

Resident Educational Program

July 1, 2006 through June 30, 2007

Department of Otolaryngology – Head and Neck Surgery

Loyola University Health System

Maywood, Illinois

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I. Program Information and Staff

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II. OVERVIEW

The training program in Otolaryngology – Head and Neck Surgery at the Loyola University Health System in Maywood, Illinois is designed to provide residents with the necessary skills and knowledge to provide comprehensive medical and surgical care to patients with disease of the ears, nose, throat, head, and neck. The program is five years in duration.

The first year (PGY-1) includes clinical month-long rotations in General Surgery (2 months), Pediatric Surgery, Neurosurgery, Plastic surgery, Oral and Maxillofacial Surgery, Otolaryngology, Anesthesia, Burns, Emergency Medicine, and Critical Care (2 months). The goals of the PGY-1 year are listed on the next several pages. The general purpose of the PGY-1 year is to provide an adequate foundation for proper care of the surgical patient, by exposure to the various surgical disciplines and related specialties.

The next four years (PGY-2 through PGY-6) are devoted to Otolaryngology – Head and Neck Surgery and include exposure to all facets of the specialty. Specific goals and objectives are listed. By building on progressive layers of basic science education, surgical skills, patient care, and research, the program seeks to develop well-trained Otolaryngologists and life-long learners.

III. ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION (ACGME) COMPETENCIES

The five-year program in Otolaryngology-Head and Neck Surgery at the Loyola University Health System adheres to the ACGME guidelines for resident education in Otolaryngology – Head and Neck Surgery. By following the specific goals and objectives listed in this document over the five years of training, residents are expected to obtain competence in the six areas listed below:

1. Patient Care – compassionate, appropriate, and effective the promotion of health and for the treatment of medical and surgical diseases.
2. Medical Knowledge – in biomedical, clinical, and communication sciences, as well as the application of this knowledge to patient care.
3. Practice-based Learning and Improvement – involving the investigation and evaluation of patient care, the appraisal and assimilation of scientific evidence, and improvements in patient care.
4. Interpersonal and Communication Skills – resulting in the effective exchange of information and collaboration with patients and their families, as well as other health care professionals.
5. Professionalism – as manifested by a commitment to professional responsibilities, adherence to ethical principles, and sensitivity of patients of diverse backgrounds.
6. Systems-based Practice – as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal patient care.

IV. FIRST YEAR RESIDENT (PGY-1)

GENERAL GOALS: The general goals of the PGY-1 year are as follows:

- To prepare residents how to assess patients requiring surgery.
- To teach residents essential communication skills required to become an effective physician.
- To give residents a basic knowledge base in Anesthesia, General Surgery, Pediatric Surgery, Neurosurgery, Plastic surgery, Oral and Maxillofacial Surgery, Otolaryngology, Anesthesia, Burns, Emergency Medicine, and Critical Care.
- To have residents understand the evidence for current medical and surgical treatment of common congenital, inflammatory, infectious, iatrogenic, traumatic, and neoplastic surgical disease states.
- To demonstrate competence in basic surgical skills including sterile technique, lumbar puncture, intubation, hemostasis, tissue handling, central line placement, chest tube placement, and tracheotomy.

IV. FIRST YEAR RESIDENT (PGY-1)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)

The main goals of these rotations are to provide the PGY-1 resident an organized experience to enable him/her to acquire the basic knowledge and skills necessary for proper care of the surgical patient. Residents are evaluated monthly. By the completion of these surgical rotations during the PGY-1 year, the resident should have the following knowledge and be able to perform the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY PATIENT CARE):

Increase skill in taking surgical patient medical history, performing physical examination, and documentation.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Obtain and write a detailed and complete surgical history.
- Perform a detailed surgical examination.
- Review and interpret relevant medical records and reports.
- Formulate a complete differential diagnosis.
- Maintain a surgical log.
- Obtain written informed consent.
- Document the treatment plan and indications for treatment in the medical record.
- Dictate and operative report and discharge summary.

COGNITIVE GOAL 2 (ACGME COMPETENCY PATIENT CARE):

Increase skill in initial patient assessment and perioperative management.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Order and interpret basic laboratory testing and x-rays.
- Evaluate and assess patient's vitals and pain status.
- Evaluate patient's cardiac, pulmonary, renal, and neurological status.
- Develop a preoperative assessment of risk factors.
- Review and order appropriate medications.
- Properly insert and secure nasogastric and dophoff tubes, and foley catheters.
- Assess nursing and ancillary notes related to patient care.
- Prescribe appropriate activity level and diet.
- Discuss patient discharge planning process and follow-up care.

COGNITIVE GOAL 3 (ACGME COMPETENCY MEDICAL KNOWLEDGE):

Increase skill in the assessment of basic diagnostic tests.

IV. FIRST YEAR RESIDENT (PGY-1)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)(continued)

OBJECTIVES FOR COGNITIVE GOAL 3:

- Recognize abnormalities on basic laboratory tests and learn normal values and ranges.
- Identify the optimal imaging technique.
- Describe basic radiological tests and recognize pleural effusions, lung masses, pneumonitis, bowel gas patterns, diaphragm abnormalities, spinal column fractures.
- Evaluate and interpret basic EKG findings.
- Recognize ischemia and arrhythmia on EKG.

COGNITIVE GOAL 4 (ACGME COMPETENCY MEDICAL KNOWLEDGE AND PATIENT CARE):

Increase skill in the understanding of surgical patient fluid/electrolyte and acid base balance.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Assess acid-base balance and the applications of body composition to fluid, electrolyte, and acid-base balance in health and disease.
- Describe fluid resuscitation, manage postoperative fluid requirements, and recognize and correctly manage acid-base disorders.
- Make adjustments in fluid administration for co-morbid conditions such as cardiac or renal insufficiency, liver failure, diabetes, and hypovolemia.
- Interpret central venous pressure measurements and urine flow rates to adjust fluid administration.
- Recognize and treat calcium and magnesium imbalance.

COGNITIVE GOAL 5 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT):

Increase skill in the understanding of surgical patient fever, microbiology, and postoperative infection.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Discuss the signs and symptoms, differential diagnosis, evaluation, and management of febrile patients.
- Initiate definitive treatment and appropriate use of antibiotic therapy.
- Interpret and monitor serum antibiotic levels.
- Recognize antibiotic complications.
- Identify and discuss the principles of prevention of nosocomial infections, sterile technique, and universal precautions.

IV. FIRST YEAR RESIDENT (PGY-1)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)(continued)

- Order and interpret the appropriate imaging studies for localization of an infected focus.
- Describe and demonstrate the principles of incision and drainage.
- Identify the proper use of prophylactic antibiotics.
- Distinguish the classification of wounds (clean, clean-contaminated, contaminated, and infected).
- Recognize signs and symptoms of sepsis and how to initiate supportive treatment. Analyze the current literature concerning the causes and mediators of sepsis and its pathophysiology.

COGNITIVE GOAL 6 (ACGME COMPETENCY MEDICAL KNOWLEDGE):
Increase skill in the understanding in epidemiology and public health as it relates to surgical patients.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Discuss HIV and AIDS diagnosis and prevention
- Describe the epidemiology and treatment of sexually transmitted disease and other communicable diseases.

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE):

Increase skill in the understanding of surgical patient nutrition.

OBJECTIVES FOR COGNITIVE GOAL 7:

- Perform a metabolic assessment of the surgical patient.
- Discuss the metabolic implications of trauma and the surgical state.
- Describe the indications for nutritional support of the surgical patient.
- Calculate nutritional requirements of the surgical patient undergoing general anesthesia
- List the composition of various enteral and parenteral formulas and understand appropriate ordering and adjustment.
- Manage central intravenous lines.
- Manage gastrostomy and jejunostomy feeding tubes.
- Assess when a postoperative patient can be fed and assess adequacy of intake.

COGNITIVE GOAL 8 (ACGME COMPETENCIES PATIENT CARE AND SYSTEMS-BASED PRACTICE):

Increase skill in the understanding of the perioperative preparation of the surgical patient.

