



Republic of Iraq
Ministry of Higher Education and Scientific Research
University of Basrah
Al-Zahraa College of Medicine



- Al-Zahraa College of Medicine
- Year 5

Block Summary

Child Health

(CHB)



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Block leader: Dr Rehab Abdulwehab Jaafer

Block co-leaders: Dr. Ahmad Jaafer, Dr. Basim Abdulkareem.

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Chapter one: Introduction and aims of the block.

Welcome to the Child Health block. During this block you will see children on the wards, in clinics and in the community. This workbook is provided to help you get the most out of the block. Please read it carefully.

Aims and objectives of the block are listed in chapter two.

To summarize them:

By the end of the course you should know how to: -

- take a history from a child or carer;
- examine a child;
- do a developmental assessment;
- formulate a differential diagnosis;
- discuss and interpret findings;
- manage common pediatric problems;
- perform simple, practical procedures.

It is each individual student's responsibility to ensure that they have covered all aspects of the course, and *done enough individual patient clerking and practice* to be able to confidently perform all the above learning objectives.

Order of the block:

Induction phase:

It involves 10 days from Sunday of W1 to Thursday of W2 (Except Fridays & Saturdays).

Clinical course:

It starts from Sunday of W3 till end of the block or Thursday of W8. Fridays and Saturdays are free days.

Clerking patients:

Between ward rounds, teaching, clinics and special activities, we recommend you aim to clerk 1-2 patients each day. This could be long (about 30 minutes) or short (about 10 minutes). You should clerk patients of different ages and with a variety of problems. Keep a record of the patients you have seen in the table provided in clinical cases records sheet.

The logbook:

Concurrently, a logbook will be attached to your workbook with instruction and duties to fill in. By end of the block, you ought to deliver a completely filled logbook, with tasks, procedural skills, and case presentations. *As in the workbook, failure to accomplish this will be reflected as bad performance and may be scored as unsatisfactory and you might be denied from entrance to the final exam.*

Attendance:

Attendance will be checked for each student at end of each day. Failure to accomplish this will result in prohibition from the final exam if it exceeded 10% of whole course without excuse and 15% with excuse.

Consent:

Before examining a child, you must have consent from the parents and child; OR from the child alone, if he/she is older and competent to give consent. Never see a child alone, always with a parent, a nurse or another student.

Hand washing:

ALWAYS wash your hands or use hand gel before touching a child.

Recommended text:

See Chapter 5.

Chapter two: Learning objectives of the course.

- 1) Take ownership of your patients – know the history, exam, and lab results at any given time; follow- up on your patients even when they have technically left your care; be responsible for them so that nothing gets missed.
- 2) Learn how to talk with children of different ages and their families both to get complete, accurate histories, and to explain clinical findings and plans. Learn how to reassure.
- 3) Learn how to perform the physical examination of children – how to interpret vital signs at different ages, how the pediatric exam is different than the adult exam, and a basic knowledge of what is normal.
- 4) Write a complete H&P, including pediatric-focused items such as diet, development and growth.
- 5) Present orally on inpatient rounds and begin to pick out what is most important to convey to the team (i.e., do not repeat the entire H&P).
- 6) Assess the development of every patient you see and be able to recognize when it is abnormal.
- 7) Be able to chart the weight, height, head circumference, and BMI and recognize obesity or failure to thrive and begin a work-up if indicated.
- 8) Talk to families about prevention, including immunizations, safety, violence, sex, and substance use. Using the WHO chart, know what immunizations a child needs at a given age.
- 9) Write prescriptions appropriately for children of different sizes.
- 10) Be able to clinically recognize a dehydrated child. Write orders for both rehydration and maintenance fluid for children based on size and clinical condition.
- 11) Recognize when a child is in need of urgent medical attention. Know how to initiate care and who to call for help.
- 12) Outline the approach to diagnosis and management of common pediatric conditions.

Chapter three: Structured teaching activities.

1. Induction phase lectures:

Lectures	8:00 AM - 12:00 PM
Rest	12:00PM - 12:30 PM
SGS	1:00PM - 2:00 PM

Blueprint topics and learning outcomes:

❖ Growth & development:

- 1) Growth & development at different ages.
- 2) Growth charts.
- 3) Puberty and its regulation.
- 4) Deviations in growth and development.
- 5) Sexual maturation and its disturbances.
- 6) Failure to thrive.

