Dow University of Health Sciences

RESPIRATORY MODULE

5 weeks

Third Year MBBS

5 YEAR CURRICULAR ORGANIZATION

<table>
<tr><th>Spiral</th><th>year</th><th colspan="4">Modules</th></tr>
<tr><td rowspan="4">First Spiral</td><td rowspan="2">I</td><td>FND1- Foundation
Cell, Genetics & Cell Death
(Basics of Anatomy, Physiology, Biochemistry, Gen. Pathology, Gen. Pharmacology, Community Medicine & Behavioral Sciences)
6 Weeks</td><td>Foundation Sub Module
Genetics, Microbiology, Bioethics
2 Weeks</td><td colspan="2">HEM1- Blood Module
Immunity, Inflammation, Tissue repair, Antimicrobials & Neoplasia
8 Week</td></tr>
<tr><td colspan="2">LCM1- Locomotion
Bones, Joints, Nerves & Muscles, 8 weeks</td><td>RSP1- Respiratory System 4 weeks</td><td>CVS1- Cardiovascular System 4 weeks</td></tr>
<tr><td rowspan="2">II</td><td colspan="2">NEU1- Nervous System
8 weeks</td><td>HNN1- Head & Neck & Special
4 weeks</td><td>END1- Endocrinology
4 weeks</td></tr>
<tr><td colspan="2">GIL 1-GIT and Liver
8 weeks</td><td>EXC1- Renal and Excretory System
4 weeks</td><td>REP1- Reproductive System 4 weeks</td></tr>
<tr><td rowspan="5">Second Spiral</td><td rowspan="5">III</td><td>IDD 1- Infectious diseases 5 weeks</td><td>HEM2- Hematology
5 weeks</td><td>RSP2- Respiratory System 5 weeks</td><td>CVS2- Cardiovascular System 5 weeks</td></tr>
<tr><td colspan="2">GIL 2-GIT and Liver (including Nutritional Disorders)
8weeks</td><td>EXC2- Renal & Excretory System
5 weeks</td><td>END2- Endocrinology
5 weeks</td></tr>
<tr><td>ORT2- Orthopedics, Rheumatology, Trauma
7 weeks</td><td>REP2- Reproductive System
8 Weeks</td><td colspan="2">PMR-Physical Medicine & Rehabilitation
DPS-Dermatology Plastic Surgery / Burns
GEN-Genetics
6 weeks</td></tr>
<tr><td colspan="2">NEU2- Neurosciences and Psychiatry
8 weeks</td><td>OPH / ENT*
4 weeks</td><td>ENT/OPH *
4 weeks</td></tr>
<tr><td colspan="2">Clinical Rotation 9:30 to 1:00 (with Ambulatory, Emergency, Intensive care)
In Medicine, Pediatrics, Cardiology and Neurology units
▪ Lecture on problem based approach, twice a week
▪ Ward tutorial twice a week
▪ Student research presentation once a week</td><td colspan="2">Clinical Rotation 9:30 to 1:00
(Inpatient, Ambulatory, Emergency, Intensive care and Operation Theatres)
In Surgery, Gynae & Obstetrics, Orthopedics and Neurosurgery.
▪ Lecture on problem based approach, twice a week
▪ Ward tutorial twice a week
▪ Student research presentation once a week</td></tr>
<tr><td colspan="4">PARALLEL THEMES:The following themes are not part of any individual module but shall run concurrently:Communication Skills, Clinical Skills, Writing and Presentation Skills, Article Writing, Ethics</td></tr>
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RATIONALE:

Pakistan is a country with high prevalence of respiratory diseases particularly in children where the leading cause of morbidity and mortality in children is Acute Respiratory Infection and pneumonia.

During clinical practice a graduate will come across different types of respiratory failures. To be able to manage these, the basis of oxygen administration and artificial ventilation has to be understood. The understanding of air flow dynamics will enable the student to comprehend the management of diseases like asthma, chronic bronchitis and their remedies. Asthma and allergic respiratory diseases are on the rise in Pakistan due to increasing pollution. At the same time the diseases related to smoking like lung cancer and chronic bronchitis are also on the rise and a firm understanding of the respiratory system will enable the student to prevent such lifestyle diseases through spreading relevant health education messages.

