

JHU Sinus/Laryngology PGY4 Rotation

This rotation for the PGY4 Resident focuses primarily on sinonasal disease and otolaryngologic allergy in the adult, and adult laryngology. During this rotation, the PGY4 resident spends three months dedicated to both the rhinology and laryngology services. This includes clinic and OR exposure. The residents are closely supervised during this rotation by three faculty members (Drs. Lin, Lane, and Reh) in the sinus division, and Dr. Akst in laryngology.

Facilities

Outpatient Clinic. Sinolaryngeal OHNS outpatients are seen in the general outpatient clinic. The outpatient clinic consists of 1 bay with a total of 4 rooms. Each room has a computer with access to the online electronic patient record. These rooms are equipped with high-definition video towers for use with rigid and flexible endoscopes. One room is equipped with video stroboscopy. All tertiary care medical and surgical consultation services are available during all clinics.

Inpatient. Sinolaryngeal inpatients are admitted to the Johns Hopkins Weinberg hospital. Most patients are admitted to a dedicated otolaryngology floor, Weinberg 4A, staffed with nurses and nurse practitioners who specialize in the care of the otolaryngology patient.

Operating Rooms. Outpatient surgical procedures are performed in the Johns Hopkins Outpatient Center Operating Rooms (8 rooms). The inpatient endoscopic skull base surgical procedures are performed in the General Operating Room suite which has 21 total rooms. The inpatient laryngology and sinus procedures are performed in the Johns Hopkins Weinberg operating rooms (14 rooms).

Specific Objectives for the OTO4 Sinolaryngeal Resident

Patient care and technical skills – Rhinology/Allergy

Develop and demonstrate competence with:

1. Obtaining a complete medical history and an understanding of prioritization when less comprehensive historical review is appropriate.
2. Competence in the otolaryngologic history and physical examination with particular emphasis on rhinology and allergy.
3. Competence in office endoscopic nasal/upper airway examination, biopsy methods, and debridement.
4. Competence in pre-operative assessment, radiographic evaluation, and peri-operative management of the sino-nasal patient.
5. Competence in appropriate application, use and interpretation of allergy testing, and understanding the principles of vial mixing and immunotherapy.
6. Competence in management of rhinologic and allergic emergencies.
7. Competence in open and endoscopic sinus procedures.
8. Skills necessary to apply to advanced/complicated rhinologic procedures (such as revision FESS, DCR, orbital decompression, CSF leak repair, Lothrop, endoscopic tumor resection).
9. Positioning of patients and room/microscope/staff arrangement for rhinologic surgery
10. Placement, testing, debugging and monitoring Landmarx for intraoperative CT navigation during FESS.
11. Identification and use of microsurgical and endoscopic instruments for endoscopic sinus and skull base surgery.
12. Skills outlined in the operative skills section.

Patient care and technical skills – Laryngology

Develop and demonstrate competence with:

1. Competence in the otolaryngologic history and physical examination with particular emphasis on speech and swallow function.
2. Competence in office flexible laryngoscopy, flexible stroboscopy, and rigid stroboscopy.
3. Competence in office procedures such as laryngeal injection.
4. Competence in pre-operative assessment, radiographic evaluation, and peri-operative management of the laryngeal patient.
5. Competence in management of airway emergencies.
6. Competence in endoscopic and endolaryngeal procedures.
7. Become proficient in the surgical and endoscopic techniques to secure difficult airways.
8. Develop skills to perform microlaryngeal surgery

Medical Knowledge Base – Rhinology/Allergy

Develop and demonstrate understanding of:

1. Pathophysiology and management of inflammatory, congenital, infectious, neoplastic, vascular, traumatic, toxic, genetic, degenerative, endocrinologic and idiopathic processes affecting the nose and paranasal sinuses.
2. Anatomy of the nose, paranasal sinuses, anterior, and middle cranial fossa.
3. Indications for medical versus surgical treatment of nasal and paranasal sinus disorders.
4. Pre-, intra-, peri- and post-operative management of patients undergoing rhinologic and endoscopic skull base procedures, including identification and proper management of rhinologic emergencies and complications
5. Interpretation of plain X-ray, CT and MRI imaging of the nose, paranasal sinuses, and anterior/middle cranial fossa.
6. Aspects of allied fields of medicine and surgery as they pertain to evaluation and management of nose and sinus disorders, including anesthesia, neurology, neurosurgery, oncology, physiatry, psychiatry and radiology.
7. Indications for, performance and interpretation of smell evaluation.
8. Indications for and performance of paranasal sinus culture and washout techniques.
9. Critical reading of a major otolaryngologic text
10. Critical reading of current literature; incorporating concepts from current literature into discussions with faculty regarding individual patient care situations.

Medical Knowledge Base – Laryngology

Develop and demonstrate competence with:

1. Become competent in the diagnosis, assessment, and management of patients with laryngeal disease.
 - a. Malignancy (SCCa, adenocarcinoma, adenoid cystic Ca, chondrosarcoma)
 - b. Benign tumors (granular cell, chondroma, papilloma)
 - c. Phonotraumatic lesions (nodules, polyps, cysts)
 - d. Laryngitis (reflux, allergy, autoimmune, infectious)
 - e. Unilateral and bilateral vocal fold paralysis and paresis
2. Become competent in the diagnosis, assessment, and management of patients with voice disorders.
 - a. Spasmodic dysphonia (adductor vs abductor)
 - b. Paradoxical vocal cord movement

- c. Tremor
 - d. Parkinson's disease
3. Become competent in the diagnosis, assessment, and management of patients with swallowing disorders.
 - a. Structural defects vs functional deficits
 - b. Zenker's diverticulum
 - c. Cricopharyngeal spasm
 - d. Esophagitis/pharyngitis
 4. Understand the basic science principles integral in phonation and how this impacts surgical technique.
 5. Understand the basic science principles integral in swallowing.
 6. Understand what constitutes the "difficult airway" and develop strategies to deal with various scenarios.

Practice-Based Care Optimization

Develop and demonstrate habits of:

1. Maintaining accurate records of operative and clinic cases
2. Monitoring of outcomes of patients with whom the resident has interacted during the rotation in the clinic and operating room; adjustment of technique/management based on observed outcomes
3. Application of the principles of evidence-based medicine to one's own practice
4. Use of on-line resources for up-to-date information
5. Candor in presenting and critically analyzing one's outcomes and errors
6. Initiative in identifying one's own areas of relative weakness/need for improvement, through consultation with faculty and resident colleagues; initiative in addressing identified gaps in knowledge/skills

Interpersonal Communication

Develop and demonstrate competence in:

1. Clear, concise, accurate and precise reporting of patient history, physical and studies (in discussion, dictations and writing)
2. Effective listening and communication with patients and family members
3. Clear writing
4. Discussion of risks, expected benefits, likely outcomes, and alternatives of different treatment modalities, as part of a discussion leading to informed consent.
5. Teaching medical students and junior residents

Professionalism

Demonstrate:

1. Honesty, compassion, level-headedness, decorum, selflessness, integrity and respect for others.
2. Acceptance of accountability and commitment to self-improvement
3. Maintenance of patient confidentiality; knowledge of HIPPA statutes
4. Sensitivity to issues involving gender, religion, race, sexual orientation, disability and age
5. Understanding of ethical issues in clinical and research settings, and critical analysis of novel ethical issues.
6. Appropriate consultation with colleagues within and outside the department

7. Ability to work as a member of a team
8. Development of leadership skills
9. Habits of continual learning

Systems-Based Care Optimization

Develop and demonstrate:

1. Organizational and time-management skills required for efficient running of the inpatient Otolaryngology service
2. Understanding of the systems approach to analysis of sentinel events signifying a potential risk to patient safety
3. Understanding of each member's contributions to the multidisciplinary patient care team
4. Identification of opportunities to systematically improve care delivery
5. Understanding of macro- and microeconomic forces impacting health care delivery to different populations and to single individuals
6. Cost-effective use of diagnostic tests and treatment modalities

