THE UNIVERSITY OF JORDAN

FACULTY OF MEDICINE
DEPARTMENT OF PEDIATRIC MEDICINE

ROTATION OUTLINE

Classification:	Medicine
Course Code:	0509601
Course Title:	Pediatrics-2
Year Level :	6th. Year
Round Schedule:	Arranged by individual teachers
Duration (Weeks):	8 Weeks
Tutorial schedule	8am-4pm (sun-thurs)
Credit Hours	9
Course Coordinator:	Dr. Abeer Alassaf
Prepared by:	Dr. Amira Masri
Date of Outline Preparation:	19-05-2005
Date of Last Revision:	29-11-2012
Checked by:	Members of Department
Approved by Head of Department:	Dr. Amira Masri

Instructions

Attendance and logbooks

1- All students in the NICU and outpatient clinics rotations should attend the daily morning report/lecture at the lectures room in the 7th floor at 8:00 am sharp.

2- Students who are doing inpatient ward calls/ER rotation, should attend and present the cases the next day in the morning at 8:00 am even if the residents schedule says lecture or other than morning report activity . The consultant attending the morning report will put the evaluation according to the student's presentation, the feedback of the senior resident who was on call and on the written history and P/E which should be handed to the senior resident on call after the morning report .

3- In any rotation, if the student shows up late ,this will be counted as half day absence, if more than half an hour , will counted full day absence.

4- A student should contact the consultant on the team or the senior resident if he/she is expected to come late or to be absent and explain the reason.

5- Students should be in the outpatient clinic or NICU at 9:00 am after attending the 8-9 am morning report.

6- Inpatient calls/emergency room rotation for the sixth year students will be overnight till next morning and should attend the morning report in the 7th floor to present the cases, then will have the rest of the day OFF till the next day afternoon:

   - Inpatient call: Each student must be in the 7th floor at **4 pm sharp** to attend **the handover round** with residents on call and to start the call afterwards till next morning.
   - ER B/C shift: starts at 5 pm till next morning.

7- All the cases the student takes during the rotation should be written on the log book.

8- The log book should be signed by the consultant,**day by day** , the resident signature won't count unless there is special circumstances and with special request. Signing the logbook in retrograde is not allowed at any circumstance. If the consultant didn't sign the logbook at the same day for any reason or if you forgot to bring your logbook – which should **NOT** happen-, you should leave it blank and inform the teaching assistant who will gather the logbooks at the end of each month with the excuse, which may or may not be accepted and your evaluation may be penalized.
   - **Note**:

     The students attendance will be tracked daily by the staff, teaching assistant or the senior resident, and will be compared with the log book at the end of the month.

9- Each 2 weeks (or single rotation) should have only one paper from the log book.

10- A student who fails to deliver the log book at the time and date which will be announced at the end of each month, the department won't evaluate that student unless the dean accept that.

Dress code:

Please refer to the faculty of medicine dress code
General roles:

1- Blue jeans are forbidden.

2- Females should not be in above knee skirts, their accessories should be simple and the make up should be light one, there should not be any exaggeration in any of the mentioned above.

3- Students should not use perfumes as employee and patients might have allergies. please Help us to make our hospital scent free

4- The shoes should cover the toes

5- All students should take care of their hygiene

Interviewing the parents:

6- when the student approach the family to take history , to do physical exam , or to follow a clinical condition , they should introduce themselves every time and ask for permission each time even if the family knows them from previous day or visits

7- the students should be considerate and try not to bother the kids or their parents if the kid is so sick and the parents are anxious may be you can postpone the interview or come back with the resident

8- the student can use a toy to facilitate the exam, but it should be a safe one, not easily breakable, doesn't have small pieces

9- male students should have a female nurse /a female doctor or female colleague accompany them when interviewing a mother if she was in a room where no other parents present.

