



**UNION EUROPEENNE DES MEDECINS  
SPECIALISTES**  
EUROPEAN UNION OF MEDICAL SPECIALISTS

**ESPO**

European Society of Pediatric Otorhinolaryngology



**EU ORL pediatric curriculum (log book)**

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**UEMS ORL SECTION  
SUBSPECIALIST TRAINING PROGRAM IN  
PEDIATRIC OTORHINOLARYNGOLOGY**

**Subspecialization in Pediatric Otorhinolaryngology**

# **PEDIATRIC OTO-RHINO-LARYNGOLOGY**

## **SUBSPECIALTY TRAINING PROGRAMME**

### **INTRODUCTION**

The UEMS-ORL Section and Board of Otorhinolaryngology-Head and Neck Surgery have developed seven subspecialty programmes. After finishing their residency programme in Otorhinolaryngology - Head & Neck surgery, otorhinolaryngologists can attend subspecialty programmes. One of these is the Pediatric otorhinolaryngology programme. This programme will serve as a guideline for training centres, enabling them to meet the European Standard as set out by the European Board of UEMS through competency based assessments.

### **DEFINITION**

Pediatric otorhinolaryngology (PORL) has become a recognized subspecialty within Otorhinolaryngology-Head and Neck Surgery (ORL-HNS). PORL deals with functions and diseases, trauma, malformations and other disorders in childhood, encompassing the anatomical structures of the ear, temporal bone and lateral skull base, nose, paranasal sinuses and anterior skull base, oral cavity, pharynx, larynx, trachea, oesophagus, head, neck, thyroid, salivary and lacrimal glands and adjacent structures. It also includes investigation and treatment of conditions affecting the auditory, vestibular, olfactory and gustatory senses and disorders of the cranial nerves; as well as human communication in respect of speech, language and voice disorders.

PORL subspecialty is ORL-HNS in its entirety, applied in pediatric population according to WHO definition of pediatric  $\leq 18$  years of age. Caring for children with ear, nose and throat problems is becoming more and more complex. Because of that, PORL subspecialty is divided into four sections: Pediatric Otology, Pediatric Rhinology and Facial Plastics, Pediatric Laryngology and Phoniatrics and Pediatric Head and Neck Surgery. Any trainee must attain advanced competency level in the entire PORL subspecialty area.

Pediatric subspecialists will tend to develop super-specialist interests in otology (cochlear implantation, bone anchored hearing rehabilitation, autologous ear reconstruction etc.) or laryngology (e.g. endolaryngeal, endotracheal and bronchial laser surgery, surgical management of congenital airways malformation etc. ) or rhinology (e.g. intracutaneous allergen test, endoscopic sinus surgery

etc.) but also congenital head and neck anomalies and other head and neck surgery in childhood. It is recognized that in some conditions, multi-disciplinary and multi-surgeon input is required and therefore it is not expected that a pediatric otolaryngologist will be solely responsible for treating complex congenital ear deformity, juvenile angiofibroma or lymphovascular malformations. Management of children with diseases in ORL area should not become an exclusivity of pediatric ORL subspecialists. Subspecialty training in pediatric otolaryngology is intended to provide sub-specialists that are able to diagnose and treat the most demanding diseases in this population.

### **Trainee Eligibility**

- ENT specialist with CCT (obtained EBEORL-HNS or/and national certification in ORL-HNS)
- Competitive process
- Candidate must show interest

### **Program Director Requirements**

- Acknowledged expert in the field
- 10 years of professional experience
- Academic position or equal competence
- Appointed by appropriate administration

### **Institutional Requirements**

- Sufficient exposure to Pediatric Otorhinolaryngology
- At least two active pediatric ENT surgeons
- Intensive care unit
- Approved by visitation
- Centralisation would promote training of a high standard

### **Resources**

- Accreditation is primary goal, then funding application

### **Training program**

- Duration minimum one year
- Previous experience in general ORL – HNS is preferable
- Number of operations is not defined
- Possible to accept transfer of some competency from general ORL training
- Participation in at least 1 scientific peer-reviewed publication
- Ample time for compulsory study: nominated journals, text books, courses, congresses etc.
- Courses are desirable during the training period
- There will no be exam after training completion, only evaluation of competence by clinical judgement by program director

