



College of Physicians and Surgeons of Mumbai

Syllabus for CPS-PG-Course

DTMH-DIPLOMA IN TROPICAL MEDICINE AND HEALTH

College of Physicians and Surgeons of Mumbai

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

DTMH-DIPLOMA IN TROPICAL MEDICINE AND HEALTH

This course is designed to give an overview of select issues in tropical medicine. Specific tropical diseases and case studies stressing diagnosis will be highlighted. Emphasis will be on the control and prevention of tropical diseases and basic pathogenic mechanisms of selected infectious diseases that continue to be of major public health importance. Students will be introduced to both clinical and environmental aspects of public health and disease control, and will acquire a working knowledge of the biology of these diseases, including prospects for effective management and control at both the personal and public health level. Course includes laboratory sessions and practical lab experience, and will help prepare students working with current and emerging health problems in developing countries.

COURSE DESCRIPTION

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

Duration: 2 Years

By the end of the course, the student should acquire following knowledge (including higher cognitive domain), professionalism and skills

A. Cognitive domain:

1. Gross and radiological anatomy of chest, abdomen, CNS
2. Pathophysiology in various tropical diseases
3. Common infectious agents in tropics and their properties
4. Modes of transmission of disease
5. Natural history of tropical diseases
6. Epidemiology of tropical diseases
7. Laboratory and radiological investigations in the diagnosis of tropical diseases
8. Treatment modalities
9. Preventive aspects and control measures

10. Drugs used in treatment of tropical diseases, their doses, pharmacokinetics, side effects, contraindications and interactions with other drugs
11. Antibiotic resistance
12. Methods of sample collection for laboratory diagnosis
13. Adequate knowledge to diagnose and manage tropical diseases
14. Maternal and childhood problems in tropical countries
15. Emporiatrics
16. Ethical issues
17. Medico-legal aspects

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 tropical diseases.
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. Treatment of various tropical conditions

5. Recognize emergency situations in intensive care, respond to these appropriately and perform basic critical care monitoring and therapeutic procedures.
6. Cardio-pulmonary resuscitation including advanced cardiac life support and endotracheal intubation
7. Diagnostic and therapeutic thoracentesis, abdominal paracentesis, Lumbar puncture
8. Bone marrow aspiration, trephine bone biopsy, FNAC
9. Insertion of central line
10. Collect samples for various laboratory investigations
11. Interpret laboratory and radiological investigations
12. Correctly diagnose and treat communicable and non communicable tropical diseases
13. Efficiently practice as a specialist in tropical diseases

SYLLABUS

A. Basic Sciences (10%)

1. Gross and Radiological anatomy of various organs especially chest, abdomen organs and CNS
2. Pathophysiology in various tropical diseases
3. Common infectious agents in tropics and their properties
4. Modes of transmission of disease
5. Natural history of tropical diseases
6. Epidemiology of tropical diseases
7. Laboratory and radiological investigations in the diagnosis of tropical diseases
8. Treatment modalities
9. Preventive aspects and control measures
10. Drugs used in treatment of tropical diseases, their doses, pharmacokinetics, side effects, contraindications and interactions with other drugs
11. Antibiotic resistance
12. Methods of sample collection for laboratory diagnosis
13. Adequate knowledge to diagnose and manage tropical diseases
14. Maternal and childhood problems in tropical countries
15. Emporiatrics

16. Ethical issues

17. Medico-legal aspects

B. Infectious diseases (45%)

Epidemiology, Natural history, magnitude of the disease at international and national level, Causative agent, Host factors, environmental factors in causation, incubation period, generation time, period of communicability, modes of transmission, signs and symptoms, management and treatment, preventive aspects including vaccination, National Health Programmes in relation to following diseases

I. Respiratory infections

1. Chickenpox
2. Measles
3. Rubella
4. Mumps
5. Influenza
6. Diphtheria
7. Whooping Cough
8. Meningococcal meningitis
9. Acute respiratory infections
10. SARS
11. Tuberculosis
12. Pneumonias

II. Intestinal infections

1. Poliomyelitis
2. Viral hepatitis
3. Acute diarrhoeal diseases
4. Cholera
5. Typhoid fever and paratyphoid fever
6. Amoebiasis

7. Ascariasis
8. Other intestinal parasitic diseases
9. Dracunculosis

III. Vector borne diseases

1. Malaria
2. Filariasis
3. Dengue fever and dengue hemorrhagic fever
4. Chikungunya fever
5. KFD
6. Japanese encephalitis
7. Yellow fever
8. Rickettsial diseases

IV. Other zoonotic diseases

1. Rabies
2. Brucellosis
3. Leptospirosis
4. Plague
5. Parasitic zoonotic diseases – Taeniasis, Hydatid disease, Leishmaniasis

V. Sexually transmitted diseases

1. AIDS
2. Syphilis
3. LGV
4. Gonorrhoea,
5. chancroid
6. Other STDs

VI. Other important tropical diseases

1. Tetanus
2. Yaws
3. Trachoma
4. Leprosy

5. Melioidosis

6.

VII. Fungal infections

VIII. Emerging and re-emerging diseases

1. Ebola
2. Zika virus disease
3. Nipah virus
4. Corona virus

C. Public health (25%)

1. Vector control measures
2. Water and sanitation,
3. Epidemiology
4. Health economics
5. Essential drugs,
6. Immunization,
7. Primary health care,
8. Clinical trials and Statistics,
9. Health education,
10. Research Methodology
11. Health policy
12. National Health Programmes.