Relationship with consultants, residents, and the nursing staff:

1- respect is the foundation of all relationships
2- the consultants are there to help you , teach you from their experience , be respecting and perform all assignments given to you

3- in order to get the most benefit of the clinical rounds, prepare your case and read about it
4- residents are much experienced than you, they are the best one to learn from, even by staying around and observing the way they work or think or do procedures
5- nursing staff are also a very helpful part of the medical team , things that you can not learn from doctors you can learn from them, you need to be patient as nurses are overwhelmed with job duties you can ask permission to watch intravenous lines insertion , NG tube insertion , etc

What to do if you need help?

1- If you have academic issues please come to us at the beginning of your rotation, we can certainly help you to improve your grades and performance

2- If you have social issues, in the family or with your colleagues we also can help you

Important:

Each student is responsible to check daily the announcements' board near the pediatric lectures room in the outpatient building, floor (- 1), to check for the new announcements and updates.

Curriculum:

FOR LIST OF TOPICS PLEASE REFERE TO APPENDIX (A) AT THE END OF THIS DOCUMENT

1- Fifth year medical students curriculum:
6^{th} year medical students are expected to have the knowledge and skills that was required during fifth year rotation.

2- During the 6^{th} year pediatric rotation, students are expected to be more comfortable and confident in :

- Taking pediatric medical history and doing the physical exam
- Applying the problem solving skills to come up with a differential diagnosis to the issue(s) the patient has
- knowing the investigation(s) required to prove /role out a diagnosis , in a step wise organized fashion
- Having a good idea about the type of treatment to be offered for that diagnosis.
- Work with the team as an active member , know self limitations , and observe how multidisciplinary approach delivers the optimum care
- Observe the process of counselling other specialities, when, why, and how.

3- Outpatient clinics rotation:
- How to follow up well babies, with age specific screening investigations/ physical exam
- Vaccination schedule and vaccination counselling
- Follow up of chronic illnesses , realizing the medical , psychological ,social , economic burden of chronic diseases
- How to write a medical prescription

4- Emergency room rotation:

- To have a good sense of emergencies in paediatrics, types, approach, treatment.
- To understand the peculiarity of pediatric age group visits to ER , as it's not always a real emergency , as some people might be new to parenthood , or over anxious.

The student is expected to be compassionate and to observe part of the teaching role the pediatrician has .

5- Inpatient ward overnight calls:

- To practice the clinical skills, knowledge, professional attitudes and behaviours necessary to evaluate, diagnose and treat pediatric patients
- To display professional behaviour including reliability, integrity, honesty

6- NICU rotation:
   - Understand the indication for admission to the neonatal units
   - To acquire good knowledge about common neonatal problems

Appendix (A)

List of Topics for 5th and 6th year students and their objectives		
No.	**Topic**	**Objectives**
	Part I: General	
1	Pediatric history and physical examination	1. To determine the differences between normal adults history taking skills and that for the pediatrics. 2. To be able to deal with pediatric patients. 3. To be able to carry out physical examination for the pediatric patients. 4. To be able to deal with pediatric patients having serious problems. 5. To be able to analyze different complaints in a logical problem solving way.
2	Growth and development	1. Developmental milestones. 2. Determining chronological age, developmental age, and their interpretations. 3. Developmental delay ,causes, diagnoses ,management 4.Growth charts analysis 5. Correlating developmental delay problems to other important organic diseases.
3	Short stature	1. Definition of short stature in pediatrics. 2. Short stature diagnoses using growth charts, causes. 3. Causes of adrenal insufficiency in childhood. 4. Correlating short stature to important organic. 5. Treatment of curable forms of short stature.
4	Fluids and electrolytes	1. Review of body fluids distribution. 2. Different types of fluids to be given, crystalloids vs. colloids. 3. Approach to dehydrated pediatric patients. 4. Problem solving to determine how much fluids exactly do dehydrated patients with different levels of dehydration need. 5. To determine when to give which type of fluids.
	Part II: Neonatology	
5	Neonatal Examination	1. How to examine primitive reflexes. 2. Important skills in neonatal examination. 3. Interpretation of abnormal findings like the absence of red reflex. 4. Important investigations to be carried out for patients with abnormal physical examination.
6	Prematurity	1. Definition of prematurity 2. Types, Causes, Diagnoses.