OBJECTIVES FOR COGNITIVE GOAL 8:

IV. FIRST YEAR RESIDENT (PGY-1)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)(continued)

- Assess if patient's overall health status will safely allow the patient to undergo a surgical procedure.
- Write preoperative orders.
- Order appropriate preoperative consultations.
- Provide appropriate informed and surgical consent.

OBJECTIVES FOR COGNITIVE GOAL 9 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):
Increase skill in the understanding of the correct wound management of the surgical patient and sterile technique

OBJECTIVES FOR COGNITIVE GOAL 9:

- Differentiate between and manage wound infection, hematoma, and seroma.
- Demonstrate wound debridement, packing, and dressing changes.
- Recognize wound dehiscence, crepitus, infection, cellulitis, necrotizing fasciitis.
- Recognize the specific recommendations for tetanus immunization.
- Recognize the clinical manifestations of rabies and agents available to prevent development of disease.
- Obtain proper wound specimen and perform and interpret Gram stains.
- Recognize indications for and utilize isolation procedures.
- Demonstrate appropriate sterile technique in the OR, ER, ICU, bedside, and office.

COGNITIVE GOAL 10 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Increase skill in the evaluation and management of surgical patient complications.

OBJECTIVES FOR COGNITIVE GOAL 10:

At the completion of this rotation, the resident will be able to prioritize, recognize, initiate treatment, and manage complications in:

- Pneumothorax.
- Altered mental status.
- Fever, nausea, vomiting.
- Hypoxia, dyspnea, apnea.
- Fecal impaction, constipation.
- Abdominal distention, ascities.
- Atelectasis, pneumonia, aspiration.
- Peripheral ischemia and/or cyanosis.
- Bleeding at bedside and coagulopathy.

IV. FIRST YEAR RESIDENT (PGY-1)(continued)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)(continued)

Seizures, alcohol, and/or drug withdrawal.
Congestive heart failure, pulmonary edema.
Deep venous thrombosis, pulmonary embolism.
Diabetic ketoacidosis and/or hyperosmolar coma.
Incisional pain, general pain, chest and abdominal pain.
Hypotension, hypovolemia, oliguria, urinary retention.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY PATIENT CARE):

Increase skill in common surgical procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

- Demonstrate correct surgical site marking, positioning, preparation, and draping.
- Perform as first assistant. Obtain hemostasis of small vessels and exposure of the operative field.
- Understand common surgical instruments (scalpel, forceps, scissors, needle holders, hemostats, retractors, electrocautery) and suture materials and their proper uses.
- Perform basic maneuvers, e.g. suture of skin, soft tissues, fascia, tie knots, and obtain simple hemostasis.
- Demonstrate basic techniques of dissection and handling of tissues.
- Under supervision excise benign lesions of the skin and subcutaneous tissues, perform lymph node biopsy, remove superficial foreign bodies, incise and drain abscesses, repair simple lacerations, assist/perform tracheotomy.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCY INTERPERSONAL AND COMMUNICATION SKILLS):

Increase communication skills with patients and other health-care workers.

OBJECTIVES FOR NON-COGNITIVE GOAL 1

- Practice therapeutic relationships with patients.
- Accept feedback and work effectively with other team members.

NON-COGNITIVE (AFFECTIVE) GOAL 2 (ACGME COMPETENCY PROFESSIONALISM):

Begin process of professional development

IV. FIRST YEAR RESIDENT (PGY-1)(continued)

A. SURGERY ROTATIONS (INCLUDING GENERAL, PLASTICS, PEDIATRICS, OTOLARYNGOLOGY, ORAL AND MAXILLOFACIAL SURGERY)(continued)

OBJECTIVES FOR NON-COGNITIVE GOAL 2:

- Organize database and begin filing system for journal and textbook articles.
- Maintain contact list and calendar.

NON-COGNITIVE (AFFECTIVE) GOAL 3 (ACGME COMPETENCY SYSTEMS-BASED PRACTICE):

Use system resources to improve patient care.

OBJECTIVES FOR NON-COGNITIVE GOAL 3:

Use the electronic medical record to integrate patient care.

REFERENCES:

Schwartz SI, Principles of Surgery, Fifth Edition, McGraw Hill, 1989.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

B. ANESTHESIA ROTATION:

The main goal of this rotation is to provide the PGY-1 resident an organized experience to enable him/her to acquire the basic knowledge and skills in perioperative anesthesia care including preanesthetic evaluation, anesthetic risk assessment, airway evaluation, and immediate postoperative care. At the completion of this rotation, the resident should be knowledgeable and proficient in the following areas:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the preoperative assessment and management of patients undergoing anesthesia.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Describe upper airway and laryngeal anatomy and physiology.
- Distinguish indications for general versus local anesthesia.
- Write preoperative orders.
- Assess and classify preoperative airway.
- Maintain and interpret anesthesia record.
- Recall the maximal dosages of local anesthetics such as lidocaine.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, SYSTEMS-BASED PRACTICE): Increase skill in the intraoperative and postoperative management of patients undergoing anesthesia.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Perform proper patient positioning for operative exposure, temperature control, and protection from pressure and traction.
- Be familiar with intraoperative monitoring such as EKG, pulse oximetry, capnograph, temperature probes, and urine flow rates.
- Recognize and treat perioperative and postoperative apnea, hypoxia, pulmonary edema, and malignant hyperthermia.
- Describe the general classifications of anesthetic agents such as muscle relaxants and paralytics, barbiturates, inhalational agents, reversing agents.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY PATIENT CARE): Increase skill in the initial treatment of patients undergoing anesthesia.

OBJECTIVES FOR TECHNICAL GOAL 1

- Insert arterial and venous lines.
- Obtain oropharyngeal control of the airway and provide Ambu ventilation.
- Perform orotracheal and nasotracheal intubation.

REFERENCE: Schwartz SI, Principles of Surgery, Fifth Edition, McGraw Hill, 1989.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

C. CRITICAL CARE AND BURN ROTATIONS

The main goals of these rotations are to provide the PGY-1 resident an organized experience to enable him/her to acquire the basic knowledge and skills in the evaluation and management of patients in the burn unit and surgical intensive care unit setting. At the completion of this rotation the PGY-1 resident should be knowledgeable in the following areas and be able to perform the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the assessment of critical care patients and in the management of shock.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Differentiate and initiate appropriate therapy in the various types of shock states: hemorrhagic, cardiogenic, septic, and neurological.
- Describe the purpose of central venous and arterial catheters, obtain hemodynamic data, interpret data, and initiate therapy.
- Recognize the clinical presentation of pneumothorax and its treatment
- Describe basic principles of mechanical ventilation.
- Recognize the indications for blood component therapy and initiate treatment.
- Recognize a transfusion reaction and initiate management.
- Institute measures to prevent upper gastrointestinal bleeding in critically ill patients.
- Describe the initial management of patients with burns injury, calculate burn surface area and fluid requirements

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the assessment and management of patients with bleeding disorders and patients requiring anticoagulation.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Choose the appropriate tests for diagnosis of a coagulopathy, and understand the coagulation factors and pathway.
- Apply effective preventative measures for deep venous thrombosis and pulmonary embolism.
- Initiate and monitor therapeutic anticoagulation drugs, understand drug dosages in normal and disease states, and understand potential complications and their management.
- Diagnose and manage acute deep venous thrombosis and acute pulmonary embolism.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

C. CRITICAL CARE AND BURN ROTATIONS (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase understanding of principles in applied cardiac physiology.

OBJECTIVES FOR COGNITIVE GOAL 3:

- Recognize the signs, symptoms, and treatment of cardiac rhythm disturbances and myocardial ischemia.
- Assess, formulate a differential diagnosis, and initiate treatment of hypotension.
- Initiate appropriate treatment for supraventricular tachycardia, bradycardia, and ventricular fibrillation.
- Initiate treatment for congestive heart failure and acute pulmonary edema.
- Manage hypertension in surgical patients and describe potential complications.
- Apply advanced cardiac life support (ACLS).

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase understanding of principles in applied renal physiology.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Recognize the pathophysiology of the development of acute renal failure; the differentiation of prerenal, renal, and obstructive types of renal failure; and the general concepts of prevention and treatment of acute renal failure.
- Recognize and treat electrolyte disturbances.
- Explain appropriate fluid replacement and balance.

