

# The University of Arizona Pediatric Residency Program

## Primary Goals for Rotation

### Otolaryngology

1. **GOAL:** Hearing Loss. Understand the morbidity of hearing loss, intervention strategies, and the pediatrician's and other specialists' roles in prevention, recognition and management.
2. **GOAL:** Understand the pediatrician's role in preventing otolaryngologic disease and dysfunction through screening and counseling.
3. **GOAL:** Differentiate normal otolaryngologic conditions from abnormal ones.
4. **GOAL:** Evaluate and appropriately treat or refer these presenting otolaryngological signs and symptoms.
5. **GOAL:** Diagnose and manage common otolaryngological conditions that generally do not require referral.
6. **GOAL:** Recognize, provide initial management and refer appropriately conditions that usually require otolaryngologic referral.
7. **GOAL:** Otitis Media. Diagnose and manage acute and chronic suppurative otitis media and otitis media with effusion.
8. **GOAL:** Diagnose and manage patients with sinusitis, and refer when appropriate.
9. **GOAL:** Screen, diagnose and manage patients with symptoms secondary to tonsillar and adenoidal hypertrophy, and refer when appropriate.
10. **GOAL:** Demonstrate high standards of professional competence while working with patients under the care of a subspecialist.

**1. GOAL: Hearing Loss. Understand the morbidity of hearing loss, intervention strategies, and the pediatrician's and other specialists' roles in prevention, recognition and management.**

A. Understand the epidemiology and prevalence of conductive and sensorineural hearing loss in childhood and adolescence.

B. Recognize the broad impact of hearing impairment on child and family, including social, psychological, educational and financial consequences.

C. Screen for hearing loss, interpret results and counsel parents, including:

1. Family and patient health history
2. Age-appropriate physical exam
3. Developmental assessment (behavior, language, speech)
4. Screening audiology and tympanometry exam

D. Describe timing and strategies for newborn hearing screening, school and office hearing screening.

E. Recognize thresholds of hearing loss associated with communication difficulties in office, school and group settings.

F. Be familiar with common interventions for hearing-impaired children and the age at which each should be initiated (e.g., hearing aids, amplification devices, cochlear implants, speech training, sign language, lip reading, communication devices).

G. Refer and coordinate school, speech and psychological services for the hearing-impaired child as early as possible.

H. Describe the roles of audiologists and general pediatricians in the ongoing management of hearing-impaired children.

**2. GOAL: Understand the pediatrician's role in preventing otolaryngologic disease and dysfunction through screening and counseling.**

A. Screen children for hearing loss.

1. Universal newborn screening and follow-up
2. Routine hearing screening at health maintenance visits

B. Screen for speech and language delays and disorders.

C. Provide strategies for preventing foreign bodies in nose, airway and ear.

D. Encourage smoking cessation in parents in order to optimize a child's respiratory health.

E. Counsel teenagers about dangers of smoking and chewing tobacco.

F. Counsel families and adolescents about reducing noise-related hearing loss.

**3. GOAL: Differentiate normal otolaryngologic conditions from abnormal ones**

A. Recognize normal development of the ear, sinuses, nose, pharynx, and of hearing, speech and language from birth to adolescence.

B. Determine whether a child's otolaryngological dysfunction (e.g., hoarse voice, nasal discharge) is a temporary state caused by a minor problem or represents a potentially serious pathological process.

C. Demonstrate ability to perform and/or interpret the following clinical studies or procedures:

1. Cerumen removal from ear canal
2. Simple foreign body removal from nose and ear
3. Pneumatic otoscopy
4. Suctioning of nares, oropharynx, tracheostomy
5. Tracheostomy tube replacement
6. Tracheal aspirates, including via tracheostomy (collection, culture, interpretation)
7. Nasopharyngeal wash specimens (collection and interpretation)
8. Nasal smears for polymorphonuclear cells (collection and interpretation)
9. Head CT
10. Sinus, airway radiographs
11. Airway fluoroscopy
12. Tympanocentesis

**4. GOAL: Evaluate and appropriately treat or refer these presenting otolaryngological signs and symptoms.**

1. Create a strategy to determine if the following presenting signs and symptoms are caused by an otolaryngologic condition, and then treat or refer appropriately:

1. Ear pain/drainage
2. Nasal discharge
3. Snoring
4. Sore throat
5. Stridor
6. Nasal polyps
7. Neck mass or anomaly
8. Hoarse voice
9. Nosebleed