❖ Behavioral and psychological disorders:

- 1) Rumination, pica & temper tantrum.
- 2) Enuresis & Encopresis.
- 3) Sleep disorders.
- 4) Breath holding spells.
- 5) Attention deficit hyperactivity disorder.
- 6) Autism spectrum disorder.

❖ Nutrition:

- 1) Infant feeding including breast feeding and complementary feeding.
- 2) Protein energy malnutrition.
- 3) Vitamins and minerals- normal requirement, sources, its role & deficiencies.
- 4) Obesity.

❖ Genetics:

- 1) Definition and type of inheritance.
- 2) Pedigree analysis.
- 3) Chromosomal disorders.
- 4) Prenatal diagnosis & genetic counseling.

❖ Neonatology:

- 1) Normal newborn, Care in the labor room.
- 2) Low birth weight & prematurity.
- 3) TTN, RDS, MAS, Apnea of prematurity.
- 4) Neonatal jaundice and bilirubin encephalopathy.
- 5) Neonatal infections & sepsis.
- 6) Neonatal convulsion, hypocalcaemia & hypothermia.
- 7) Haemorrhagic disease of newborn.
- 8) Maternal illnesses affecting the newborn, Infant of diabetic mother and neonatal hypoglycemia.
- 9) Birth injuries, birth asphyxia and HIE.

❖ **Immunization:**

- 1) Types of vaccine+ schedule + side effects.

❖ **Infectious diseases:**

- 1) Measles.
- 2) Rubella.
- 3) Mumps.
- 4) Roseola Infantum.
- 5) Varicella infection.
- 6) Scarlet fever.
- 7) Diphtheria.
- 8) Pertussis.
- 9) Tetanus.
- 10) Rabies.
- 11) Poliomyelitis.
- 12) Kala-azar.
- 13) T.B
- 14) HIV

❖ **Respiratory:**

- 1) Infections of URT &LRT; bronchitis, bronchiolitis, acute pneumonia, pleural effusion & bronchiectasis.
- 2) Congenital anomalies of lower respiratory tract, bronchomalacia , tracheomalacia.
- 3) Respiratory emergencies; pneumothorax, hemothorax, pulmonary embolism.
- 4) Obstructive sleep apnea.
- 5) Bronchial asthma.

❖ **Cardiovascular:**

- 1) Congenital heart diseases (cyanotic and Acyanotic).
- 2) Pulmonary hypertension.
- 3) Rheumatic fever and rheumatic heart disease.
- 4) Infective endocarditis.
- 5) Cardiac arrhythmias.
- 6) Diseases of myocardium (cardio-myopathy, myocarditis).
- 7) Diseases of the pericardium.
- 8) Heart failure.
- 9) Tumors of the heart.
- 10) Interpretation of ECG, Echocardiography.
- 11) Management of hyperlipidemia in children.
- 12) Systemic hypertension.

❖ **Haemato-oncology:**

- 1) Iron deficiency anemia.
- 2) Thalassemia syndrome.
- 3) SCA.
- 4) Aplastic anemia.
- 5) G6PD.
- 6) Cong. Spherocytosis.
- 7) Bleeding disorders; Haemophilia, VWD and ITP.
- 8) Leukemia and + Lymphoma.

❖ Gastrointestinal:

- 1) Esophageal & Duodenal atresia
- 2) Congenital hypertrophic pyloric stenosis
- 3) Large bowel anomalies.
- 4) Motility disorders of oesophagus, intestine, colon; Hirsch-sprung's disease.
- 5) Anorectal mal-formations, surgical conditions of anus and rectum.
- 6) Hernia.
- 7) Appendicitis.
- 8) Acute and chronic diarrhea.
- 9) ORT and fluid therapy.
- 10) Constipation & Chronic abdominal pain.
- 11) Malabsorption syndrome, celiac disease , cystic fibrosis and IBS.
- 12) Metabolic diseases of liver, Wilson's disease.
- 13) Liver cirrhosis and portal hypertension.
- 14) Biliary tract diseases.

❖ Neurology:

- 1) Cerebral palsy.
- 2) Neurocutaneous disease.
- 3) Neuromuscular diseases(spinal muscular dystrophy, Duchenne dystrophy, GBS, myasthenia gravis).
- 4) Neuropathies (acute & chronic), Acute Flaccid Paralysis.
- 5) Meningitis & Encephalitis.
- 6) Seizure in children.