### **Advanced competency level**

The trainee performs the procedure/management independently/alone (trainer available)

## A. OTOLOGY Diagnostics

- a) Objective hearing test
  - i. evoked response audiometry (ERA, BERA)
  - ii. oto-acoustic emissions (OAE)
- h) Paediatric audiology
  - i. screening methods
  - ii. objective methods
  - iii. subjective methods

### 1. Vestibular function

- a) Spontaneous nystagmus
- b) Induced nystagmus
  - i. positional nystagmus
  - ii. caloric testing
- c) Electronystagmography

### 2. Facial nerve function

- a) Topodiagnostic testing
  - i. e.g. Schirmer's test, gustatory tests, stapedial reflex

### 3. Non-surgical management

- a) Pharmacological treatment and/or physical rehabilitation
- b) Ear infection
- c) Sensorineural deafness
- d) Tinnitus
- e) Vertigo and disequilibrium
- f) Facial nerve paresis / paralysis
- g) Post-op care

## OTOLOGY Management/Treatment

### a. Otitis Media/Cholesteatoma

i. Evaluate and treat a child with serious and acute otitis media.

1. Understand medical and surgical therapy, antibiotic resistance, and the role of vaccination.

ii. Evaluate and treat a child with chronic otitis media with or without cholesteatoma.

1. Proficient micro-otoscopy, audiometric evaluation, radiological interpretation (X-Ray, MSCT, MRI, Angiography)

2. Medical and Surgical management including ossicular reconstruction, canal wall up and canal wall down mastoidectomies

b. Evaluate, identify, and manage complications of chronic otitis media, both intra and extra cranial. Learn to work in conjunction with the neurosurgeon and infectious disease services.

<b>c. Sensorineural Hearing Loss</b>	
i. Evaluate and treat a child with SNHL.	
1. Work-up (history, physical exam, imaging and laboratory testing as indicated)	
2. Referral for hearing aid placement (including bone anchored hearing aids) and FM auditory systems	
3. Surgical proficiency including BAHA and CI cases.	
<b>d. Facial Nerve Palsy/Paralysis</b>	
i. Evaluate and treat a child with facial nerve palsy/paralysis	
1. Work-up (history, physical exam, imaging and laboratory testing as indicated)	
<b>MEASUREMENT:</b>	
1. Documentation of the above.	
2. Attending evaluations from Hearing Impaired Clinic.	

<b>d. Vertigo</b>	
i. Evaluate and treat a child with vertigo	
1. Differential diagnosis and work-up	
<b>MEASUREMENT:</b>	
1. Attending evaluations from Hearing Impaired Clinic.	
2. Documentation of the above.	
4. Round lists	

<b>OTOLOGY surgical treatment log</b>	
1. Temporal bone dissections (lab.)	
2. Management of oto-haematoma	
3. Myringoplasty	
4. Tympanotomy	
5. Mastoidectomy	
a. Simple	
b. Modified	
c. Radical	
6. Antrotomy	
7. Meatoplasty	
8. Foreign body removal	
9. Removal of auditory meatus polyps	
10. Myringotomy	
11. Myringotomy with ventilation tube insertion	
12. Tympanoplasty (reconstruction of ossicles)	
13. Implantation of prostheses	
a. Middle ear prosthesis	
b. Bone anchored hearing aids	
c. Cochlear implants	
14. Facial nerve surgery	
a. Decompression	

<b>SURGICAL MANAGEMENT OF CONGENITAL AND ACQUIRED MALFORMATIONS</b>	
15. Auricle	
16. Fistulas	
17. Outer ear canal	
18. Middle ear	
<b>REPAIR OF INJURIES</b>	
19. Auricle	
20. Outer ear canal	
21. Middle and inner ear	
<b>TUMOUR SURGERY</b>	
22. Auricle	
23. Outer ear canal	
24. Middle and inner ear	

## B. LARYNGOLOGY and FONIATRICS Diagnostics

### 1. Non-surgical management

- a) Techniques in voice analysis
- b) Medical management of laryngotracheal disease

