



In the name of God, the Most Gracious, the Most Merciful

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INTRODUCTION

The objective of the Postgraduate Medical Institute is to promote the Postgraduate Medical Education amongst the doctors by designing postgraduate medical studies programs in Balochistan keeping in view the provincial needs.

To achieve this objective the Postgraduate Medical Institute has developed structured training programs for specialist to be utilized in the health care facilities of tertiary and secondary levels. Beside clinical sciences the institute is also running Postgraduate training programs in Basic Medical Sciences.

The Postgraduate Medical Institute, Quetta possesses all the relevant learning facilities like qualified and well trained faculty, teaching hospitals, libraries, lecture halls, clinocopathological conference halls, laboratories, audiovisual aids, internet access, etc.

The Postgraduate Medical Institute is affiliated with University of Balochistan. The format of the examination has been improved with more valid objectives and reliable methods of assessment. To

ensure the fairness and transparency the institute has introduced the use of assessment forms for scoring of all components of clinical and oral examination.

This booklet contains the information for the candidate of Diploma in Paediatric (DCH) regarding eligibility criteria for admission to the course details of training program, Syllabus, Objective of the training program and format of examination.

ELIGIBILITY CRITERIA FOR DCH COURSE:

Requirements for Admission in Diploma in Paediatric (DCH) course are laid down by PGMIQ, for 2013-15 session.

- MBBS or equivalent qualification registered with the PMDC.
- One year House job in a teaching hospital six months of which should preferably be in the specialty of Paediatrics.
- Only those doctors are eligible who are in the active service of Government of Balochistan for a minimum period of two years.
- Selection through entry test and selection committee approval.

AIMS AND OBJECTIVES OF THE COURSE

AIM.

The aim of 2 years diploma programme in Child Health is to equip medical graduates with relevant professional knowledge, skills and ethical values to enable them to apply their acquired expertise at primary and secondary health care organizations as non-academic consultants.

OBJECTIVES

DCH training should enable a trainee to:

1. Take a comprehensive and pertinent history of a patient presenting with paediatric ailments
2. Perform detailed physical examination in a rational sequence that is both technically correct as well as methodical
3. Elicit physical signs without discomfort to the patient
4. Evaluate patients in the setting of outpatients' department, hospital wards, ICUs and emergency
5. Order a set of relevant investigations considering availability, diagnostic yield, cost-effectiveness, side effects and implications for management

6. Comprehend Community Indicators related to child health
7. Aware of and can apply national and international guidelines for treatment and assessment
8. Counsel patients and relatives in patient's preferred language in elective and emergency situations in keeping with the principles of good communication skills, empathy and empowerment of patients
9. Exhibit emotional maturity and stability, integrity, ethical values and professional approach, sense of responsibility in day-to-day professional activities
10. Take proper informed consent for physical examination and ensure confidentiality and appropriate environment for physical examination
11. Act as an independent specialist at Tehsil and District Headquarter Hospital
12. Show initiative and become life long self-directed learners tapping on resources including clinical material, faculty, internet and on-line learning programmes and library

TRAINING PROGRAM.

The duration of training program for Diploma in Paediatrics (DCH) is two years. The rotation will be Six months in different Paediatrics units. The knowledge and skill that the trainees are going to acquire here will help in managing your young patients and their guardians with highest levels of professional competence. In this duration the trainees are suppose to attend the formal lectures in the relevant Basic Sciences but simultaneously trainees start their clinical programme which is specially designed for acquisition of knowledge, attitude and skills in the relevant field.

This duration of two years is sub divided as follows:

1st Year

- Basic Sciences lectures.
- Rotation in different units of Paediatrics.
- Indoor teaching in every clinical unit.

2nd Year

- Clinical Residency Training in the unit of his/her own Supervisor.

Indoor Clinical Teaching will be scheduled and organized by every individual unit and be sent to Post Graduate Medical Institute, Quetta.

Following teaching modalities will be employed:

- Lectures
- Seminar Presentation and Journal Club Presentations
- Group Discussions
- Grand Rounds
- Clinico-pathological Conferences
- SEQ as assignments on the content areas and ward settings
- Attend genetic clinics and rounds for at least one month.
- Self study, assignments and use of internet
- Bedside teaching rounds in ward
- OPD & Follow up clinics
- Long and short case presentations

Timetable for the rotation.