Goals and Objectives Specific to the OTO4 Sinolaryngeal OHNS Resident

Competency	Educational Method Used	How Assessed
<p><u>Patient care and technical skills – Rhinology/Allergy</u> Develop and demonstrate competence with:</p> <ol style="list-style-type: none"> 1. Obtaining a complete medical history and an understanding of prioritization when less comprehensive historical review is appropriate. 2. Competence in the otolaryngologic history and physical examination with particular emphasis on rhinology and allergy. 3. Competence in office endoscopic nasal/upper airway examination, biopsy methods, and debridement. 4. Competence in pre-operative assessment, radiographic evaluation, and peri-operative management of the sino-nasal patient. 5. Competence in appropriate application, use and interpretation of allergy testing, and understanding the principles of vial mixing and immunotherapy. 6. Competence in management of rhinologic and allergic emergencies. 7. Competence in open and endoscopic sinus procedures. 8. Skills necessary to apply to advanced/complicated rhinologic procedures (such as revision FESS, DCR, orbital decompression, CSF leak repair, Lothrop, endoscopic tumor resection). 	<ul style="list-style-type: none"> • Supervised and progressive patient care responsibility: in-patient, out-patient clinic, emergency department • Supervised and progressive intra-operative experience • Surgical laboratories including the annual resident endoscopic sinus cadaver dissection course. • Didactic and patient care conferences: Division journal club and teaching rounds, weekly resident didactic conference, grand rounds, morbidity and mortality conference • Assigned reading • Faculty-mentored research projects, manuscript preparation and lecture presentation 	<ul style="list-style-type: none"> • Structured operative skills assessment • Case numbers and distribution • Documented evaluations by faculty, peers, nursing • Mid- and end-of-rotation preceptor feedback • Attendance of workshops; formative feedback provided during laboratory teaching exercises • Attendance of didactic program • Feedback by moderator and faculty of morbidity and mortality rounds • Program director semiannual review

<p>9. Positioning of patients and room/microscope/staff arrangement for rhinologic surgery</p> <p>10. Placement, testing, debugging and monitoring Landmarx for intraoperative CT navigation during FESS.</p> <p>11. Identification and use of microsurgical and endoscopic instruments for endoscopic sinus and skull base surgery.</p> <p>12. Skills outlined in the operative skills section.</p>		
<p>Patient care and technical skills - Laryngology Develop and demonstrate competence with:</p> <ol style="list-style-type: none"> 1. Competence in the otolaryngologic history and physical examination with particular emphasis on speech and swallow function. 2. Competence in office endoscopic laryngoscopy, stroboscopy, and injection techniques. 3. Competence in pre-operative assessment, radiographic evaluation, and peri-operative management of the laryngeal patient. 4. Competence in management of airway emergencies. 5. Competence in endoscopic and endolaryngeal procedures. 6. Become proficient in the surgical and endoscopic techniques to secure difficult airways. 7. Develop skills to perform microlaryngeal surgery 	<ul style="list-style-type: none"> • Supervised and progressive patient care responsibility: in-patient, out-patient clinic, emergency department • Supervised and progressive intra-operative experience • Surgical laboratories including the bronchoscopy and difficult airway courses. • Didactic and patient care conferences: Division journal club and teaching rounds, weekly resident didactic conference, grand rounds, morbidity and mortality conference • Assigned reading • Faculty-mentored research projects, manuscript preparation and lecture presentation 	<ul style="list-style-type: none"> • Structured operative skills assessment • Case numbers and distribution • Documented evaluations by faculty, peers, nursing • Mid- and end-of-rotation preceptor feedback • Attendance of workshops; formative feedback provided during laboratory teaching exercises • Attendance of didactic program • Feedback by moderator and faculty of morbidity and mortality rounds • Program director semiannual review
<p>Medical Knowledge Base – Rhinology/Allergy Develop and demonstrate understanding of:</p> <ol style="list-style-type: none"> 1. Pathophysiology and management of inflammatory, congenital, infectious, neoplastic, vascular, traumatic, toxic, genetic, degenerative, endocrinologic and idiopathic processes affecting the nose and paranasal sinuses. 2. Anatomy of the nose, paranasal sinuses, anterior, 	<ul style="list-style-type: none"> • Division journal club and teaching rounds, weekly resident didactic conference, grand rounds, morbidity and mortality conference • Assigned reading • Faculty-mentored research projects, manuscript preparation 	<ul style="list-style-type: none"> • In-training examinations • In-house testing • Attendance of conferences and didactic program • Faculty evaluation • Mid- and end-of-rotation preceptor feedback

