



المجلس العلمي للأمراض الباطنة

Scientific Council of Internal Medicine

دليل اختصاص أمراض الجهاز التنفسي

Guidebook of Respiratory Medicine

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Scientific Council of Internal Medicine

Arab Board Fellowship in Adult Respiratory Medicine

Fellowship Program

اسم الاختصاص	
الاختصاص الدقيق في أمراض الجهاز التنفسى عند البالغين	اللغة العربية:
Fellowship of Adult Respiratory Medicine	اللغة الإنجليزية

Structure and Requirements

شُؤون التدريب:

- مدة التدريب ثلاثة سنوات.
- شرط التسجيل في الاختصاص أن يكون الطبيب حاصلاً على شهادة المجلس العربي في الامراض الباطنية العامة أو ما يعادلها من البورادات المحلية والشهادات الأخرى .
- بالنسبة لشروط الاعتراف بالمراكز التدريبية تلتزم اللجنة بالشروط العامة للمجلس العربي للاختصاصات الصحية

شُؤون الامتحان:

شكل الامتحان:

- امتحان نهائي كتابي يتكون من ورقة واحدة/ 100 سؤال – متعدد الخيارات / .
- امتحان نهائي عملي يتكون من:
 - * حالة واحدة طويلة.
 - * حالتين قصيرتين.
 - * حالة واحدة للمناقشة تشمل مهارات التواصل.



Overview

With the rapid development of health care in the region, there is an increasing demand for qualified respiratory physicians. The pulmonologist has to be highly specialized physician qualified through well-structured fellowship programs, enabling him/her to provide continuous, safe, effective care for patients suffering from respiratory problems.

The Respiratory Medicine Fellowship Program is a structured postgraduate training program that will help fulfill the regional needs for trained physicians in this field. This program is designed to prepare physicians for practicing competently and independently in Respiratory Medicine.

The program will teach the trainees the fundamental skills, knowledge, and humanistic qualities inherent to Respiratory Medicine practice and provides progressive responsibility and experience in the application of these principles to enable effective management of clinical problems.

Equal opportunities must be provided to trainees, under the guidance and supervision of qualified faculties, to develop an excellent level of clinical maturity, judgment, and technical skills, upon completion of this program.

Competencies:

After the completion of this program trainees should be capable of practicing Respiratory Medicine, learning new skills and gaining knowledge during their training program, and monitoring both patient's physical and mental well-being.

The Respiratory Medicine should be considered as sub-specialty of Internal Medicine.

The Respiratory Fellowship program should utilize all resources which presently reside at each recognized center.

This fellowship program in adult respiratory medicine has the aim to define the educational objectives, the body of knowledge and practical skills required by physicians specializing in this subspecialty.

The core program is centered in a medical department / respiratory division, Medical Intensive Care Unit, Outpatient Respiratory (Ambulatory) Clinics, inpatient services and Emergency Room.



Rotations

The core rotations are in:

- Respiratory Clinic.
- Bronchoscopy unit.
- Medical floor.
- Medical intensive care unit (MICU).
- Sleep study Laboratory.
- Pulmonary Physiology laboratory and respiratory therapy.
- Respiratory Consultations.
- Clinical Imaging.
- Electives in: Pathology, Echocardiography.

Objectives

The goals of this fellowship program are:

- To provide an educational environment optimized for the development of clinician basic science leaders in respiratory medicine.
- To allow trainees to build mastery in diagnosis and management of complex problems in patients with acute and chronic respiratory diseases.
- To allow trainees to acquire an appreciation for the depth and breadth of the specialty of respiratory medicine including:
 1. Scientific principles.
 2. Medico-legal issues.
 3. Ethical dilemmas.
 4. Administrative duties.
 5. Education responsibilities.
- To gain basic principles of research study design and statistical analysis and provide trainees with clinical and basic science research opportunities.
- To allow trainees to appreciate the role of information management.
- To develop effective skills in handling various electronic medical informatics and related tools.



PROGRAM STRUCTURE

Admission Requirements

The following requirements must be fulfilled by all candidates accepted into the training program:

1. All candidates must hold a medical degree such as an M.B.B.S. or its equivalent from a university recognized by the training program.
2. All candidates must have completed 12-month rotating internship.
3. All candidates must have a License (permanent or temporary) to practice medicine in the country of the training center.
4. All candidates must hold Arab Board Certificate in internal medicine or equivalent qualification in internal medicine from other approved boards.
5. For those who hold local subspecialty in respiratory medicine without holding internal medicine board certificate, should be studied separately by the respiratory committee in the Arab Board.
6. All candidates must provide a comprehensive CV with references from two (2) consultants, preferably from the field of Respiratory Medicine, who should provide recommendation letters stating the suitability of the candidate for training in respiratory medicine.
7. All candidates must be registered as training in respiratory medicine at the Arab Council for Health Specializations (Arab Board).
8. All candidates must have certificate in advanced cardiac life support, if they don't have, the training center should conduct similar training course.



General Training Requirements

1. Trainees shall abide by the training regulations and obligations set by the training center and Arab Board council for health specialties (ACHS).
2. Training is a full-time commitment. Trainee will be enrolled in full-time, continuous training throughout the program's duration.
3. Training is to be conducted at a recognized hospital by the ACHS, which is accredited for training in Respiratory Medicine.
4. The training will comprehensively cover the specialties related to Respiratory Medicine.
5. Trainees should be actively involved in patient care with gradual progression of responsibility.

