SYLLABUS FOR STUDENTS
OF FACULTY OF MEDICINE NO.2

Name of the course: Pneumophthisiology
Code of the course: S.07.O.51
Type of course: Compulsory

Total number of hours – 40
Lectures - 10 hours, practical lessons - 30 hours

Number of credits provided for the course: 2

Lecturers who teach the course:
Iavorschii Constantin – PhD, professor
Kulcíticaia Stela – PhD, associate professor
Ustian Aurelia – PhD, associate professor
Niguleanu Adriana - PhD, lecturer
Vîlce Valentina – MPH, lecturer

Chisinau 2014
I. Aim of the discipline

The purpose of training students in pneumo-phthisiology takes account for the future medical professional activity and involves acquiring basic knowledge and training on respiratory tuberculosis practical skills needed to perform the diagnosis and treatment of patients with respiratory tuberculosis.

II. Training objectives in the discipline of Pneumophthisiology

- At the level of knowledge and understanding
  - to define the theoretical basis of respiratory tuberculosis at contemporary;
  - to understand the importance of respiratory tuberculosis studying, especially in the current epidemiological conditions;
  - to identify particularities of primary tuberculosis in children, adolescents and adults;
  - to know the etiopathogenesis, clinical manifestations, diagnosis and differential diagnosis, principles of treatment and prevention of various forms of respiratory tuberculosis;
  - to identify the risk of TB contracting.

- At the level of application
  - to achieve practically all mandatory stages of the formulation of diagnosis: history, physical examination, interpretation of clinical data (formulation of the clinical diagnosis), indication and interpretation of investigations, formulation of diagnosis;
  - to learn application method of Pr. Mantu with 2UT and results interpretation;
  - to interpret the chest radiographs with different forms of Extrarespiratory tuberculosis;
  - to perform differential diagnosis of tuberculosis with other respiratory diseases;
  - to apply TB treatment according to tuberculosis cases and type of resistance;
  - to take the optimal decisions of the emergency aid in critical situations;
  - to apply prevention methods of tuberculosis in practice;
  - to formulate ethical and deontological principles in health care of patients with tuberculosis;
to resolve issues, multilateral and critical processing assimilated information.

- At the level of integration
  - to appreciate the importance of studying of Pneumophthisiology in context of therapy and integration of related medical disciplines;
  - creatively tackle problems of clinical medicine;
  - to infer interrelationships between Pneumophthisiology and other clinical disciplines;
  - to possess the skills of implementation and integration of knowledges obtained in medical practice;
  - to be able to objectively assess and self-assess knowledge in the field;
  - to be able to assimilate the achievements in Pneumophthisiology

III. Provisional terms and conditions:

Pneumophthisiology is a clinical discipline in Internal Medicine, studying of which at the university will allow future physician to assimilate the principles of management of respiratory tuberculosis in patients. Respiratory tuberculosis has interdisciplinary closely touches in the undergraduate medical curriculum. So, knowledge of Pneumophthisiology contributes to the formation of the holistic health concept and complex application skills. To acquire Pneumophthisiology better knowledge in the following subjects is required:

- **Fundamental:** Human Anatomy, Histology, Cytology and Embryology, Physiology and Medical Rehabilitation, Biochemistry and Clinical Biochemistry, Molecular Biology and Human Genetics, Microbiology, Virology and Immunology;
- **Preclinical:** Pathophysiology and clinical pathophysiology, Morphopathology, Pharmacology and Clinical Pharmacology, Internal Medicine - semiology, Surgery - semiology, Pediatrics, semiology and childcare;
- **Clinical:** Internal Medicine, Obstetrics and Gynecology, Surgery, Pediatrics, Urology, Neurology, Ophthalmology, Otorhinolaryngology, Dermatovenereology, Endocrinology, Hematology and Oncology, Infectious Diseases, Epidemiology.
IV. Basic content of the course

1. THEORETICAL BASIS OF PHTHISIATRY


1.3. Transmission of TB infection. Sources of infection. Pathways of infection penetration in the body and mechanisms of contamination.


2. METHODS OF TUBERCULOSIS SCREENING AND DIAGNOSIS


2.7. **Laboratory investigations.** Biochemical and immunological investigation. Examination of liver function. Examination of kidney function. Cytological examination of pleural effusion. Biochemical examination of cerebral spinal fluid. Results interpretation.

