



***STUDY GUIDE***  
***FOR***  
***UNDERGRADUATES (MBBS) CLINICAL ROTATION***  
***PEDIATRIC DEPARTMENT***

***MEDICAL TEACHING INSTITUTION***  
***BACHA KHAN MEDICAL COLLEGE***  
***MARDAN MEDICAL COMPLEX MARDAN***



## Study Guide

Pediatrics is one of the most sensitive and overburdened fields all over the world. Pediatric care focuses on growth and development, nutrition, prevention of diseases, and treatment of illnesses in children.

As discussed in this guide, medical graduates should have a sound knowledge of the pathogenesis, clinical presentation, investigations, and diagnosis of common pediatric diseases. This basic knowledge will help the students integrate these skills in their clinical practice for timely diagnosis and successful management of patients.

Our aim is to produce safe primary health care doctors, who are the backbone of the health system and they should know the management of children with common pediatric diseases. Achievement of this objective requires knowledge, skills, and attitudes blended in a carefully planned balanced curricular unit. This study guide accommodates specified content related to common pediatric diseases, with learning strategies and assessment methodologies; all corresponding to each other in an integrated manner.

This pediatric teaching program offers all MBBS students an opportunity to develop clinical skills that are required by a clinician to diagnose a patient with a pediatric problem in the community. It is believed that after attending the clinical program a student will be able to meet the expectations of the community, institution, and PMDC.

This document will provide you with the detailed syllabus, taught in all three years, the methodologies used for the teaching, and the assessment methods (timings and the structure of the assessment).

On behalf of my faculty, I welcome you all and wish you a successful journey in pediatrics and life ahead.