TERMINAL OBJECTIVE:

By the end of the respiratory module in MBBS course the students shall be able to:

1) Understand the normal and abnormal structures and functions of respiratory system.

2) Interpret the biochemical changes in the body related to the respiratory system with reference of some common respiratory disorders.

3) Take history and perform a satisfactory physical examination of the respiratory system.

4) Describe normal changes that occur in respiratory system functioning from infancy to old age.

5) Formulate an appropriate plan for evaluating patients with respiratory signs and symptoms to achieve a reasonable differential diagnosis and to develop an investigative and management plan.

6) Diagnose, manage and prevent common respiratory diseases.

MODULE OBJECTIVES:

- Review normal anatomy and physiology of respiratory system.
- Knowing the obstructive lung diseases like chronic bronchitis, emphysema, asthma, and bronchiectasis, and identify the causes, underlying pathophysiology, histopathology, clinical presentation and pharmacological and clinical management in adults and children.
- Understand the interstitial lung diseases with emphasis on occupational lung diseases and identify the causes, underlying pathophysiology, histopathology, clinical presentation and clinical management.
- Knowing the pulmonary infections (pneumonias), identify the causes, underlying patho-physiology, histopathology, clinical presentation and pharmacological and clinical management. Understand the Management of viral respiratory infections (RSV) in children.

- To understand the diseases of vascular origin; identify the causes, underlying patho-physiology, histopathology, clinical presentation and pharmacological and clinical management.
- Understand the pathology, clinical presentation, diagnosis and approach in the treatment of Tuberculosis in different clinical scenario.
- Recognize the pleural tumors; identify the causes, underlying pathophysiology, histopathology, clinical presentation and clinical management.
- Enable to classify the types, underlying pathophysiology, clinical presentation and pharmacological and clinical management of pleural effusion and pneumo-thorax.
- Review the physiology of cough and recognize pharmacological ways and means of management.
- Understand the interstitial lung diseases with emphasis on occupational lung diseases.
- Demonstrate knowledge of autopsy protocol, types of autopsy, autopsy incisions, techniques and hazards.
- Understand pathophysiology of asphyxia deaths, types of asphyxia deaths.
- Classify mechanical asphyxia and recognize their medico legal importance.

MODULE CONTENTS:

PHARMACOLOGY

- **Rsp 2 Pha 1** Drugs used in ASTHMA 1
- **Rsp 2 Pha 2** Drugs used in ASTHMA 2
- **Rsp 2 Pha 3** Anti-tuberculosis drugs 1
- **Rsp 2 Pha 4** Anti-tuberculosis drugs 2
- **Rsp 2 Pha 5** Anti-tussive Drugs
- **Rsp 2 Pha 6** Activity of Histamine and antihistamine on Bronchial smooth muscles

PATHOLOGY

- **Rsp 2 Pth 1** COPD 1Obstructive diseases – emphysema, chronic bronchitis
- **Rsp 2 Pth 2** COPD 2**,** Asthma, bronchiectasis + Atelectasis
- **Rsp 2 Pth 3** Chronic interstitial restrictive diseases
- **Rsp 2 Pth 4** Granulomatous diseases Sarcoidosis, hypersensitivity related diseases
- **Rsp 2 Pth 5** Pulmonary Infections Pneumonia
- **Rsp 2 Pth 6** Pulmonary Tuberculosis
- **Rsp 2 Pth 7** Pulmonary diseases of vascular origin Pulmonary embolism, hemorrhage, infarction, hypertension and diffuse pulmonary hemorrhage syndrome.
- **Rsp 2 Pth 8** Pulmonary tumors.
- **Rsp 2 Pth 9** Pleural infection &Tumors
- **Rsp 2 Pth 10** Covid 19
- **Rsp 2 Pth 11** Histopath of TB and COPD

FORENSIC MEDICINE

- **Rsp 2 For 1** AUTOPSY –I
- **Rsp 2 For 2** AUTOPSY –II
- **Rsp 2 For 3** AUTOPSY –III
- **Rsp 2 For 5** ASPHYXIA-I
- **Rsp 2 For 6** ASPHYXIA-II
- **Rsp 2 For 7** ASPHYXIA-III
- **Rsp 2 For 8** Preservation of viscera and method of preparation preservatives