COGNITIVE GOAL 5 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase understanding of principles in applied pulmonary physiology.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the differential diagnosis and management of hypoxia.
- Initiate appropriate ventilator therapy, discuss potential complications of therapy and their management, and discontinue therapy.
- Describe the manifestations – clinical and by laboratory testing – of obstructive pulmonary disease and pulmonary insufficiency, and their surgical preoperative management.
- Recognize bronchoconstrictive disorders and their perioperative management.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase understanding of principles of applied nutrition.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

C. CRITICAL CARE AND BURN ROTATIONS (continued)

OBJECTIVES FOR COGNITIVE GOAL 6:

- Describe nutritional requirements of the surgical patient; evaluate and manage the nutritional needs of a critically ill patient.
- Describe the effects of chronic diseases such as diabetes and liver insufficiency on wound healing.
- Initiate enteral and parenteral nutritional therapy.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase critical care surgical skills

OBJECTIVES FOR TECHNICAL GOAL 1:

- Develop surgical skills in cardiopulmonary resuscitation, central venous and arteriovenous catheter placement, and chest tube placement.
- Perform first assistant in bedside bronchoscopy and pulmonary lavage.
- Obtain oropharyngeal control of airway, provide Ambu ventilation, and perform orotracheal intubation.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES PROFESSIONALISM, SYSTEMS-BASED PRACTICE, INTERPERSONAL AND COMMUNICATION SKILLS): Develop an understanding of professional practice in a specialty hospital environment, including an appreciation of the different styles of interacting with critical care and burn patients and their families.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Discuss the management of critically ill patients with their family members
- Plan with patients, family members, social workers, and other health care personnel the needs and recovery of critically ill patients after hospital discharge.

REFERENCE: Schwartz SI, Principles of Surgery, Fifth Edition, McGraw Hill, 1989.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

D. EMERGENCY MEDICINE ROTATION

The main goal of this rotation is to provide the PGY-1 resident an organized experience to enable him/her to acquire the basic knowledge and skills in the proper evaluation and management of patients presenting to the emergency room. The PGY-1 resident should also gain an appreciation of the effect of co-morbid medical conditions such as diabetes mellitus, hypertension, cardiac disease, stroke, and chronic pulmonary disease, which are often seen in patients presenting to the emergency room. At the completion of this rotation, the PGY-1 resident should be knowledgeable in the following areas and demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the assessment and management of patients presenting to the emergency department.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Conduct primary assessment and take appropriate steps to stabilize and treat patients with trauma (penetrating and blunt), respiratory distress, congestive heart failure, metabolic imbalances, myocardial infarction, and chronic pain.
- Establish the acuity level of patients in the ER, establish priorities, and define the tasks necessary to manage the patients successfully.
- Monitor, observe, manage, and maintain the stability of several patients who are at different stages in their work-ups, including fundamental lab tests and radiological studies.
- Recognize and initiate treatment for an acute anaphylactic reaction.
- Participate in disaster management drills.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED PRACTICE): Increase communication skills.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

Collaborate with physicians and other professionals to evaluate and treat patients, arrange appropriate placement and transfer if necessary, formulate a follow-up plan, and communicate effectively with patients, family, and involved health care members.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY PATIENT CARE): Increase skill in common emergency department procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

Perform closure of simple and complex lacerations.

REFERENCE: Schwartz SI, Principles of Surgery, Fifth Edition, McGraw Hill, 1989.

IV. FIRST YEAR RESIDENT (PGY-1) (continued)

E. NEUROSURGERY ROTATION

The main goal of this rotation is to provide the PGY-1 resident an organized experience to enable him/her to acquire the basic knowledge and skills in the evaluation and management of patients presenting with neurosurgical complaints. The resident should gain an appreciation for the collaborative efforts between Neurosurgery and related disciplines, especially Otolaryngology. At the completion of this rotation, the PGY-1 resident should be knowledgeable in the following areas and demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the evaluation and management of patients with neurological and neurosurgical illnesses.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Recall basic cranial anatomy including cranial nerve function.
- Demonstrate a bedside neurological examination.
- Describe the initial evaluation and management of the patients with acute mental status changes, blunt and penetrating intracranial injury, intracranial hemorrhage, hydrocephalus, meningitis, and subarachnoid hemorrhage.
- Describe the indications for and basic interpretation of cervical spine films, head CT, and MRI imaging studies.
- Discuss the diagnosis and basic management of cerebrospinal fluid leaks.
- Describe indications for lumbar puncture and lumbar drainage.
- Discuss management of lumbar drains and potential complications.
- Describe the initial management of common neurosurgical postoperative complications, including mental status changes and intracranial hemorrhage.
- Differentiate between stroke, TIA, and non-cerebrovascular events causing neurological symptoms, and understand the different diagnostic techniques.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY PATIENT CARE): Increase neurosurgical procedural skills.

OBJECTIVES FOR TECHNICAL GOAL 1

- Perform lumbar puncture.

REFERENCE: Schwartz SI, Principles of Surgery, Fifth Edition, McGraw Hill, 1989.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1)

Overview: This year includes a 2-week basic science course, 4 month Pediatric rotation, 4 month Head and Neck Surgical Oncology rotation, and a 4 month Hines VA rotation. All rotations are supervised and taught by attending Otolaryngologists. During the year, the resident also participates in weekly didactic conferences and tumor board, supervised Temporal Bone Dissection (every Tuesday afternoon, September thru March), Journal Club (2nd to last Wednesday of each month), Morbidity and Mortality Conference (last Wednesday of each month), COCLIA Conference (every Monday afternoon), the Home Study Course, and the Annual Otolaryngology In-service Examination. The main purpose of this year is to provide a solid foundation in Otolaryngology-Head and Neck Surgery. The educational program combines core basic science knowledge of Otolaryngology and the communication sciences with progressive, supervised clinical and surgical care of patients. Residents are evaluated continuously during the rotations, with a formal evaluation at the end of the rotation. Specific goals and objectives for each rotation are listed on the following pages.

The general goals of the PGY-2 year are to:

- Prepare residents to become life-long learners.
- Give residents a basic knowledge base in head and neck surgical anatomy, embryology, pharmacology, pathology, and pathophysiology.
- To prepare residents to perform a comprehensive Otolaryngological history and physical examination.
- To have residents understand the evidence for the medical and surgical treatment of congenital, inflammatory, infectious, iatrogenic, traumatic, and neoplastic otolaryngological disease states.
- To demonstrate competence in basic Otolaryngological surgical skills including tracheotomy, myringotomy, tonsillectomy, adenoidectomy, endoscopy of the upper aerodigestive tract.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

A. BASIC SCIENCE COURSE

This is a two-week course that all PGY-2 residents attend in July, before they begin the clinical year. The course is provided by the Indiana University Department of Otolaryngology – Head and Neck Surgery. At the completion of this two-week course, the resident should have the following knowledge:

COGNITIVE GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE AND PATIENT CARE): Increase skill in the understanding of core otolaryngological knowledge important for appropriate patient care.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Develop a basic understanding of the anatomy, embryology, and physiology of the ear, nose, nasal cavity, nasopharynx, skull base, brain, cranial nerves, oral cavity, oropharynx, larynx, hypopharynx, esophagus, trachea, neck, and related structures.
- Describe the lymphatic drainage of the head and neck.
- Describe common infectious, inflammatory, congenital, traumatic, and neoplastic diseases of the head and neck.
- Discuss the initial evaluation and management of common otolaryngological emergencies, including epistaxis, acute mastoiditis/meningitis, epiglottitis, airway obstruction, Ludwig's angina, odontogenic abscesses, airway and esophageal foreign bodies.
- Apply imaging modalities such as ultrasound, computed tomography, magnetic resonance imaging, and angiography in otolaryngology for diagnostic purposes.
- Interpret basic laboratory testing including thyroid function tests.
- Demonstrate basic clinical evaluation of otolaryngological patients including head and neck examination, microscopic otoscopy, tuning fork testing, cranial nerve examination, and cerebellar function.
- Become proficient at interpreting basic testing including audiometry, tympanometry, otoacoustic emissions, and electronystagmography.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

B. PEDIATRIC ROTATION

Pediatric otolaryngology is primarily a PGY2 (ORL-1) rotation of 4 months duration at Loyola University Medical Center. The resident spends equal time in the clinic and operating room. The main goal of this rotation is to provide the resident clinical experience in the diagnosis and treatment of pediatric Otolaryngological diseases. At the completion of this rotation, the resident should have the following knowledge and be able to demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE):
Increase knowledge of pediatric head and neck embryology and anatomy.

