

Otolaryngology

Division Details

RESEARCH AND TRAINING DETAILS

Faculty	11
Joint Appointment Faculty	3
Research Fellows and Post Docs	1
Research Graduate Students	2
Total Annual Grant Award Dollars	\$60,513
Total Publications	49

CLINICAL ACTIVITIES AND TRAINING

Clinical Fellows	6
Inpatient Encounters	871
Outpatient Encounters	47,983



Row 1: C Myer IV, C Hart, S Ishman, R Cotton, S Shott, C Myer III

Row 2: M Rutter, D Choo, A de Alarcon, J Greinwald, J Willging

Research Highlights

Michael Rutter, MD, receives the Gabriel F. Tucker Medal from the American Laryngological Association

On May 19, 2016, [Dr. Michael J. Rutter](#) received the [Gabriel F. Tucker Medal](#) from the American Laryngological Association (ALA). This is an annual award given to an outstanding candidate for recognition of their individual contributions to the field of pediatric laryngology and for outstanding service to the ALA.

Launch of Cincinnati Childrens CHARGE Team

Since the start of the calendar year, the Cincinnati Children's [CHARGE](#) team has begun applying our principles and practices of authentically coordinated care to a very complex population of children with CHARGE syndrome. The CHARGE acronym derives from the congenital conditions and disorders that affect these children across almost every organ system. The "C" stands for coloboma (an eye disorder that can compromise vision), "H" for heart defects, "A" for choanal atresia (failure of the opening of the back of the nose to develop, causing obstruction), "R" for retardation of growth and development, "G" for genitourinary abnormalities and "E" for ear and hearing problems. A defect of the CHD7 gene is as a common genetic cause for CHARGE syndrome, but the exact mechanism(s) by which CHD7 mutations result in the spectrum of issues seen in CHARGE remain unclear and are a major area of research focus. As the CHARGE team's experience has grown with these children, it has quickly become evident that the medical conditions and challenges seen in our patients with CHARGE syndrome go far beyond those features outlined by the early nomenclature. Patients with CHARGE frequently have other conditions such as cleft lip or palate, difficulties with speech and swallowing, malformations of the trachea and esophagus, aspiration, hormonal abnormalities, facial weaknesses or paralysis, as well as delays in development of motor function and cognition.

However, early successes in optimally managing these patients have demonstrated to our CHARGE team (and families) that these children frequently have tremendous potential to function and excel if provided with the proper, early and effective interventions. Many of these interventions are critical, life-threatening treatments for issues like congenital heart defects or airway problems that need addressed immediately. However, after these early critical periods, key developmental and communicational aspects need to be aggressively addressed in order to allow these children to reach their full potential. This is our goal in creating this interdisciplinary CHARGE Team; to provide the full range of assessments and interventions for children with CHARGE syndrome in a comprehensive and optimally coordinated manner such that these children can reach their full potential. Clinicians from the Divisions of [Developmental and Behavioral Pediatrics](#); [Audiology](#); [Speech-Language Pathology](#); [Plastic Surgery](#); [Urology](#); [Psychiatry](#); [Human Genetics](#); [Ophthalmology](#); [Social Services](#); [Pulmonary Medicine](#); [General and Thoracic Surgery](#); [Endocrinology](#); [Pediatric Otolaryngology](#); [Gastroenterology, Hepatology and Nutrition](#) have all collaborated on this endeavor and epitomize the well-coordinated, high acuity expertise that is Cincinnati Children's.

As mentioned above, research into CHARGE syndrome remains a compelling area of need. Multicenter clinical projects are under development to probe the specific genetic mutations of CHD7 in individuals with CHARGE and to correlate those specific DNA sequences with the clinically observed manifestations; all with the hopes of better understanding how specific genetic defects cause the anomalies seen in CHARGE syndrome.

The inaugural CHARGE symposium held in the Sabin Auditorium at Cincinnati Children's took place on October 14, 2016, for clinicians as well as individuals with CHARGE and their families. Patient and family-driven topics at this conference included behavioral issues and management in CHARGE, navigating the healthcare system for children with CHARGE syndrome, feeding and blenderized diets, and secretion and airway management in CHARGE.