		3. Complications of prematurity and important interventional managements.
7	Surgical problems in pediatrics	1.Important life threatening diseases as Intussusception, congenital malformations, 2. Which congenital malformations need urgent surgical management and why. 3. Complications of different surgical procedures.
8	Common neonatal problems	1. Apgar score 2. Meconium aspiration causes, clinical features, complications, and management. 3. Respiratory distress syndrome. 4. Erbs palsy and other neonatal traumas such as caput succedaneum.
9	Asphyxia	1. Definition of Asphyxia. 2. Approach to Asphyxia, clinical manifestations, and diagnosis. 3.Possible preventive measures for Asphyxia 4. Complications of Asphyxia. 5. Outline the stepwise approach to management of Neonates with low Apgar score
10	Neonatal Seizures	1. Review of the pathophysiology of seizures. 2. List of causes for Neonatal seizures 3.Complications 4. Treatment and list of Medications to be given with their side effects.
11	Breast Feeding	1.Components of the Human milk 2. Comparison between Human milk and Cow milk. 3. Benefits of Human Milk. 4. Review of Studies done to prove how beneficial Human milk is, and how does it prevents common morbidities as obesity and diabetes mellitus.
12	Neonatal Jaundice	1. Definition of Neonatal jaundice. 2. Types of Neonatal jaundice, and how to distinguish between them. 3. Features of physiological and pathological jaundice. 4. Current treatment. 5. Complications and prognosis.
13	Shock in Newborn	1. Approaching shock in Newborn according to international guidelines. 2. Types of shock and their pathophysiology. 3. Stepwise Management in shocked newborns and possible complications.
14	Care of the newborn	1. Head to toe examination during the first neonatal visit. 2. Screening tests that should be done to all neonates.
15	Failure to thrive	1. Definition.

		2. Growth charts interpretation. 3. Causes; physiological and pathological. 4. Diagnostic work up. 5. Management.
16	Infants Formulas	1. Different types of Formulas. 2. When to give which type of Formula. 3. The importance of Formulas in the management of important metabolic disorders as Galactosemia.
17	Respiratory Distress Syndrome	1. Definition. 2. Causes of Respiratory Distress Disorder. 3. Clinical features and investigations. 4. Outline of management.
18	Congenital Infections	1. Epidemiology. 2. Different congenital infections as TORCH infections. 3. Diagnoses and complications. 4. Management of congenital infections.
19	Neonatal Sepsis	1. Pathophysiology. 2. Clinical picture. 3. Stepwise Management.
20	Management of patients at increased risk for sepsis	1. List of diseases that could increase the risk of developing Neonatal sepsis. 2. Management of patients at risk of developing neonatal sepsis.
21	Newborn Resuscitation	1. A stepwise algorithm for the Resuscitation of newborns. 2. Important medications with the doses to be given during Resuscitation. 3. Indications for Resuscitation.
Part III: Infectious Diseases		
22	Pertussis, Diphtheria, and Tetanus	1. Causative agent and pathophysiology. 2. Epidemiology. 3. Clinical manifestations and laboratory work up. 4. Complications. 5. Treatment and Prevention.
23	Common Childhood Exanthems (Measles, Rubella, Varicella-Zoster, Erythema Infectiosum, Roseola infantum, Scarlet Fever)	1. The Causative agent and spread out of each disease. 2. Clinical features. 3. Diagnosis and Investigations. 4. Complications. 5. Management and follow up.
24	Acute Bacterial Meningitis	1. Causative agents and pathophysiology. 2. Clinical manifestations and physical examination according to different age groups. 3. Diagnosis and laboratory work up and imaging studies. 4. The importance of Lumber puncture and its indications. 5. Complications and Prognosis. 6. Treatment and follow up.