OBJECTIVES FOR COGNITIVE GOAL 1:

Describe the embryology and developmental anatomy of the craniofacial structures, the ear, the nose and paranasal sinuses, the aerodigestive tract, and the neck, including the derivatives of the pharyngeal arches and their innervation.

COGNITIVE GOAL 2 (ACGME COMPETENCY MEDICAL KNOWLEDGE):
Increase knowledge of pediatric congenital syndromes.

OBJECTIVES FOR COGNITIVE GOAL 2:

Discuss the common craniofacial syndromes (Downs, Treacher Collins, Hemifacial Microsomy, Alports, Turners) and their potential implications regarding sensory impairments, airway complications and/or systemic co-morbidities.

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the evaluation and management of pediatric congenital malformations.

OBJECTIVES FOR COGNITIVE GOAL 3:

Discuss the evaluation and management of patients with congenital malformations of the following head and neck structures:

Ear – pits, tags, microtia and atresia.

Nasal passages – choanal, atresia, pyriform aperture stenosis.

Oral cavity – micrognathia, cleft lip and/or palate.

Laryngotracheal airway – laryngomalacia, vascular tracheal compression, complete tracheal rings, tracheo-esophageal fistula.

Neck – branchial anomalies, midline and lateral cervical cysts.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, PRACTICE-BASED LEARNING, AND MEDICAL KNOWLEDGE): Increase skill in the diagnostic evaluation and management of pediatric sensory impairments.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

B. PEDIATRIC ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 4:

Describe the evaluation and management of conductive and sensorineural hearing loss, including age- appropriate audiological and language assessments and language developmental implications.

Discuss the evaluation and management of pediatric vertiginous disorders (perilymphatic fistula, paroxysmal vertigo of childhood, migraine).

Describe the evaluation and management of unilateral and bilateral true vocal cord paresis and paralysis.

Describe the evaluation and management of pediatric facial nerve paralysis.

Discuss the evaluation and management of the multiply sensory-impaired child (Moebius syndrome).

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, PRACTICE-BASED LEARNING, AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric otolaryngological infections.

OBJECTIVES FOR COGNITIVE GOAL 5:

Describe the evaluation and management of pediatric otolaryngological infectious diseases and their complications in the following areas:

Ear – acute otitis media, otitis media with effusion, chronic otitis media.

Nose and paranasal sinuses – acute and chronic rhinosinusitis, allergic rhinitis.

Pharynx – acute and chronic recurrent adenotonsillitis.

Airway – laryngotracheitis, epiglottitis.

Neck – lymphadenitis, parapharyngeal and retropharyngeal abscesses.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE, PRACTICE-BASED LEARNING, AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric otolaryngological acquired disorders.

OBJECTIVES FOR COGNITIVE GOAL 6:

Discuss the recognition and management of acquired otolaryngological disorders in the following anatomical areas:

Ear – cholesteatoma, temporal bone trauma.

Pharynx – hypertrophied and obstructive tonsils and adenoids.

Laryngotracheal airway – post-intubation laryngotracheal stenosis.

Aerodigestive tract – foreign body aspirations, foreign body and caustic ingestion.

Facial skeleton – maxillofacial trauma.

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE, PRACTICE-BASED LEARNING, AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric neoplastic and paraneoplastic diseases.

SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

B. PEDIATRIC ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 7:

Describe the evaluation and management of the following paraneoplastic and neoplastic diseases:

- Hemangiomas, teratomas.
- Vascular malformations.
- Soft tissue sarcoma.
- Lymphoma.
- Langerhan's cell histiocytosis.
- Juvenile angiofibromas.
- Recurrent respiratory papillomatosis.

COGNITIVE GOAL 8 (ACGME COMPETENCY PATIENT CARE): Increase skill in performing pediatric otolaryngological history and physical examination.

OBJECTIVES FOR COGNITIVE GOAL 8:

- Demonstrate ability to obtain a comprehensive or focused pediatric otolaryngological history as dictated by the inpatient or outpatient clinical setting, including comorbid conditions, developmental status, perinatal history and family/social dynamics.
- Demonstrate ability to provide appropriate pediatric otolaryngological examination including flexible endoscopic evaluation of the upper airway.

COGNITIVE GOAL 9 (ACGME COMPETENCY PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the medical management of pediatric otolaryngological patients.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Demonstrate ability to provide appropriate perioperative pediatric care including fluid/electrolyte management and pharmacological dosing on an appropriate age/weight basis
- Demonstrate ability to assess and prioritize the initial management of pediatric otolaryngological emergencies including airway obstruction and epistaxis.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Gain experience in performing basic pediatric otolaryngological procedures.

SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

B. PEDIATRIC ROTATION (continued)

OBJECTIVES FOR TECHNICAL GOAL 1:

Perform as first assistant and then surgeon the following pediatric otolaryngological procedures:

- Myringotomy
- Tympanostomy with tube placement
- Myringoplasty
- Tonsillectomy
- Adenoidectomy
- Closed reduction of nasal fractures
- Removal of ear and nasal foreign bodies
- Control of epistaxis
- Frenulectomy
- Diagnostic laryngoscopy, bronchoscopy, and esophagoscopy
- Bronchoscopy/esophagoscopy with foreign body removal
- Incision and drainage of cervical abscesses
- Excisional biopsy of cervical lymphadenopathy

NON-COGNITIVE (AFFECTIVE) GOAL 1: (ACGME COMPETENCIES PROFESSIONALISM, SYSTEMS-BASED PRACTICE, INTERPERSONAL AND COMMUNICATION SKILLS): Become skillful in the application of interpersonal skills and communication skills with patients, peers, and staff.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

Display leadership to the team by demonstrating interpersonal and communication skills that establish and maintain professional relationships with patients, families, and other members of the health care team.

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- Wetmore RF, Muntz HR, McGill TJ: Pediatric otolaryngology: Principles and practice pathways. First edition. Thieme, 2000.
- Bluestone CD, Stool SE: Atlas of pediatric otolaryngology. First edition. W.B. Saunders Company, 1995.
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SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

B. PEDIATRIC ROTATION (continued)

Healy JB: Common problems in pediatric otolaryngology. First edition. Year Book Medical Publishers, 1990.

Hotaling AJ, Stankiewicz JA: Pediatric otolaryngology for the general otolaryngologist. First edition. Agaku-Shoin, 1996.

Applicable readings from AAO-HNS Home Study Course.

Applicable readings from the SIPAC series.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION

This rotation is 4 months in duration at Loyola University Medical Center. This is the resident's first in-depth exposure to the clinical and surgical care of patients with head and neck cancer. The resident spends relatively equal time in the clinic and operating room. At the completion of this rotation, the resident should have basic knowledge in the following areas and be able to demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the etiology, pathogenesis, and epidemiology of head and neck carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 1:

Assess general biologic principles pertaining to the development (carcinogenesis) and growth (tumorogenesis) of benign and malignant head and neck tumors including:

Describe the cell cycle and the multi-step carcinogenesis model

Discuss the role of various environmental, toxic and viral agents in head and neck carcinogenesis

Discuss the geographic, gender and population based disparities in particular varieties of head and neck tumors.

Recognize and recall the American Joint Commission on Cancer (AJCC) staging paradigms for all head and neck cancers

Describe the preoperative evaluation of patients presenting for therapy of malignant head and neck tumors including an understanding relevant comorbidities and their potential impact on recovery, and the cost effective preoperative assessment including appropriate use of consultations, imaging studies and antibiotics.