It will be posted on the notice board outside the office to the head of the department and TMO's are expected to follow it. The attendance is mandatory for the OPD, ward, clinical meeting and tutorials in the seminar room and for the evenings. However TMO's are strongly recommended to attend the others meetings as and when posted on the bulletin boards.

Time table

08:30-10:00	theory Classes/small group discussions. Morning meeting
10:00-2:00	Word/ OPD/bed-side teaching
2:00-08:00	Evening duties

Activities.

a) Ward activities include.

1. Bed allocation for history taking and examination.
2. Case presentation and discussion every day from 11:00-12 noon the discussion include the following.
 - a) Clinical method.
 - b) Common themes like IMCI, Nutrition (PEM), Malaria ARI Diarrhea, etc
 - c) Discussions and case allocation for all the major problems prevalent in Pakistan.

b) Out patient activities.

1. Brief History talking
2. Presentations.
3. Discussion on diagnosis and management
4. Investigations.

c) Seminar for approximately 20 hours.

These will be combined for some diseases related to gynecology and obstetrics and other department. The conditions will be decided after the rotation in consultation with the respective department.

d) Clinical-pathological conference.

1. Special case presentation.
2. Observations.
3. Role playing in discussions.

SYLLABUS

PART-I SYLLABUS

ANATOMY

General Organization of the Body

1. Anatomical nomenclature
2. Terms of position
3. Divisions of the body according to the regions and organ systems
4. Detailed Anatomy of the organ systems, their blood supply, nerve supply, lymphatic drainage and important gross relations to other organs
5. Developmental Anatomy and associated common congenital abnormalities
6. Cell biology, cell cycle, cellular differentiation and proliferation.
7. Tissues of Body: Light and electron microscopic details, structural basis of function, regeneration and degeneration of the organ systems.

General Features of Human Development

1. Features of mitotic and meiotic modes of cell division. Genetic consequences of meiotic division.
2. Abnormal mitotic and meiotic divisions of clinical importance.
3. Gametogenesis: origin of germ cells.
4. Oogenesis: prenatal and postnatal development of ova.
5. Spermatogenesis: proliferation and maturation of male germ cells. Abnormal gametes, their clinical significance.

6. Ovulation, fertilization and the consequences of fertilization.

Early Embryonic Development:

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

Period of the Growing Fetus:

Various stages and salient features of the fetus development

Extraembryonic Membranes:

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

Development of the External Body Form:

Shaping of the head, neck, trunk and limbs.
Common developmental anomalies associated with this.

The Branchial Apparatus:

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

Factors known to be involved in the development of congenital anomalies. Concept of critical periods.

Structural and Functional Organization of the Tissues of Body
Classification of tissues and identification of various tissues in routine histological preparations under the light microscope.

- The Epithelial Tissue
- The Connective Tissue

- The Muscular Tissue
- The Neural Tissue
- The Nervous System
- The Brain
- Cerebral Cortex
- Limbic System
- Basal Ganglia
- Thalamus
- Hypothalamus
- Internal Structure of Cerebellum
- Spinal Cord
- Peripheral Nervous System
- Organs of Special Senses
- Gastrointestinal System
- Cardiovascular System
- Urinary System
- Respiratory System
- Larynx
- Bones
- Joints
- Muscles and Fasciae
- Body Cavities:

PHYSIOLOGY

Cellular organization, structure function correlations and physiological alterations in the endocrine organ systems of body Structural and Functional Organization of the Cells of the Body.

- Concept of cells as the structural, functional and genetic units of the body.

- Composition of protoplasm, division into cytoplasm and nucleus.
- Role of macromolecules in the structural organization of the cell.
- Cell components with their role in cell function.
- Diversity of cell morphology as related to the varied functional demands. Physical activities of the living cells, intracellular movements, cellular locomotion, endocytosis and exocytosis.
- Basic concepts of the principles of transport through cell membrane, membrane potential and action potential.
- The cell cycle and cell division.
- Energy balance, metabolism & nutrition
- Uses of cell and tissue cultures.
- DNA and RNA structure and protein synthesis.

Blood:

- General properties and composition.
- Structure, production, functions and fate of red blood cells, white blood cells and platelets.
- Structure, formation, functions, and fate of haemoglobin.
- Blood volume and principles of its measurement.
- Disorders of blood.
- Blood groups (ABO, Rh and other systems), blood transfusion and exchange transfusion.
- Precautions and hazards of blood transfusion.
- Plasma proteins, their production and functions.
- Diagnosis of various types of anaemias and leukaemias.
- Values of various components of blood in different age groups e.g. haemoglobin, WBCs, hormones etc.