## LARYNGOLOGY and FONIATRICS Management/Treatment

<b>a. Stridor</b>	
i. Evaluate neonate diagnosis and management of the neonate or child with stridor or extubation problems.	
ii. Diagnose and manage conditions such as congenital and acquired laryngotracheal disorders, obstructive sleep apnea, foreign body, and airway trauma.	
<b>MEASUREMENT:</b>	
1. Documentation of urgent and/or difficult intubations in the hospital.	
2. Documentation of surgical cases to evaluate and treat these children.	
3. Attending evaluations from Airway Clinic.	
4. Rounds lists	

<b>b. Complex airway compromise</b>	
i. Understand complex airway pathologies, including mastery of the medical and surgical management of these.	
ii. Feel proficient and confident in securing a tracheotomy in the neonate.	
iii. Feel comfortable counseling families on the alternative forms of management of complex airway pathologies	
<b>MEASUREMENT:</b>	
1. Documentation of neonatal tracheotomies.	

2. Documentation of surgical cases to evaluate and treat these children, both through an open and endoscopic approach.	
3. Attending evaluations from Airway Clinic.	

### c. Voice

i. Manage a child with a voice disorder such as hoarseness, demonstrating mastery of the differential diagnosis, office endoscopic assessment and medical and surgical treatment.

1. Able to work closely with a speech and language pathologist in the evaluation of these children.

#### MEASUREMENT:

1. Documentation of surgical cases to evaluate and treat these children.

2. Attending evaluations from Voice Clinic.

## LARYNGOLOGY and FONIATRICS surgical treatment log

1. Removal of foreign bodies from larynx, trachea and bronchi	
a. Recognition of the clinical features of foreign bodies in the ear nose and throat	
b. Recognition of the clinical signs of respiratory distress in children	
c. Emergency airway care in conjunction with anaesthetists and paediatricians.	
2. Endotracheal intubation	
3. Tracheotomy - tracheostomy (including percutaneous)	
4. Closure of tracheostome	
5. Incision of crico-thyroid membrane	
6. Endolaryngeal, endotracheal and bronchial laser surgery	
<b>SURGERY FOR LARYNGEAL TRACHEAL NEOPLASMS</b>	
7. Endolaryngeal surgery for tumors	
8. Endolaryngeal laser surgery for tumours in the upper aerodigestive tract	
9. Management of laryngo-tracheal stenosis	
10. Tracheal and bronchial stenting	
11. Repair of tracheo-oesophageal fistulas	
<b>SURGICAL MANAGEMENT OF CONGENITAL AND ACQUIRED MALFORMATIONS</b>	
12. Supraglottic stenosis	
13. Laryngeal web	
14. Subglottic haemangioma	
15. Vocal cord paralysis	
16. Laryngeal cleft	
17. Vascular compression	
18. Tracheal stenosis	
19. Inhalational injury	
20. Laryngeal papilloma	

## C. RHINOLOGY and FACIAL PLASTIC Diagnostics

### 1. Allergy investigations

- a) Epicutaneous allergen tests
- b) Intracutaneous allergen tests (Prick, Scratch)
- c) Nasal provocation tests
- d) Nasal cytology
- e) Eliminative tests
- f) Interpretation of serological tests (RAST, IgE)

### 2. Non-surgical management

- a) Pharmacological therapy
- b) Specific immunotherapy (hyposensitization)
- c) Anaphylaxis reaction therapy

## RHINOLOGY and FACIAL PLASTIC Management/Treatment

### a. Rhinosinusitis

- i. Demonstrate ability to medically and surgically manage pediatric rhinosinusitis, including pediatric functional endoscopic sinus surgery.
- ii. Ability to counsel families as to the management options of pediatric rhinosinusitis.
- iii. Understand association with chronic pulmonary diseases.

#### MEASUREMENT

1. Documentation of the above, including surgical cases.
2. Attending evaluations from ENT clinics.

### b. Suppurative complications of Rhinosinusitis

- i. Able to recognize and treat the complications (both intra and extra-cranial) of sinusitis, including open and endoscopic approaches.
- ii. Able to work closely with other specialists such as the neurosurgeon, ophthalmologist, etc.