<p>and middle cranial fossa.</p> <ol style="list-style-type: none"> 3. Indications for medical versus surgical treatment of nasal and paranasal sinus disorders. 4. Pre-, intra-, peri- and post-operative management of patients undergoing rhinologic and endoscopic skull base procedures, including identification and proper management of rhinologic emergencies and complications 5. Interpretation of plain X-ray, CT and MRI imaging of the nose, paranasal sinuses, and anterior/middle cranial fossa. 6. Aspects of allied fields of medicine and surgery as they pertain to evaluation and management of nose and sinus disorders, including anesthesia, neurology, neurosurgery, oncology, physiatry, psychiatry and radiology. 7. Indications for, performance and interpretation of smell evaluation. 8. Indications for and performance of paranasal sinus culture and washout techniques. 9. Critical reading of a major otolaryngologic text 10. Critical reading of current literature; incorporating concepts from current literature into discussions with faculty regarding individual patient care situations. 	<p>and lecture presentation</p> <ul style="list-style-type: none"> • Surgical laboratories and workshops: bronchoscopy course, emergency airway workshops, sinus surgery course, temporal bone course, head and neck course 	<ul style="list-style-type: none"> • Program director semiannual review
<p>Medical Knowledge Base – Laryngology Develop and demonstrate competence with:</p> <ol style="list-style-type: none"> 1. Become competent in the diagnosis, assessment, and management of patients with laryngeal disease. <ol style="list-style-type: none"> a. Malignancy (SCCa, adenocarcinoma, adenoid cystic Ca, chondrosarcoma) b. Benign tumors (granular cell, chondroma, nodules, cysts, papilloma, granuloma) c. Laryngitis (reflux, allergy, autoimmune, infectious) 2. Become competent in the diagnosis, assessment, and management of patients with voice disorders. <ol style="list-style-type: none"> a. Spasmodic dysphonia (adductor vs abductor) b. Paradoxical vocal cord movement 	<ul style="list-style-type: none"> • Division journal club and teaching rounds, weekly resident didactic conference, grand rounds, morbidity and mortality conference • Assigned reading • Faculty-mentored research projects, manuscript preparation and lecture presentation • Surgical laboratories and workshops: bronchoscopy course, emergency airway workshops, sinus surgery course, temporal bone course, head and neck 	<ul style="list-style-type: none"> • In-training examinations • In-house testing • Attendance of conferences and didactic program • Faculty evaluation • Mid- and end-of-rotation preceptor feedback • Program director semiannual review

<ul style="list-style-type: none"> c. Tremor d. Parkinson's disease <ol style="list-style-type: none"> 3. Become competent in the diagnosis, assessment, and management of patients with swallowing disorders. <ul style="list-style-type: none"> a. Obstructive vs dysmotility vs odynophagia vs psychosomatic b. Zenker's diverticulum c. Cricopharyngeal spasm d. Esophagitis/pharyngitis 4. Understand the basic science principles integral in phonation and how this tempers surgical technique. 5. Understand the basic science principles integral in swallowing. 6. Understand what constitutes the "difficult airway" and develop strategies to deal with different scenarios. 	<p>course</p>	
<p><u>Practice-based Learning and Improvement - Sinolaryngeal</u></p> <ol style="list-style-type: none"> 1. Monitor and review patient outcomes with resident during the rotation; adjustment of technique/management based on observed outcomes. 2. Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems; use information technology to optimize learning 3. Be candid in presenting and critically analyzing one's outcomes and errors 4. Participate in quality improvement and safety efforts 5. Take the initiative in self improvement: a) Identify strengths, deficiencies and limits in one's knowledge and expertise; b) set learning and improvement goals; c) identify and perform appropriate learning activities 6. Incorporate formative evaluation feedback into daily practice 7. Participate in the education of patients, families, students, residents and other health professionals 	<ul style="list-style-type: none"> • Operative skills assessment and formative feedback • Presentation of cases at M&M conference including summary of literature and evidence-based practice • Other presentations in department and at meetings • Journal club and ward rounds • Self-directed reading and study • Chart review for retrospective study • Self-assessment during semi-annual review 	<ul style="list-style-type: none"> • Documented faculty evaluations • Mid- and end-of-rotation preceptor feedback • Program director semiannual evaluation: self assessment, longitudinal assessment of skill development, list of conference presentations and publications, review of learning goals