COMMUNITY MEDICINE

- **Rsp 2 Com 1** Nuclear Medicine
- **Rsp 2 Com 2** Air Pollution
- **Rsp 2 Com 3** Introduction Writing
- **Rsp 2 Com 4** Occupational Health
- **Rsp 2 Com 5** Objective writing, Research question and hypothesis

MEDICINE

- **Rsp 2 Med 1** COPD/Resp. Failure clinical approach, investigations & diagnosis
- **Rsp 2 Med 2** Asthma
- **Rsp 2 Med 3** Clinical investigations & management of ILD
- **Rsp 2 Med 4** Community Acquired pneumonia clinical diagnosis, severity assessment and management.
- **Rsp 2 Med 5** Adult Tuberculosis; Clinical diagnosis, assessment and management. (along with MDR: Definition.
- **Rsp 2 Med 6** Arterial Blood Gases (ABG's)
- **Rsp 2 Med 7** PFT Interpretations
- **Rsp 2 Med 8** Bronchogenic Carcinoma
- **Rsp 2 Med 9** Classification & Approach in pleural effusion & Pneumothorax.

PAEDIATRICS

- **Rsp 2 Ped 1** Childhood Asthma: Classification management
- **Rsp 2 Ped 2** Clinical presentation Management of TB in children
- **Rsp 2 Ped 3** Upper Respiratory tract infections **&**management
- **Rsp 2 Ped 4** Lower respiratory infections: Pneumonia

PHYSIOLOGY

- **Rsp 2 Phy 1** Lung volume and capacities+ ABG's

ANATOMY

- **Rsp 2 Ana 1** Overview of Anatomy of Thorax (Wall Lungs and Tracheobronchial tree) Common Congenital anomalies

SKILL LAB

- **Rsp 2 SL 1** Examination of Respiratory System

TEACHING STRATEGIES

LARGE CLASS FORMATS

- Lectures

SMALL GROUP DISCUSSION

- Demonstrations
- Tutorial
- Practical
- Skill labs
- Case based learning sessions

LEARNING OBJECTIVES OF SKILL LAB

Examination of Respiratory system:

- Demonstrate the correct steps and sequence of respiratory system examination
- Demonstrate the correct method of auscultation of lung.
- Differentiate between normal, abnormal and adventitious breath sounds
- Identify accurately at least six common breath sounds viz.
- Normal breath sound
    - Bronchial breathing
    - Rhonchi
    - Crepitation/crackles
    - Pleural rub
    - Bronchophony

ASSESSMENT PLAN

RESPIRATORY MODULE

	WEIGHTAGE
ANNUAL EXAM	80%
MODULE EXAM INTERNAL EVALUATION	
THEORY	10%
PRACTICAL	10%

CONTACT HOURS (DISCIPLINE WISE)	
Discipline	**Contact Hours**
Pathology	**11.5**
Pharmacology	**6.5**
Forensic Medicine	**7.5**
Community Medicine	**5**
Paediatrics	**4**
Skill Lab	**1.5**
Pulmonology	9

CREDIT HOURS	
Respiratory-2	3+ 1.5

BOOKS

PATHOLOGY

- Robbins Basic Pathology Kumar & Abbas 9th Edition
- Robbins & Cotran Pathologic Basis Of Disease Kumar & Abbas & Aster 9th Edition

COMMUNITY MEDICINE

- Public Health And Community Medicine Shah, Ilyas, Ansari 7th Edition

PHARMACOLOGY

- Lippincott's Illustrated Review Pharmacology Karen Whalen 6th Or Latest Edition
- Basic And Clinical Pharmacology Bertram G. Katzung 11th Edition

FORENSIC MEDICINE

- Principles And Practice Of Forensic Medicine Nasib R.Awan 1 St Edition

MEDICINE

- Principles & Practice Of Medicine Davidson's 22nd Or Latest Edition
- Essentials Of Kumar And Clark's Clinical Medicine Kumar & Clark 9th Or Latest Edition
- Macleod's Clinical Examination Douglas & Nicol & Robertson13th Or Latest Edition
- Hutchison's Clinical Methods William M Drake & Michael Glynn 23rd Or Latest Edition

PAEDIATRICS

Nelsons's Essentials Of Pediatrics Marcdante & Kliegman 7th Or Latest Edition

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