

PEDIATRIC OTOLARYNGOLOGY SUBSPECIALTY TRAINING PROGRAM

Introduction

The population of the Kingdom of Saudi Arabia is one of the fastest in growth in the world. More than half of the population is below the age of 15 years. Also, with the increase in the quality of medical services, particularly in high-risk pregnancy and neonatology, the need for pediatric otolaryngologists is growing. The aim of the pediatric otolaryngology fellowship program is to provide a well-qualified pediatric otolaryngologist, who will be able to look after children with surgical problems. The Fellow will gain the required expertise in this field by spending enough time in two well-equipped centers to allow him/her to develop appropriate competence in the period suggested. The KAMC/KKNGH centers are very busy tertiary care centers and dedicated as referral centers for the Kingdom. Since 1990 they were involved heavily in Saudi board.

Requirements:

The Fellow must meet the following requirements:

1. Successful completion of an accredited residency-training program in Otolaryngology.
2. Saudi Board certification in Otolaryngology or the equivalent within three years of certification.
3. Sponsorship.

Duration:

The Pediatric Otolaryngology Program is a two-year program; the Fellow will spend the following length of time in each area:

1. Pediatric Otolaryngology (14 months)
2. Neonatal Intensive Care Unit (NICU) (2months)
3. Pediatric Intensive Care Unit (PICU) (2 months)
4. Pediatric Surgery (1 month)
5. Thoracic Surgery (1 month)
6. Elective Rotation (1 month)
7. Research time (3 months)

The Fellow must adhere to the rules and regulations of the Saudi Council for Health Specialties during the training period. The candidate will be granted four weeks of holiday per year, as well as one Eid holiday per year, as determined by the training Hospital concerned.

Selection of the Candidate:

A Committee, which will interview the candidates, will also select the Fellow.

The following are required:

1. Three confidential letters of references.
2. A written examination and an interview must be conducted to evaluate each candidate.
3. One Fellow will be selected per approved hospital every one year (depending on the requirement)

The selection should follow strict criteria to ensure an adequate exposure of the Fellows to enough work experience.

Evaluation and Certification:

The trainee will be evaluated according to the regulations of the Saudi Council for Health Specialties. The promotion of the candidate from one level to another will be determined by a local Supervisory Committee, based on the overall performance of the candidate and input from members of the pediatric otolaryngology team. At the end of the training period the Program Director will submit a final in-training evaluation, which is considered essential for the successful completion of the program. A certificate will be issued to the candidate after he/she passes both a written and oral examination. Unsuccessful candidates will be allowed to sit for two further attempts over a period of three years from the date of completion of the training.

Program Director:

He/She should be a full time Fellowship trained pediatric otolaryngology consultant and has served in this capacity for a minimum of 3 years. He/she should be able to:

1. Demonstrate commitment to the subspecialty
2. Show the interest, authority and commitment necessary to fulfill teaching responsibilities in order to develop, implement and achieve the educational goals and objectives of the program.
3. Maintain an active clinical involvement in the service of pediatric otolaryngology.
4. Pursue continuing education in pediatric otolaryngology
5. Exhibit an active interest in medical research related to pediatric otolaryngology.

Duties of the Trainee:

As a general principle, continuity of care should be emphasized. Ideally, the Fellow should seek to follow patients from the time of pre-admission evaluation (consultation) or the admission history/physical, through the in-hospital phase of treatment, including surgery and follow-up visits. It is particularly important that he/she remain intimately involved with the day to day care of surgical patients in the PICU and the NICU, and attend all major surgical cases.

- The Fellow is highly encouraged to attend outpatient clinics to see as many new patients as possible, and to follow-up on all patients he/she has treated in hospital or out-patient surgery.
- The Fellow is also encouraged to attend all surgical procedures of interest in other disciplines when relevant to the secondary objectives of the training.
- The Fellow is expected to undertake one or more clinical or basic science research projects. This is a training requirement.
- The Fellow should attend and actively participate in the pediatric otolaryngology meetings, and be responsible for organizing the weekly academic activities within the department.
- The Fellow must play a major role in the teaching and supervision of the junior residents in their daily clinical work.