#### MEASUREMENT:

1. Documentation of the above, including surgical cases.
2. Attending evaluations from ENT clinics.
3. Rounds lists.

## RHINOLOGY and FACIAL PLASTIC surgical treatment log

a.	Control of nasal epistaxis	
	a.	Nasal packing
	b.	Nasal cautery
2.	Foreign body removal	
3.	Nasal polypectomy	
4.	Turbinate surgery	
5.	Reposition of nasal fractures	
6.	Incising abscesses	



7. Septal surgery	
8. Closed rhinoplasty	
9. Cleft patient rhinoplasty	
10. Correction of malformations (e.g. choanal atresia, fistulas, dermoids, etc.)	
11. Management of immediate post-operative complications	
12. Sinus endoscopy	
13. Endoscopic antrostomy	
14. External ethmoidectomy	
15. Endonasal ethmoidectomy (endoscopic, microscopic)	
16. Fronto-ethmoidectomy (endoscopic)	
17. Sphenoid sinus surgery	
18. Revision paranasal sinuses operation	
<b>REPAIR OF INJURIES (TRAUMATOLOGY)</b>	
19. Soft tissue injuries	
20. Nasal fractures	
21. Septal haematoma	
22. Paranasal sinus fractures	
23. Fractures of orbit including blow out fracture	
<b>PLASTIC AND RECONSTRUCTIVE SURGERY</b>	
24. Limited regional sliding and rotation flaps	
25. Free skin grafts	
26. Otoplasty	

## D. HEAD and NECK Diagnostics

### 1. Non-surgical Management

- a) Pharmacological therapy
- b) Swallowing and aspiration rehabilitation
- c) Non-surgical treatment of sleep apnoea and roncopathy
- d) Conservative treatment of wounds
- e) Chemo-radiation-therapy
- f) Application of botulinum toxin
- g) Treatment planning

## HEAD and NECK Management/Treatment

### a. Adenotonsillar diseases

- i. Understand the pathophysiology (including neurobehavioral and cardiovascular sequelae), evaluation and medical/surgical management of pediatric sleep apnea including in complex patients with neuromuscular disorders and hypotonia.
- ii. Comprehend the pathophysiology and treatment of acute and chronic infectious adenotonsillar disease.

**MEASUREMENT:**

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|--|--|
| 1. Documentation of the above, including surgical cases. |  |
| 2. Attending evaluations from ENT clinics.               |  |

**b. Velopharyngeal Insufficiency**

- i. Manage a child with congenital or acquired velopharyngeal insufficiency demonstrating knowledge and comprehension of associated etiologies including velocardiofacial syndrome.
- ii. Demonstrate capability of performing and understanding the office nasopharyngoscopic assessment and medical (speech therapy) and surgical (pharyngeal flap, sphincteroplasty) treatment.
- iii. Able to work closely with the speech and language pathologist in the evaluation and management of these children.

**MEASUREMENT:**

- |   |  |
|---|--|
| 1. Documentation of surgical cases to treat these children. |  |
| 2. Attending evaluations from VPI Clinic.                   |  |

**c. Swallowing**

- i. Be able to direct the investigation into a child's feeding/swallowing disorder including history/physical, appropriate laboratory and radiographic studies, and endoscopy.
- ii. Comprehend the management, both medical and surgical, of drooling in children including those with neuromuscular and developmental disorders.

**MEASUREMENT:**

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|--|--|
| 1. Documentation of the above, including surgical cases. |  |
| 2. Attending evaluations from ENT clinics.               |  |
| 3. Attending evaluation from Oro- and Swallowing clinic. |  |

**d. Congenital**

- i. Comprehensive understanding of the embryology and anatomy of the head and neck.
- ii. Know the differential diagnosis of these lesions, appropriate peri-operative studies and medical and surgical treatment.
- iii. Demonstrate proficiency in the surgical excision of these.

**MEASUREMENT:**

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|--|--|
| 1. Documentation of the above, including surgical cases. |  |
| 2. Attending evaluations from ENT clinics.               |  |
| 3. Rounds lists  |  |

**e. Inflammatory**

- i. Comprehend the pertinent aspects of history, physical examination, laboratory and imaging studies prior to appropriate medical and/or surgical treatment.
- ii. Able to work closely with other specialists including infectious diseases.

