

## In the Name of God

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

## Pediatric Cardiology Degree: Subspecialty

### Introduction

After the establishment of pediatric cardiology ward in 1971, the independent education of pediatric cardiologists began in 1976 by a number of professors who had returned home after the completion of the relevant subspecialty in the U.S. and since then, the pediatric cardiology secured a place among other academic disciplines. Due to the increasing growth of population, increased number of patients, changing patterns of diseases, technological changes, and the subsequent changes in the educational conditions and needs, it was necessary to revise the curriculum after three and a half decades of its formal education. Therefore, a committee was appointed to develop a new curriculum. By utilizing the curricula of accredited universities around the world and the experts' experiences and opinions, this curriculum was developed to be issued to the executive universities after the approval of the legal authorities.

### Definition:

Pediatric cardiology is a subspecialty of pediatrics involving the prevention, diagnosis, and treatment of congenital and acquired cardiovascular diseases in children and adolescents, as well as the fetal heart diseases. After passing the official exam successfully and submitting the thesis, the graduates of this course will receive a fellowship degree.

### Course Duration:

Duration of this course is 36 months (3 years).

### Mission:

The mission of this course is to train diligent, knowledgeable, competent, efficient, and committed pediatric cardiologists who make their best efforts in the areas of prevention, diagnosis, treatment, education, and research and play their educational and professional role in providing health care.

### Vision:

In the next 10 years, in order to improve public health in the area of pediatric cardiology, we are expected to train competent specialists who conform to international standards in terms of educational indicators, science production, and providing services to students and patients and we will be among the top countries in the Middle East.

### Expected Competencies at the End of the Program

#### General Competencies\*

#### Procedural skills (diagnostic-therapeutic procedures):

- ECG
- M mode, 2D color-Doppler echocardiography
- 3D and 4D echocardiography
- Intraoperative and postoperative echocardiography
- Stress Echocardiography
- Contrast Echocardiography
- Fetal echocardiography

- Echocardiography during interventional procedures
- Transesophageal echocardiography (TEE)
- Diagnostic catheterization and angiography
- Cardiac MRI, CT Angio (as a teamwork with radiologists)
- Performing EPS
- Valvuloplasty of pulmonary valve
- Aortic valvuloplasty
- Recoarctation angioplasty
- Primary angioplasty for native coarctation of the aorta
- Cardiac biopsy

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

#### **Student Assessment:**

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

- Written exams
- Oral exams
- DOPS
- OSCE
- Log book assessment
- Portfolio assessment
- Case based discussion
- Using standard checklists

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

- Continuous assessment
- Monthly theoretical assessment by the main/attending professor
- Theoretical assessment every six months by all professors of the ward and under the supervision of the dean of the ward
- Annual written, oral, and practical assessment by the professors and under the supervision of the dean of the ward
- Final assessment

### **Ethical Considerations\***

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

**The overall structure of the course:**

Educational ward, unit, or education setting	Syllabus	Duration (month)
Pediatric cardiology ward	Participation in educational and therapeutic activities according to weekly and monthly program of the ward approved by the curriculum developers at university and announced by the dean of department and dean of the ward to students and educators.	24 months
Pediatric CCU and PICU	Participation in educational and therapeutic activities according to weekly and monthly program of the ward	4 months
<b>Compulsory rotating ward, including:</b> Transesophageal echocardiography (TEE) Fetal echocardiography Electrophysiology Exercise test Cardiac surgery and operating room Adult CCU	Participation in educational and therapeutic activities according to weekly and monthly program of the ward Physical presence in education and learning about how to use devices to perform diagnostic-therapeutic procedures Performing invasive procedures, such as EPS Pacemaker implantation and Holter Monitor interpretation Performing exercise test and interpreting it	6 months
<b>Elective ward:</b> Choosing among MRI and CT angiography, heart transplant, Animal Lab., Laboratory of Molecular Medicine, Nuclear medicine, genetics, and heart diseases, novel therapies and anatomy and pathology of the heart with the approval of the dean of the ward and the interest of the student according to the curriculum	Participation in educational and therapeutic activities according to weekly and monthly program of the relevant ward More familiarity with the principles of MRI and CT angiography and their interpretation for better diagnosis of diseases Studying theoretical principles of the relevant ward from reference books	2 months

Seyed-Hassan Emami-Razavi MD  
 Secretariat 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