

## **Academic 2 (Audiology, Otology, Head and Neck Surgery, Allergy) Service Educational Goals**

### **1. Third-Year Resident (PGY-4)**

This rotation was begun in July 2010 after the closure of St. Vincent's Hospital. It was structured to increase the resident's exposure to senior level otology at an earlier stage, as well as continue managing Head and Neck patients. In addition, a formal Allergy exposure has also been incorporated into this rotation.

**I. Knowledge Goals.** Upon completion of this rotation and the academic year, the PGY-4 resident should understand and be prepared for their final training year in the following:

1. Demonstrate mastery of all knowledge acquired in prior years.
2. Practical evaluation of hearing disorders, including (requirements as modified from Campbell KCM. Audiology Curriculum Guidelines for Otolaryngologists. Am J Audiology. 1995; 4:35-34)
  - a. Pure tone audiometry.
  - b. Speech audiometry.
  - c. Acoustic immittance testing.
  - d. Otoacoustic emission testing.
  - e. ABR, ASSR, ECogH.
  - f. Pediatric audiometry.
3. Practical evaluation and medical treatment of balance disorders, including:
  - a. Electronystagmography/Videonystagmometry.
  - b. Dynamic platform posturography.
  - c. Sinusoidal harmonic acceleration rotational chair.
  - d. High frequency autorotation.
  - e. Vestibular rehabilitation, evaluation and treatment.
  - f. Epley, Semont maneuver for benign paroxysmal positional vertigo.
  - g. Gentamycin injection for ablation of vestibular labyrinth.
4. Discuss the interpretation of plain radiographs, CT images, MRI/ MRA and 4-vessel arteriographic and venographic images of the temporal bone, base of skull and related structures.
5. Discuss the diagnosis and medical and/or surgical management of patients with:
  - a. Chronic otitis media and cholesteatoma.
  - b. Congenital middle ear anomalies.
  - c. Congenital and acquired deafness.
  - d. Temporal bone fractures.
  - e. CSF otorrhea.
  - f. Perilymph fistula.
  - g. Glomus tympanicum and jugulare.
  - h. Acute and chronic dizziness and vertigo.

- i. Auricular atresia.
  - j. Primary or metastatic neoplasms of the temporal bone.
  - k. Facial paralysis.
- 6. Discuss adverse consequences of not treating, potential complications from surgical management of, and long-term management strategies for:
  - a. Chronic otitis media and cholesteatoma.
  - b. Congenital middle ear anomalies.
  - c. Congenital and acquired deafness.
  - d. Temporal bone fractures.
  - e. CSF otorrhea, purulent otorrhea.
  - f. Perilymph fistula.
  - g. Glomus tympanicum and jugulare.
  - h. Acute and chronic dizziness and vertigo.
  - i. Auricular atresia.
  - j. Primary and metastatic neoplasms of the temporal bone.
  - k. Facial paralysis.
  - l. Otosclerosis.
- 7. Demonstrate application of acquired knowledge to the preoperative selection, operative and perioperative care, and avoidance and management of complications of patients on the General/Head and Neck Surgery Service.
- 8. Discuss, in detail, the management of patients undergoing:
  - a. Airway surgery: palatoplasty, tracheotomy.
  - b. Endoscopy of the esophagus, larynx, sinuses, and trachea.
  - c. Open reduction and internal fixation with or without stenting of laryngeal fractures
  - d. Laryngeal framework surgery, vocal fold medialization by injection and airway management by arytenoidectomy/arytenoidopexy.
  - e. Laryngectomy: ; total, horizontal, supraglottic and supracricoid.
  - f. Maxillectomy: ; medial and total with and without orbital extenteration.
  - g. Neck dissection, modified and radical.
  - h. Marginal and segmental mandibular resection.
    - 1. Resection of neoplasms of the upper aerodigestive tract.
    - 2. Parotidectomy, resection of parapharyngeal space and submandibular gland neoplasms.
    - 3. Thyroidectomy, parathyroidectomy.
    - 4. Vascular surgery; resection of carotid body tumors, repair of venous and arterial lacerations and ligation of major vessels of the head and neck.
- 9. Practical evaluation and medical treatment of patients with allergies, including:
  - a. Allergy testing
  - b. Immunotherapy
  - c. Medical management of the allergic patient