Structure of the Training Program

1. The program is a 3-year (36-month) postgraduate structured training program in Adult Respiratory Medicine and is divided into two parts:
 - **Junior Fellows (the 1st 18 months) and (2nd 18 months) as senior Fellows.**
2. The junior fellowship period (1st 6-18 months) is designed to provide training in basic respiratory physiology , respiratory clinics, medical floor and provides elective rotations inside and outside the respiratory practice.
3. The senior fellowship period is designed to provide training in bronchoscopy, respiratory consultation, sleep unit, respiratory clinics and other related rotations.
4. Research activities can be initiated throughout the training period.



Curriculum:

Formal educational program includes:

- Lectures or Seminars series that covers an extensive list of respiratory medicine topics related to:
 1. Respiratory Physiology.
 2. Respiratory Pharmacology.
 3. Respiratory diseases patients management.
 4. Pulmonary function testing.
 5. Chest radiology.
 6. Sleep Medicine and sleep studies scoring and interpretation.
 7. Pleural tap and biopsies.
 8. Diagnostic plus some therapeutic bronchoscopies.
 9. Monthly performance improvement (assessment) meetings.
 10. Clinical research forums.
 11. Multidisciplinary case conferences in internal medicine to further enhance the educational environment.
 12. Respiratory clinic training and teaching.
 13. Teaching rounds.
 14. Respiratory case discussion seminars.

Research:

Candidates participating in this program should have a strong interest in clinical or basic science research. The involvement of the candidates in the respiratory research team should be encouraged.

Application Process:

- Candidates may apply at any time at the recognized center for this training program.
- The program in all recognized center for the training should start at the 1st July each year.



Initial steps for candidates interested in applying are as follows:

- Complete the respiratory medicine Fellowship Application Form (RMF) provided by the training center.
- Submission of the application (electronic copies and hard copies are accepted) and the following supporting documents to the Adult Respiratory Medicine Fellowship program:
 - Current photograph (passport size or similar)
 - Current curriculum vitae
 - Copy of all certificates needed for registration and program entry.
- All applications for Respiratory fellowship program in Arab Board should be provided by the recognized center and should include all the documents needed for registration including registration fees.

Evaluation

- Candidates are required to satisfactorily complete the allocated rotations for each year and pass the end-of-year evaluation before proceeding from one year to the next.
- The recognized training center is responsible for the end year evaluation.
- The sequence of rotations will be determined by the training committee and the Program Director in the recognized center for the training program.

After successfully completing all 3 years of training and obtaining the Final In-Training Evaluation Report (FITER) done by training center, the Arab Board committee will conduct the final examination.



The exam should include:

- **Final written exam** (one paper) include: 100 single best multiple answer choices. The pass mark of the exam is 60% or more.
- Those candidates who pass the final written exam are eligible to enter the clinical exam.
- **The clinical exam should include:**
 - One long case, two short cases and one discussion case include communication skills.
 - The clinical exam has the form of objective structured exam.
 - To pass the exam the candidate should pass in:
The total pass for the exam is 60% or more and the minimum pass mark for each station should be 50% or more.

Candidates to be eligible for certification as specialist in Adult Respiratory Medicine should meet all the following requirements:

1. Successful completion of training.
2. Passing the final written exam.
3. Passing the clinical exam.
4. The candidate published at least one paper either as principle investigator or co-author.

Syllabus

The syllabus should include the following activities in the following areas:

Respiratory Failure

- Definitions
- Types
- Physiology
- Diagnosis
- Treatment of respiratory failure :
 - ✓ Oxygen therapy
 - ✓ High flow oxygen therapy
 - ✓ Hyperbaric oxygenation
 - ✓ Mechanical ventilation:



- ✓ Non-invasive ventilation (CPAP/ BiPAP)
- ✓ Invasive mechanical ventilation
- ✓ Negative pressure ventilation
- ✓ Complications of mechanical ventilation
- ✓ Weaning from mechanical ventilation

Common Respiratory Diseases

1. Airways diseases

- Asthma
- COPD

2. Other Obstructive Airways Diseases

- Bronchiolitis Obliterans
- Bronchiectasis
- Cystic Fibrosis
- Primary ciliary dyskinesia

3. Interstitial Lung Diseases

- IPF
- Other types

4. Pneumonias

5. Pleural diseases and malignancies

6. Unusual infectious disease

- Tuberculosis
- Fungal Diseases

7. Occupational Lung Diseases

8. ARDS

9. Sleep Disordered Breathing

- Obstructive sleep apnea (OSA)
- Central sleep apnea (CSA)
- Mixed Sleep Apneas

10. Pulmonary Vascular diseases

- Venous Thrombo Embolism (VTE)
- Pulmonary arterial hypertension.

11. Lung cancer

12. Lung transplantation

13. Sepsis

14. Pulmonary vasculitis



Other acute respiratory conditions

1. Acute respiratory failure:
 - a. Hypoxic respiratory failure (type I)
 - b. Hypercapnic respiratory failure (type II)
2. Status asthmaticus
3. Smoke inhalation and airway burns
4. Aspiration and chemical pneumonitis
5. Flail chest and chest trauma
6. Bronchopulmonary infections
7. Upper airway obstruction
8. Drowning

Pulmonary function tests:

- Pulmonary mechanics
- Peak expiratory flow rate
- Spirometry and reversibility
- Maximum inspiratory and expiratory pressures
- Flow volume loop
- Lung volumes
- CO diffusion capacity (DLCO)
- Respiratory adequacy and arterial and venous blood gases interpretation
- Challenge (provocation) testing
- 6-minute walk test
- Cardio pulmonary exercise test

Common Pharmacology groups

Antimicrobial therapy

1. Antibiotics
2. Anti-tuberculous agents
3. Antifungal agents
4. Antiviral agents
5. Agents for parasitic infections

Bronchodilators long and short acting

Anti-inflammatory agents

Immunological agents

Biologic agents

Immune suppressive agents