2.8. **Bronchoscopy in diagnosis of tuberculosis.** Indications for bronchoscopy. Bronchoscopy technique. Pathological endoscoical semiology. Endoscopic aspects of the specific bronchopulmonary


3. **CLINICAL FORMS OF RESPIRATORY TUBERCULOSIS**


3.6. **Infiltrative pulmonary tuberculosis.** Pathogenesis. Clinical and radiographic types of tuberculosis infiltrates. Particularities of


4. **COMPLICATIONS OF RESPIRATORY TUBERCULOSIS AND MEDICAL EMERGENCY**


5. **TUBERCULOSIS ASSOCIATED WITH OTHER DISEASE AND CONDITIONS**


5.3. **Pulmonary tuberculosis and ulcer disease.** Pathogenesis. Clinical and treatment particularities. Evolution and prognosis. Supervision and dispensarization of patients.


6. **THE TREATMENT OF TUBERCULOSIS**


6.2. **Chemotherapy.** Aims of treatment. General principles of treatment. Regimens. DOTS classic TB treatment: basic principles, schemes. Categories of patients in strategy DOTS.

6.3. **Treatment monitoring** and evaluation of results of TB treatment.

6.5. **Communication, information and education of a patient with TB.** The importance of health education in tuberculosis control. The importance of the patient’s adherence to the treatment.

6.6. **Adjunctive therapy.**

7. **PREVENTION OF TUBERCULOSIS**


7.4. **Control of tuberculosis infection.** Managerial activities. Administrative control. Environmental control measures. Personal respiratory protection.

8. **ORGANIZATION OF TUBERCULOSIS CONTROL IN THE REPUBLIC OF MOLDOVA**

8.1. **National Programme of Tuberculosis Control.** Purpose and objectives.
8.2. **Organizational structure and responsibilities of TB control services.** Central level. Regional / city level. Primary level. TB control in primary health care level. Joint activities between the centers of public health, primary care medicine and phthisiopneumology service in TB control.

### A. Lectures:

<table>
<thead>
<tr>
<th>No.</th>
<th>Topic</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>History of tuberculosis, epidemiology, etiology and pathogenesis of tuberculosis.</td>
<td>2</td>
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<tr>
<td>3.</td>
<td>Primary latent tuberculous infection. Particularities of primary tuberculosis. Primary tuberculosis complex. Tuberculosis of intrathoracic lymph nodes. Complications of primary tuberculosis.</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Prevention of tuberculosis: specific, sanitary, social. TB infection control. Organization of tuberculosis control in RM.</td>
<td>2</td>
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<td>Total</td>
<td>10</td>
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### B. Practical Lessons:

<table>
<thead>
<tr>
<th>No.</th>
<th>Topic</th>
<th>Hours</th>
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<tbody>
<tr>
<td>1.</td>
<td>Appropriation particularities and methods of examination of TB patient: clinical and paraclinical investigation. Classification of TB. Tuberculin skin test. Microbiological and radiological examination. Inspection of the patient.</td>
<td>6</td>
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<tr>
<td>2.</td>
<td>Examination and results evaluation of patients with primary tuberculosis. Diagnosis and treatment. Clinical discussion of patients with primary tuberculosis complex, tuberculosis of intrathoracic lymph node. Complications of primary tuberculosis: pleurisy, meningitis, atelectasis.</td>
<td>6</td>
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<tr>
<td>3.</td>
<td>Examination and evaluation of results of patients with secondary pulmonary tuberculosis (disseminated TB, nodular TB). Diagnosis and treatment. Clinical discussion of patients with secondary pulmonary tuberculosis.</td>
<td>6</td>
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<tr>
<td>4.</td>
<td>Examination and evaluation results of patients with secondary pulmonary tuberculosis (infiltrative TB, fibro-cavitary TB).</td>
<td>6</td>
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</tbody>
</table>
### Diagnosis and treatment. Clinical discussion of patients with secondary pulmonary tuberculosis.

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### Colloquium

| Total | 30 |

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### V. Recommended literature:

- **A. Compulsory:**

- **B. Additional:**
  - Bumbăcea D. et al. - Tuberculosis. Course for students. Romania, 2005
  - Perelman MI, Bogadelnikova I.V. Phthisiology. Moscow, 2010
  - National Programme for Prevention and Control of Tuberculosis 2011 – 2015
  - Methodical teaching materials, legislative norms, specialized periodicals publications.
VI. Teaching and learning methods

Subject Pneumophthisiology is surrendered as a course in hospital, provides both lectures and practical lessons. The student is obliged to be present during the whole module, regardless of the hours of lectures or practical lessons. Lectures are read by the holders of the course. On practical lessons students study the subject Phthisiopneumology in Chisinau Municipal Hospital departments by clinical inspection of hospitalized patients, exposure, interactive debate, solving related tests, preparation of medical records and thematic clinical cases. The Department reserves the right to spend some practical work in interactive manner.