Division Publications

1. Amin RS, Rutter MJ. [Airway Disease and Management in Bronchopulmonary Dysplasia](#). *Clin Perinatol*. 2015; 42:857-70.
2. Balakrishnan K, Cheng E, de Alarcon A, Sidell DR, Hart CK, Rutter MJ. [Outcomes and Resource Utilization of Endoscopic Mass-Closure Technique for Laryngeal Clefts](#). *Otolaryngol Head Neck Surg*. 2015; 153:119-23.
3. Bergmark R, Ishman S, Scangas G, Cunningham M, Sedaghat A. [Socioeconomic Determinants of Overnight and Weekend Emergency Department Use for Acute Rhinosinusitis](#). *Laryngoscope*. 2015; 125:2441-46.
4. Dalesio NM, McMichael DH, Benke JR, Owens S, Carson KA, Schwengel DA, Schwartz AR, Ishman SL. [Are Nocturnal Hypoxemia and Hypercapnia Associated with Desaturation Immediately after Adenotonsillectomy?](#) *Paediatr Anaesth*. 2015; 25:778-85.
5. Darrow D, Greene A, Mancini A, Nopper A. [Diagnosis and Management of Infantile Hemangioma](#). *Pediatrics*. 2015; 136:e1060-e104.
6. de Alarcon A, Osborn A, Tabangin M, Cohen A, Hart C, Cotton R, Rutter M. [Laryngotracheal Cleft Repair in Children with Complex Airway Anomalies](#). *JAMA Otolaryngol Head Neck Surg*. 2015; 141:828-33.
7. DeMarcantonio M, Choo DI. [Radiographic Evaluation of Children with Hearing Loss](#). *Otolaryngol Clin North Am*. 2015; 48:913-32.
8. Ehsan Z, Mahmoud M, Shott SR, Amin RS, Ishman SL. [The Effects of Anesthesia and Opioids on the Upper Airway: A Systematic Review](#). *Laryngoscope*. 2016; 126:270-84.

9. Friedman NR, Parikh SR, Ishman SL, Ruiz AG, El-Hakim H, Ulualp SO, Wootten CT, Koltai PJ, Chan DK. **The Current State of Pediatric Drug-Induced Sleep Endoscopy.** *Laryngoscope*. 2016.
10. Giese AP, Guarnaschelli JG, Ward JA, Choo DI, Riazuddin S, Ahmed ZM. **Radioprotective Effect of Aminothiols on Irradiated Inner Ear of Guinea Pig.** *PLoS One*. 2015; 10:e0143606.
11. Gooi Z, Ishman SL, Bock JM, Blumin JH, Akst LM. **Changing Patterns in Reflux Care: 10-Year Comparison of ABEA Members.** *Ann Otol Rhinol Laryngol*. 2015; 124:940-6.
12. Hart C, Ishman S, Alessandrini E. **Surgical Measurement Framework: A New Framework for Quality Care in Surgical Specialties.** *Perioper Care Oper Room Manag*. 2016; 2:28-33.
13. He D, Marie C, Zhao C, Kim B, Wang J, Deng Y, Clavairoly A, Frahm M, Wang H, He X, Hmidan H, Jones BV, Witte D, Zalc B, Zhou X, Choo DI, Martin DM, Parras C, Lu QR. **Chd7 Cooperates with Sox10 and Regulates the Onset of CNS Myelination and Remyelination.** *Nat Neurosci*. 2016; 19:678-89.
14. Ishii L, Roxbury C, Godoy A, Ishman S, Ishii M. **Does Nasal Surgery Improve OSA in Patients with Nasal Obstruction and OSA? A Meta-Analysis.** *Otolaryngol Head Neck Surg*. 2015; 153:326-33.
15. Ishman S, Stewart C, Senser E, Stewart R, Stanley J, Stierer K, Benke J, Kern D. **Qualitative Synthesis and Systematic Review of Otolaryngology in Undergraduate Medical Education.** *Laryngoscope*. 2015; 125:2695-708.
16. Ishman S, Tang A, Cohen A, Babiker H, Chini B, Ehsan Z, Fleck R, Gordon C, McPhail G, Pan B. **Decision Making for Children with Obstructive Sleep Apnea without Tonsillar Hypertrophy.** *Otolaryngol Head Neck Surg*. 2016; 154:527-31.
17. Ishman S, Yang C, Cohen A, Benke J, Anderson R, Madden M, Meinzen-Derr J, Tabangin M. **In Response to Is the OSA-18 Predictive of Obstructive Sleep Apnea: Comparison to Polysomnography.** *Laryngoscope*. 2016; 126:E228.
18. Ishman SL. **The Role of Sleep Studies in Children Who Snore.** *JAMA Otolaryngol Head Neck Surg*. 2016; 142:179-81.
19. Ishman SL, Hart CK. **Improving Outcomes and Promoting Quality in Otolaryngology-Beyond the National Surgical Quality Improvement Program.** *JAMA Otolaryngol Head Neck Surg*. 2016; 142:247-8.
20. Ishman SL, Stewart CM, Benke JR, Stanley J, Stierer KD, Senser E, Stewart RW, Kern DE. **In Response to Qualitative Synthesis and Systematic Review of Otolaryngology in Undergraduate Medical Education.** *Laryngoscope*. 2016; 126:E135.
21. Jefferson ND, Cohen AP, Rutter MJ. **Subglottic Stenosis.** *Semin Pediatr Surg*. 2016; 25:138-43.
22. Johnson K, Tabangin M, Meinzen-Derr J, Cohen AP, Greinwald JH. **High-Frequency Sensorineural Hearing Loss in Children.** *Laryngoscope*. 2016; 126:1236-40.
23. Kirsh E, Zacharias S, de Alarcon A, Deliyiski D, Tabangin M, Khosla S. **Vertical Phase Difference and Glottal Efficiency in Musical Theater and Opera Singers.** *J Voice*. 2015.
24. Knecht S, Mays W, Amos M, Gerdes Y, Schuckert L, Collins S, de Alarcon A, Shoreman J, Knilans T. **Evaluating Exercise Efficiency in Pediatric Patients with Upper Airway Obstruction Using Exercise Flexscope Methodology: 3673 Board #112 June 4, 8: 00 Am - 9: 30 Am.** *Med Sci Sports Exerc*. 2016; 48:1023.
25. Kopelovich JC, Wine TM, Rutter MJ, Mitchell MB, Prager JD. **Secondary Reverse Slide Tracheoplasty for Airway Rescue.** *Ann Thorac Surg*. 2016; 101:1205-7.
26. Kukwa W, Kukwa A, Galazka A, Czarnecka AM, Krzeski A, Migacz E, Ishman SL. **Long-Term Parental Satisfaction with Adenotonsillectomy: A Population Study.** *Sleep Breath*. 2015; 19:1425-9.
27. Mahant S, Hall M, Ishman SL, Morse R, Mittal V, Mussman GM, Gold J, Montalbano A, Srivastava R, Wilson KM, Shah SS. **Association of National Guidelines with Tonsillectomy Perioperative Care and Outcomes.** *Pediatrics*. 2015; 136:53-60.