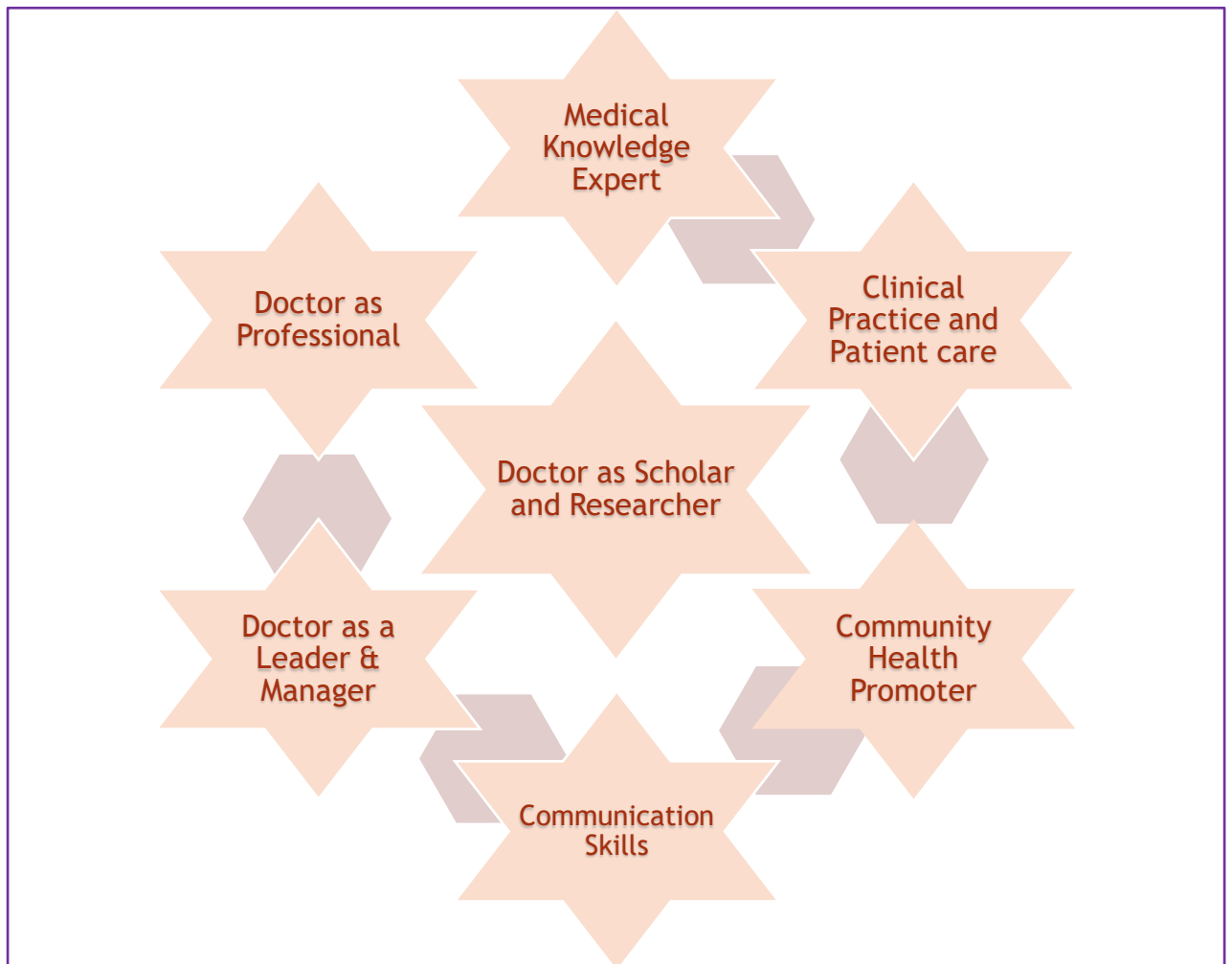
**Head of Pediatric Department**

**Prof. Dr. Muhammad Fazil**

## The mission of the Pediatric Department

*Strengthen the practice of child health care and well-being by flourishing a knowledgeable, skillful, diagnostic, and research-oriented children's health care center in the region.*

## PMDC Seven Star Doctor



## Pediatric Rotation Details

Third Year MBBS	IV Year MBBS	Final Year MBBS
Total Duration: 2 weeks. Contact hours per day: 2hrs Number of students per batch:	Total Duration:1 month. Contact hours per day:2hrs Total Contact Hours: 40hrs. Number of students per batch:	Total Duration: 1 month. Contact hours per day: 7 hours per day + 6 hours every Saturday. Number of students per batch:
<b>20</b> contact hours	<b>40</b> contact hours	<b>164</b> contact hours
Total contact hours during pediatric rotation: <b>224</b>		

## Resource Persons Facilitating Learning



### Staff Details

#### Facilitators responsible for the third Year MBBS:

- Dr.Kiramattullah (Assistant professor)
- Dr.KhalilAhmad (Assistant professor)
- Dr.AbbasAli Khan (Registrar)

#### Facilitators responsible for 4th Year MBBS:

- Dr. Kiramatullah (Assistant professor)
- Dr. Khalil Ahmad (Assistant professor)

**Facilitators Responsible for Final Year MBBS:**

Dr Muhammad Fazil (Professor and Chairman of pediatrics)

Dr. Muhammad Qasim Khan (Associate Professor)

**Sops for the Students during Pediatric Rotation**

- Every student should follow a proper dress code (white coat), follow appropriate timings, and bring all the gadgets required during pediatric rotation.
- Every student in a batch will be allotted a bed on the first day of the rotation. He/She would be responsible for the bedside case presentation.
- Students will be monitored by the postgraduate residents on duty. They should present their histories daily.
- Students should respect patients and all the supporting staff present in the hospital.
- Students' attendance will be maintained in a logbook. Likewise, attendance will be logged in during the first 15 minutes and any logouts before the end of the session will be recorded as absent.
- Students failing to submit their assigned tasks will be considered ineligible to appear in the ward test.

## General Learning Outcomes:

At the end of the pediatric rotation, undergraduate medical students should be able to:

### *COGNITIVE DOMAIN*

- Identify symptoms of Pediatric disease.
- Elaborate the history of a patient presenting to the pediatric indoors and outdoors, with different complaints
- Prescribe relevant investigations.
- Interpret laboratory data to arrive at a diagnosis.
- Compose a management plan for pediatric diseases.
- Recognize severe signs of the disease so as to appropriately refer children with severe illness to concerned specialists/hospitals.

### *PSYCHOMOTOR DOMAIN*

- Acquire a high level of proficiency in history taking from a parent or child. Or
- Present detailed history of a patient presenting to pediatric indoor and outdoor, with different complaints
- Demonstrate general physical examination (GPE) of a pediatric patient
- Perform examination of a normal newborn baby and healthy child.
- Demonstrate disease-specific relevant examination independently (can pick red flags)
- Advise appropriate nutritional measures for healthy and sick children (Breastfeeding, avoidance of bottles, proper weaning).
- Perform anthropometric measurements independently and plot them on the growth chart.
- Measure blood pressure, using an age-specific cuff.
- Relate relevant procedures done in a pediatric Unit.

### *AFFECTIVE DOMAIN*

- Display empathy and care towards patients.
- Counsel the parents on health promotion and disease preventive strategies for the child e.g., immunization procedures; and hand washing.
- Discuss with the patient and parents regarding the disease, its complications, and management.

## **Weekwise Themes during III, IV, and Final Year MBBS**

### **Themes during III Year MBBS**

Week 1	History taking & General Physical Examination
Week 2	History taking & General Physical Examination

### **Themes during IV Year MBBS**

Week 1	General Physical Examination & Abdominal Examination
Week 2	Respiratory Examination & Neonatal Examination
Week 3	Neurological Examination
Week 4	Cardiovascular Examination & Locomotor Examination

### **Themes during Final Year MBBS**

Week 1	Blood and Musculoskeletal System
Week 2	Cardiopulmonary and Renal System
Week 3	Endocrine and Nervous System
Week 4	Gastrointestinal system plus fluids and electrolytes.