## II. Skill Goals.

1. Demonstrate mastery of all skills acquired in the previous three years.
2. Evaluation of hearing loss, including:
  - a. Performing complete air and bone conduction audiogram in normal and hearing impaired patients.
  - b. Performing an ABR, otoacoustic emissions audiometry and impedance audiometry.
  - c. Interpretation of peripheral and central testing audiometry.
3. Evaluation of vestibular dysfunction, including:
  - a. Performing an ENG.
  - b. Assisting in the performance of platform posturography and rotation chair testing.
4. The resident must demonstrate ability to manage the General/Head and Neck Surgery patients, including:
  - a. Supervision of junior residents and coordination of nursing, social services and administration to optimize patient care.
  - b. Assist faculty with supervision of the general, head and neck, pediatric, rhinology and thyroid clinics.
  - c. Develop the treatment plan for all patients undergoing medical or surgical care on the General/Head and Neck Surgery Service
  - d. Direct the presentation of appropriate patients to the Head and Neck Tumor Board.
  - e. The resident should utilize this third-year rotation at the Eye and Ear to both build upon and acquire new patient management skills as outlined above under Knowledge and those skills required for completion of prior years of training.

**III. Attitude Goals.** [See A.1.III](#) and [A.3.III](#).

## E. Research Goals

Goals for the research component of resident training are designed to establish competency in the design, conduct, interpretation, and presentation of research by requiring the resident to complete at least one major project on which the resident is the primary investigator and to participate in additional projects on which he/she is a co-investigator. The expected benefit of secondary projects includes the opportunity to enlarge upon previous research and topics identified by senior residents, the opportunity for co-resident mentorship, and opportunities for additional authorships. The research experience is based on a mentorship model. Therefore, the resident and faculty research mentor work together to develop and execute a research project. Effective July 2002, residents are directed to assume a specific, finite role in ongoing basic science projects under established investigators (e.g., elucidate the genetic abnormalities in a metabolic pathway using micro-array analysis which contributes to the development of thyroid cancer in a laboratory which focuses on thyroid neoplasia).

Selection of clinical research projects follows a similar protocol; that is, the resident research interest is matched with the appropriate faculty mentor. Faculty research mentors meet every six months as a group to discuss resident research activities, identify individual resident strengths and weaknesses in performing these activities, and develop remediation plans as needed to address weaknesses. Residents submit written evaluations of their faculty research mentors to the research director (Stimson Schantz, M.D.) and department chair at least every six months.

## **1. Goals for primary research project**

### **I. PGY-2 Goals:**

1. By the end of the third month, the resident will have visited the basic science laboratories and clinical research areas, identified an area of interest, and selected a research mentor.
2. By the end of the sixth month, the resident will formally declare a research project, enumerate critical design issues with regard to this project (for example, animal versus human subjects, sample size and characteristics, available and required resources, budget), and propose a timetable for completion of the project.
3. Each resident will be required to present an outline of the research project during the monthly research presentation (Feb/Mar)
4. By the end of the ninth month, the resident will submit a complete research proposal using the NIH R-01 format and will have obtained IRB approval to begin data collection. The resident will be encouraged to seek extramural funding through the American Academy of Otolaryngology, and other appropriate agencies.

### **II. PGY-3 Goals:**

1. By the end of the third month of the second year, the resident will have begun data collection and will have made any necessary adjustments to the research design in consultation with research mentor.
2. By the end of the twelfth month, the resident will have completed a majority of data collection and begun initial data analysis.
3. 3. Each resident will have a dedicated research day one day out the week from each rotation (Westchester, St. Vincent's, NYEE)

### **III. PGY-4 Goals:**

1. The resident will complete data collection.
2. The resident will complete all data analysis by the end of the dedicated, three-month research rotation.
3. The resident will work with mentor to prepare an oral and written presentation of results.
4. The resident will present findings at Resident Research day in June.

#### **IV. PGY-5 Goals:**

1. By the end of the third month of the fourth year, the resident will submit a complete report of the research project to the faculty, and:
  - a. Submit a final manuscript for publication in a major scientific or clinical journal.
  - b. Submit an abstract of the research report for presentation at a regional, national, or international professional meeting.
  - c. May participate with research mentor in preparation of a grant for extramural funding to refine the techniques of grantsmanship.

#### **2. Goals for secondary research projects**

##### **I. PGY-2 Goals:**

1. By the end of the third month, the resident will have met with senior residents and faculty to discuss ongoing research projects.
2. By the end of the sixth month, the resident will have begun assisting a senior resident or faculty member in at least one ongoing research project.

##### **II. PGY-3 through 5 Goals:**

1. Residents will follow the same structure in their second through fourth year as outlined for the primary research project.