- Interpretation of complete blood picture, haematological changes in infectious and non infectious diseases
 - Cardiovascular System:
 - Respiration:
 - Renal function:
 - Gastrointestinal function:
 - Central Nervous System
 - Autonomic Nervous System
 - Functional Aspects of the Nervous System
 - Muscle and nerve physiology.

BIOCHEMISTRY

- Membrane biochemistry and signal transduction
- Gene expression and the synthesis of proteins
- Bioenergetics; fuel oxidation and the generation of ATP
- Enzymes and biologic catalysis
- Tissue metabolism

VITAMINS

- Classification, components, sources, absorption and functions (physiological and biochemical role).

- Daily requirements, effects of deficiency and hypervitaminosis.
- Salient morphologic features of diseases related to deficiency or excess of vitamins.

MINERALS

- Sources of calcium, phosphorous, iron, iodine, fluorine, magnesium and manganese.
- Trace elements and their clinical importance.
- Absorption and factors required for it.
- Functions and fate.

METABOLISM

- Metabolic rate and basal metabolic rate
- Factors influencing metabolic rate, principles of measurement.

CARBOHYDRATES

- Classification and dietary sources.
- Digestion, absorption and utilization of dietary carbohydrates.

LIPIDS

- Classification of simple, derived and compound lipids.
- Dietary sources.
- Digestion, absorption, utilization and control.
- Fatty acid oxidation with steps involved.
- Ketogenesis and its significance.
- Lipotropic factors and their actions. Lipoproteins, types and importance.

PROTEINS AND AMINO ACIDS

- Classification and dietary sources of proteins.
- Digestion, absorption, utilization and control.
- Fate of amino acids.
- Urea formation with steps involved.
- Functions and effects of deficiency.

NUCLEOPROTEINS:

- Structure and metabolism.

PIGMENT METABOLISM

- Basic concept of endogenous and exogenous pigments.
- Causes of pigmentation and depigmentation.
- Disorders of pigment metabolism, inherited disorders, acquired disorders from deficiency or excess of vitamins, minerals, fats, carbohydrates, proteins etc.

BALANCED DIET

- Nutritional requirements at different ages
- Requisites of an adequate diet.
- Role of carbohydrates, fats, proteins, minerals, vitamins and water in diet.
- Principles of nutrition as applied to medical problems
- Biotechnology and concepts of molecular biology with special emphasis on use of recombinant DNA techniques in medicine and the molecular biology of cancer

PHARMACOLOGY

- Introduction to Pharmacology
- Receptors
- Mechanisms of Drug Action
- Pharmacokinetics
- Pharmacokinetic Process
- Absorption
- Distribution
- Metabolism
- Desired Plasma Concentration o Volume of Distribution
- Elimination
- Elimination rate constant and half life
- Creatinine Clearance
- Drug Effect
- Beneficial Responses
- Harmful Responses
- Allergic Responses
- Drug Dependence, Addiction, Abuse and Tolerance
- Drug Interactions
- Drug use in pregnancy and in children
- Autonomic Pharmacology

PATHOLOGY

Pathological alterations at cellular and structural level along with brief introduction of Basic Microbiology and Haematological pathology as related to medicine

Cell Injury and adaptation

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

Inflammation

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

Haemodynamic disorders

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

Neoplasia

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

Immunity and Hypersensitivity

- Immunity
- Immune response
- Diagnostic procedures in a clinical Immunology laboratory
- Protective immunity to microbial diseases
- Tumour immunology
- Immunological tolerance, autoimmunity and autoimmune diseases.
- Transplantation immunology
- Hypersensitivity
- Immunodeficiency disorders
- Immunoprophylaxis & Immunotherapy

Haematology

- Normal paediatric blood picture & variations in diseases

Microbiology

- A brief account of the classification of microorganisms.
- Role of Microbes In Various Paediatric Diseases
- Infection source

Bacterial Growth and Death

- Names, habitat, modes of transmission/infection, pathogenic mechanism and pathological changes

produced by bacteria, commonly causing paediatric diseases in Pakistan

- Gram staining and AFB staining, Culture of blood and fluid; details regarding methodology in collection, transportation and preservation.
- Culture media for common pathogens and methods of culture.
- Special culture media.
- Basis of sensitivity tests.