28. Manickam PV, Shott SR, Boss EF, Cohen AP, Meinzen-Derr JK, Amin RS, Ishman SL. **Systematic Review of Site of Obstruction Identification and Non-Cpap Treatment Options for Children with Persistent Pediatric Obstructive Sleep Apnea.** *Laryngoscope*. 2016; 126:491-500.
29. Mowry S, Jammal H, Myer C, Solares C, Weinberger P. **A Novel Temporal Bone Simulation Model Using 3d Printing Techniques.** *Otol Neurotol*. 2015; 36:1562-65.
30. Myer CMt, Howell RJ, Cohen AP, Willging JP, Ishman SL. **A Systematic Review of Patient- or Proxy-Reported Validated Instruments Assessing Pediatric Dysphagia.** *Otolaryngol Head Neck Surg*. 2016; 154:817-23.
31. Prosser JD, Cohen AP, Greinwald JH. **Diagnostic Evaluation of Children with Sensorineural Hearing Loss.** *Otolaryngol Clin North Am*. 2015; 48:975-82.
32. Puri K, Kocoshis S, Risma K, Perez L, Hart C, Chin C, Ryan TD, Jefferies JL, Schumacher KR, Castleberry C. **Basiliximab Treatment for Autoimmune Bowel Disease in a Pediatric Heart Transplant Patient.** *Pediatr Transplant*. 2015; 19:E165-9.
33. Rutter M, Prosser J, DeAlarcón A. **Congenital Tracheal Stenosis.** In: J Lioy, S Sobol, eds. *Disorders of the Neonatal Airway: Fundamentals for Practice*. New York: Springer; 2015:81-86.
34. Samy R, Scott M, Choo D, Meinzen-Derr J. **Cochlear Implantation in Patients with Meniere's Disease.** *Cochlear Implants Int*. 2016; 16:208-12.
35. Scangas G, Ishman S, Bergmark R, Cunningham M, Sedaghat A. **Emergency Department Presentation for Uncomplicated Acute Rhinosinusitis Is Associated with Poor Access to Healthcare.** *Laryngoscope*. 2015; 125:2253-58.
36. Sidell D, Ward J, Pordal A, Quimby C, Nassar M, Choo D. **Combination Therapies Using an Intratympanic Polymer Gel Delivery System in the Guinea Pig Animal Model: A Safety Study.** *Int J Pediatr Otorhinolaryngol*. 2016; 84:132-36.
37. Sidell DR, Wood RE, Hart CK. **Conservative Management of Pediatric Tracheal Rupture.** *Pediatr Pulmonol*. 2016.
38. Subramaniam D, Mylavarapu G, McConnell K, Fleck R, Shott S, Amin R, Gutmark E. **Upper Airway Elasticity Estimation in Pediatric Down Syndrome Sleep Apnea Patients Using Collapsible Tube Theory.** *Ann Biomed Eng*. 2016; 44:1538-52.
39. Subramaniam DR, Mylavarapu G, McConnell K, Fleck RJ, Shott SR, Amin RS, Gutmark EJ. **Compliance Measurements of the Upper Airway in Pediatric Down Syndrome Sleep Apnea Patients.** *Ann Biomed Eng*. 2016; 44:873-85.
40. Subramanyam R, Ishman SL, Fleck RJ, Mahmoud M. **Video Imaging of Arytenoid Prolapse.** *Can J Anaesth*. 2016; 63:350-1.
41. Tan L, Holland SK, Deshpande AK, Chen Y, Choo DI, Lu LJ. **A Semi-Supervised Support Vector Machine Model for Predicting the Language Outcomes Following Cochlear Implantation Based on Pre-Implant Brain Fmri Imaging.** *Brain Behav*. 2015; 5:e00391.
42. Tang A, Benke JR, Cohen AP, Ishman SL. **Influence of Tonsillar Size on Osa Improvement in Children Undergoing Adenotonsillectomy.** *Otolaryngol Head Neck Surg*. 2015; 153:281-5.
43. Tang A, Gropler M, Duggins A, Amin R, Shott S, Chini B, Ishman S. **Gaps in Evidence: Management of Pediatric Obstructive Sleep Apnea without Tonsillar Hypertrophy.** *Laryngoscope*. 2016; 126:758-62.
44. Tang AL, Cohen AP, Benke JR, Stierer KD, Stanley J, Ishman SL. **Obstructive Sleep Apnea Resolution in Hypopnea- Versus Apnea-Predominant Children after Adenotonsillectomy.** *Otolaryngol Head Neck Surg*. 2016; 155:670-5.
45. Tawfik K, Myer C, Shikary T, Goldschneider K. **The Catheter Hub Disinfection Cap as Esophageal Foreign Body.** *Laryngoscope*. 2015; 125:2820-22.
46. Tawfik K, Sedaghat A, Ishman S. **Trends in Inpatient Pediatric Polysomnography for Laryngomalacia and Craniofacial Anomalies.** *Annals Oto Rhinol Laryngol*. 2016; 125:82-89.

