

JINNAH SINDH MEDICAL UNIVERSITY

STUDY GUIDE

PROGRAM	MBBS
COURSE TITLE	Paediatrics
ACADEMIC YEAR	5th YEAR- 2024
INTRODUCTION	<p>Paediatrics is the branch of medicine dealing with the health and medical care of infants, children, and adolescents from birth up to the age of 18. The word “Paediatrics” means “healer of children”. Paediatrics is a relatively new medical specialty, developing only in the mid-19th century.</p> <p>A Paediatrician is a child's physician who provides not only medical care for children who are acutely or chronically ill but also preventive health services for healthy children. A Paediatrician manages physical, mental, and emotional well-being of the children under their care at every stage of development, in both sickness and health.</p>
RATIONALE	<p>Pakistan has an estimated population of 212 million; 45 per cent are children and 22.7 per cent are adolescents aged 10–19 years. With an annual growth rate of 2.4 per cent, the population doubles every 29 years, increasing pressure on social and healthcare systems, which is compounded by rapid urbanization. The birth rate for Pakistan in 2023 was 26.042 births per 1000 people, a 1.87% decline from 2022. The infant mortality rate for Pakistan in 2023 was 55.777 deaths per 1000 live births, a 1.95% decline from 2022. Keeping these statistics in mind, it is imperative that MBBS graduates be trained adequately in how to manage Paediatric conditions so that they are able to deal with them during their internship and during independent practice.</p>
OUTCOMES	By the end of the final year MBBS, students will be able to

JINNAH SINDH MEDICAL UNIVERSITY

	<ul style="list-style-type: none"> • Demonstrate competence in basic clinical skills which they can utilize as doctors to improve the health care system quality • Demonstrate clinical reasoning and decision making • Justify management plans for common Paediatric conditions in Emergency, in- and out-patient situations • Appropriately and promptly refer patients to specialists • Consistently demonstrate professional & ethical behavior along with communication skills with all stakeholders
COURSE OBJECTIVES	<p>By the end of the Paediatrics course and for each of the conditions listed in this study guide, final year MBBS students will be able to:</p> <ul style="list-style-type: none"> • discuss the etiology, risk factors, clinical presentations and relevant investigations for each • correlate the conditions' pathophysiology with signs and symptoms • justify differential diagnoses and diagnoses on the basis of history, examination findings and investigation reports • discuss outlines of treatment plans for each • explain plans for prevention of conditions where appropriate • discuss outline of management of complication in the relevant conditions
<u>LECTURES</u> ACID BASE AND FLUID AND ELECTROLYTES DISORDERS	<ol style="list-style-type: none"> 1. Acid-base balance and related disorders 2. Dehydration and replacements of electrolytes (clinical types and management) 3. Maintenance fluids / electrolytes therapy (normal requirements)
BEHAVIORAL AND PSYCHIATRIC	<ol style="list-style-type: none"> 1. Attention-deficit/hyperactivity disorder, Autism spectrum disorder (clinical presentation, classification, management)

JINNAH SINDH MEDICAL UNIVERSITY

DISORDERS	<ol style="list-style-type: none"> Nocturnal enuresis, encopresis (clinical presentation, classification, management) Pica Tics, anorexia nervosa and bulimia nervosa
BONES AND JOINTS DISORDERS	<ol style="list-style-type: none"> Achondroplasia Clubfoot (talipes equinovarus) Marfan's syndrome Osteogenesis imperfecta Osteomyelitis Scoliosis Septic arthritis
CARDIO-VASCULAR DISORDERS	<ol style="list-style-type: none"> Acquired heart diseases (infective endocarditis, rheumatic heart disease,) Congenital heart disease (cyanotic & acyanotic) Myocarditis Cardiomyopathy, CCF
GASTRO-INTESTINAL AND LIVER DISORDERS	<ol style="list-style-type: none"> Approach to abdomen pain Constipation, diarrhea, dysentery Liver disorders (acute hepatitis & liver abscess) & CLD (Hepatic failure, Portal hypertension) Malabsorption (Celiac disease, Giardiasis, IBD) Vomiting, GERD,
GENETIC DISORDERS	<ol style="list-style-type: none"> Chromosomal disorders (Turner syndrome, Down's syndrome) Genetic counselling (general rules of genetic counselling) Polygenic (multi factorial inheritance) Pre-natal diagnosis (methodologies) Single gene defects
GROWTH AND DEVELOPMENT &	<ol style="list-style-type: none"> Factors affecting growth Growth charts (plotting)

