



# **College of Physicians and Surgeons of Mumbai**

## **Syllabus for CPS-PG-Course**

### **TDD-DIPLOMA IN TUBERCULOSIS DISEASES**

**College of Physicians and Surgeons of Mumbai**

**CPS House, Dr. E. Borges Marg, Parel, Mumbai – 400012.**

## **TDD-DIPLOMA IN TUBERCULOSIS DISEASES**

### **General Guidelines**

During the training period effort will always be made that adequate time is spent in discussing pulmonary problems of public health importance in the country.

### **General Principles**

Acquisition of practical competencies being the keystone of post-graduate medical education, post-graduate training is skills oriented.

Learning in post-graduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

### **COURSE DESCRIPTION**

**Eligibility:** A candidate should possess MBBS degree/ equivalent degree as per provisions of Indian Medical Council Act.

**Duration:** 2 Years

#### **Skills and competencies to be acquired by students at the end of course**

##### **A. Cognitive domain**

**At the end of the Diploma , the student should acquire knowledge in:**

1. Gross and radiological Anatomy of chest organs, lung segments, airways etc
2. Physiology of air exchange
3. Acid base balance and role of lungs
4. Pathology of common lung diseases
5. Pulmonary infections and their management
6. Emerging and re-emerging pulmonary infectious diseases
7. common pulmonary diseases, their clinical manifestations, including emergent situations and of investigative procedures to confirm their diagnosis.

8. Various modes of therapy used in treatment of pulmonary diseases.
9. Commonly used drugs, their doses, side-effects / toxicity, indications and contra- indications and interactions.
10. Medical management of various diseases
11. Information about options of Surgical management of various pulmonary diseases
12. Manage common pulmonary emergencies and understand the basic of intensive care in patients with pulmonary diseases.
13. Details about Revised National Tuberculosis Control Programme
14. Microbiological aspects of Acid Fast Bacilli
15. Common sites of TB infections
16. Diseases of Pleura and pleural cavity
17. Radiology in common lung pathologies

**B. Affective Domain:**

1. Should develop communication skills to interact effectively with patients, relatives and colleagues and other hospital staff.
2. Should always adopt ethical principles and practices
3. Should be able to work a member of a team for effective care delivery system
4. Should develop an attitude to contribute effectively in the improvement, maintenance of health care delivery system of the country and to contribute in improving the health indicators of our country in comparison with the other developed world.

### **C. Psychomotor domain**

**At the end of the course, the student should acquire following clinical skills and be able to:**

1. Acquire sufficient clinical skills, including history taking, clinical examination for the correct diagnosis of lung pathologies.
2. Identify required laboratory investigations and interpret them
3. Sputum collection and examination for etiologic organisms especially Acid Fast Bacilli (AFB), interpretation of the chest x-rays and lung function tests.
4. Interpret and manage various blood gases abnormalities in various pulmonary diseases.
5. Management of pulmonary diseases.
6. Common procedures, like bronchoscopic examination, pleural aspiration and biopsy, pulmonary physiotherapy, endotracheal intubation and pneumo-thoracic drainage / aspiration etc.
7. Recognize emergency situations in intensive care, respond to these appropriately and perform basic critical care monitoring and therapeutic procedures.

#### **Diagnostic tests: Performance and interpretation**

1. Chest X-ray, various views and interpretation
2. Sputum and other body fluids examination with ZN stain for AFB, culture methods for pathogenic bacteria, fungi and viruses

3. Newer diagnostic techniques for tuberculosis including molecular techniques, PCR, CB-NAAT, Genexpert etc
4. FNAC of lung masses
5. Interpretation of CT
6. PFT
7. Pleural biopsy, lymph node biopsy
8. Pleural tapping, tube thoracostomy
9. CPAP, BiPAP
10. Intubation

## **Syllabus**

### **Basic Sciences**

Embryogenesis of different organ systems especially heart, genitourinary system, gastrointestinal tract, applied anatomy of different organs, functions of kidney, liver, Lungs, heart and endocrinal glands. Physiology of maturation and defecation, placental physiology, fetal and neonatal circulation, regulation of temperature (especially newborn), blood pressure, acid base balance, fluid electrolyte balance, Calcium metabolism, vitamins and their functions, hematopoiesis, hemostasis, bilirubin metabolism. Growth and development at different ages, puberty and its regulation, nutrition, normal requirements of various nutrients. Basic immunology, bio-statistics, clinical epidemiology, ethical and medicolegal issues, teaching methodology and managerial skills, pharmacokinetics of commonly used drugs, microbial agents and their epidemiology.