<p><u>Interpersonal and Communication Skills – Sinolaryngeal</u></p> <ol style="list-style-type: none"> 1. Effective listening and communication with patients and family members from a broad range of socioeconomic and cultural backgrounds; 2. Discussion of risks, expected benefits, likely outcomes, and alternatives of different treatment modalities, as part of a discussion leading to informed consent. 3. Communicate effectively with physicians, other health professionals, and health related agencies; 4. Clearly written, complete and timely communication and documentation of clinical findings, recommendations and plan. 5. Work effectively as a member or leader of a health care team or other professional group; 6. Act in a consultative role to other physicians and health professionals; 7. Develop communication skills through experience in group presentations and lectures. 8. Teaching medical students and OTO-1 resident in the clinic and inpatient setting. 	<ul style="list-style-type: none"> • Supervised and progressive patient care responsibility: in-patient, out-patient, operating room and on-call • Airway management drills • Multi-disciplinary conferences • De-briefing by physician advisor, division faculty and multidisciplinary airway team after on-call engagements <ul style="list-style-type: none"> • Lectures and discussions: Grand Rounds • Book reviews and discussions • Multidisciplinary airway emergency simulations • Self-assessment during semi-annual review • Attend family meetings and counseling sessions with attending physicians 	<ul style="list-style-type: none"> • Documented evaluation by faculty, other health care providers, peers • Mid- and end-of-rotation feedback by preceptor • GR and M&M presentations: Faculty and resident evaluations • Program director semiannual evaluation: list of conference presentations and publications, review of documented evaluations, resident self assessment
<p><u>Professionalism – Sinolaryngeal</u></p> <ol style="list-style-type: none"> 1. Honesty, compassion, level-headedness, decorum, selflessness, integrity and respect for others. 2. Acceptance of accountability and commitment to self-improvement. 3. Maintenance of patient confidentiality; knowledge of HIPAA statutes. 4. Sensitivity to issues involving gender, religion, race, sexual orientation, disability and age. 5. Understanding of ethical issues in clinical and research settings, and critical analysis of novel ethical issues. 6. Skills necessary for a specialist consultant providing inpatient and Emergency Department consultations in a professional manner. 7. Ability to work as a member of a team. 	<ul style="list-style-type: none"> • Lectures and discussions: Grand Rounds • Book reviews and discussions • Web-based sleep deprivation module • Web-based HIPAA modules • Web-based Course on Research Ethics • Self-assessment during semi-annual review • De-briefing by physician advisor, division faculty and multidisciplinary airway team after on-call engagements 	<ul style="list-style-type: none"> • Documented evaluation by faculty, other health care providers, peers • Mid- and end-of-rotation feedback by preceptor • >80% score for web-based modules • Program director semiannual evaluation: review of documented evaluations, resident self assessment