Fungal Diseases

- Names, general morphological features, and paediatric diseases produced by fungi commonly found in Pakistan, including dermatophytes, maduromycosis and opportunistic infections.

Important Parasites;

- Names and modes of infection of parasitic paediatric diseases commonly found in Pakistan including amoebiasis, malaria, leishmaniasis, ascariasis, cestodiasis, ankylostomiasis, giardiasis, hydatid disease and guinea worm disease.
- Important viruses
- Sterilization and disinfection
- Sterilization and disinfection
- Immunization
- Nosocomial infections
- Use of investigation and procedures in laboratory
- Sputum, urine, stool, cerebrospinal fluid (CSF), pus, aspirates etc.

PART-II SYLLABUS

Specific Objective

These are the competencies that trainee have to acquire by the end of the course. The following levels of cognition, Psychomotor skills and attitudes should be kept in mind while looking at the objectives of the training

1. Cognition

C1	Recognition
C2	Interpretation
C3	Problem Solving

2. Psychomotor Skill

P1	Observation
P2	Assist in the procedure/investigation
P3	Perform under supervision
P4	Perform independently

3. Attitudes (Affects)

With respect to the diseases listed below by the end of course you should be cognizant of and able to:

1. Define all problems listed in a scientific manner and with logical reasoning with clear understanding of their effect on human body systems (CI).
2. Discuss their causes (CI).
3. Identify these Diseases through their signs and symptoms (CI).
4. Explain their differential diagnosis with logical reasoning (CI).

5. Request and be able to interpret relevant investigation (C2).
6. Perform relevant problem related procedures.
7. Prescribe relevant Drugs for Pediatric care (C3).
8. Identify the side effects and implications of Drugs related to common Pediatric problems.
9. Counsel Parents regarding diagnosed relative Pediatric problem (P2).
10. Define neonatal, prenatal periods and prematurity (C1)
11. Examine a normal newborn (including reflexes) (P4).
12. Explain the principles of and assist in the care for a newborn and a premature newborn (C3 P2).
13. Define LBW,IMR,NNMR,PNN, crud birth rate (1);
14. Describe causes of high infant mortality in Pakistan and possible solutions(C2).
15. Discuss immunization EPI program in Pakistan comparison with other countries (C2)
16. Identify new vaccines and their indications e.g. Hepatitis B, typhoid, Haemophilus Influenza and meningococcal (C1).
17. Discuss special problems of preterm neonates and outline basic management inside the Hospital and at home.
18. Detect common malformations and birth defects e.g. talipes, dislocation of hip joint, cardiac murmurs and trauma.
19. Discuss about the advantages of breast –feeding, problems of bottle feeding and counseling mothers with emphasis on promotion of breast-feeding soon after delivery.

4. Cognitive and psychomotor skills

1. Neonatal resuscitation at primary care level and also in the community (including APGAR score)(C2 P3)
2. Start I/V line in a severely dehydrated patient (P3)
3. Observe the echo being done (P1).
4. Observe ultrasound of Brain done in a neonate (P1)
5. Interpret the chest X-Ray under supervision (C2 P1)
6. Perform and interprets an ECG (C2 P3)
7. Pass a Nasogastric tube in a newborn, toddler, child (P3)
8. Pass a catheter in a child who has not passed urine(P2)
9. Drawing a sample of blood for investigations (P2)
10. Observe the following (P1)
 - Lumber Puncture being done
 - Bone marrow examination
 - Supra-Pubic Puncture
 - Sub dural tap
 - Thoracocentesis
 - Pericardiocentesis
 - Liver Biopsy
 - Renal Biopsy
11. Counsel mother independently with respect to the following. (P3)
 - a. Breast-Feeding and complementary feeding.
 - b. Feeding toddlers and young children.
 - c. Cleanliness and hand washing.
 - d. Avoidance of bottle and feeding cans.

- e. Drug compliance for various Diseases.
- f. Avoidance of self- medication particularly unnecessary anti biotic in Diarrhea and reparatory infections.