Discuss potential surgical and non-surgical complications of the treatment of head and neck malignancies.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in fundamental head and neck pathology.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Review general principles of microscopic tissue examination

Discuss indications and contraindications for fine needle aspiration biopsy and open biopsy of head and neck tumors.

Discuss the role of immunohistochemistry and molecular pathology in diagnosing head and neck cancer.

Describe the fundamental principles of progression of epithelial malignancy from dysplasia to invasive carcinoma.

Contrast the histological heterogeneity of the thyroid and parathyroid, salivary glands, mandible, maxilla, odontogenesis, mesenchymal tissues of the craniofacial skeleton, temporal bone, and laryngo-tracheal framework.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the radiographic evaluation of head and neck tumors.

OBJECTIVES FOR COGNITIVE GOAL 3:

At the end of the rotation, residents will have a clinically useful knowledge base in each of the following areas:

The radiographic anatomy of the craniofacial skeleton and specialized tissues of the head and neck.

The basic principles and indications for plain radiographs, computed tomography scans, and magnetic resonance images in the evaluation of head and neck tumors.

The role of functional barium examination of the upper aerodigestive tract in the evaluation of patient pre- and post- treatment of head and neck malignancies.

The basic principles and indications for specialized nuclear medicine studies including lymphatic mapping and positron emission tomographic scanning.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the oral cavity and pharynx.

OBJECTIVES FOR COGNITIVE GOAL 4:

Describe the relevant anatomy including all subdivisions, boundaries, and contents of the oral cavity and pharynx (nasopharynx, oropharynx, hypopharynx).

Discuss the elements of the physical examination critical to the diagnosis of oral cavity and pharyngeal malignancies obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of oral and pharyngeal malignancies, understand important potential treatment related complications.

Discuss rationale and principles of the nonsurgical therapy of nasopharyngeal carcinoma.

List the staging of oral cavity and pharyngeal cancer.

Describe predictable patterns of lymphatic metastasis.

Explain the normal physiology of swallowing and the impact of cancer therapy on swallowing function.

Discuss fundamentals of surgical extirpation of oral cavity and pharyngeal carcinoma with particular attention to surgical approaches to these tumors, principles of mandibular preservation in the surgical treatment of oral carcinoma, and fundamentals of soft tissue reconstruction.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the larynx.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the relevant anatomy including all subdivisions, boundaries, and contents of the larynx (supraglottic, glottic, subglottic).
- Discuss the elements of the physical examination critical to the diagnosis of laryngeal malignancies obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of laryngeal carcinoma.
- Describe important potential treatment related complications including fistulae, dysphagia, hoarseness, voice change, and airway obstruction.
- Discuss rationale and principles of the nonsurgical therapy of laryngeal carcinoma.
- Recall the staging of laryngeal cancer.
- Identify predictable patterns of lymphatic metastasis.
- Describe the normal physiology of phonation and the impact of cancer therapy on phonatory function.
- Discuss fundamentals of surgical extirpation of laryngeal carcinoma including:
 - Endoscopic versus open techniques.
 - Principles of laryngeal preservation in the surgical treatment of laryngeal carcinoma.
 - Prevention and management of tracheostomal recurrence.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with salivary gland carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Describe the relevant anatomy of the major and minor salivary glands including all subdivisions, boundaries, and contents of the pertinent anatomical spaces in the head and neck.
- Discuss the elements of the physical examination critical to the diagnosis of salivary gland malignancies and interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management.
- Describe important potential treatment related complications including cranial nerve paresis and xerostomia.
- Describe inherent biological differences in the behavior of malignancies arising in the major and minor salivary glands and rationale and principles of the nonsurgical therapy of salivary gland carcinoma.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Recall the staging of salivary gland cancer.

Review predictable patterns of lymphatic metastasis and the rationale for neck dissection.

Describe the normal physiology of the production of saliva, salivary flow and the sequellae of xerostomia.

Review fundamentals of surgical extirpation of salivary gland carcinoma.

Compare important differences in biologic behavior between the different histologies of the salivary gland malignancies

Summarize indications for facial nerve resection.

Review indications and techniques for the various forms of static and dynamic facial rehabilitation

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cervical lymph node metastases.

OBJECTIVES FOR COGNITIVE GOAL 7:

Describe the relevant anatomy of the neck including all subdivisions, boundaries, and contents of the Memorial Sloan-Kettering Cancer Center classification of the compartments of the neck.

Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.

Obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of neck and subclinical neck disease.

Outline the role and limitations of fine needle aspiration biopsy in the evaluation of a metastatic neck mass.

Discuss the principles, indications, and limitations of sentinel node biopsy of head and neck malignancies.

Define the staging of cervical node metastasis.

Discuss the algorithm for the systematic evaluation of the occult cervical lymph node metastasis.

Discuss predictable patterns of lymphatic metastasis and the rationale for neck dissection in all sites of the head and neck.

Describe the complications and consequences of the radical, modified radical and selective neck dissections.

COGNITIVE GOAL 8 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cutaneous neoplasms of the head and neck.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 8:

- Describe the relevant histology of the skin as it relates to the development of the various types of cutaneous malignancies.
- Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.
- Obtain and accurately interpret appropriate imaging studies.
- Formulate and implement a correct plan for surgical and non-surgical management of cutaneous malignancies.
- Summarize the indications and limitations for the various types of biopsy of cutaneous malignancies (shave, excisional, incisional, punch).
- Distinguish the principles, indications, and limitations of sentinel node biopsy and Moh's micrographic excision of head and neck malignancies.
- Recall staging of cutaneous malignancy, particularly the staging of melanoma.
- Summarize the indications and goals of elective and therapeutic neck dissection in the management of cutaneous malignancies.
- Compare the basic principles and options for the reconstruction of partial thickness, full thickness, and through-and-through cutaneous defects of the head and neck including basic geometries of local flaps.

COGNITIVE GOAL 9 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the paranasal sinuses and skull base.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Describe the relevant anatomy of the paranasal sinuses and the related anterior and middle cranial base.
- List the elements of the physical examination critical to the diagnosis of carcinoma of the paranasal sinuses and skull base including epidemiologic and etiologic factors.
- Obtain and correctly interpret appropriate imaging studies including radiologic evaluation of the carotid circulation and endovascular interventions as necessary.
- Develop and implement a correct plan for surgical and non-surgical management of paranasal sinus and skull base malignancies.
- Explain the indications and limitations for the various types of biopsy of malignancies of the skull base and paranasal sinuses (endoscopic, excisional, incisional).
- Recall the staging of malignant tumors of the paranasal sinuses.
- Describe the biologic heterogeneity of paranasal sinus and skull base malignancies and how biology dictates management principles.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Describe oncologic concepts critical and unique to the surgical management of paranasal sinus malignancies including management of the orbit, craniofacial skeleton, and dura.

Discuss the differential diagnosis and management of tumors involving the parapharyngeal space and infratemporal fossa.

Discuss fundamental concepts of reconstruction of paranasal sinus and skull base defects including oronasal separation, restoration of mastication, protection of the dura, and restoration of acceptable aesthetics.

COGNITIVE GOAL 10 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the temporal bone.

OBJECTIVES FOR COGNITIVE GOAL 10:

- Recall the relevant anatomy of the ear and temporal bone.
- Identify elements in the history and physical examination critical to the diagnosis of temporal bone cancer.
- Obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of temporal bone cancer.
- Recall staging of malignant tumors of the ear and temporal bone.
- Distinguish oncologic concepts critical and unique to the surgical management of temporal bone malignancies including management of the facial nerve, middle ear and auditory apparatus, and dura.
- Justify rationale for the treatment of loco-regional lymphatics including the roles of parotidectomy and neck dissection.

COGNITIVE GOAL 11 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge of principles of radiation oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 11:

- Describe the fundamental principles of radiation oncology as they relate to the primary and/or adjuvant treatment of malignant head and neck tumors.
- Discuss basic principles of radiation physics.
- Outline differences between electromagnetic and particle irradiation.
- List radiation effects on living tissues and describe the concept of the absorbed dose.
- Discuss fundamental concepts of radiation biology including mechanisms of cell killing, radiation effects on cell cycle, and dose response curves.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

- Describe the major factors affecting the radiation sensitivity of various tissues.
- Discuss basic differences in dose fractionation and their biologic bases.
- Contrast current advances in radiation oncology used in the combined modality treatment of patients with advanced stage malignant head and neck tumors, including conformal and intensity-modulated radiotherapy, radiosensitizing chemotherapy, and target combined modality therapy.