8. Development of leadership skills. 9. Habits of continual learning.		
<p><u>Systems-based Practice – Sinolaryngeal</u></p> <ol style="list-style-type: none"> 1. Understanding of the organization of the sinolaryngeal service, including expected responsibilities in the coordination of care, the hierarchy of the team, and the mechanisms of supervision and communication. 2. Organizational and time-management skills required for efficient running of the inpatient pediatric service 3. Effective participation in interprofessional teams to enhance patient safety and improve patient care quality 4. Familiarization and utilization of the Patient Safety Net for identification and prevention of potential adverse events. 5. Understanding of the systems approach to analysis of sentinel events signifying a potential risk to patient safety. 6. Understanding of the complex multidisciplinary approach to the preoperative, intraoperative and postoperative care of the pediatric patient. 7. Become familiar with the outpatient, inpatient, operating room, and emergency room facilities at JHH and resources available to the OHNS pediatric surgery team. 8. Identification of opportunities to systematically improve care delivery. 9. Understanding of macro- and microeconomic forces impacting health care delivery to different populations and to single individuals (indigent versus private patient). 10. Cost-effective use of diagnostic tests and treatment modalities 11. Understanding the medico-legal issues that affect the provision of health care 	<ul style="list-style-type: none"> • Supervised and progressive clinical team responsibilities and leadership • Ward Rounds • Multi-disciplinary airway team <ol style="list-style-type: none"> (a) Rounds (b) Training (c) Debriefing • Morbidity and Mortality Conference <ol style="list-style-type: none"> (a) Database entry (b) Presentation (c) System error analysis • Lectures and discussions: Grand Rounds • Quality Improvement Efforts 	<ul style="list-style-type: none"> • Documented evaluation by faculty • Mid- and end-of-rotation feedback by preceptor • Attendance of M&M, Grand Round conferences, multidisciplinary workshops • Physician Advisor and faculty evaluation/feedback of M&M presentation and proposed system improvements • Program director semiannual evaluation of above and resident self assessment

Duties:

Outpatient clinical duties: The Rhinology/Allergy/Laryngology OTO4 resident is closely supervised by four faculty members for one-on-one teaching in the clinic setting. During the rotation the resident is to spend 1-2 days per week in designated rhinology and laryngology clinics. They are actively to participate in the history, examination, assessment and treatment plan of the patients.

Surgical Duties: The Rhinology /Allergy/Laryngology resident is expected to perform routine pre- and peri-operative duties in the surgical cases with which they are involved. This starts in clinic and extended to the pre-operative surgery area, surgery, immediate post-operative care, and follow-up in the clinic. The resident is expected to be familiar with the patient's history, exam, treatment plan, and review pre-operative studies and radiographs. The resident should read in advance about the specific disease process and planned surgical procedure. The PGY-4 resident will perform sinus procedures appropriate for the individual resident's surgical skills. They are to build onto and refine the skills they have already acquired during their PGY 1-3 years in other rotations. At the end of the rotation, the resident will act primarily as surgeon for open and endoscopic sinus cases. The resident will also assist in complex rhinology and laryngology procedures (such as revision airway reconstruction, vocal cord surgery, FESS, CSF leak repair, Lothrop, endoscopic tumor resection), with increasing involvement in the advanced/complex procedures over the course of the rotation.

Inpatient duties: The Rhinology/Allergy/Laryngology resident participates in the in-house call schedule in the pool of residents covering at the Johns Hopkins Hospital. On the days the resident is on call, his duties includes on call duties such as inpatient consults and emergency room consults, and the evaluation and management of these patients. The resident is closely supervised by the chief resident and on-call attending. The resident is expected to be familiar with inpatients in the hospital. The resident works closely with the otolaryngology nurse practitioner who assists in the inpatient care management and duties.

Academic duties: While on service, the Rhinology/Allergy/Laryngology resident is expected to be present, prepared, and actively participate for all mandatory otolaryngology educational lectures, conferences and workshops. If there are rotating medical students on service, the resident plays a role in medical student education.

Administrative duties: The Rhinology/Allergy/Laryngology resident is expected to maintain complete and concise documentation of clinical efforts in the medical record. The resident is also responsible for accurate documentation for ACGME, the Johns Hopkins School of Medicine, and the Johns Hopkins Hospital.