D. Non-communicable diseases (20%)

Diabetes, Hypertension, Cardiovascular disease, Asthma, Epilepsy, Stroke, Mental health, Travel medicine, Bites and stings, Skin disease, Drugs/alcohol, poisoning

Rotations during clinical postings will include--

HIV, Tuberculosis, and Other Chronic Infections in the Tropics

Description:

Course will cover the history, clinical presentation, epidemiological factors, new diagnostic techniques, treatment, and control of tuberculosis. Addresses pathophysiology, clinical presentation, ecology, and effects of HIV/AIDS on developing countries, their populations, and resource utilization. Additional topics include other chronic infections that have global public health importance. There will be an emphasis on integrating policies addressing TB, HIV/AIDS, other infections and poverty in resource-poor settings and how these interactions influence control strategies.

Learning Objectives:

By the end of the course, students should be able to:

- 1) Describe the epidemiology, pathogenesis, diagnosis and treatment of TB, HIV and the major chronic tropical infections;
- 2) Characterize preventive and control policies for these diseases in the tropics;
- 3) Understand how integrating public health and development policies can strengthen control of these chronic infections in resource-poor settings.

Vector-Borne Diseases in the Tropics

Description:

Focuses on vector-borne diseases prominent in tropical infections. Areas of emphasis are global epidemiology, diagnosis, clinical presentations, pathophysiology, and treatment of microorganisms as well as characterization and control of vectors. Laboratory sessions integrate clinical cases and pathology. Principal diseases covered include malaria, African and American trypanosomiasis, leishmaniasis, filariasis, yellow fever, dengue, hemorrhagic fevers, Bartonella, Lyme, Rickettsial, plague and toxoplasmosis.

Learning Objectives:

Upon completion of this course, students should be able to: Understand the biology, global distribution and impact, infectious source, transmission, diagnosis, mechanism of pathology in relationship to infectious agent or host immune response, treatment and control of vector borne diseases relevant to the tropics; Characterize vectors and methods of control relevant to disease control.

Intestinal Infections in the Tropics

Description:

Provides an overview of the epidemiology, presentation, and effects of microbial, protozoan, and viral intestinal infections, including Salmonella, Shigella, cholera, typhoid, rotavirus, amebiasis, dysentery, H. pylori, Campylobacter, Cryptosporidium, Cyclospora, and Giardia. Clinical presentation, life cycle, distribution, prevention, and treatment of intestinal helminthes, including Ascaris, Trichuris, Strongyloides, and hookworm are addressed.

Interactions between parasites, diarrhea, and malnutrition, are addressed, along with treatment, prevention and control strategies, and oral rehydration therapy. Cysticercosis and hydatid disease are also be covered. Includes laboratory sessions and practical lab experience.

Learning Objectives:

At the end of the course, students should be able to: 1) Understand the epidemiology, pathogenesis, diagnosis and treatment of several major tropical intestinal diseases; 2) List publichealthpreventiveandcontrolmeasuresforthemajorintestinaldiseasesinthetropics; Recognizeimportantprotozoalandwormpathogensaspresentedinlaboratoryspecimens.

Public Health in the Tropics

Description:

Specific topics include malaria, HIV, measles, pneumonia, diarrhea and nutritional deficiencies. Additional topics may include, eye diseases, demography and anthropometry.

Learning Objectives:

At the end of the course, students should be able to: 1) Describe interventions to reduce mortality from each of the major causes; 2) Explain the role of under nutrition and micronutrient deficiency.

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 bought by the candidate for the practical examination.

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EXAMINATION PATTERN**Theory Examination:**

PAPER I	PAPER II	PAPER III
Basic sciences, Infectious tropical diseases –I, non communicable diseases -I	Infectious tropical diseases –II, non communicable diseases – II, preventive aspects	Public health aspects, National Health Programmes, MCH, Recent advances
Section I	Section I	Section I
Q.1. 10 Marks	Q.1. 10 Marks	Q.1. 10 Marks
Q.2. 10 Marks	Q.2. 10 Marks	Q.2. 10 Marks
Q.3. 10 Marks	Q.3. 10 Marks	Q.3. 10 Marks
Q.4. 10 Marks	Q.4. 10 Marks	Q.4. 10 Marks
Q.5. 10 Marks	Q.5. 10 Marks	Q.5. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section II	Section II	Section II
Q.6. 10 Marks	Q.6. 10 Marks	Q.6. 10 Marks
Q.7. 10 Marks	Q.7. 10 Marks	Q.7. 10 Marks
Q.8. 10 Marks	Q.8. 10 Marks	Q.8. 10 Marks
Q.9. 10 Marks	Q.9. 10 Marks	Q.9. 10 Marks
Q.10. 10 Marks	Q.10. 10 Marks	Q.10. 10 Marks
Total 50 Marks	Total 50 Marks	Total 50 Marks
Section I + II = 100 Marks	Section I + II = 100 Marks	Section I + II = 100 Marks
Total Theory = 300 Marks, Passing = 150 (i.e. 50%) Marks aggregate in Theory		

Practical Examination		Marks
Paper - IV	Clinical Practical (Long Case)	100
Paper - V	Oral & Viva	100
Paper - VI	Case (Short Cases – 2)	100
Total Marks	(Aggregate marks for passing is 50% out of total.)	300