25	Viral Meningeoencephalitis	1. Definition, Etiology and Epidemiology. 2. Clinical manifestations and physical examination. 3. Diagnosis and laboratory work up and imaging studies. 4. Treatment and follow up.
26	Vaccinations	1. Types of immunization (active vs. passive). 2. Knowing the types of antigens in general. 3. Knowing the types of vaccines used in Jordan and in other countries and Routine and non-routine vaccines. 4. Characteristics of each vaccine from Safety, Protections, Side effects, contraindications, cost, Administration and Timing.
27	Gastroenteritis	1. Definition and causative agents of Diarrhea. 2. Mechanism of diarrhea. 3. Classifications of diarrhea (infections vs. noninfectious). 4. Clinical manifestations and physical examination. 5. The importance of Signs and Symptoms of Dehydration and Rehydration therapy. 6. Management with different Medications (Antimicrobial, Antiemetic, and Anti-diarrheal agents)
28	Pneumonia and other Respiratory Tract Infections	1. Epidemiology according to age. 2. Clinical assessment and differentiating features between viral and bacterial pneumonia. 3. Antibiotic treatment. 4. Treatment and prevention. 5. Etiology, clinical picture, management of: Croup, bacterial Tracheitis and Epiglottitis.
29	Tuberculosis	1. Epidemiology of childhood TB. 2. Risk factors of reactivation. 3. Clinical features of primary TB, TB after primary; both pulmonary and extrapulmonary. 4. Diagnosing TB infection. 5. Antituberculosis drugs and treatment.
Part IV: Gastroenterology		
30	GI functions and Malabsorption	1. Review of process of digestion through GI tract. 2. Clinical features, laboratory test, and causes of fat, protein and carbohydrate Malabsorption. 3. Celiac Disease: Different presentations, appropriate investigations and treatment. 4. Cow milk protein intolerance: Different presentations, diagnosis and treatment.
31	Metabolic Disorders	1. Glycogen storage diseases: Listing major types, typical symptomatology and diagnosis. 2. Galactosemia: symptomatology and complications, diagnosis and treatment. 3. Amino acid disorders: Major types and their

		pathophysiology and treatment.
32	Cholestasis	1. Differential diagnosis of cholestatic jaundice. 2. Laboratory and imaging evaluation. 3. Biliary Atresia: pathophysiology, diagnosis, and management.
Part V: Hematology, Oncology and Genetics		
33	Anemia	1. Classifying anemias. 2. Historical clues and physical findings in the evaluation of anemia. 3. Iron Deficiency Anemia: Epidemiology, clinical features, typical laboratory findings, and treatment. 4. Alpha- and Beta-Thalassemia. 5. Discussion of other types.
34	Pediatric tumors	1. CNS tumors. 2. Neuroblastoma. 3. Nephroblastoma. 4. Leukemia. 5. Lymphoma. 6. Retinoblastoma.
35	Down Syndrome	1. Typical clinical features. 2. Investigations. 3. Comorbidities.
36	Idiopathic Thrombocytopenic Purpura (ITP)	1. Epidemiology of ITP. 2. Typical clinical features. 3. Treatment: General measures, medical and surgical. 4. Prognosis.
Part VI: Endocrinology		
37	Congenital Hypothyroidism	1. Revision of thyroid gland physiology and embryology. 2. Different etiologies of congenital hypothyroidism. 3. Clinical manifestations. 4. Screening and laboratory work up. 5. Treatment and prognosis.
38	Diabetes Mellitus	1. Criteria to define DM. 2. Classification of DM in childhood. 3. Diabetic Ketacidosis; pathophysiology and management. 4. Hypoglycemia and morning hyperglycemia. 5. Outpatient management and follow up.
39	Adrenal Gland Dysfunction	1. Revision of enzymatic pathways of adrenal hormones synthesis. 2. Clinical manifestations of adrenal insufficiency. 3. Causes of adrenal insufficiency in childhood. 4. Basic management. 5. Review of Addison Disease and Cushing Syndrome.
40	Disorders of Sexual Differentiation	1. Review of normal sexual development. 2. Tanner staging of sexual maturation. 3. Approach to Ambiguous genitalia.