Progression of responsibilities:

As the resident progresses through the rotation, they are to progress in their responsibilities. In the clinic, they are exposed to increasingly complex patients and given more independence in formulation work-up and treatment plans as their experience and knowledge increases. In the OR, the resident is allowed to become more independent in the performance of open and endoscopic procedures as their skills dictate. As skills accelerate, the resident is to increase involvement with complex/advanced cases (such as revision FESS, CSF leak repair, Lothrop, endoscopic tumor resection).

Evaluation:

At the beginning of each rotation, the PGY4 resident will meet with the resident education liaison (Dr. Reh) or the division director (Dr. Lane and Dr. Akst, respectively) to review the goals, objectives, and clinical responsibilities for the rotation. Each resident will have a mid-

rotation and end of rotation review by the resident education liaison or division director. This meeting will involve a review of the resident evaluation completed by the division faculty and staff including nurses during a designated division meeting. Each faculty member that works with the resident during the rotation will have input into the evaluation. The resident will also have the opportunity to provide feedback about the rotation and faculty at their review allowing for a 360 degree evaluation process.

Conferences:

During the rotation, the resident is to participate in all required otolaryngology educational conferences and workshops (such as Tumor Board, M & M, Grand Rounds, weekly didactic resident lectures, COCLIA review and clinicopathology conference).

In specific, rhinology and allergy lectures and teaching are covered primarily during the weekly didactic resident conference which runs over the course of three years and then repeats. Some topics are also covered during Grand Rounds, Sinus dissection course, and allergy practicums.

Journal clubs are held monthly. At least 1-2 rhinology journal clubs and 1 laryngology journal club are held yearly and cover the recent literature as well as relevant and controversial topics for the respective field.

For the OTO4 resident on the Rhinology/Allergy/Laryngology rotation, there will also be a series of assigned readings covering various topics in Laryngology. The resident will meet with the Laryngoogy Rotation Director (Dr. Akst) on a regular basis throughout the rotation to review these articles.

Operative skills:

The Rhinology/Allergy/Laryngology resident is expected to become proficient in the following procedures:

- Office and OR management of epistaxis (packing, endoscopic)
- Office endoscopy of upper airway, biopsy, and debridements
- Turbinate surgery
- Anterior and posterior ethmoidectomy
- Maxillary antrostomy
- Sphenoidostomy
- Frontal sinus surgery/ trephination/obliteration
- Caldwell-Luc
- Skill necessary in advanced endoscopic procedures (such as revision FESS, CSF leak repair, Lothrop, endoscopic tumor resection).
- Vocal cord injection
- Vocal cord medialization
- Microlaryngeal surgery

Topics covered in the didactic lectures include:

- Anatomy of the nose and sinuses
- Embryology of the nose and sinuses

- Physiology of olfaction and taste and olfactory disorders
- Physiology of sinonasal cavities
- Rhinitis
- Acute sinusitis (diagnosis, treatment, complications)
- Chronic sinusitis - etiologies / fungal sinusitis
- Congenital nasal deformities (cysts)
- Inflammatory and granulomatous sinonasal diseases
- Neoplasms of the sinonasal cavities
- Endoscopic sinus surgery
- CSF rhinorrhea
- Laryngeal anatomy and embryology
- Laryngeal function and physiology
- Vocal cord paresis and paralysis - etiology, diagnosis, and treatment
- Voice assessment and videostroboscopy
- The professional voice
- Vocal cord dysfunction (include movement disorders)
- Management of chronic aspiration
- Laryngeal benign neoplasms (polyps, nodules, cysts, RRP)
- Systemic diseases and the larynx
- Management of acute and chronic airway obstruction (flow volume loops)
- Laryngeal trauma

Courses

During the sinus dissection course which is held once a year, the residents are given in depth instruction on sinus anatomy, and a demonstration dissection performed by the faculty. Each resident is then given the opportunity to do an endoscopic dissection on one side of a cadaver head.

During the two allergy practicums that are held once every three years, the topics covered include testing methods, interpretation of results, vial mixing and immunotherapy. The residents participate in hands on testing techniques and vial mixing during the practicums.

In addition, the residents are provided with a reading list in which appropriate articles and chapters to cover the above topics as well. The reading list is divided by articles appropriate for each PGY level.