**5. GOAL: Diagnose and manage common otolaryngological conditions that generally do not require referral.**

A. Diagnose and manage these conditions:

1. Allergic rhinitis
2. Blunt nasal trauma
3. Cervical adenitis
4. Epistaxis
5. Otitis media and externa, uncomplicated

6. Parotitis (mild)
7. Pharyngitis (viral and streptococcal)
8. Routine care for the child with a tracheostomy
9. Simple nasal and ear canal foreign bodies
10. Sinusitis
11. Stridor, mild (croup, laryngomalacia)
12. Tonsillar hypertrophy without obstruction
13. Uvulitis

**6. GOAL: Recognize, provide initial management and refer appropriately conditions that usually require otolaryngologic referral.**

A. Diagnose, provide initial management of, and refer appropriately conditions such as:

1. Abscess (retropharyngeal, peritonsillar)
2. Airway obstruction (acute, chronic, tonsillar, adenoidal, nasal, and lower airway)
3. Cholesteatoma
4. Congenital anomalies of the pinna, nose, lip, palate, jaw, neck
5. Complicated otitis media, sinusitis, epistaxis and parotitis
6. Epiglottitis
7. Facial nerve palsy
8. Foreign body of the aerodigestive tract
9. Head and neck masses
10. Nasal polyp
11. Significant hearing loss
12. Significant trauma to the middle or external ear, nose, lip, palate, pharynx
13. Sleep apnea
14. Tympanic membrane perforation (traumatic or persistent)

B. Identify the role and general scope of practice of the otolaryngologist; recognize situations where children benefit from the skills of pediatric specialists; and work effectively with these professionals in the care of children.

**7. GOAL: Otitis Media. Diagnose and manage acute and chronic suppurative otitis media and otitis media with effusion.**

A. Demonstrate successful removal of cerumen from ear canals to achieve satisfactory visualization of the tympanic membrane (TM).

B. Describe an optimal means of holding the child and the optimal equipment necessary for visualization of the TM in an infant, including type of speculum, light source, type of bulb, type of examination head, and use of the bulb to observe for TM mobility.

C. Demonstrate correct interpretation of the tympanogram for a child with: AOM, middle ear effusion, obstruction of the ear canal, ossicular disruption, and perforation of the TM.
D. Differentiate between complicated and uncomplicated AOM, mild and severe AOM, and the appropriate management of each variety.
E. Diagnose acute otitis media, using visual and pneumatic otoscopy, tympanometry, history, and signs and symptoms (e.g., fever, ear pain).
F. Diagnose and treat persistent otitis media, identifying treatment options, including indications for tympanocentesis.
G. Use antibiotic therapy judiciously to treat acute otitis media, taking into account the typical pathogens involved, and their antibiotic sensitivities and resistance patterns. Be prepared to explain to parents the need to limit antibiotic use in cases of mild illness.
H. Explain the role of antibiotic prophylaxis for recurrent acute otitis media.
I. Follow-up children with acute otitis media at appropriate intervals, monitoring for the development of chronic or recurrent acute otitis media or persistent otitis media with effusion.
J. Monitor infants and children with chronic middle ear effusion, recurrent acute otitis media or chronic otitis media for hearing loss and language delay; recognize indications for referral for formal audiologic and speech evaluation.
K. Describe the generally accepted criteria for insertion of pressure equalizing tubes (PET) in children, with specific reference to published guidelines.
L. Recognize clinical cases warranting referral to an otolaryngologist for evaluation of need for pressure equalizing tubes (PET) for middle ear ventilation. Refer appropriately, providing medical information about medical course under your care and special circumstances that may affect the decision.
M. Counsel families regarding the risks and benefits of pressure equalizing tubes (PET).
N. Describe the means of preventing acute otitis media for which there is evidence in the literature.
<b>8. GOAL: Diagnose and manage patients with sinusitis, and refer when appropriate.</b>
A. Diagnose acute sinusitis accurately, using information from the history and physical examination.
B. Explain the role of radiologic tests in diagnosing sinusitis, including cost factors and limitations of each study (radiographs and computed tomography).
C. Manage cases of sinusitis, judiciously using the appropriate antibiotics, with an awareness of sensitivity and resistance patterns of common bacterial pathogens.
D. Prescribe adjunctive pharmacotherapy for sinusitis as needed (e.g., nasal drops or sprays, antihistamines).
E. Explain to parents the pathophysiology, epidemiology and management of sinusitis, especially viral rhinosinusitis.