		4. Male and female pseudohermaphroditism.
Part VII: Immunology		
41	Approach to patient with recurrent infections	1. Non immunogenic causes of recurrent infections. 2. When to think of immunodeficiency. 3. Causes of secondary immunodeficiency. 4. Evaluation of patient with recurrent infections.
42	Immunodeficiency Disorders - 1	1. Characteristics of various categories of Immunodeficiency Disorders. 2. Sensitive and specific tests for these categories. 3. Review of Combined Immunodeficiency Disorders.
43	Immunodeficiency Disorders - 2	1. Review of B-cell Immunodeficiency Disorders. 2. Review of Phagocytic defects. 3. Review of Complement defects.
44	Allergic Rhinitis	1. Epidemiology of Allergic Rhinoconjunctivitis. 2. Typical symptoms and signs. 3. Differential diagnosis. 4. Treatment: General measures, pharmacologic and immunotherapy.
Part VIII: Respiratory System		
45	Childhood Asthma	1. Epidemiology of bronchial asthma in pediatric patients. 2. List triggering and risk factors of asthma. 3. Describe clinical features of asthma with emphasis on indicators of severity. 4. Define the investigations used to diagnose asthma. 5. Outline the stepwise approach to management of asthma based on international guidelines.
46	Cystic Fibrosis	1. Etiology and epidemiology. 2. Clinical manifestation; respiratory, gastrointestinal and others, as well as complications. 3. Diagnostic and screening tests. 4. Treatment and prognosis.
47	Bronchiolitis	1. Causative agents and Epidemiology among pediatric patients. 2. Typical signs, symptoms and laboratory findings. 3. Treatment for hospitalized patients and outpatients. 4. Prevention through active and passive immunity.
Part IX: Rheumatology		
48	Familial Mediterranean Fever (FMF)	1. Epidemiology and Genetic etiology. 2. Clinical manifestations. 3. Current treatment. 4. Complications and prognosis.
49	Juvenile Rheumatoid Arthritis (JRA)	1. Criteria for diagnosis. 2. Categories of disease according to type of onset: Pauciarticular, Polyarticular and systemic onset (Still's disease). 3. Typical laboratory findings.

		4. Modalities of treatment.
50	Systemic Lupus Erythematosus (SLE)	1. Autoimmune basis for etiology. 2. Affection of various body systems, demonstrating various signs and symptoms. 3. Criteria for diagnosis. 4. Treatment.
Part X: Cardiology		
51	Kawasaki Disease (KD) and Rheumatic Fever (RF)	1. Definition and Criteria of diagnosis of KD. 2. Management and follow up of KD patients. 3. Etiology of RF. 4. Jones criteria to diagnose RF. 5. Treatment, follow up and prevention of RF.
52	Infective Endocarditis (IE)	1. Definition IE according to Duke's criteria. 2. Causative agents and risk factors for IE. 3. Clinical picture. 4. Treatment; medical and surgical.
53	Heart Failure in Children	1. Basic mechanisms of heart failure. 2. Causes of heart failure in children. 3. Clinical features and investigations. 4. Outline of management.
54	Left-to-right Congenital Heart Diseases	1. Concept of shunting of blood. 2. Hemodynamics, presentation, diagnosis and basic management for: ASD, VSD & Patent Ductus Arteriosus.
55	Right-to-left Congenital Heart Diseases	1. General causes of cyanosis in pediatric patients. 2. Hemodynamics, presentation, diagnosis and basic management for: Tetralogy of Fallot, Transposition of great arteries & tricuspid atresia.
56	Other Congenital Heart Diseases	1. Hemodynamics, presentation, diagnosis and basic management for: Aortic stenosis, Mitral regurgitation, Coarctation of aorta, Ebstein anomaly and Total Anomalous Pulmonary Venous Return.
57	Pediatric Arrhythmias	1. Discussion about irregular rhythms: Artifacts, Premature atrial, junctional and ventricular contractions. 2. Slow rhythms: Sinus bradycardia, 1st, 2nd and 3rd degree heart blocks. 2. Fast rhythms: Ventricular and supraventricular (Re-entry & Non re-entry).
Part XI: Nephrology		
58	Acute Renal Failure (ARF)	1. Pathogenesis of different mechanisms of ARF. 2. Review of different causes of ARF. 3. Distinguishing between pre-renal, renal and post-renal causes from clinical features and laboratory investigations. 4. Treatment: Medical management and dialysis.
59	Chronic Kidney Disease	1. Etiology: Congenital and acquired. 2. Pathophysiology. 3. Long term clinical manifestations.