JINNAH SINDH MEDICAL UNIVERSITY

NUTRITIONAL DISORDERS	<ol style="list-style-type: none"> 3. Malnutrition classifications 4. Normal growth & development 5. Nutritional requirements 6. Puberty and Tanner's staging 7. Under and over nutrition (obesity and overweight) 8. Vitamins and micronutrients deficiencies (effects, management)
HEMATOLOGICAL DISORDERS	<ol style="list-style-type: none"> 1. Bleeding and coagulation disorders 2. Hemolytic anemia including - Thalassemia & transplant, blood transfusion 3. Nutritional & Aplastic Anemia 4. Leukemias and Lymphomas
IMMUNOLOGICAL DISORDERS	<ol style="list-style-type: none"> 1. Acquired immune deficiency including AIDS 2. Cellular, humoral and complement related immunodeficiencies 3. Evaluation of suspected immunodeficiency 4. Neutrophil related defects
INFECTIOUS DISEASES	<ol style="list-style-type: none"> 1. Diarrhea: etiology and management of acute and chronic diarrhea 2. Diphtheria, tetanus, pertussis 3. Rabies (as part of Non-EPI) 4. Rashes: measles, mumps, Varicella (chickenpox), 5. Tuberculosis 6. Typhoid fever & malaria and Dengue, poliomyelitis
KIDNEY AND URINARY BLADDER DISORDERS	<ol style="list-style-type: none"> 1. Acute and chronic kidney disorders 2. Acute post-streptococcal glomerulonephritis 3. Congenital anomalies of kidneys and urinary tract 4. Laboratory evaluation and imaging of urinary tract

JINNAH SINDH MEDICAL UNIVERSITY

	<ol style="list-style-type: none">5. Nephrotic syndrome & Nephritic syndrome6. Urinary tract infections, renal stones7. Wilm's tumor
NEONATOLOGY	<ol style="list-style-type: none">1. Birth asphyxia, prematurity2. Causes of seizures in newborn3. Hemorrhagic disease of newborn4. NEC (necrotizing enter colitis)5. neonatal jaundice, IDM (Infant of Diabetic Mother)6. Neonatal sepsis7. Respiratory distress syndrome8. TORCH infections
NEUROLOGICAL DISORDERS	<ol style="list-style-type: none">1. Brain tumors2. Cerebral palsy, Microcephaly3. Encephalitis4. Epilepsy & febrile convulsions, headaches & space occupying lesions5. Increased intracranial pressure, hydrocephalus6. Meningitis (Pyogenic, Tuberculosis)7. Neuroblastomas8. Poliomyelitis
PAEDIATRICS SURGERY	<ol style="list-style-type: none">1. Biliary atresia, duodenal atresia2. Cleft lip and palate3. Developmental dysplasia of the hip, Telepes, Kyphosis, Scoliosis4. Hernias5. Hirschsprung's disease6. Intussusception7. Neural tube defects8. Posterior urethral valve