Special Skills:

The students should be able to;

- 12. Asses and manage a child up to 5 years of age using the IMCI checklist (C2 P4)
- 13. Counsel mothers of children under 5 years of age using IMCH mothers card.(P4)

5. The conditions that you should Acquire competence in are:

5.1 Growth and development

Problems

Diseases/Conditions

Short stature

Constitutional delay genetic short stature malnutrition
Endocrine disorders like; Growth hormone deficiency and Hypothyroidism
Chronic diseases like malabsorption, chronic cardiac respiratory and renal problems

Tall stature

Familial
Precocious puberty
Obesity
Chromosomal abnormalities like; Klinefetter

5.1 Specific Required skills

5.1.1.1 Clinical

- 1. Assessment of weight with normal values at different ages (C2 P2)
- 2. Competent to use different types of weighing skills (P4)

3. Measurement of length/height be infentometer and measuring tape with occipito-frontal circumference (OFC) with interpretation (C2P4)
4. Measurement of occipito-frontal circumference (OFC) with interperetation C2P4)
5. Measurement of mid-upper-arm circumference (MUAC) with inference (C2P4)
6. Plotting weight ,hieght and OFC on the growth chart (C2P4)
7. Assessment of nutritional history family history of growth problem (C2P4)
8. Assessment of chronic illnesses (C2P4)
9. Assessment of parental height and stages of puberty (C2P4)
10. Counsel mothers regarding dietary management (P4)
- 11.

5.1.2 Investigations:

- 1) Xray to determine bone age(C2P3).
- 2) Complete blood picture, ESR, X-ray chest ,Urine analysis.
- 3) Renal function tests, cardiac evaluation, tests for malabsorption(C2P3).
- 4) Hormone assays for thyroid hormones , growth hormones cortisol levels and testosterone(C2P2)

5.2 Neonatology

Problems

Normal newborn
Low birth weight

Diseases / Condition

Prematurity
Small for dates.

Malformations and birth Defects.

Complications of prematurity
Clubfeet
Meningo-myelocele.
Microcephaly
Hydrocephalus
Mid line anomalies
Diaphragmatic hernia.
Umbilical hernia and Omphlocele.

Birth trauma

Genital anomalies.
Dislocation of hip.
Erb,s and Klumpke's paralysis.

Fever, Lethargy and refusal to feed

Cephalohaematoma.
Fracture of Clavicle ,Humerus and femur.
Umbilical cord sepsis
NN sepsis.

Convulsions

Tetanus.
Meningitis.
Pneumonia.
Diarrhoea.
Asphyxia.
Intracranial bleeding.
Tetanus.

Respiratory Distress

Meningitis.
Hypoglycemia.
Hypocalcaemia.
Hypomagnesaemia.
Meconium aspiration.
IRDS Sysndrome in preterm.

Neonatal jaundice

Physiological Jaundice.
Rh incompatibility.
ABO incompatibility.
Minor group
incompatibility.
Vriggler Najjar syndrome.
Gilbert Syndrome.
Biliary atresia.
Neonatal hepatitis.
Hemolysis
Haemorrhagic Disease of
New borns.

Pallor/Bleeding

5.2.1 Specific Required Skills

5.2.1.1 Clinical.

- 1) Identify and interpretation of APGAR score (P4).
2. Assess relative risk for neonate by taking a good obstetric and antenatal history (C2).
3. Examination of neonate with ability to elicit common normal neonatal reflexes and identify.
4. Estimation of Gestational age in preterm. (C2P4)
5. Assess neonate of level of jaundice and pallor (C2P4)
6. Counsel mothers with special reference to genetic counseling (P3)

5.2.1.2 Investigations

1. Hematological data in neonate (C2)
2. Interpret blood groups for incompatibility (C2P2)
3. Con's test direct and indirect (C3)
4. Blood culture (C2P2)
5. X-ray Chest (C2)
6. ABG's (C2P2)
7. Ultrasound of brain (C2P1)

5.2.1.3 Procedure.

1. Draw blood of a newborn (P2)
2. pass a nasogastric tube
3. Observe a lumbar puncture (P1)
4. Give an intravenous / intramuscular / subcutaneous injection to a new born (P3)
5. Neonatal ventilation (P1)
6. Endotracheal intubation (P2)
7. Stomach wash in neonate (P2)
8. Incubator care of preterm (P1)