F. Monitor patients and recognize complications of sinusitis (e.g., Pott's puffy tumor, meningitis, chronic or recurrent sinusitis).
G. Refer sinusitis patients when appropriate (e.g., with chronic/recurrent disease), explaining rationale for referral and possible therapeutic interventions (e.g., endoscopic surgery).
H. Describe characteristics that help differentiate allergic, viral and bacterial sinusitis; as well as acute and chronic sinusitis.
I. Explain conditions that mimic sinusitis and how to sort through the differential diagnosis.
<b>9. GOAL: Screen, diagnose and manage patients with symptoms secondary to tonsillar and adenoidal hypertrophy, and refer when appropriate.</b>
A. Screen for tonsillar and adenoidal hypertrophy at health maintenance visits, using information from the physical examination and history.
B. Counsel parents about the pathophysiology of conditions associated with tonsillar and adenoidal hypertrophy and the possibility of normal developmental regression in some cases.
C. Explain to parents the reasons for referral to otolaryngology and general issues related to surgical intervention.
D. Describe the use of diagnostic tests for assessing tonsils and adenoids (e.g., airway films, sleep studies).
<b>10. GOAL: Demonstrate high standards of professional competence while working with patients under the care of a subspecialist.</b>
A. <b>Competency 1: Patient Care.</b> Provide family-centered patient care that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.
1. Use a logical and appropriate clinical approach to the care of patients presenting for specialty care, applying principles of evidence-based decision-making and problem-solving.
2. Describe general indications for subspecialty procedures and interpret results for families.
B. <b>Competency 2: Medical Knowledge.</b> Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a pediatrician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.
1. Acquire, interpret and apply the knowledge appropriate for the generalist regarding the core content of this subspecialty area.
2. Critically evaluate current medical information and scientific evidence related to this subspecialty area and modify your knowledge base accordingly.
C. <b>Competency 3: Interpersonal Skills and Communication.</b> Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

1. Provide effective patient education, including reassurance, for a condition(s) common to this subspecialty area.
2. Communicate effectively with primary care and other physicians, other health professionals, and health-related agencies to create and sustain information exchange and teamwork for patient care.
3. Maintain accurate, legible, timely and legally appropriate medical records, including referral forms and letters, for subspecialty patients in the outpatient and inpatient setting.
<b>D. Competency 4: Practice-based Learning and Improvement.</b> Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one's patient care practice.
1. Identify standardized guidelines for diagnosis and treatment of conditions common to this subspecialty area and adapt them to the individual needs of specific patients.
2. Identify personal learning needs related to this subspecialty; systematically organize relevant information resources for future reference; and plan for continuing acquisition of knowledge and skills.
<b>E. Competency 5: Professionalism.</b> Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.
1. Demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes, and seeking answers to patient care questions).
2. Demonstrate a commitment to carrying out professional responsibilities.
3. Adhere to ethical and legal principles, and be sensitive to diversity.
<b>F. Competency 6: Systems-based Practice.</b> Understand how to practice high-quality health care and advocate for patients within the context of the health care system.
1. Identify key aspects of health care systems as they apply to specialty care, including the referral process, and differentiate between consultation and referral.
2. Demonstrate sensitivity to the costs of clinical care in this subspecialty setting, and take steps to minimize costs without compromising quality
3. Recognize and advocate for families who need assistance to deal with systems complexities, such as the referral process, lack of insurance, multiple medication refills, multiple appointments with long transport times, or inconvenient hours of service.

4. Recognize one's limits and those of the system; take steps to avoid medical errors.

### **Procedures**

**A. GOAL: Technical and therapeutic procedures.** Describe the following procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

1. Foreign body removal (simple): nose
2. Foreign body removal (simple): ear
3. Suctioning: tracheostomy
4. Tracheostomy tube: replacement

**B. GOAL: Diagnostic and screening procedures.** Describe the following tests or procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

1. Audiometry evaluation: interpretation
2. Radiologic interpretation: CT of head
3. Radiologic interpretation: lateral neck X-ray
4. Radiologic interpretation: sinus films

### **Source**

Kittredge, D., Baldwin, C. D., Bar-on, M. E., Beach, P. S., Trimm, R. F. (Eds.). (2004). APA Educational Guidelines for Pediatric Residency. Ambulatory Pediatric Association Website. Available online: [www.ambpeds.org/egweb](http://www.ambpeds.org/egweb).