❖ Endocrinology:

- 1) Hypopituitarism/ Hyperpituitarism, Growth hormone deficiency.
- 2) Hypo- and hyper-thyroidism, hypo- and hyperparathyroidism
- 3) Adrenal insufficiency, Cushing's syndrome & adrenogenital syndromes.
- 4) Gonadal dysfunction and intersexuality.
- 5) Short stature.
- 6) D.M & diabetic ketoacidosis.
- 7) Diabetes insipidus.
- 8) Inborn error of metabolism, Persistent hypoglycemia.

❖ Nephrology:

- 1) Acute glomerulonephritis.
- 2) Nephrotic syndrome.
- 3) UTIs.
- 4) Acute renal failure.
- 5) Chronic kidney disease.
- 6) HUS.
- 7) Wilms tumor.
- 8) VUR.
- 9) RTA and Nephrogenic DI.
- 10) Renal malformations.

❖ Rheumatology:

- 1) Henoch- schonlein purpura, Kawasaki disease, vasculitis, and SLE.
- 2) JRA.

2. Clinical course:

It starts from Sunday of W3 till end of the block where assessment will be performed.

❖ NICU & PICU:

Learning objectives are:

- 1) To gain understanding of care of the dependent baby.
- 2) Observe/undertake observations of baby.
- 3) Understand some of the common physical problems of the preterm baby, such as feeding problems, jaundice, respiratory problems and temperature control.

❖ ER and Outpatient clinic:

Learning objectives are:

- 1) Identify the patient who requires immediate medical attention and intervention using the “ABCD” assessment
- 2) Demonstrate knowledge of the immediate emergency management of a child following trauma to the head, near drowning, foreign body aspiration, and other common pediatric emergencies
- 3) Demonstrate the appropriate anticipatory guidance to prevent future occurrences of life-threatening illnesses (e.g. infant positioning for sudden infant death syndrome (SIDS), supervision to prevent poisoning, falls, choking).
- 4) The student will demonstrate knowledge of the common acute pediatric illnesses (including salient history, physical exam findings, epidemiology, management, and severity) for each of the following presenting complaints: Cough - Wheeze - Limp - Heart Murmur - Fever - Hematuria - Headache - Organomegally - Sore Throat – Vomiting -Seizure - Abdominal Mass - Ear Pain - Diarrhea
Petechiae/Purpura - Abdominal Pain - Runny Nose - Rash -Lymphadenopathy - Proteinuria - Pallor - Anemia - Developmental Delay - Vision/Hearing Problems.

❖ Haematology, Nephrology, cardiology and endocrine center’s clinics:

Learning objectives are:

- 1) Knowledge of the common pediatric chronic illnesses (including salient history, physical exam findings, epidemiology, management and severity) for each of the following: inherited anemia , hemostatic disorders, chronic renal failure, nephrotic syndrome, congenital heart diseases, heart failure, short stature etc.
- 2) Perform a medical interview and a physical examination for a patient with a chronic illness. Obtain information about the effects of the chronic illness on growth and development, and on the emotional, economic and psychosocial functioning of the patient and family. Elicit information about treatments used, including “complementary and alternative therapies.”

❖ General pediatric ward:

Learning Objectives will include:

- 1) Conduct an effective interview and physical exam, adapted for the visit, in a manner that is sensitive to the age of child and the developmental, social and cultural context.
- 2) Generate an appropriate initial differential diagnosis and outline an initial evaluation.
- 3) Give suggestions for the therapeutic plan appropriate to the final diagnosis.
- 4) Present a complete, well-organized verbal summary of the findings of the patient's history and physical examination, modifying the presentation to fit the situation.
- 5) Prepare a complete written summary of the history and physical examination.
- 6) Effectively communicate information about the diagnosis and treatment to the patient and family. Critically use the medical literature to obtain current information relative to the patient.

Chapter Four: Core procedural skills.

These skills should be performed by each student and need to be signed in their Logbook.

Failure to comply with some or all might be conceived as bad performance, and ultimately the student would be scored as unsatisfactory.



SKILLS:

- 1) **Neonatology Procedures:** Neonatal resuscitation in the delivery room
Stabilization and transport after resuscitation (T, P, R, BM Stix), Assessment of maturity stage & anthropometric measurement, Intravenous, line insertion, Nasal-gastric tube insertion, Oro- pharyngeal suction, Supra-pubic tab for urine analysis and culture, Fluid therapy, Endotracheal intubation, Phototherapy, Mechanical ventilation & Exchange transfusion.
- 2) **Emergency procedures:** Cardiopulmonary resuscitation.
- 3) **Immunology procedures:** Administration of vaccination, Administration of Intravenous immunoglobulin & Administration of intra-muscular injections.
- 4) **Cardiology Procedures:** Perform and interpret EKG, Echocardiography.
- 5) **Haematology Procedures:** Blood product transfusion, Bone marrow aspiration.
- 6) **Procedures related to nutrition:** Weight , length and height measurement.
- 7) **Nephrology Procedures:** Blood pressure measurement, Peritoneal dialysis, Renal imaging and renal biopsy.
- 8) **Neurology Procedures:** Cerebrospinal fluid tap.