JINNAH SINDH MEDICAL UNIVERSITY

	9. Tracheoesophageal fistula
RESPIRATORY DISORDERS	<ol style="list-style-type: none"> 1. Acute respiratory infections (ARI) 2. Asthma, foreign body 3. Bronchiolitis, bronchopneumonia 4. Laryngomalacia, Otitis media 5. Lobar pneumonia, cystic fibrosis 6. Tonsils and adenoids, Epiglottitis, Croup
RHEUMATIC & NEUROMUSCULAR DISORDERS	<ol style="list-style-type: none"> 1. Acute Flaccid Paralysis, GBS 2. Duchene muscular dystrophy 3. Floppy infant 4. Juvenile idiopathic arthritis 5. Kawasaki Disease 6. SLE / Neonatal lupus
SOCIAL AND PREVENTIVE PAEDIATRICS	<ol style="list-style-type: none"> 1. EPI program 2. Breast feeding 3. Child rights/abuse/neglect 4. Health indicators (definitions and national statistics) <ol style="list-style-type: none"> a. U5MR, IMR, neonatal mortality rate b. Maternal mortality rate c. Perinatal mortality rate d. Low birth weight (intra uterine growth retardation), large for gestational age, small for gestational age, appropriate for gestational age 5. IMCI / IMNCI (Integrated Management of Childhood Illnesses/ Integrated Management of Newborn and Childhood Illnesses) programs 6. Vaccinations (other than EPI) <ol style="list-style-type: none"> a. Varicella, influenza, hepatitis A

JINNAH SINDH MEDICAL UNIVERSITY

	<ul style="list-style-type: none"> b. Meningococcal vaccine c. Rabies
CLINICAL SKILLS (performing under direct supervision- In skills lab and/ or during ward rotations)	<ul style="list-style-type: none"> • Administering oxygen & nebulizers • Blood sampling or venipuncture in children • Communicating professionally with children and / or their primary caregivers • Giving intramuscular and intravenous injections • History taking • Measuring capillary blood glucose • Moving and handling, Paediatric patients who are frail • Passing N/G tube • Performing General and Systemic Physical Examinations • Setting up and maintaining I/V line • Vaccinating children • Wearing protective equipment
CLINICAL SKILLS (Observation)	<ul style="list-style-type: none"> • CPR on real Paediatric patients • Endoscopies (where available) • Insertion of Central venous line • Lumbar puncture • Male and female Catheterization in Paediatrics • Management of paediatric patients in Emergency Room/ Casualty • Management of neonates in neonatal and Paediatric ICUs • Ventilation
PROFESSIONAL BEHAVIOR	<ul style="list-style-type: none"> • Maintain personal hygiene at all times, especially after being in contact with patients • Effectively counsel primary caregivers regarding options for relevant therapeutic procedures

JINNAH SINDH MEDICAL UNIVERSITY

	<ul style="list-style-type: none"> • Demonstrate respect, empathy and care while dealing with patients and their primary caregivers • Take consent appropriately before all procedures and processes • Communicate with professionally and with respect with patients, their attendants, health care team members, senior physicians and peers • Demonstrate punctuality and regularity in all academic sessions • Demonstrate care, empathy and principles of ethical and professional practice in all the therapeutic procedures while taking care of patient safety issues • Safeguard themselves from potential harm by adhering to prescribed protocols • Consistently demonstrate care for the betterment of the patients • Work effectively as a productive member of the health care team • Perform duties honestly and to the best of their abilities • Demonstrate proactive behavior in fulfilling their responsibilities • Follow institutional policies
INTERNAL ASSESSMENT	<ul style="list-style-type: none"> • Internal assessment will be according to JSMU policy. The details of internal assessment will be determined by the respective institutions. • Internal assessment carries 20% weightage in the final, end-of-year examination
ANNUAL EXAMINATION	There will be one theory paper consisting of MCQs. The areas that will be included in the theory are those that are listed in this study

JINNAH SINDH MEDICAL UNIVERSITY

	<p>guide AND taught in previous years. There will also be OSCE.</p> <p>Clinical Topics and skills, related to Paediatrics, taught in previous years, will be assessed in Final year MBBS professional examination (theory and OSCE) as well.</p> <p>Students are strongly advised to thoroughly read the policy on Academic Progression in Undergraduate Programs present on JSMU website.</p>
--	--