Program Objectives:**General:**

- 1.0 To acquire all of the required knowledge, skills and attitudes needed to practice and teach Pediatric Otolaryngology, and to participate in the progress of Pediatric Otolaryngology through research and publication.
 - 1.1 To familiarize himself/herself thoroughly with the clinical recognition, natural history and embryology of all conditions relevant to Pediatric Otolaryngology.
 - 1.2 To acquire the pathophysiology of these conditions, and the pathophysiological response of the child to trauma and surgery.
 - 1.3 To be able to undertake fully the general supportive care of pediatric otolaryngology patients, especially newborns.
 - 1.4 To be able to perform independently all surgical procedures in the field of Pediatric Otolaryngology.
 - 1.5 To acquire the appropriate attitudes required to deal with specific personal stress involved in the practice of Pediatric Otolaryngology and stress experienced by patients and their families.
 - 1.6 To reinforce the principles of ethical behavior previously acquired, and familiarize himself/herself with ethical issues of particular relevance to Pediatric Otolaryngology.
 - 1.7 To develop the specific communication skills required to deal with children and their parents.
 - 1.8 To develop an awareness of Quality Assurance issues specifically related to the specialty.
- 2.0 To acquire the theoretical and practical knowledge necessary to succeed in the certifying examinations, after the successful completion of the training.

Specific:

1.0 Knowledge

1.1 Pediatric Otolaryngology (14 months)

Upon completion of the training period, the Fellow should be able to diagnose, manage, and give prognosis on the index cases of Pediatric Otolaryngology listed under the OPERATIVE PROCEDURES (pages 11-13). He /she should demonstrate teaching abilities.

1.2 Neonatology (2 months)

Rotation-specific learning objectives for the neonatology rotation are those listed in the above curriculum. In addition, it is mainly, but not exclusively, during this rotation that the Fellow should familiarize himself/herself with the specific aspects of Pediatric Otolaryngology conditions.

The following guidelines will direct the conduct of this rotation:

- 1.2.1 The Fellow is jointly responsible to the Division Head in Neonatology and in Pediatric Otolaryngology
- 1.2.2 During the day, his/her primary responsibility is to the NICU and he/she will participate in all of its activities.
- 1.2.3 He/She will have a particular, but not exclusive, responsibility towards surgical neonates. In fact, the main purpose of the rotation is to familiarize him/her with all aspects of the care of sick neonates in general.
- 1.2.4 By common agreement with the Director of the NICU, he/she will take night call in Pediatric Otolaryngology and may be excused from NICU to operate on index cases and to attend Pediatric Otolaryngology rounds.
- 1.2.5 An evaluation form will be completed at the end of the rotation by the Division Head in Neonatology.

1.3 Pediatric Intensive Care Unit (2 months)

During this period, the Fellow will have responsibilities similar to those in NICU rotation. A set of special objectives will be directed towards the care of children with multiple trauma, pre- and post-operative management of surgical patients, including fluid management, different types of ventilators and ventilatory support of sick children, and also the different procedures carried out in the unit, e.g. airway management, vascular access, etc.

1.4 Pediatric Surgery (one month)

The Fellow is expected to familiarize himself/herself with the procedures in relevance to Pediatric Surgery.

1.5 Thoracic Surgery (one month)

The Fellow is expected to familiarize himself/herself with the procedures in relevance to Thoracic Surgery.

1.6 Elective Rotation (one month)

The Fellow will spend one month in one of the following services: Pediatric GI, Pediatric Pulmonary, Pediatric Allergy/Immunology, Pediatric Genetics, Pediatric Ophthalmology, Pediatric Anesthesia, Pediatric Radiology, Pediatric Plastic Surgery. Feedback from the Fellow will ensure whether he/she is benefiting from those rotations. Prior approval of the training committee is mandatory for the elective rotations.

