Fellowship in Pediatric Otolaryngology

The fellowship in pediatric otolaryngology provides advanced training in diagnosis and medical and surgical treatment of congenital and acquired anomalies affecting children, including — but not limited to — complex airway and aerodigestive problems, chronic ear disease, deafness, head and neck masses, sleep disorders and sinus disease. In addition, fellows are given the opportunity to perform clinical and/or basic science research in the field of pediatric otolaryngology.

All clinical work is performed under the supervision of one of five faculty members. Clinical duties include running the pediatric otolaryngology inpatient and consult services (including Massachusetts Eye and Ear, Massachusetts General Hospital and Shriners Hospital for Children), participating in at least one half-day of clinic per week and participating in all advanced level pediatric otolaryngology surgical cases. There are no formal call responsibilities; however, the fellow will be invited to participate in the care of any complex and/or interesting patients who present at night or over the weekends. The fellow will also round on weekends when complex patients are being cared for on the service.

Educational responsibilities include overseeing and teaching junior residents how to manage and treat otolaryngologic diseases of the pediatric patient, both medically and surgically. In addition, the fellow attends grand rounds, leads didactic sessions related to pediatric otolaryngology and attends a monthly pediatric hearing loss conference and bi-weekly pediatric head and neck tumor board at MGH.

Although the first year of fellowship is primarily clinical, several fellows have had the opportunity to present and publish their work at meetings and in various journals. Two have recently won awards at the annual ASPO research competition. If a fellow opts for a second year, this will be primarily devoted to research. Alternatively, a fellow may choose to obtain an advanced degree during the second year.

Please see a collection of quick facts about the pediatric otolaryngology division below.
Director
Christopher Hartnick, M.D., M.S. Epi.

Application Deadline
January 1

Start Date
July 1

Duration of Training
One year, with an optional second year.

Number of Positions
The program has approval from the ACGME to match one pediatric otolaryngology fellow per year.

Eligibility
Candidates must be graduates of an ACGME-accredited otolaryngology–head and neck surgery residency training program.

Accreditation
The pediatric otolaryngology fellowship has been accredited by the ACGME since it began in 2005.

Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Clinical Interests:</th>
</tr>
</thead>
</table>
| Christopher J. Hartnick M.D. | Airway Reconstruction  
| Division Director and Fellowship Director | Pediatric Voice Disorders  
| 617-573-4206 | Pediatric VPI Surgery/ Cleft Palate Surgery  
| Christopher_hartnick@meei.harvard.edu | Pediatric Head and Neck and Skull Base Surgery  
| | Pediatric Sinus Surgery |
| Daniel J. Lee M.D., FACS | Cochlear implants  
| 617-573-3130 | Auditory brainstem implants  
| Daniel_lee@meei.harvard.edu | Chronic ear surgery  
| | Superior canal dehiscence syndrome  
| | Acoustic neuroma surgery |
| Michael Cohen, M.D. | Pediatric Hearing Loss  
| 617-573-4208 | Pediatric Cochlear Implantation |
| michael_cohen@meei.harvard.edu |
| Donald Keamy Jr., M.D. | Pediatric Otolaryngology  
| 617-573-4208 | Pediatric Neck Masses  
| donald_keamyjr@meei.harvard.edu | Pediatric Chronic Ear Disease  
| | Pediatric Sinus Disease and Surgery |
Leila Mankarious M.D.
617-573-4208
leila_mankarious@meei.harvard.edu

Clinical Interests:
Pediatric Hearing Loss
Pediatric Cochlear Implantation

Allocation of Time
The majority of the fellow's clinical time will be spent in the operating room, with the exception of specialty clinic and consultation service demands. Ideally, a full day is reserved each week for research pursuits. If the fellow decides to stay on for a second year, research time will constitute the vast majority (80%) of their time.

Example of a Typical Work Week

Monday (OR day): Full day in the operating room with Dr. Hartnick, usually consisting of 10-16 cases. Direct laryngoscopy/Bronchoscopy (DLB) on Mondays are done with the Pediatric Pulmonary and Gastroenterology (GI) services from the MGH. They will perform flexible bronchoscopy and esophagastroduodenoscopy in conjunction with the DLB. Alternatively, the fellow may assist Dr. Mankarious in her OR with otology cases on this day as well.

Tuesday (Clinic/OR day): Dr. Hartnick’s multidisciplinary Aerodigestive and Voice Clinic. The Pediatric Pulmonary, GI and speech/swallow service from MGH participate in this clinic. Dr. Lee will have some pediatric otology cases on Tuesday mornings as well. Dr. Mankarious operates in the surgicenter with the PGY-2 resident.

Wednesday (OR day): Dr. Hartnick has a full day in the operating room with approximately 10-16 cases. Dr. Keamy and Dr. Mankarious have clinic. Once a month, there is a multi-disciplinary pediatric hearing loss conference at 5 p.m.