COGNITIVE GOAL 12: (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase knowledge of principles of medical oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 12:

Describe the basic principles of medical oncology as they relate to the treatment of patients with malignant head and neck tumors.

Recall the cell cycle and the events occurring in each phase.

Discuss differences between induction, primary (neoadjuvant), and adjuvant chemotherapy.

Explain the basic classes of chemotherapeutic agents used in treating patients with head and neck cancer and the general cell cycle effects of each, including antitumor alkylating agents, cisplatin and analogues, antimetabolites, topoisomerase inhibitors and DNA intercalation, and antimicrotubule agents.

Discuss concepts of systemic agents used to enhance (sensitize) the local effects of radiation therapy.

Compare the principles of surgical and nonsurgical palliation and identify the integral role of the medical oncologist the management of patients with end stage and unresectable head and neck cancer.

COGNITIVE GOAL 13 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING): Increase knowledge of principles of outcomes assessment as they apply to patients with head and neck cancer.

OBJECTIVES FOR COGNITIVE GOAL 13:

- Describe the basic principles of the assessment and reporting on the results of treatment of patients with malignant head and neck tumors.
- Identify the principal differences between Phase I, II, and III clinical trials.
- Discuss differences in levels of evidence included in various clinical studies.
- Contrast the strengths and weakness of the following methods of results reporting including co-morbidity scores, retrospective chart reviews, quality of life scales, prospective clinical trials, industry sponsored trials, and oncologic results reporting.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

C. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Develop an understanding of the issues that arise when a patient is diagnosed with cancer.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Empathize with the patient and family members.
- Answer patient questions about the effect of their illness on family members.
- Integrate care with other professionals in other related disciplines – radiation therapy, oncology, speech pathology, nursing, occupational and physical therapy.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Increase skill in basic head and neck oncological procedures,

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this rotation, the resident will be able to efficiently perform as first assistant and then surgeon the following procedures:

- Tracheotomy.
- Submandibular gland resection.
- Cervical lymph node biopsy.
- Laryngoscopy.
- Esophagoscopy.
- Bronchoscopy.
- Biopsy of oral cavity, pharynx, larynx lesions.

REFERENCES:

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1 & 2, J. B. Lippincott Company 1993.

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Management of Head and Neck Cancer (second edition), Million RR, Cassisi NJ, JB Lippincott, Philadelphia, 1994

Head and Neck Surgery and Oncology (Third edition), Shah J, Mosby, Philadelphia, 2003

Decision Making in Ear, Nose and Throat Disorders. Alper, Myers, Eibling. W. B. Saunders Company, Philadelphia, 2001.

Complications in Head and Neck Surgery. David W. Eisele. Mosby Year Book, 1993.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

D. HINES VA ROTATION

This 4-month rotation at Hines Veterans Administration is designed to foster the independent decision-making and analytical skills necessary for an Otolaryngologist. The resident is supervised and instructed by staff Otolaryngologists. The resident has his/her own office in the clinic in which patients are seen, evaluated, and treated. The resident also sees consults on the hospital floors and in the emergency room. The surgical cases are varied in scope and include head and neck surgical oncology, nasal surgery, and minor outpatient surgery. At the completion of this rotation, the resident will have the following knowledge and be able to perform the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS): Increase skill in performing general and targeted head and neck history and systems review.

OBJECTIVES FOR COGNITIVE GOAL 1

- Describe and perform the elements of a complete and targeted head and neck history including:
 - Chief complaint
 - Current illness history
 - Allergies
 - Current medications
 - Previous operations, hospitalizations
 - Pertinent social history and cultural background
- Perform a complete systems review, emphasizing systemic conditions that may affect the head and neck.
- Present patients to attending physicians in clinic.
- Demonstrate and perform documentation in the electronic medical record.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS): Increase skill in performing a detailed head and neck examination, including cranial nerve testing and microscopic otoscopy.

OBJECTIVES FOR COGNITIVE GOAL 2

Describe and perform the elements of a complete head and neck examination, including:

Binocular ear exam and tuning fork testing.

Examination of the nasal cavity using flexible and rigid scopes.

Oral cavity examination, including bimanual palpation.

Examination of the nasopharynx, oropharynx, and larynx, using mirror and flexible scopes.

Testing of the cranial nerves.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

D. HINES VA ROTATION (continued)

Recognize normal physical exam findings and their variations from abnormal findings.

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS):

Increase skill in the diagnosis and management of patients presenting with common otolaryngological medical and surgical problems.

OBJECTIVES FOR COGNITIVE GOAL 3

Justify and interpret laboratory testing.

Justify and interpret an audiogram, tympanogram, ABR, and acoustic reflex testing.

Describe the natural history, clinical presentation, differential diagnosis, evaluation and management of common inflammatory, infectious, traumatic, and neoplastic diseases of the head and neck.

Recall common medications, their dosages, complications, and side-effects.

Discuss the indications for and interpret CT scans of the temporal bone and head and neck.

Discuss the indications for and interpret MRI scans of the brain, internal auditory canals, salivary glands, and neck.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS):

Increase knowledge about the indications and contraindications of common otolaryngological surgical procedures, the risks of such procedures, and alternative treatments.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the variations, indications, contraindications and complications of tonsillectomy/adenoidectomy.
- Discuss the variations, indications, contraindications and complications of oral cavity, pharyngeal, and laryngeal surgery.
- Describe the variations, indications, contraindications and complications of cervical neck dissections.
- Discuss the variations, indications, contraindications and complications of tympanostomy with tube placement.
- Describe the variations, indications, contraindications and complications of salivary gland surgery.
- Discuss the variations, indications, contraindications and complications of nasal and sinus surgery.
- Describe the variations, indications, contraindications and complications of tracheotomy.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

D. HINES VA ROTATION (continued)

- Discuss potential alternative treatments such as longer medical therapy or radiation therapy.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCY PROFESSIONALISM): Learn how to become more organized

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Develop a filing system for articles and papers
- Maintain a calendar or PDA
- Enter surgical cases into database weekly

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT): Gain additional experience in performing basic otolaryngological office and surgical procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this rotation, the resident will be able to efficiently perform as first assistant and surgeon the following procedures:

- Oral cavity biopsies
- Binocular microscopy and tympanostomy with tube placement
- Cutaneous biopsies.
- Nasal biopsies and nasal endoscopy
- Nasal septoplasty.
- Tracheotomy.
- Laryngoscopy, bronchoscopy, and esophagoscopy.

REFERENCES:

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1-4, J. B. Lippincott Company, 1993.

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 1-4, Mosby, St Louis, 2000.

V. SECOND YEAR RESIDENT (PGY-2, OTO-1) (continued)

E. TEMPORAL BONE DISSECTION COURSE

This weekly course meets on Tuesday afternoons (September through March). Didactic and surgical instruction occur in graduated fashion. As the resident repeats this course each year, he/she is expected to become more proficient in temporal bone dissection technique, with the overall goal of being able to safely navigate the temporal bone in patients with otological and neurotological diseases. At the completion of this course, the resident should demonstrate the following knowledge and be able to perform the following skills:

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase otological surgical skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this course, the resident will be able to efficiently demonstrate the following technical skills on cadaveric temporal bones:

1. Proper posture while operating under the microscope
2. Correct suction/irrigation technique
3. Proper arm position and drill holding
4. Simple mastoidectomy
5. Intact canal wall mastoidectomy
6. Facial recess approach
7. Endolymphatic sac decompression
8. Canal wall down mastoidectomy
9. Labyrinthectomy
10. Middle Fossa Approach
11. Extended Facial Recess Approach
12. Transmastoid exposure of carotid artery and jugular bulb

MEASUREMENT OF OBJECTIVES:

Attendance will be taken.

The resident will be observed performing the above procedures.

The resident will be graded performing the above procedures (pass or unsatisfactory).