1.7 Research Rotation (3 months)

The Fellow will have a total of three months dedicated research time during the second year of the program. During the first year, clinical projects will be initiated, and the background work for the second year project will be completed. This research time will be broken into smaller units of time appropriate for completion of their research projects. All research projects will have a faculty mentor. The research projects will be encouraged to be within the realm of expertise of the pediatric otolaryngology staff.

Research meetings are held to discuss progress of each Fellow's research projects. Goals are set at each meeting for progress on each project and progress is monitored. Tutoring in research design, data collection, statistical analysis, and manuscript preparation is provided by the faculty mentor. Clinical research projects are also encouraged and are carried out throughout the duration of the fellowship.

Evaluation of the Fellow's fulfillment of the knowledge objectives will be accomplished formally through in-training oral examinations, as well as through a written examination in the same format as the final certifying examination. A clear demonstration of improvement in knowledge during the course of training is expected.

2.0 Skills

By the end of training, the Fellow should have acquired skills appropriate to those of a junior consultant in the following areas:

2.1 Pre-operative care, which includes:

- 2.1.1 History and physical examination skills specific to the infant and child, and skills necessary to interview parents, explain the diagnosis, the proposed treatment and the prognosis, and to obtain an informed consent.
- 2.1.2 Appropriate use and interpretation of diagnostic aids.
- 2.1.3 Preparation of the patient for surgery, including assessment of anesthetic risk. This will be evaluated by direct observation on an on-going basis, and formally reported on the evaluation form. It will also be tested during in-training examinations, to which the Saudi Council for Health Specialties standards will apply.

2.2 Operative Care

This includes both minor and major surgery, with emphasis on index cases. The Fellow must demonstrate an ability to exercise judgment and control in unexpected situations, and ingenuity in dealing with “one-of-a-kind” problems. He/she should demonstrate an ability to assist more junior colleagues in the performance of procedures, and should be able to operate independently.

This will be evaluated by direct observation on an on-going basis, and formally reported on the evaluation form. A log of all operative procedures must be kept and provided to the Program Director on an official form (available from his office).

2.3 Postoperative care:

The main emphasis here is on maintenance of hemostasis (fluids and electrolytes, temperature control, monitoring, etc.) and on early recognition of complications, pain control, etc.. This will be evaluated by direct supervision and reviewed at the time of word rounds and formally reported on the evaluation form.

2.4 Ancillary skills, which include:

- 2.4.1 Demonstrate proficiency with surgical skills of endoscopic sinus surgery in children under four years of age
- 2.4.2 Demonstrate proficiency with surgical skills of flexible and rigid bronchoscopy in neonate, infant, child
- 2.4.3 Demonstrate proficiency with surgical skills of tracheotomy-premature infant, child
- 2.4.4 Demonstrate proficiency with surgical skills of extraction of foreign body from the aerodigestive tract
- 2.4.5 Demonstrate proficiency with surgical skills of airway surgery
- 2.4.6 Demonstrate proficiency with surgical skills of repair of congenital anomalies
- 2.4.7 Demonstrate proficiency with surgical skills of surgical treatment of masses.

A clear demonstration of improvement in the development of these skills must be demonstrated throughout the course of training.

3.0 Attitudes:

He/she will be expected to develop and demonstrate appropriate attitudes and relational skills relative to the child and his family in the clinical context, and similar interpersonal skills with other caregiver and hospital staff.

The issues that are stressed are essential components of practice: these relate to communication skills, teaching skills, critical appraisal of the literature, lifelong learning skills, and knowledge of quality assurance, medico legal and ethical issues.

Some of this will have been acquired during college of medicine and otolaryngology training, but the following objectives are more or less specific to Pediatric Medicine and Surgery:

- Relative to communication skills, the ability to communicate with the child at his/her level in a non-threatening way is essential. Ability to anticipate and address parents' questions and concerns must be developed. The trainee must learn to accept that sometimes a large investment of time must be made in dealing with families, but that this is always rewarded later with a better therapeutic relationship.