5.3 Infectious diseases

Problems	Conditions / disease.
Rash	Chikenpos Rubella Other exanthemas and erythemas
Fever	PUO (approach to diagnosis)
Miscellaneous	Enteric fever
Problems refer to respective Systems given below	Whooping cough Tetanus Poliomyelitis Mumps Tuberculosis Septic arthritis ostemyelitis

5.4 G.I infections

Problems	Conditions /Disease
Acute and Chronic diarrhea and vomiting	Infectious diarrhea Malabsorption Syndrome
Dehydration	Fluid and electrolyte therapy

Jaundice	Acute hepatitis Chronic live disease metabolic disorders affecting liver
Bleeding per rectum	Dysentery Intussusceptions Systemic disorder

5.5 Respiratory System

Problems	Conditions
Sore throat	Pharyngitis Tonsillitis Diphtheria Stomaatitis
Earache	Otitis media Otitis exterma
Stridor	Epiglottitis Croup
Rhinitis and Cough or without fever	Nasopharyngitis Tuberculosis allergic conditions
Respiratory distress with or without wheeze	Bronchiolists Pneumonia Foreign body Bronchial Asthma Pneumothorax Pleural effusion Respiratory

5.5.1 Specific Skills Required

5.5.1.1 Examination (C2P4)

5.5.1.2 Procedures:

1. Throat swab
2. aspiration of plural fluid (P1)

3. Physiotherapy
4. Investigation
5. X-ray chest (C2)
6. ABG's (C2)
7. Sputum for AFB, culture and sensitivity (C2)
8. Gram staining of smear (P3)

5.6 Neurology

Problems	Conditions
Convulsions	Febrile fits CNS infections Seizure disorders Metabolic
Development delay	Cerebral palsy mental retardation Craniosynostosis hydrocephalus Brain tumors Head injury Metabolic involving CSN
Headache	CNS infections Migraine Brain tumors
Paralysis and paresis	Polimyelitis Intracranial bleed GBS Spinal Peripheral neuropathies

5.6.1 Specific Skills Required

5.6.1.1 Examination (C2P1)

5.6.1.2 Procedures:

- Lumber puncture (C2P1)
- Physiotherapy (P20)

5.6.1.6 Investigations:

- X-ray skull (C2)
- X-ray spine (C2)
- CSF examination (C2)
- CT scan 9C2P1)
- MRI (C1)
- EEG (C1P1)
- EMG (C2P1)
- Nerve conduction studies (C1)

5.7 Endocrinology

Problems	Conditions / Diseases
Short stature	Constitutional delay in growth Familial short stature Growth hormone deficiency Hypothyroidism Syndromes Turner Syndrome Achondroplasia Spinal dysplasias
Obesity	Simple obesity Cushing's syndrome Hypothyroidism Prader willi syndrome Laurence moon Biedel syndrome
Ambiguous Genitalia	Congenital adrenal hyperplasia Adrenal tumors Gonadal tumors
Precocious puberty	Congenital adrenal hyperplasia Adrenal tumors Gonadal tumors. Adrenal tumor

Polyuria, impaired
conscious status
weight loss

Juvenile diabetes mellitus

5.7.1 Specific Skills Required

5.7.1.1 Clinical Skills:

1. Anthropometric Date (CP3)
2. Approach short stature (C3)
3. Sexual maturity rating (C2P3)

5.7.1.2 Procedures:

1. Insulin tolerance test in paediatrics (C2)
2. Dehydration test (C2)

5.7.1.3 Lab skills:

1. Thyroid function test in paediatrics (C2)
2. Insulin stress test (C2)
3. Gn-Rha stimulation test (C2)
4. Diurnal cortisol level (C2)
5. Dexamethasone suppression test (C2P3)
 - Overnight
 - Low dose
 - High dose
6. ACTH level (C2)
7. PRA (C2)
8. Serum and urinary osmolality (C2)
9. 17 OH progesterone level (C2)
10. Hydroxylase level (C2)
11. Testosterone level (C2)
12. X-ray wrist for bone age (C1)

5.8 Cardiology

Problems	Conditions /Disease
Cyanosis	Fallot's tetralogy Transposition of great vessels Pulmonary stenosis.
Dyspnoea with feeding difficulties, Exercise intolerance	VSD Bacterial endocarditis and rheumatic heart disease
Arthritis	Rheumatic fever Rheumatoid arthritis