The resident will not be allowed to proceed to the next surgical procedure until demonstrating proficiency in the current procedure.

REFERENCE:

Surgery of the Ear, Edited by ME Glasscock and GE Shambaugh, 2002, WB Saunders, Philadelphia

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2)

The overall goals of the PGY-3 year are:

- To have residents design, perform, analyze, present, and eventually publish a basic-science Otolaryngological research project.
- To give residents an intermediate knowledge base in head and neck surgical anatomy, embryology, pharmacology, pathology, and pathophysiology.
- To have residents develop an intermediate understanding of the evidence for the medical and surgical treatment of congenital, inflammatory, infectious, iatrogenic, traumatic, and neoplastic otolaryngological disease states.
- To have residents demonstrate competence in intermediate Otolaryngological surgical skills including head and neck oncological procedures including parotidectomy, neck dissection, laryngeal surgery, and oropharyngeal surgery.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION:

This rotation is 4 months in duration at Loyola University Medical Center. This is the resident's second time on this rotation. He/she is expected to increase their knowledge base and surgical skills. The residents are given more clinical and surgical responsibilities. At the completion of this rotation, the resident should have expanded knowledge in the following areas and be able to demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the etiology, pathogenesis, and epidemiology of head and neck carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 1:

Assess general biologic principles pertaining to the development (carcinogenesis) and growth (tumorigenesis) of benign and malignant head and neck tumors including:

- Describe the cell cycle and the multi-step carcinogenesis model, and discuss the role of environmental, toxic and viral agents in head and neck carcinogenesis
- Discuss the geographic, gender and population based disparities in particular varieties of head and neck tumors.
- Recognize and recall the American Joint Commission on Cancer (AJCC) staging paradigms for all head and neck cancers
- Describe the preoperative evaluation of patients presenting for therapy of malignant head and neck tumors including an understanding relevant comorbidities and their potential impact on recovery, and the cost effective preoperative assessment including appropriate use of consultations, imaging studies and antibiotics.
- Discuss potential surgical and non-surgical complications of the treatment of head and neck malignancies.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in fundamental head and neck pathology.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Review principles of microscopic tissue examination; discuss indications and contraindications for fine needle aspiration biopsy and open biopsy of head and neck tumors.
- Discuss the role of immunohistochemistry and molecular pathology in diagnosing head and neck cancer.
- Describe the fundamental principles of progression of epithelial malignancy from dysplasia to invasive carcinoma.
- Contrast the histological heterogeneity of the thyroid and parathyroid, salivary glands, mandible, maxilla, odontogenesis, mesenchymal tissues of the craniofacial skeleton, temporal bone, and laryngo-tracheal framework.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the radiographic evaluation of head and neck tumors.

OBJECTIVES FOR COGNITIVE GOAL 3:

At the end of the rotation, residents will have a clinically useful knowledge base in each of the following areas:

The radiographic anatomy of the craniofacial skeleton and specialized tissues of the head and neck.

The basic principles and indications for plain radiographs, computed tomography scans, and magnetic resonance images in the evaluation of head and neck tumors.

The role of functional barium examination of the upper aerodigestive tract in the evaluation of patient pre- and post- treatment of head and neck malignancies.

The basic principles and indications for specialized nuclear medicine studies including lymphatic mapping and positron emission tomographic scanning.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the oral cavity and pharynx.

OBJECTIVES FOR COGNITIVE GOAL 4:

Describe the relevant anatomy including all subdivisions, boundaries, and contents of the oral cavity and pharynx (nasopharynx, oropharynx, hypopharynx).

Discuss the elements of the physical examination critical to the diagnosis of oral cavity and pharyngeal malignancies obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of oral and pharyngeal malignancies, understand important potential treatment related complications.

Discuss rationale and principles of the nonsurgical therapy of nasopharyngeal carcinoma.

List the staging of oral cavity and pharyngeal cancer.

Describe predictable patterns of lymphatic metastasis.

Explain the normal physiology of swallowing and the impact of cancer therapy on swallowing function.

Discuss fundamentals of surgical extirpation of oral cavity and pharyngeal carcinoma with particular attention to surgical approaches to these tumors, principles of mandibular preservation in the surgical treatment of oral carcinoma, and fundamentals of soft tissue reconstruction.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the larynx.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the relevant anatomy including all subdivisions, boundaries, and contents of the larynx (supraglottic, glottic, subglottic).
- Discuss the elements of the physical examination critical to the diagnosis of laryngeal malignancies obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of laryngeal carcinoma.
- Describe important potential treatment related complications including fistulae, dysphagia, hoarseness, voice change, and airway obstruction.
- Discuss rationale and principles of the nonsurgical therapy of laryngeal carcinoma.
- Recall the staging of laryngeal cancer.
- Identify predictable patterns of lymphatic metastasis.
- Describe the normal physiology of phonation and the impact of cancer therapy on phonatory function.
- Discuss fundamentals of surgical extirpation of laryngeal carcinoma including:
 - Endoscopic versus open techniques.
 - Principles of laryngeal preservation in the surgical treatment of laryngeal carcinoma.
 - Prevention and management of tracheostomal recurrence.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with salivary gland carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Describe the relevant anatomy of the major and minor salivary glands including all subdivisions, boundaries, and contents of the pertinent anatomical spaces in the head and neck.
- Discuss the elements of the physical examination critical to the diagnosis of salivary gland malignancies and interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management.
- Describe important potential treatment related complications including cranial nerve paresis and xerostomia.
- Describe inherent biological differences in the behavior of malignancies arising in the major and minor salivary glands and rationale and principles of the nonsurgical therapy of salivary gland carcinoma.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Recall the staging of salivary gland cancer.

Review predictable patterns of lymphatic metastasis and the rationale for neck dissection.

Describe the normal physiology of the production of saliva, salivary flow and the sequellae of xerostomia.

Review fundamentals of surgical extirpation of salivary gland carcinoma.

Compare important differences in biologic behavior between the different histologies of the salivary gland malignancies

Summarize indications for facial nerve resection.

Review indications and techniques for the various forms of static and dynamic facial rehabilitation

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cervical lymph node metastases.

OBJECTIVES FOR COGNITIVE GOAL 7:

Describe the relevant anatomy of the neck including all subdivisions, boundaries, and contents of the Memorial Sloan-Kettering Cancer Center classification of the compartments of the neck.

Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.

Obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of neck and subclinical neck disease.

Outline the role and limitations of fine needle aspiration biopsy in the evaluation of a metastatic neck mass.

Discuss the principles, indications, and limitations of sentinel node biopsy of head and neck malignancies.

Define the staging of cervical node metastasis.

Discuss the algorithm for the systematic evaluation of the occult cervical lymph node metastasis.

Discuss predictable patterns of lymphatic metastasis and the rationale for neck dissection in all sites of the head and neck.

Describe the complications and consequences of the radical, modified radical and selective neck dissections.

COGNITIVE GOAL 8 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cutaneous neoplasms of the head and neck.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 8:

- Describe the relevant histology of the skin as it relates to the development of the various types of cutaneous malignancies.
- Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.
- Obtain and accurately interpret appropriate imaging studies.
- Formulate and implement a correct plan for surgical and non-surgical management of cutaneous malignancies.
- Summarize the indications and limitations for the various types of biopsy of cutaneous malignancies (shave, excisional, incisional, punch).
- Distinguish the principles, indications, and limitations of sentinel node biopsy and Moh's micrographic excision of head and neck malignancies.
- Recall staging of cutaneous malignancy, particularly the staging of melanoma.
- Summarize the indications and goals of elective and therapeutic neck dissection in the management of cutaneous malignancies.
- Compare the basic principles and options for the reconstruction of partial thickness, full thickness, and through-and-through cutaneous defects of the head and neck including basic geometries of local flaps.