Thursday (Admin/research day): The morning begins with grand rounds or M&M. This is followed by a CPC session with the residents. Twice a month, Dr. Lee has a pediatric otology clinic in the afternoons. Twice a month, the MGH pediatric head & neck tumor board is held in the afternoon. Once a month, Dr. Gerald Healy will hold a conference for the pediatric otolaryngology division at 4 p.m. The conference is scheduled and run by the fellow.

Friday (OR/Clinic day): Dr. Keamy has a full day in the OR with 10-16 cases. Dr. Hartnick has a full day in clinic. Dr. Lee will have pediatric otology cases in the OR.

Clinical Responsibilities
Outpatient clinic exposure includes, but is not necessarily be limited to, those specialty/multidisciplinary clinics in which the pediatric otolaryngology faculty participates, including the Pediatric Otology Clinic (Drs. Lee and Cohen), and the Airway and Voice Disorders Clinic (Dr. Hartnick).

The fellow also plays an active role in the consult service provided to the
Massachusetts General Hospital for Children and the Shriners Hospital for Children related to pediatric ORL issues of an infectious, traumatic or emergent/urgent etiology.

Fellowship training in pediatric otolaryngology at Mass. Eye and Ear also offers the experience of working in specialized facilities with a team of faculty with training and certifications in various subspecialty areas of Pediatric Otolaryngology. For example, fellows will gain experience in reading sleep studies with Dr. Keamy, who is board-certified in both pediatric otolaryngology and sleep medicine, in our Pediatric Sleep Laboratory.

**Recent Fellow Select Surgical Case Log (one year):**
- Open Airway (LTR.CTR/TRR/ Slide tracheoplasty): 17
- Open Airway (Tracheopexy/Tracheoplasty): 15
- Endoscopy Airway with Intervention: 113
- Endoscopic Ear Surgery: 30
- Mastoidectomy: 15
- Cochlear Implant: 10
- Congenital Anomalies: 26
- Major Pediatric H&N Cases: 15
- Rhinology: 48
- Facial Plastics (including VPI surgery): 25

**Teaching Responsibilities**
The fellow also attends and participates in the Department’s didactic lecture series (which includes CPCs, grand rounds and M&M), the pediatric otolaryngology division’s monthly lecture series (directed by Dr. Gerald Healy), and any other relevant conferences, such as the monthly pediatric hearing loss conference and the bi-weekly pediatric pulmonary conference and tumor board at the MGH. Additionally, fellows participate in the monthly ASPO web-based fellowship didactic lecture series. The fellow also directs the weekly informal “fellow talk” with the fellowship director (Dr. Hartnick) and the rotating resident.

**Research and Publications**
The first year of the fellowship will be primarily clinical. During this time, the fellow will be encouraged to develop clinical-based research under the guidance of the faculty. If a candidate opts for a two-year fellowship, the second year will be primarily devoted to either outcomes or basic science research activities.

Fellows are also encouraged to author and publish scientific articles during their fellowships. Two of our past fellows won first prize at ASPO’s annual research competition. Others have co-authored books with faculty members during their fellowships.
Funded Clinical Trials:

- Randomized Controlled Trial of Voice Therapy on Children with Vocal Nodules
- A Pilot Study to Evaluate the Safety and Efficacy of the Hypoglossal Nerve Stimulator in Adolescents With Down Syndrome and Obstructive Sleep Apnea

Current Research Projects:

Quality and Outcomes Research
1. Preoperative audiograms in tympanostomy tube placement:
   a. Currently examining the utility and cost-effectiveness of obtaining preoperative audiograms prior to tympanostomy tube placement. Because this is currently used as a quality metric that does not seem consistently demonstrative of high quality/cost-effectiveness, we are also attempting to establish a new metric that is more consistent with high quality care.
   b. Conducting a survey of the ASPO membership to determine current practice patterns in obtainment of perioperative audiograms for tube placement. We would like to establish the current trends to determine how much practice deviates from quality metrics and possibly determine why this happens.
2. Change in healthcare utilization following tube placement for recurrent acute otitis media
   a. Using the Tricare database, we are studying changes in healthcare utilization following tube placement in children with recurrent acute otitis media, including number of clinic visits, number of ED visits, number of systemic antibiotics taken and cost of care before and after tube placement.

Clinical Research
1. FDA Approved Clinical Trial of the efficacy of Hypoglossal Nerve Stimulator to treat adolescents with Down Syndrome and recalcitrant severe OSA (see above)
2. R01 funded randomized trial of voice therapy vs hygiene to treat children with vocal fold nodules and dysphonia (see above)
3. Postoperative admission patterns for children who undergo surgery for obstructive sleep apnea
   a. Using the Kids Inpatient Database, we are studying the pattern of admission following surgery for OSA to determine if there variability, including geographic variation, and any factors that may impact which patients are admitted and which undergo outpatient surgery.
4. Amplification in unilateral hearing loss
   a. Currently conducting a prospective study examining the benefits of amplification vs. conventional methods (preferential classroom seating, FM system in class) for treatment of unilateral hearing loss in children. Using multiple validated quality of life questionnaires, we are studying whether or not the use of the hearing aid provides any additional benefit over conventional methods.
b. Conducting a survey of the ASPO and AOS/ANS membership to determine current practice patterns in management of pediatric unilateral hearing loss.