5.8.1 Specific Skills Required

5.8.1.1 Clinical:

1. BP measurement in children (P4)
2. X-ray chest (C2)
3. ECG changes with age
4. Echocardiography
5. ABG

5.9 Hematology

Problems	Conditions /Disease
Pallor	Iron deficiency Thalassaemia Acute lymphatic leukemia Aplastic anemia congenital and acquired
Lymphadenopathy	Leukemia Lymphoma
Ecchymosis, Petechiae or excessive bleeding	ITP Coagulation disorders Aplastic anaemia

5.9.1 Specific Skills Required

5.9.1.1 Lab Skills:

1. Identify normal formed elements in blood
2. Identify Blast cell in film (C1)
3. Identify iron deficiency from peripheral blood smear (C1)
4. Identify sickle cells and target cell in blood film (C2) PT (C2)
5. PT (C2)
6. APTT (C2)
7. BT (C2)
8. CT (C2)
9. Platelet count (C2)
10. Coombs test (C2)

5.10 Nephrology

Problems	Conditions
Frequency of urine, burning micturation urinary retention	UTI Posterior urethral valve
Haematuria, oliguria and edema	Acute glomerulonephritis Nephrotic syndrome
Hypertension	AGN Renal vascular disease
Mass abdomen	hydronephrosis Wilms tumor

5.10.1 Specific Skills Required

5.10.1.1 Clinical Skills:

1. Palpation of the kidney bimanually
2. Measurement of blood pressure and its interpretation

5.10.1.2 Procedures:

1. Urine testing 9C2P4)
2. Ultrasound abdomen (C1)
3. X-ray abdomen (C2)
4. IVP (C2P1)
5. MCUG (C2P1)

5.10.1.3 Lab skills:

1. DMSA scan (C2P1)
2. DTPA SCAN (C2P1)
3. Calculation of GFR in children from creatinine (P3)
4. ABG'S (C2)
5. Serum electrolyte (C2)

5.11 Genetics

Problems	Conditions
Dysmorphism	Down's syndrome Turner syndrome Klinefelter syndrome Achondroplasia

5.12 Collagen vascular disorders

Problems	Conditions
Chronic arthritis	Juvenile rheumatoid arthritis
Erthematous rash	SLE

Miscellaneous conditions to be included in the Paediatric clerkship

- a) General management of poisoning in children and account on common poisonings e.g. aspirin, kerosene oil, morphine and iron.
- b) Common accidents among children drawing and electrocution and electrocution.
- c) Metabolic disorders e.g. phenylketonuria, congenital adrenal hyperplasic.

EXAMINATION / EVALUATION.

The Examination of Diploma in Paediatrics (DCH) will comprise of two parts. The format of examination shall be as follows:-

Eligibility to appear in Part – I Examination

- (a) Application by the candidate recommended by the Supervisor.
- (b) Certificate by the Supervisor, countersigned by Dean PGMI that candidate has regularly attended at least 75% of the basic science lectures, demonstration, tutorials, and practical or clinical work both in-patients and out-patients of Part-I education.

Part I Examination:

At the end of 1st Calendar Year, the Part-I examination will comprise of Basic Sciences Education papers relevant to the specialty of Paediatrics of only theory MCQ types as under:

Paper I

Anatomy, Pharmacology 100 Marks
MCQ's 100 Questions (One Best Type)

Paper II

Physiology, Bio-Chemistry & Pathology 100 Marks
MCQ's 100 Questions (One Best Type)

Total= 200 Marks

Eligibility to appear in Part - II Examination

1. The candidate has completed the prescribed period of training of the course.
2. The candidate has passed the Intermediate Evaluation (Part-I Examination).
3. Certificate by the Supervisor that the Log Book of candidate is complete in all aspects and is signed by the Co-Supervisor and the Supervisor. The original Log Book will be presented by the candidate during Practical / Oral examination.
4. The application form for Part-II examination with recommendation of the Supervisor.

Part II Examination:

At completion of training, papers will comprise of Paediatrics Examination, consist of theory (MCQ & Short Essay) & clinical assessment.

Theory Examination:

Paper-I:-

MCQ's 100 Questions (One Best Type) 100 Marks

Paper-II:-

Short Essay 10 Questions (Ten Marks Each) 100 Marks

Total = 200 Marks

Note: - Candidates who pass theory examination are allowed to appear in viva Voce / practical examination.

