

NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA



CURRICULUM FOR SUBSPECIALTY OF  
ENDOCRINOLOGY

FACULTY OF PAEDIATRICS

APPROVED BY THE SENATE ON 23<sup>RD</sup> JULY, 2022

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COLLEGE REGISTRAR

# NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

## ENDOCRINOLOGY SUB-SPECIALTY CURRICULUM FOR FACULTY OF PAEDIATRICS

### Objectives:

The objective of this curriculum is to train Paediatric Endocrinologists who will be able to practice in Nigeria and compete favourably globally.

The ultimate aim is to provide a broad and in-depth clinical training in the field of endocrinology, metabolism and clinical nutrition as it affects children and adolescents.

### 1.0 Clinical Objectives:

At the end of the training, the trainee will be able to

1. Demonstrate a high level of competence in managing endocrine disorders.
2. Perform stimulation and suppression tests
3. Interpret radiological imaging.
4. Undertake responsibility for patient and family education.
5. Carry out scientific research.
6. Teach medical students and residents effectively.

### 2.0 Competency-based educational goals:

#### 2.1 Medical Knowledge:

At the end of the training, the trainee should be able to demonstrate

1. A broad knowledge of endocrine and metabolic disorders.
2. The ability to formulate a care plan
3. A proper understanding of laboratory techniques including the basic science behind radioimmunoassay, ELISA and other diagnostic tests.
4. A clear understanding of the methodology of hormone assay and receptor activation.

#### 2.2 Curriculum Content Outline:

The trainee is expected to be familiar with the following endocrine and metabolic disorders. The components to be familiar with include pathophysiology, natural history, clinical and laboratory evaluation, therapeutic interventions, counselling and education of patients and their parents in the following disorders.

- a) Carbohydrate metabolism
  - i) Physiology of systemic glucose metabolism
  - ii) Hypoglycaemia in infancy

- iii) Diabetes mellitus
- b) Thyroid disorders
- i) Anatomy and physiology
  - ii) Thyroid hormone and receptors
  - iii) Congenital hypothyroidism
  - iv) Acquired hypothyroidism
  - v) Hyperthyroidism
  - vi) The infant of the mother with Graves's disease
  - vii) Thyroiditis
  - viii) Sick thyroid syndrome
- c) Pituitary Gland and Hypothalamus
- i) Neuroendocrine regulation of the anterior pituitary
  - ii) Neurohypophyseal function
  - iii) Anterior pituitary hormones
  - iv) Hypopituitarism
  - v) Hyperpituitarism
- d) Adrenal gland
- i) Biosynthesis and metabolism of adrenal steroids
  - ii) Adrenal insufficiency
  - iii) Congenital Adrenal Hyperplasia
  - iv) Cushing syndrome
  - v) Hyperaldosteronism
  - vi) Adrenal tumours
  - vii) Pheochromocytoma
  - viii) Premature adrenarche
  - ix) Adrenal incidentaloma
- e) Gonadal disorders
- i) Development and function of the gonads
  - ii) Abnormal sexual differentiation
  - iii) Hypofunction of the testes
  - iv) Hypofunction of the ovaries
  - v) Disorders of puberty
- f) Mineral metabolism
- i) Calcium
  - ii) Phosphorus
  - iii) Magnesium
  - iv) PTH

- v) Vitamin D
- vi) Calcitonin
- vii) Bone formation and associated disorders
- viii) Rickets
- ix) Hypophosphataemia

g) Growth

- i) Normal growth
- ii) Short stature
- iii) Tall stature
- iv) Obesity

h) Hormone assays and lipoprotein metabolism

- i) Molecular biology
- ii) Hormone receptors
- iv) Gastrointestinal hormones
- v) Hormone assays

### 3.0 Duration of Training and Postings

The training should last for a minimum of 24 calendar months after passing the Part 1 fellowship examination in Paediatrics of the National Postgraduate Medical College of Nigeria.

The following rotations are mandatory

- a) Chemical Pathology (2 months). During this posting, trainee is expected to have hands-on experience in hormonal assays, dynamic testing and interpretation of common endocrinologic tests.
- b) Radiology (1 month). During this posting, trainee is expected to participate in the preparation and interpretation of plain radiographs of the pituitary and thoracic inlet, CAT scans and MRI of the pituitary and adrenals as well as thyroid ultrasound scans.
- c) Ophthalmology (1 month). During this posting trainee is expected to gain proficiency in fundoscopy for diabetic retinopathy and to be involved in management of Graves ophthalmopathy.
- d) Neonatology (2months). The trainee is expected to have hands-on experience in managing metabolic problems in the neonate and cases of disorders of sexual differentiation.

e) 18 months in Paediatric Endocrinology

#### 4.0 Evaluation Methods

The trainee is expected to submit and be examined on a dissertation in any aspect of endocrinology. The trainee is also required to submit a completed log book of dynamic endocrinologic tests performed.

The trainee will also undertake oral examinations on endocrine physiology, biochemistry, pathology and pharmacology.