**MEASUREMENT:**

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|--|--|
| 1. Documentation of the above, including surgical cases. |  |
| 2. Rounds lists.   |  |
| 3. Attending evaluations.                                |  |

f. Neoplastic	
i. Be knowledgeable of the differential diagnosis, physical examination, endos-copy (as needed), radiographic, and laboratory studies necessary to come up with an accurate differential diagnosis.	
ii. Understand surgical management, including the role of needle cytology, inci-sional or excisional biopsies.	
iii. Be familiar with the multi-disciplinary approach necessary for the management of these lesions.	
MEASUREMENT:	
1. Documentation of the above, including surgical cases.	
2. Rounds lists	
3. Attending evaluations.	

HEAD and NECK surgical treatment log	
1. Adenoidectomy	
2. Tonsillectomy	
3. Tonsillotomy	
4. Abscess tonsillectomy (hot tonsillectomy)	
5. Arrest of tonsillar haemorrhage	
6. Removal of foreign bodies	
7. Endoscopic biopsy and tumour staging	
8. Transoral removal of salivary calculi	
DRAINAGE OF ABSCESS	
9. Peri- and retrotonsillar	
10. Para- and retro- pharyngeal	
11. Base of tongue	
CORRECTION OF MALFORMATIONS	
12. Lingual frenulum	
13. Ranula	
14. Cysts inclusion	
15. Macroglossia	
SURGERY OF INJURIES/TUMORS	
16. Simple injuries	
17. Complex injuries	
18. Management of wounds	
a. Management of wounds breakdown	
b. Management of scar tissue	
c. Management of open neck wounds	
d. Fistula care	
19. Removal of	
a. Branchial cysts	
b. Surgery of benign tumours	
c. Fistulae	
20. Incision and drainage of abscess	
21. Surgery of skin tumours	
a. Benign skin tumours	
b. Malignant skin tumours	

<b>REPAIR OF INJURIES</b>	
22. Management of soft tissue injuries of the lateral and middle part of the face	
<b>TUMOUR SURGERY</b>	
23. Resection of the tongue	
a. Partial glossectomy	
24. Reconstruction of the tongue	
25. Pharyngostomy	
26. Closure of pharyngostoma	
27. LASER surgery of oral cavity and pharynx	
28. Surgery for tumours of the nasopharynx	
29. Surgery for tumours of the oropharynx and reconstruction	
<b>DISSECTION OF TUMOURS</b>	
30. Removal of cervical lymph-nodes	
31. Neck dissection	
1. Selective neck dissection level I to III	
2. Selective neck dissection level I to V	
3. Modified radical neck dissection	
4. Radical neck dissection	
32. Soft tissue neoplasms	
33. Vascular tumours	
34. Neurogenic tumours	
<b>SURGERY OF THE SALIVARY GLANDS</b>	
35. Removal of the submandibular gland	
36. Removal of the sublingual gland	
37. Removal of minor glands	
38. Parotidectomy	
a. Partial parotidectomy	
b. Suprafacial parotidectomy	
<b>SURGERY OF THE THYROID GLAND</b>	
27. Hemithyroidectomy	
28. Total thyroidectomy	
29. Parathyroidectomy	
30. Level VI neck dissection	

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### **Subspecialty Textbooks**

Graham, Scadding, Bull: Pediatric ENT 1st Edition

Wetmore, Muntz, McGill: Pediatric Otolaryngology – Principles and Practice Pathways 2nd Edition

Bluestone and Stool's Pediatric Otolaryngology 5th Edition

### **Subspecialty Journals**

International Journal of Pediatric Otorhinolaryngology

### **European Paediatric Fellowship Programmes**

Great Ormond Street Hospital (2 posts)

Birmingham Children's Hospital

Evelina Children's Hospital

Royal Manchester Children's Hospital

Royal Hospital for Sick Children, Glasgow

Sheffield Children's Hospital

(These posts are remunerated and are for one year by competitive interview. These hospitals also accept observers.)

Necker Children's Hospital, Paris (observerships for 6 months)

US and Australian (Sydney, Melbourne, Perth) fellowships require registration with US and Australian medical boards by examination.