VII. Suggestions for individual activity

At present, the individual activity of medical student gradually becomes the main form of the educational process. As the result of individual activity accumulation, structuring and consolidation of knowledge take place. From the pedagogical point of view, a less effective appropriate method is passive listening of the course, even if it is very carefully structured and illustrated. It is necessary that theoretical knowledge has output in practice with applicative results. The practice fulfilling is much more effective, than just reading about how to do this. However, making a work without theoretical support tergiversate the expected result. There is one secret of success, namely the repetition and continuous improvement, but the most effective is to teach someone else to do some work. If you want to have success in assimilation of Pneumophthisiology course, work actively with the material. What does this mean:

1. Firstly read the material, but not simply, to complete it to the diagonally. Take notes. Try to formulate the main moments alone. Study the diagrams and images from the manual, resolve tests on this topic by youself.
2. Come to courses and practical lessons not only to be present, but with the thought of learning something new, to see live clinical cases, to review and reinforce the material studied at home with the help of the teacher. Otherwise
you will not meet the requirements. On the lectures you need to be actively involved in the topic, but not only automatically. Listen to the information and ask yourself: do you agree with the teacher? Do you understand what is it about? Does the material taught correspond to the manual?

3. Ask questions: ask the teacher, each other, youself. Once you ask the question, you are trying to understand and process the material taught, which can only be welcomed.

4. Organize in groups of 2-3 students to meet regularly in order to discuss the course material and prepare for practical lessons, exams. Usually, in small groups a much broader and clearer understanding is synthesizes, than working individually. In addition, the ability to explain the learned material to colleagues, is helpful.

5. Duration of Pneumophthisiology course is small, thing that provides for rational use of time and establishes a "gold" balance between the effort to obtain knowledge, other responsibilities and personal life.

VIII. Methods of assessment

Both formative assessment and final assessment are foreseen on the subject Pneumophthisiology.

**Formative assessment** is performed daily on practical lessons and includes several methods of assessment (oral answer, check written test, clinical cases, etc.). Formative assessment provides for students the obligatory presence at all lectures / practical lessons. In case of absence the student is required to recover these hours. Every practical lesson the student is rated at pretest estimating, works at the patient bed and practical theme appropriation. Daily Mark is the arithmetic mean of all samples presented during the lesson.

History report shall be noted on the base of its presentation and discussion at the end of the module (supporting).

Annual Attestation provides for deduction arithmetic average Mark of all daily marks plus the mark got during module on history report, which should not be less than grade 5.

Students with annual average under grade 5, and students who have not recovered absences from the practical work are not admitted to the colloquium.

**Final evaluation** in the form of colloquium is a combination of two steps - practical test and theoretical examinations (consisting of three questions). Colloquium is taken at the end of the module, in accordance with the rules of examination of students in force.

1. Theoretical part is oral and the mark consists 50% of the final grade. Theoretical test is performed by giving each student a question card, it contains three theoretical questions. Students have 30 minutes to prepare the answer. The exam is marked from 0 to 10. Theoretical examination is eliminatory, students
who do not obtain a minimum 5.00 grade can not be promote and do not pass practical exam. The obtained score is multiplied by 0.5 to give the final grade of the theory test.

2. The practical exam is oral, representing 20% of the final grade. It consists of:
   a. test of interpretation of radiological images, with different forms of pulmonary tuberculosis, b. description of clinical case - the teacher discusses with the student presented clinical case. Professor reserves the right to address the student questions from the rest of the theme.

In accordance with the regulation, the colloquium is promoted only if the mark for practical test is equal to or more than 5.00.

In case of failure of the theoretical exam, the student will recover the entire Colloquium. In case of failure only of practical test, the student will recover only the practical part of the Colloquium. Subjects of Colloquium (clinical cases and questions for the oral test), approved at the Department meeting, are announced to students at least one month before the Colloquium.

The final grade consists of three components: average mark (coefficient 0.3), practical skills test (coefficient 0.2) and oral test (coefficient 0.5). Knowledge (each component) is appreciated with grades from 10 to 1, with decimals and hundredths. The final grade is the average of current assessments and final examination, assessed with grades from 10 to 1 and decimal rounded to 0.5.

**Method of mark rounding**

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<th>The average of current and final marks</th>
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<td>9,6 - 10</td>
<td>10</td>
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*Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to re-take the exam twice.*

**IX. Language of study: English**
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