Clinical Examination:-

Long Case	One Case	50 Marks
Short Case	Four Cases	80 Marks
Table Viva		60 Marks
Internal Evaluation		10 Marks

Total = 200 Marks

It is compulsory to pass all the component parts of the each subject separately. In case of failure to obtain 50% marks in any of components of examination candidate will have to appear in all components of examination again. In the remaining prescribed three attempts allowed.

The panel of examiner will be as follows:-

External Examiner **One**

(To be selected by University of Balochistan from the list of three examiners available)

Internal Examiner **Two**

(From the faculty of BMC)

LOG BOOK.

Log book should include adequate number of diagnostic and therapeutic procedures observed and performed the indications for the procedure, any complications and the interpretation of the results, routine and emergency management of patients, case presentations in CPCs, journal club meetings and literature review.

Log Book will have 5% weightage in final examination.

Proposed Format of Log Book is as follows:

Candidate's Name: _____

Roll No. _____

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

PROCEDURES PERFORMED

S #	Date	Name of Patient, Age, Sex & Admission No	Diagnosis	Procedure Performed	Supervisor's Signature

EMERGENCIES HANDLED

S #	Date	Name of Patient, Age, Sex & Admission No	Diagnosis	Procedure / Management	Supervisor's Signature

CASE PRESENTED

S #	Date	Name of Patient, Age, Sex & Admission No	Case Presented	Supervisor's Signature

SEMINAR / JOURNAL CLUB PRESENTATION

S #	Date	Topic	Supervisor's Signature

EVALUATION RECORD

(Excellent, Good, Adequate, Inadequate, Poor)

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

S #	Date	Method of Evaluation (Oral, Practical, Theory)	Rating	Signature

- Log Book will be signed by the supervisor / Co- Supervisor regularly.
- Log Book completion is must before the candidate Final examination forms are signed.
- Log Book should be used in Practical / Clinical Examination at viva voce table or at TOCS cabin.

LEAVE.

The postgraduate trainee medical officers will be entitled to avail the leave as per S&GAD and postgraduate studies schedule, after the recommendation of their supervisor and approval of the Registrar PGMI, Quetta.

RECOMMENDED BOOKS.

- Paediatric Association.
Textbook of Paediatrics of Pakistan (latest Edition).
- Nelson. Essentials of Paediatrics (Latest Edition).
- Current Paediatrics, Diagnosis and Treatment. 6th Ed.
- Lissauer T. and Clayden G.
Illustrated Textbook of Paediatrics. 2nd Ed.
- Hull D. Hospital Paediatrics (Latest Edition)
- Khan S. R. Hand Book of Clinical Paediatrics (Latest Edition).
- Rana M. H., Ali S. Mustafa M. A Handnook of Behavioural Sciences for Medical and Dental Students. Lahore: University of Health Science; 2007.
- Fathalla M. F. and Fathalla M. M. F. A Practical Guide for Health Researcher. Cairo: World Health Organization; 2004.

JOURNALS:-

- Pakistan Paediatrics Journal.
- Archives & diseases of childhood.
- Paediatrics infection diseases Journal
- The Paediatrics Clinic of North America.
- The Journal of Paediatrics.
- The Journal of Clinical Paediatrics.
- A.M.J Diseases childhood.
- Indian Paediatrics Journal.

TRAINING SITE

- Post Graduate Medical Institute Quetta.
- Bolan Medical Complex Hospital Quetta.
- Sandeman (Prov:) Teaching Hospital Quetta.

FACULTY MEMBERS.

PROFESSOR:

Prof. Abdul Bari.	MBBS, MCPS, FCPS.
Prof. Bashir Ahmed Kakar.	MBBS, MCPS, DCH, M.D.
Prof. Asmatullah Durrani.	MBBS, FCPS.
Prof. Dilshad Qureshi.	MBBS, FCPS.

ASSOCIATE PROFESSOR:

Dr. Mobin-ur-Rehman	MBBS, FCPS
Dr. Habib Ullah	MBBS, FCPS.

ASSISTANT PROFESSOR:

Dr. Mushtaq Jaffar	MBBS, MCPS,FCPS
Dr. Riffat Khalid	MBBS, MCPS, FCPS
Dr. Rizwana Tareen	MBBS, MCPS,FCPS
Dr. Surriya Jabeen	MBBS, FCPS
Dr. Shamayal Mandokhail	MBBS, FCPS