		4. Stages of CKD. 5. Management of various aspects, including indications and types of renal dialysis.
60	Nephrotic Syndrome and proteinuria	1. Differential diagnosis of childhood proteinuria. 2. Clinical picture of Nephrotic syndrome. 3. Description of major causes: Minimal Change Disease, Focal segmental glomerulosclerosis, Membranous nephropathy and Congenital nephrotic syndrome. 4. Diagnostic workup for proteinuria.
61	Glomerulonephritis (GN) and Hematuria	1. Presentation of Glomerular diseases. 2. Differential diagnosis of Hematuria. 3. Pathogenesis, clinical and laboratory findings of: Acute Postinfectious GN, IgA nephropathy, Henoch–Schönlein Purpura, Alport Syndrome and This basement membrane nephropathy.
62	Urinary Tract Infection (UTI) and Reflux	1. Epidemiology and gender difference in incidence. 2. Pathogenesis and risk factors. 3. Symptoms and signs according to age. 4. Suitable laboratory findings. 5. Indications for imaging 6. Treatment and prophylaxis.
63	Renal Tubular Disorders	1. Overview of proximal and distal tubular disorders. 2. Characteristics of Fanconi syndrome, Proximal RTA, Distal RTA, Type IV RTA and Hypokalemic metabolic alkalosis.
64	Hemolytic-uremic Syndrome (HUS)	1.Etiology: *E.coli* O157:H7 2. Clinical manifestations and development of symptoms over time. 3. Complications. 4. Treatment, with emphasis on meticulous fluid management. 5. Course and prognosis.
65	Childhood Hypertension (HTN)	1. Stages of HTN in children and adolescents. 2. Clinical evaluation: History, Physical exam, and investigations. 3. Listing of Causes. 4. Treatment options.
66	Henoch–Schönlein Purpura (HPS)	1. Pathogenesis. 2. Clinical findings and involvement of several systems. 3. Differential diagnosis. 4. Treatment and prognosis.
Part XII: Neurology		
67	Neurological History and Examination	1. Peculiarities of neurological history and differentiation between static and progressive diseases. 2. Systematic neurological physical examination.
68	Headache	1. Classification of headache according etiology as well as to

		onset and progression. 2. Pathophysiology, clinical features, labs and management of Migraine, Tension headache and pseudotumor cerebri.
69	Attention deficit hyperactivity disorder (ADHD)	1. Primary symptoms and criteria of ADHD. 2. Theories behind the etiology. 3. Clinical presentation at different ages. 4. Treatment and prognosis.
70	Pervasive Developmental Disorders	1. DSM-IV list of pervasive disorders. 2. Epidemiology and pathophysiology of Autism. 3. Clinical picture and criteria of diagnosis. 4. Treatment and prognosis.
71	Lower Motor Neuron Disorders	1. Recognition of general clinical picture and lab test of lower motor neuron disorders. 2. Emphasis on Dytrophinopathies, Myasthenia Gravis, guillain-barré syndrome and spinal muscular atrophy.
72	Floppy Infant	1. Differentiation between central and peripheral causes. 2. List central, peripheral, and mixed hypotonia causes.
73	Neurodegenerative Disorders	1. List of possible pathophysiological mechanisms. 2. Approach to the patient: Clinical, anatomical, and chemical. 3. General idea about the treatment.
74	Cerebral Palsy (CP)	1. Definition and major types of CP. 2. Associated comorbidities. 3. Clinical features. 4. Management and prognosis.
75	Epilepsy	1. Listing of major childhood and adolescent epileptic disorders. 2. Importance history and physical examination. 3. Appropriate investigations for patients with seizures. 4. Treatment.
76	Febrile Seizures	1. Definition of febrile seizure. 2. Prognosis. 3. Management and prevention.