# 3rd-year MBBS



**Week 1**

**History taking & General physical examination**

Topic	Learning Objectives	Instructional Strategy
Orientation to the pediatric rotation.	Discuss the SOPs to be followed by the students during pediatric rotation	Interactive Lecture.
Communication skills	Express rapport building with the patient. Demonstrate active listening skills. Take informed consent. Counsel an uncooperative parent/child.	Role-play.
Basic steps of history taking	Explain the basic steps of history taking.	Interactive Lecture.
History of an acute illness	Elaborate the history of a patient presenting with an acute illness (HOPI).	Interactive Lecture.
General physical examination	Demonstrate general physical examination in a methodical sequence.	Demonstration followed by hands-on practice by the students.

**Week 02**

**History taking & General physical examination**

Topic	Learning Objectives	Instructional Strategy
Symptomatology	Elaboration of different presenting symptoms in the history of present illness.	Interactive Lecture
History of chronic diseases	Follow chronological order while taking the history of present illness (HOPI) in chronic diseases.	Interactive Lecture.
Modification of history	Modify different headings of the history according to the nature of the disease.	Interactive Lecture.
History presentation	Present a case history at the bedside	Bedside case presentation.

**Ward Test:**

On the last day of ward rotation, a ward test will be conducted at the bedside

**SDL (self-directed learning):**

The students should study the EPI schedule and Developmental milestones

# 4th-year MBBS

**WEEK 01**

**GENERAL PHYSICAL EXAMINATION  
ABDOMINAL EXAMINATION**

Day	Topic	Instructional Strategy	Objectives
1.	Revision of pediatric history taking	Interactive Lecture.	Revise the basic steps of pediatric history taking.
2.	General Examination and Anthropometry Physical and	Bedside teaching	Perform GPE and Anthropometry in standard sequence under direct supervision.
3.	Approach to abdominal examination and relevant GPE	Bedside teaching	Explain the theoretical background, rationale, steps, sequence, and interpretation of abdominal examination and relevant GPE
4.	Approach to abdominal examination and relevant GPE	Bedside presentation.	Perform abdominal examination and relevant GPE in a proper sequence under direct supervision.
5.	Present the findings of an abdominal examination and relevant GPE	Bedside Presentation.	Present the findings of an abdominal examination and relevant GPE in a proper sequence.

**WEEK 02**

**RESPIRATORY EXAMINATION  
NEONATAL EXAMINATION**

Day	Topic	Instructional Strategy	Objectives
01	Respiratory system examination and relevant GPE	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of respiratory examination and relevant GPE
02	Approach to respiratory system examination and relevant GPE	Bedside teaching	Perform respiratory examination with relevant GPE in a proper sequence.
03	Presentation of the findings of the respiratory examination and relevant GPE	Bedside case presentation.	Present the findings of the respiratory examination and relevant GPE in a proper sequence.
04	Neonatal examination	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of neonatal examination
05	Approach to neonatal examination	Bedside teaching	Perform neonatal examination in head-to-toe sequence.

**WEEK 03**

**NEUROLOGICAL EXAMINATION**

Day	Topic	Instructional Strategy	Objectives
01	Neurological system examination and relevant GPE	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of the motor system, sensory system, cerebellar signs, and higher mental functions examination and relevant GPE
02	Approach to neurological system examination and relevant GPE	Bedside teaching	Assess a child's motor system, sensory system, cerebellar signs, and higher mental functions in a proper sequence.
03	Approach to neurological system examination and relevant GPE	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of the cranial nerves examination, Glasgow coma scale (GCS) signs of meningeal irritation (SOMI) examination, and relevant GPE
04	Approach to neurological system examination and relevant GPE	Bedside teaching	Examine all the accessible cranial nerves. Assess a child's consciousness level using the Glasgow coma scale (GCS). Elicit signs of meningeal irritation(SOMI) in a child with meningitis.
05	Floppy baby examination	Bedside teaching	Perform floppy baby examination through 180-degree maneuvers

**WEEK 04**

**CARDIOVASCULAR EXAMINATION**

**LOCOMOTOR EXAMINATION**

Day	Topic	Instructional Strategy	Objectives
01	Approach to the cardiovascular system examination and relevant GPE	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of the cardiovascular examination and relevant GPE
02	Approach to cardiovascular system examination and relevant GPE	Bedside teaching	Demonstrate the cardiovascular system examination and relevant GPE in a proper sequence.
03	Approach to locomotor system examination and relevant GPE	Interactive Lecture.	Explain the theoretical background, rationale, steps, sequence, and interpretation of the locomotor system examination and relevant GPE
04	Approach to locomotor system examination and relevant GPE	Bedside teaching	Demonstrate the locomotor system examination and relevant GPE in a proper sequence
05	<b>WARD TEST</b>		