- Relative to critical appraisal, the Fellow must have formed his/her own opinion, by the end of training, on what specific procedure he/she will use for what specific conditions such as gastroesophageal reflux, choanal atresia, etc. He/she should be able to justify that choice and this will be tested on in-training examinations. He/she should be able to critically evaluate articles presented at the Journal Club.
- Medico-legal and ethical issues sometimes overlap. However, the rules and regulations of the country apply. The following specific issues, among others, should be addressed through reading and attendance at ethics rounds and more informal discussions:
 - a. Informed consent in children
 - b. Refusal of treatment, especially in situations where “quality of life” is a major issue.
 - c. Inter-parental conflict in treatment decisions.
 - d. Withholding of treatment.
 - e. Parent-physician conflict in treatment decisions. Physician-physician conflict in same.
 - f. Am I treating this child as I would want my own child to be treated?
 - g. Ethics of research on children.

Accreditation:

The two hospitals, which will be accredited for training, must follow rigid accreditation criteria to ensure a high standard of training; these criteria will be ensured by a committee to be formed by the Saudi Council for Health Specialties and will include:

1. A minimum of two qualified consultant pediatric otolaryngologists, with experience in teaching and commitment to carrying out the training program as stipulated by the Saudi Council for Health Specialties.
2. An inpatient pediatric otolaryngology service with a minimum of 4 beds per Fellow.
3. A PICU & NICU within the hospital.
4. Curriculum-based teaching activities as approved by the Saudi Council for Health Specialties should be designed so that each trainee will develop high quality practical and academic expertise.
5. Research-oriented activities that allow the Fellow sufficient exposure and participation in research.
6. The program must allow the Fellow to perform no less than the minimum number of procedures required for the subspecialty as follows:

- Neonatal cases (30)
 - Important pediatric cases (50)
 - Tumors of the head and neck and other similar operations (15)
 - Other pediatric cases (see attached appendix for details)
7. Wherever possible, broad exposure to multiple centers is encouraged for the Fellows.
 8. An active subspecialty service, dealing with various medical disorders in the subspecialty with sufficient diversity and skills as stipulated by the training program of any particular subspecialty such as NICU, PICU, Pediatric Radiology, Pediatric Anesthesia, etc.
 9. The accredited hospital(s) will be reviewed regularly by the Saudi Council for Health Specialties and accreditation will be renewed periodically.

Disciplinary Actions and Dismissal:

Disciplinary actions and dismissal from the program will be taken according to the Rules and Regulations of the Saudi Council for Health Specialties and participating hospitals. Those actions should be approved by the educational committee of the training program.

Operative Procedures:

- I. **Otologic surgery:**
 1. Myringoplasty & tympanoplasty
 2. Ossiculoplasty
 3. Mastoidectomy
 4. Cochlear implantation

- II. **Rhinologic surgery**
 1. Reduction of nasal fracture
 2. Septoplasty
 3. Choanal Atresia Repair
 4. Endoscopic Sinus Surgery

- III. **Oral and pharyngeal surgery**
 1. Frenuloplasty
 2. Tongue surgery
 3. UPPP

4. Speech surgery
 - a. Furlow's palatoplasty
 - b. Sphincter pharyngoplasty
 - c. Pharyngeal flap
 - d. Posterior pharyngeal wall augmentation

5. Drooling surgery
 - a. Parotid duct ligation
 - b. Submandibular duct rerouting
 - c. Sublingual gland excision
 - d. Submandibular gland excision

VI. Endoscopy and Airway surgery

1. Pharyngoscopy
2. Laryngoscopy
3. Bronchoscopy
4. Esophagoscopy
5. Tracheotomy
6. Tracheocutaneous fistula repair
7. Surgery of larynx and trachea
 - a. Arytenoidectomy
 - b. Supraglottoplasty
 - c. Glottic web excision
 - d. Laryngotracheal reconstruction
 - e. Cricotracheal resection
 - f. Tracheal resection and anastomosis
 - g. Laser surgery

IV. Head and Neck surgery

1. Lymph node biopsy
2. Incision and drainage of deep neck infections
3. Sistrunk procedure
4. Branchial cyst excision
5. Preauricular sinus excision
6. Salivary gland excision
7. Vascular lesion excision