### **Community and Social Pulmonary Medicine**

Prevention and cure of tuberculosis under RNTCP implementation of DOTS; Prevention of HIV (VCTC) as it increases prevalence of tuberculosis, investigation of adverse events

following anti-tubercular therapy, general principles of prevention and control of tuberculosis and nosocomial infection (pneumonia), prevention of droplet infection.

## **CLINICAL**

- **Approach to Important Clinical Problems**
- **Respiratory** : Cough/chronic cough, noisy breathing, wheezy child, respiratory distress, hemoptysis.
- **Critical Care Medicine** : All patients on ventilator with special reference to acute severe COPD and bronchial asthma
- **Nutrition** : TB suspect / COPD /asthmatic
- **Infections** : Upper & lower respiratory infection, tuberculosis, pneumonia, fungal infections, bronchiectasis, recurrent infections, nosocomial infections.
- **Oncology** : Lung cancer, benign and malignancy with pleural metastasis with primary pleural malignancy
- **Miscellaneous** : Connective tissue disorder, drug induced pulmonary diseases, HIV related pulmonary disease and tuberculosis.

## **PRACTICAL SKILLS**

### **History and examination :**

- History taking including psychosocial history, physical examination, general physical examination, health function-areas and social support groups;

### **Bedside procedures**

- **Monitoring skills:** Temperature recording, capillary blood sampling, arterial blood sampling.
- **Therapeutic skills:** Hydrotherapy, nasogastric feeding, endotracheal intubation, cardio-pulmonary resuscitation, administration of oxygen, venepuncture and establishment of vascular access, administration of fluids, blood, blood components, parenteral nutrition,

intra-osseous fluid administration, intra-thecal administration of drugs, common dressings, abscess drainage and basic principles of rehabilitation.

- **Investigative skills:** Lumbar puncture, pleural, peritoneal, pericardial and subdural tap, pleural biopsy, lung biopsy, fine needle aspiration cytology, truncate biopsy from lung, bronchoscopy, alveolar lavage, pulmonary function test, sleep study, collection of urine for culture, urethra lcatheterization.
- **Bedside investigations.** Hemoglobin, TLC, ESR, peripheral smear staining and examination, urine : routine and microscopic examination, PFT, bronchoscopy, sputummicroscopy examination, Gramstain, ZN stain, gastric aspirate.
- **Interpretation of X-rays of chest, CT chest, ECG, ABG findings**
- **Understanding of** common EEG patterns, x-ray findings, CT scans, ultra-sonographic abnormalities.

**Log Book:** A log book has to be maintained by all students in which a written record of all the ward procedures done, ICU procedures done, cases seen, interesting cases discussed is kept. This log book has to be regularly counter checked by the teacher. The log book has to be submitted to the college whenever asked for and has to be brought by the candidate for the practical examination.

**TDD : DIPLOMA IN TUBERCULOSIS DISEASES****EXAMINATION PATTERN****Theory Examination:**

<b>PAPER I</b>	<b>PAPER II</b>	<b>PAPER III</b>
Public Health Aspects Of Tuberculosis & Pathological, Bacteriological & Differential Aspects	Medical And Surgical Aspects Of Tubercular Disease Including Recent Advances And Regimen Of Various Modes Of Therapy.	Non Respiratory Tuberculosis Relations In Internal Medicine And Other Diseases Conditions.
<b>Section I</b>	<b>Section I</b>	<b>Section I</b>
Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks <b>Total 50 Marks</b>	Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks <b>Total 50 Marks</b>	Q.1. 10 Marks Q.2. 10 Marks Q.3. 10 Marks Q.4. 10 Marks Q.5. 10 Marks <b>Total 50 Marks</b>
<b>Section II</b>	<b>Section II</b>	<b>Section II</b>
Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks <b>Total 50 Marks</b>	Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks <b>Total 50 Marks</b>	Q.6. 10 Marks Q.7. 10 Marks Q.8. 10 Marks Q.9. 10 Marks Q.10. 10 Marks <b>Total 50 Marks</b>
Section I + II = 100	Section I + II = 100	Section I + II = 100
<b>Total Theory = 300 Marks, Passing = 150 (i.e. 50%) Marks aggregate in Theory</b>		

<b>Practical Examination:</b>		<b>Mar</b>
<b>Paper - IV</b>	Long Case Clinical	100
<b>Paper - V</b>	Short Cases Clinical	100
<b>Paper - VI</b>	Practical & Viva-Voce	100
<b>Total Marks</b>	<b>(Aggregate marks for passing is 50% out of total.)</b>	<b>300</b>