**SDL**

The students should learn:

- Growth /centile charts of height, weight, and head circumference
- Normal values of height, weight, and head circumference according to age
- Normal values of Blood pressure according to age

# Final year MBBS



**WEEK 01**

**Blood and Musculoskeletal System**

Subject	Theme	Domain	Learning objective
<b>Blood and Immunology System</b>	Pallor Nodular swellings Bleeding	Cognitive Psychomotor	Formulate the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with pallor, nodular swellings, and bleeding
		Affective	Counsel the parents of a child with ALL and Thalassemia major.
<b>Musculoskeletal System</b>		Cognitive <sub>+</sub> Psychomotor	Propose the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with a Musculoskeletal problem
		Affective	Counsel the parents of a child with JIA.

**WEEK 02**

**Cardiopulmonary and Renal System**

Subject	Theme	Domain	Learning objective
<b>Cardiopulmonary System</b>	Tachycardia Shortness of breath Fever and Cough Cyanosis and Clubbing	Cognitive+ Psychomotor  Affective	Negotiate the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with Shortness of breath, Fever, Cough, Cyanosis, and Clubbing.  Counsel the parents of a child with congenital heart disease.
<b>Renal System</b>	Facial Swelling Scanty Urine Acidotic breathing	Cognitive+ Psychomotor  Affective	Compose the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with CKD, Nephrotic syndrome, and AGN  Counsel the parents of a child with Nephrotic syndrome.

**WEEK 03**

**Endocrine and Nervous System**

Subject	Theme	Domain	Learning objective
Endocrine System	Tall/short stature Polyuria/ polydipsia Ambiguous genitalia	Cognitive+ Psychomotor	Predict the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with Tall/short stature Polyuria/ polydipsia and Ambiguous genitalia.
		Affective	Counsel the parents of a child with CAH and T1DM.
Nervous System	Loss of consciousness and Fits Micro and macrocephaly Lower limb weakness	Cognitive+ Psychomotor	Design the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting with Loss of consciousness and Fits, Micro and macrocephaly, and Lower limb weakness.
		Affective	Counsel the parents of a child with Cerebral Palsy and TBM.

**WEEK 04**

**Gastrointestinal system plus fluids and electrolytes.**

Subject	Themes	Domain	Learning objective
GIT and Hepatobiliary System	Epigastric Pain and constipation Pain Abdomen and Diarrhea Jaundice	Cognitive+ Psychomotor	Plan the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting Epigastric Pain and constipation, Jaundice,Pain Abdomen,and Chronic Diarrhea.
		Affective	Counsel the parents of a child with CLD and NEONATAL CHOLESTASIS.
Fluids and electrolyte imbalance ABGs	Hypo and Hyponatremia Hypo and Hypokalemia Acidosis Alkalosis	Cognitive+ Psychomotor	Generate the differential diagnosis, diagnostic workup, and therapeutic approaches to a pediatric patient presenting withFluid and electrolyte imbalance and abnormal ABGs.
		Affective	Counsel the parents of a child with RTA and Barter syndrome.

### Assessment Plan

The students will be evaluated during the rotation (formative) and at the end of the rotation by a ward test (Summative).

#### Weightage scheme

Formative assessment (20%)	End of Ward Exam (80%)	Total
		100

#### Formative Assessment

- Attendance
- Active participation in group tasks
- Bedside case presentations

#### Summative Assessment

- TOACS/ OSCE
- OSLER (OBJECTIVE STRUCTURE LONG EXAMINATION RECORD)

#### SDL

- Breaking the bad news.
- Take consent for common pediatric procedures.
- Neonatal resuscitation.

## **Learning Resources:**

### **List of Textbooks**

- Nelson Textbook of Pediatrics, 21<sup>st</sup> Edition
- Basics of pediatrics by Dr. Pervez Akbar
- Bedside techniques
- Macleod's clinical Examinations

### **Reference books.**

- Zitelli and Davis' Atlas of Pediatric Physical diagnosis
- Current pediatrics
- Textbook of Neonatal Resuscitation (2011)
- Pediatrics in review by American Academy of Pediatrics
- 100 Cases in Pediatrics.
- Clinical Decision Making: Case Studies in Pediatrics
- Textbook of Neonatal Resuscitation, 8th Edition
- Wyne haris pediatric examination.

## Feedback from the students and teachers

### Feedback from the students

Questions	Agree	Disagree	neutral
Do you think pediatric rotation helped you to reinforce theory and concepts learned during earlier years of MBBS?			
Do you find it interesting?			
Are you satisfied with the content taught and assessed during this rotation?			

Suggestions for improvement:

### ✓ Feedback from the teachers