5. Clinical Trial using in vivo Optical Coherence Tomography in the Operating Room to define the development and maturation of the Pediatric Vocal Fold Lamina Propria

6. Double Blind Prospective Randomized Trial of Ibuprofen vs Placebo to identify whether Ibuprofen has significantly increased risk of postop bleeding in a non-inferiority study

Basic Science Research

1. Testing of a canine model of decellularized and reperfused laryngeal transplantation

Global Health Initiatives
Past fellows have traveled with Dr. Hartnick on pediatric otolaryngology medical missions, one for cleft lip and palate surgery and another for pediatric airway surgery.

Specific Goals and Objectives
In addition to the specific skill sets outlined in the various areas of concentration, the program is committed to the development of a competency-based education model including the creation and use of evaluative instruments to demonstrate attainment of the following six ACGME-defined general competencies:

1) **Patient care**
Ensure that our Fellows provide compassionate, committed, and effective pediatric otolaryngology patient care.

2) **Medical knowledge**
Impart to our Fellows established and evolving biomedical, clinical, epidemiological and social/behavioral knowledge and assess the application of this knowledge to patient care.

3) **Practice-based learning and improvement**
Continuously monitor the quality of our Fellow’s performance both in the office and operating room settings, including their appraisal and assimilation of scientific evidence, technologic advancements, and novel health care delivery options into patient care.

4) **Interpersonal and communication skills**
Facilitate in our Fellows those interpersonal and communication skills which enhance their exchange of information with patients, patients’ families and other health professionals and which constitute the essence of “doctoring”.

5) **Professionalism**
Instill in our Fellows a commitment to carrying out professional responsibilities in
accordance with ethical principles and with sensitivity to the diversity of one’s patient population.

6) **Systems-based practice**
Create an awareness and responsiveness in our Fellows to the health care system, and enhance their ability to effectively call on system resources to provide care that is of optimal value and reasonable cost.

**Progress Reports**
Dr. Hartnick provides a semi-annual and an annual review summarizing the Pediatric Otolaryngology faculty's impression of the fellow's activities and progress.

**Previous Fellows and Current Employment**

**Mark Boseley, M.D.**—Director of Pediatric Otolaryngology, Madigan Army base, Tacoma, Washington
markboleymd@comcast.net

**J. Andrew Sipp, M.D.**—Pediatric Otolaryngologist, Pediatric Ear, Nose and Throat of Atlanta, Atlanta, Georgia
jandysipp@gmail.com

**Matthew T. Brigger, M.D., MPH**—Associate Professor of Surgery, University of California San Diego, and Director of Pediatric Surgical Airway Team, Rady Children's Hospital San Diego
matt.brigger@alumni.vanderbilt.edu

**Stephen Maturo, M.D.**—Pediatric Otolaryngologist, San Antonio Uniformed Services Health Education Consortium; Wilford Hall Medical Center, Lackland AFB, Texas; Brooke Army Medical Center, Fort Sam, Houston, Texas
stephen.maturo@sbcglobal.net

**Thomas Q. Gallagher, D.O.**—Pediatric Otolaryngologist, Naval Medical Center, Portsmouth, Virginia
ThomasQGallagher@yahoo.com

**Jennifer Setlur, M.D.**—Pediatric Otolaryngologist, Massachusetts Eye and Ear, Concord location and Instructor at Harvard Medical School
jennifer.setlur@gmail.com

**Derek J. Rogers, M.D.**—Pediatric Otolaryngologist, Madigan Army base, Tacoma, Washington
derekJrogers@yahoo.com

**Nikhila Raol, M.D., MPH**—Pediatric Otolaryngologist, Henrietta Egleston Hospital for Children and Assistant Professor of Otolaryngology, Emory University School of Medicine, Atlanta, Georgia
nikhilaraol@meei.harvard.edu

**Gillian R. Diercks, M.D.**—Pediatric Otolaryngologist, Massachusetts Ear and Ear, Newton-Wellesley location and Instructor at Harvard Medical School
gillian_diercks@meei.harvard.edu

**Carissa Wentland, D.O.**—Assistant Professor, UH Case Medical Center, Rainbow Babies and Children's Hospital, Cleveland, Ohio
carissaw@me.com
How to Apply
Applicants should register and apply for fellowship positions through the SF Match program. Applications are due on January 1st. Interviews are held in March.

Selection Criteria:
The fellow's performance as a resident, letters of recommendation, the quality of the applicant’s interview, academic achievement, and additional evidence of an interest in an academic pediatric otolaryngology career that would be enriched by a fellowship at the Massachusetts Eye and Ear are all considered.

Salary and Benefits:
Salary and benefits are commensurate with years of training and with that of the other Mass. Eye and Ear fellowships. Pediatric Otolaryngology faculty will cover the fellow’s malpractice insurance. The faculty will also support travel to a conference at which the fellow is presenting his or her research.