❖ Investigations:

You need to be able to interpret simple investigations, as follows:

- 1) **X-ray:**
 - Chest - neonatal hyaline membrane disease, pneumonia, effusion, hyperinflation, TB , cardiomegaly.
 - Abdomen - perforation , obstruction.
 - Skeletal - fractures, rickets.
- 2) **ECG:**
 - Rate and rhythm.
- 3) **Biochemistry:**
 - blood gases
 - acid base balance (main abnormalities)
 - dehydration – hypo & hypernatraemic
 - pyloric stenosis
 - diabetic ketoacidosis
 - types of jaundice.

4) Haematology:

- types of anaemia.
- Sepsis.
- thrombocytopenia and causes.
- types of coagulation problem.

5) Microbiology:

- CSF (meningitis).
- urine (UTI).
- GSE: common organisms.

❖ Pharmacology and therapeutics in pediatrics:

The primary aim of this task is to draw on your knowledge of basic pharmacology and learn how this can be applied in a number of clinical scenarios. This is a generic task that can be applied to any (and all) of your clinical blocks. An additional aim is to introduce the concept of safe prescribing in terms of written prescriptions. At the end of the block, you should have learnt about a number of drugs in detail and have a better understanding of safe prescribing.

○ Medicines code:

- 1) Check that the correct agent is prescribed for the correct patient with the correct diagnosis.
- 2) Check for drug allergies.
- 3) Check for potential interactions with other drugs.
- 4) Use generic drug names and write the drug in CAPITALS.
- 5) Don't use abbreviations.
- 6) Ensure that the dose, frequency and times, and route of administration are clearly identified.
- 7) Include a start date (and a review / end date if appropriate).
- 8) Be cautious using decimal points; these may be difficult to read resulting in 10x the dose.
- 9) Write „Units“ rather than „u“ as the latter can be misread as „0“; again 10x the dose.
- 10) Print name as well as signing.
- 11) Do not guess; ask or refer to local formulary guide / BNF if in doubt.

Drugs you need to know:

<p><u>Chest:</u></p> <ul style="list-style-type: none"> ○ Salbutamol ○ Ipratropium bromide ○ Salmeterol ○ Montelukast ○ Adrenaline ○ Aminophylline ○ Albuterol 	<p><u>Antibiotics:</u></p> <ul style="list-style-type: none"> ○ Penicillin ○ Ampicillin ○ Vancomycin ○ Trimethoprim ○ Macrolides ○ Cefotaxime ○ Ceftriaxone ○ Metronidazole 	<p><u>Pain/Antipyretics:</u></p> <ul style="list-style-type: none"> ○ Paracetamol ○ Ibuprofen ○ Codeine ○ Morphine 	<p><u>Gastrointestinal:</u></p> <ul style="list-style-type: none"> ○ ORS ○ Domperidone ○ Omeprazole ○ Ranitidine ○ Lactulose ○ Zinc
<p><u>CNS:</u></p> <ul style="list-style-type: none"> ○ Sodium valproate ○ carbamazepine ○ Diazepam ○ Midazolam 	<p><u>Skin:</u></p> <ul style="list-style-type: none"> ○ Emollients ○ Steroid skin ointments 	<p><u>Other:</u></p> <ul style="list-style-type: none"> ○ Steroids: ○ Furosemide ○ Insulin, Thyroxin ○ Acyclovir ○ I.V. fluids ○ Blood product transfusion 	

For each drug you need to know:

- Indications
- Contraindications
- Interaction.
- Route of administration.
- Common side effects.

Chapter five: Reading and other learning resources.

You need to do background reading in addition to attending the course.

Recommended texts:

- Nelson TEXTBOOK of PEDIATRICS, 20th EDITION.
- Nelson Essentials of Pediatrics, 7th Edition 2015.
- Illustrated Textbook of Paediatrics, 4th Edition.
- Pediatric Decision-Making Strategies, 2nd Edition.

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