing the students.

The Department also has non-teaching staff comprising one administrative officer, one Secretary, one clerical officer, one caretaker and a cleaner.

Mentorship

At the start of the programme, each student is assigned a mentor who follows up the academic performance and character molding of the student. The mentor tries to identify any problem that may affect the academic performance of the mentee and offers intervention/advice.

Teaching Aids In The Department

The Department has the following equipment for teachings:-

- One Television Set
- Projector and screen for presentations
- Sharp Photocopying Machine
- DVD Cassettes for Teaching
- LCD multiplier pole protector and screen in the year 5 class and public address system for student lectures.
- Photographs of various diseases conditions
- Side Laboratory with Microscope, Microhaematocrit Centrifuge and Reader
- Reagents for various tests and Slides
- X-ray viewing boxes in each of the wards and the clinics for Teaching

Recommended Textbooks

1. Paediatrics and Child Health in the Tropics
2. Diseases of Children in the Tropics by Jolly
3. Nelsons Textbook of Paediatrics
4. Diarrhoea Training Manual
5. Textbook of Clinical symptoms, Signs and laboratory parameters