47. Tawfik KO, Edwards CR, Jones BV, Myer CM, 3rd. **Masticator Space Foreign Body in a Child Presenting with Otorrhea and Granulation Tissue of the External Auditory Canal.** *Ann Otol Rhinol Laryngol.* 2016; 125:854-7.
48. Yang CJ, Lavender V, Meinzen-Derr JK, Cohen AP, Youssif M, Castiglione M, Manickam V, Bachmann KR, Greinwald JH. **Vestibular Pathology in Children with Enlarged Vestibular Aqueduct.** *Laryngoscope.* 2016; 126:2344-50.
49. Zacharias S, Weinrich B, Brehm S, Kelchner L, Deliyski D, Tabangin M, de Alarcon A. **Assessment of Vibratory Characteristics in Children Following Airway Reconstruction Using Flexible and Rigid Endoscopy and Stroboscopy.** *JAMA Otolaryngol Head Neck Surg.* 2015; 141:882-87.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Alessandro de Alarcon, MD	Monitoring Juvenile Onset	Department of Health and	200-	9/26/2014	\$40,513
	Recurrent Respiratory	Human Services (Eastern	2014-	-	
	Papillomatosis (JORRP)	Virginia Medical School)	59074	9/25/2016	
David F Smith, MD-PHD	Inflammation and Cardiovascular Disease in Pediatric OSA	American Academy of Otolaryngology	Smith	7/1/2015 -	\$20,000
			AAO	6/30/2017 (CORE) Awa	
Total Annual Grant Award Dollars					\$60,513