

Introduction

The aim of the Pediatric Dentistry curriculum is to ensure that dental students acquire the most current knowledge and skills in Pediatric Dentistry and train to the highest standards of patient centered care to meet the changing needs of a diverse population. Main emphasis on the training is at the 5th and 6th year of the dental curriculum (9th through 11th semester). The course comprises theoretical lectures and practical exercises on patients and preclinical laboratory training. It is notable that the department has an emergency outpatient service for the young patients suffering from traumatic injuries. The department of Pediatric Dentistry also offers a three-year course of postgraduate education and a one-year fellowship program of “Hospital Dentistry”. A professionally-equipped operating room has been set up in the department so as to provide comprehensive dental treatments for selected young patients or even adult patients in need of treatments under general anaesthesia/sedation setting. Furthermore, the department has established a collaboration with “Children’s Medical Center” (Pediatrics center of excellence) in Tehran to be able to provide dental treatments for medically-compromised young patients.

Primary Aims

Students should gain a broad basic scientific knowledge of pediatric dental care, as well as clinical expertise in the presentation, diagnosis and treatment of the young population and integrate this knowledge within the whole dental care. They should be able to perform evidence based treatments for uncomplicated cases in the best way and learn how to recognize complicated cases and refer them. Students should learn how to communicate with their young patients and their parents/caregivers, since this is the cornerstone of pediatric dentistry.

Postgraduate students should get familiar with complicated treatment strategies and try to become specialized in treating potentially cooperative/uncooperative patients. They should also provide professional dental treatments under general anesthesia for selected patients, especially the medically compromised or uncooperative cases. Fellowship students focus on “Hospital Dentistry” and get a deep understanding of the process of anesthesia. They are highly engaged in treating patients in hospitals/ the operating room of the department under general anaesthesia/sedation setting.

Main Objectives

Students should get the knowledge of:

- The development, anatomy, importance and function of the primary dentition
- The etiology and epidemiology of dental diseases (specially in pediatric population)
- Clinical and radiographic and other diagnostic techniques of dental diseases in children
- Prevention of plaque accumulation and dental caries
- Treatment of carious teeth (restorative treatments, pulp therapies, extractions)
- Space maintainers and other orthodontic appliances in primary and mixed dentition
- To learn dealing with children during dental treatments
- To get knowledge of the treatment and sequela of traumatic accidents involving the oral structures
- The interaction of Pediatric Dentistry with other specialties and general dentistry
- To make a change in the attitudes and knowledge of parents about the primary teeth
- To train a clinically proficient, scientifically orientated, and ethical Pediatric Dentistry

**Hours in the Curriculum and distribution of hours across semesters, trimesters, modules, years
(with the exception of integrated courses)**

	5 th year			6 th year		
	Credits	Hours	semesters	Credits	Hours	semesters
Theoretical	2 (T)	34	9 and 10	-	-	-
Preclinical Training	2 (P)	68	9	-	-	-
Clinical Training	2(P)	68	10	2(P)	68	11

Integrated courses

Course	Credits	Hours	Number of sessions	Departments involved
Traumatology	1(T)	17	6	Oral and Maxillofacial Surgery, <i>Pediatric Dentistry</i> , Oral and Maxillofacial Radiology, Endodontics, Community Oral Health
Pain and pharmacology in dentistry	1(W)	51	1	<i>Pediatric Dentistry</i> , Oral and Maxillofacial Surgery, Oral and Maxillofacial Medicine
Cariology	1(T)	17	2	Restorative Dentistry , Oral and Maxillofacial Medicine, Oral and Maxillofacial Radiology, Community Oral Health, Oral and Maxillofacial Pathology, <i>Pediatric Dentistry</i>
Diagnostic Dentistry 6	1	17	4	<i>Pediatric Dentistry</i> , Oral and Maxillofacial Radiology, Oral and Maxillofacial Pathology, Orthodontics, Oral and Maxillofacial surgery, Prosthodontics
LASER in dentistry	1(T)	17	1	

Methods of Learning / Teaching

- **Theoretical knowledge:**

Lecture with Power Point presentation.

- **Preclinical practice**

Preclinical practice is presented in the 9th semester. This training course consists of simultaneous theoretical and practical training in our simulation lab. At the end of this course, students should get into patient-based practice by admitting new patients, taking radiographs, gathering documents and acquiring a diagnostic knowledge of treatment planning. They may also learn to perform non-invasive treatments such as fluoride therapy, fissure sealant and preventive resin restorations.

Methods of teaching consist of:

- Lectures using power point presentations and videos
- Demonstrations in small groups
- Giving formative feedbacks according to direct observations and midterm quizzes

- **Clinical practice:**

Clinical training starts from the 9th semester by performing simple and non-invasive treatments. In 10th and 11th semester, students get into more complicated treatments. It should be addressed that dealing with uncooperative children or performing a complicate treatment is not included in undergraduate taught program, and these patients are referred to our postgraduate section for further services.

Methods of teaching consist of:

- Supervised clinical patient treatment
- Direct observation
- Giving formative feedbacks

Assessment Methods

	Final exam		Clinical practice	Preclinical practice
	Written	Written/OSCE		
Theoretical Courses	% 100		-	-
Preclinical Courses		%25	%25	%50
Clinical Courses		%25	%75	-

Strengths

- Well trained and experienced academic staff
- There are good clinical facilities, digital and portable radiography system and an adequate supply of patients.
- The department has a well-equipped operating room to provide dental treatments under sedation/general anesthesia setting.
- The department is linked with “Children’s Medical Center” to provide advanced dental treatments in the hospital for medically compromised patients
- Computer based archive system for patients
- Providing a safe learning environment

- Holding summer school programs for international students
- Providing written exam blueprints for better learning of students
- A good blend of well experienced and younger academic members exists

Weaknesses

- Lack of chair-side dental nursery and hygienist support
- Long waiting list for appointment times for patients

Innovation and Best Practices

- Pediatric Dentistry curriculum is newly revised and new subjects are added.
- Some part of the students' score is devoted to a one-day exam of clinical skills during a dental treatment
- Attempts are being made to monitor students' feedback about the department.
- Running the operating room at the department

Plans for Future Changes

- Have more dental nursing staff
- Attendance of students to basic surgical procedures which are performed by postgraduate students
- Evidence-based dentistry and encouraging students to rely on primary sources of knowledge as much as possible.
- Have international postgraduate and fellowship students