

## In the Name of God

### Islamic Republic of Iran Ministry of Health and Medical Education Deputy for Education

## Pediatric Infectious Diseases Degree: Fellowship

### Introduction:

According to the latest World Health Organization statistics, 28% of the world population and 25% of the U.S. population are under the age of 18 years. In Islamic Republic of Iran, 25.8% of the population are under 15 years old. Currently, the main causes of death among children and adolescents are infectious diseases. According to the WHO, more than 13 million deaths occur each year due to infectious diseases and in developing countries, 1 in every 2 deaths occur due to infectious diseases. Emergence of many new infectious agents and re-emergence of some infectious agents that were considered eliminated, and the growing resistance of causative agents of infectious diseases to antibiotics suggest the fact that the war between microbes and human not only does not end, but also continues and presents even new aspects soon. Furthermore, vaccination is a valuable tool for the prevention of infectious diseases with its wide range. It is included in the area of infectious diseases and requires a professional performance. According to the above-mentioned points and taking into consideration the fact that infectious diseases are the major causes of death in our country, it is essential to completely review and strengthen medical curricula in all departments, including infectious disease specialists to empower practitioners in scientific, practical, and managerial fields.

### Definition and Duration of Training Program:

Pediatric Infectious Diseases fellowship is a clinical course originated from pediatrics, and the graduates are involved in diagnosis of febrile diseases, prevention, treatment, and care of patients with pediatric infectious diseases and who will provide the society with their specialized knowledge and skills in terms of education, research, and health services.

This course duration is 2 years.

### Aims:

To train pediatric infectious specialists who are scientifically update, competent, accountable, and sensitive to the health of individuals and society and who will provide the society with their expertise in the areas of prevention, diagnosis, treatment, education, and research.

In the next 10 years, we will be among top countries in the Middle East in terms of educational standards, research production, and providing medical services to children.

### Expected Competencies at the End of the Program

#### General Competencies\*

#### Procedural Skills (Diagnostic-Therapeutic Procedures):

- Lumbar puncture
- Liver biopsy
- Bone marrow puncture and bone biopsy
- Performing PPD
- Lesion and lymph node aspiration
- Types of sampling (blood, urine, pharyngeal secretions, wounds, etc.)
- Knee joint puncture
- Pleural paracentesis
- Resuscitation of infants and children
- Smear preparation

- Bacteriological staining (Gram, Ziehl-Neelsen, Giemsa, Wright, and methylene blue)
- Identifying different types of bacteria under a microscope
- Identifying different types of culture media (blood agar, Nutrient agar, MacConkey, Shigella, Salmonella, eosin methylene blue, citrate, etc.)
- Culturing microbes such as Mycobacterium
- Performing biochemical tests used to identify microbes (catalase, coagulase, oxidase, indole, urea, nitrate, production of hydrogen sulfide gas, and sugar fermentation)
- Antibigram (Disa diff-E-Test)
- Using BACTEC
- Virus detection rapid tests
- Parasite detection tests
- Fungus detection rapid tests
- Measuring serum levels of immunoglobulins
- Measurement of C3 and C4
- Performing serological tests (Wright, Vidal, IFA, and ELISA)
- Performing PCR
- Performing venipuncture
- Becoming skilled at anaerobic culture
- Cell culture, for example viruses
- Latex agglutination
- Cut down

## **Educational Strategies, Methods and Techniques\***

### **Student Assessment**

#### **Methods of Assessment:**

- Consecutive exams during the course
- Written and oral exams (OSCE) for promotion from the first year to the second year with a minimum score of 60% and after the second year, for referring students to final examination with a minimum score of 70%
- Written and oral exams (OSCE) in the subspecialty board examination at the end of the course
- Reviewing dissertations by the pediatric infectious diseases faculty members

#### **Periods of Assessment:**

- Continuous assessment (Multiple quizzes, logbook assessment)
- Annual assessment
- Final examination
- Continuous Portfolio assessment

### **Ethical Considerations\***

\*Note: The related document(s) can be found at <http://hcmep.behdasht.gov.ir/>.

### **The overall structure of the course**

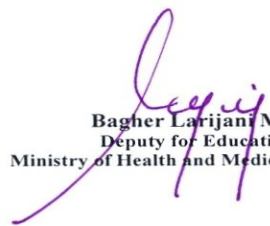
Ward, unit, or education setting	Syllabus- Measures	Duration (month)
Pediatric infectious disease clinic	Outpatient visit- selecting, filing cases, and hospitalizing patients- following up the expert consultations given to patients, performing outpatient procedures, teaching the lower-level groups, responding to expert consultations requested, and other measures in accordance with the curriculum organized by the ward	14.5 months, two days a week
Pediatric infectious diseases ward	Visiting inpatients, patient care- stabilizing the patients hospitalized in the ward - performing diagnostic-therapeutic procedures at the bedside, teaching the lower-level groups, and other measures in accordance with the curriculum organized by the ward	14.5 months, every day
Procedure room	Participating in surgical procedures by observation- assisting or performing independently according to the curriculum organized by the ward	As a case study during the course
Adult infectious disease ward	As explained on page 19	15 days
Transplant unit	As explained on page 19	1 month
HIV/AIDS unit	As explained on page 19	15 days during the course
Radiology ward	As explained on page 20	15 days
Pediatric pulmonary unit or clinical immunology unit (At the discretion of the program manager)	As explained on page 19	1 month
Microbiology Laboratories, including immunology, Tuberculosis lab. and unit, Bacteriology, virology, mycology, and parasitology)	As explained on page 19 and 20	3 months
Research center or community-based training unit	As explained on page 20	3 months

**Seyed-Hassan Emami-Razavi MD**  
 Secretarial of the Council for  
 Graduate Medical Education



**Seyed Mansour Razavi MD**  
 Secretary of the Supreme Council for  
 Medical Sciences Planning



  
**Bagher Larijani MD**  
 Deputy for Education  
 Ministry of Health and Medical Education