COGNITIVE GOAL 9 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the paranasal sinuses and skull base.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Describe the relevant anatomy of the paranasal sinuses and the related anterior and middle cranial base.
- List the elements of the physical examination critical to the diagnosis of carcinoma of the paranasal sinuses and skull base including epidemiological and etiologic factors.
- Obtain and correctly interpret appropriate imaging studies including radiological evaluation of the carotid circulation and endovascular interventions as necessary.
- Develop and implement a correct plan for surgical and non-surgical management of paranasal sinus and skull base malignancies.
- Explain the indications and limitations for the various types of biopsy of malignancies of the skull base and paranasal sinuses (endoscopic, excisional, incisional).
- Recall the staging of malignant tumors of the paranasal sinuses.
- Describe the biologic heterogeneity of paranasal sinus and skull base malignancies and how biology dictates management principles.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Describe oncologic concepts critical and unique to the surgical management of paranasal sinus malignancies including management of the orbit, craniofacial skeleton, and dura.

Discuss the differential diagnosis and management of tumors involving the parapharyngeal space and infratemporal fossa.

Discuss fundamental concepts of reconstruction of paranasal sinus and skull base defects including oronasal separation, restoration of mastication, protection of the dura, and restoration of acceptable aesthetics.

COGNITIVE GOAL 10 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the temporal bone.

OBJECTIVES FOR COGNITIVE GOAL 10:

- Recall the relevant anatomy of the ear and temporal bone.
- Identify elements in the history and physical examination critical to the diagnosis of temporal bone cancer.
- Obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of temporal bone cancer.
- Recall staging of malignant tumors of the ear and temporal bone.
- Distinguish oncologic concepts critical and unique to the surgical management of temporal bone malignancies including management of the facial nerve, middle ear and auditory apparatus, and dura.
- Justify rationale for the treatment of loco-regional lymphatics including the roles of parotidectomy and neck dissection.

COGNITIVE GOAL 11 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge of principles of radiation oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 11:

- Describe the fundamental principles of radiation oncology as they relate to the primary and/or adjuvant treatment of malignant head and neck tumors.
- Discuss basic principles of radiation physics.
- Outline differences between electromagnetic and particle irradiation.
- List radiation effects on living tissues and describe the concept of the absorbed dose.
- Discuss fundamental concepts of radiation biology including mechanisms of cell killing, radiation effects on cell cycle, and dose response curves.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

- Describe the major factors affecting the radiation sensitivity of various tissues.
- Discuss basic differences in dose fractionation and their biologic bases.
- Contrast current advances in radiation oncology used in the combined modality treatment of patients with advanced stage malignant head and neck tumors, including conformal and intensity-modulated radiotherapy, radiosensitizing chemotherapy, and target combined modality therapy.

COGNITIVE GOAL 12: (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase knowledge of principles of medical oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 12:

Describe the basic principles of medical oncology as they relate to the treatment of patients with malignant head and neck tumors.

Recall the cell cycle and the events occurring in each phase.

Discuss differences between induction, primary (neoadjuvant), and adjuvant chemotherapy.

Explain the basic classes of chemotherapeutic agents used in treating patients with head and neck cancer and the general cell cycle effects of each, including antitumor alkylating agents, cisplatin and analogues, antimetabolites, topoisomerase inhibitors and DNA intercalation, and antimicrotubule agents.

Discuss concepts of systemic agents used to enhance (sensitize) the local effects of radiation therapy.

Compare the principles of surgical and nonsurgical palliation and identify the integral role of the medical oncologist the management of patients with end stage and unresectable head and neck cancer.

COGNITIVE GOAL 13 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING): Increase knowledge of principles of outcomes assessment as they apply to patients with head and neck cancer.

OBJECTIVES FOR COGNITIVE GOAL 13:

- Describe the basic principles of the assessment and reporting on the results of treatment of patients with malignant head and neck tumors.
- Identify the principal differences between Phase I, II, and III clinical trials.
- Discuss differences in levels of evidence included in various clinical studies.
- Contrast the strengths and weakness of the following methods of results reporting including co-morbidity scores, retrospective chart reviews, quality of life scales, prospective clinical trials, industry sponsored trials, and oncologic results reporting.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

A. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Develop an understanding of the profound social stresses that life-threatening conditions place on patients and their families, and an appreciation of the manifestations of such stress.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Describe a variety of coping reactions that are commonly employed by patients with life-threatening illnesses.
- Discuss an appropriate therapeutic response for each of the common coping reactions that are employed by patients with life-threatening illnesses.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Increase skill in intermediate head and neck oncological procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this rotation, the resident will be able to efficiently perform as first assistant and surgeon the following surgical procedures:

- Awake tracheotomy.
- Submandibular gland resection.
- Cervical neck dissection.
- Nasal endoscopy, laryngoscopy, esophagoscopy, bronchoscopy.
- Biopsy of oral cavity, pharynx, larynx.
- Laryngectomy.
- Hemiglossectomy.

REFERENCES:

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1 & 2, J. B. Lippincott Company 1993.

Cancer of the Head and Neck (Fourth Edition). Myers, EN, , Suen JY, Myers JN, Hanna EYN, Saunders Company, Philadelphia, 2003

Management of Head and Neck Cancer (second edition). Million RR, Cassisi NJ, JB Lippincott, Philadelphia, 1994

Head and Neck Surgery and Oncology (Third edition). Shah J, Mosby, Philadelphia, 2003

Decision Making in Ear, Nose and Throat Disorders. Alper, Myers, Eibling. W. B. Saunders Company, Philadelphia, 2001.

Complications in Head and Neck Surgery. David W. Eisele. Mosby Year Book, 1993.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

B. HINES VA ROTATION

This is the second 4-month rotation at Hines Veterans Administration. It is designed to further foster the independent decision-making and analytical skills necessary for an Otolaryngologist. The resident is supervised and instructed by staff Otolaryngologists. The resident has his/her own office in the clinic in which patients are seen, evaluated, and treated. The resident is given increased clinical and surgical responsibilities. At the completion of this rotation, the resident will have the following knowledge and be able to perform the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS): Increase skill in performing general and targeted head and neck history and systems review.

OBJECTIVES FOR COGNITIVE GOAL 1

- Describe and perform the elements of a complete and targeted head and neck history including:
 - Chief complaint
 - Current illness history
 - Allergies
 - Current medications
 - Previous operations, hospitalizations
 - Pertinent social history and cultural background
- Perform a complete systems review, emphasizing systemic conditions that may affect the head and neck.
- Present patients to attending physicians in clinic.
- Demonstrate and perform documentation in the electronic medical record.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS): Increase skill in performing a detailed head and neck examination, including cranial nerve testing microscopic otoscopy, nasal endoscopy, nasopharyngoscopy, and laryngoscopy.

OBJECTIVES FOR COGNITIVE GOAL 2

Describe and perform the elements of a complete head and neck examination, including:

Binocular ear exam and tuning fork testing.

Examination of the nasal cavity using flexible and rigid scopes.

Oral cavity examination, including bimanual palpation.

Examination of the nasopharynx, oropharynx, and larynx, using mirror and flexible scopes.

Testing of the cranial nerves.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

B. HINES VA ROTATION (continued)

Recognize normal physical exam findings and their variations from abnormal findings.

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS):

Increase skill in the diagnosis and management of patients presenting with common otolaryngological medical and surgical problems.

OBJECTIVES FOR COGNITIVE GOAL 3

Justify and interpret laboratory testing.

Justify and interpret an audiogram, tympanogram, ABR, and acoustic reflex testing.

Describe the natural history, clinical presentation, differential diagnosis, evaluation and management of common inflammatory, infectious, traumatic, and neoplastic diseases of the head and neck.

Recall common medications, their dosages, complications, and side-effects.

Discuss the indications for and interpret CT scans of the temporal bone and head and neck.

Discuss the indications for and interpret MRI scans of the brain, internal auditory canals, salivary glands, and neck.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, INTERPERSONAL AND COMMUNICATION SKILLS):

Increase knowledge about the indications and contraindications of common otolaryngological surgical procedures, the risks of such procedures, and alternative treatments.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the variations, indications, contraindications and complications of tonsillectomy/adenoidectomy.
- Discuss the variations, indications, contraindications and complications of oral cavity, pharyngeal, and laryngeal surgery.
- Describe the variations, indications, contraindications and complications of cervical neck dissections.
- Discuss the variations, indications, contraindications and complications of tympanostomy with tube placement.
- Describe the variations, indications, contraindications and complications of salivary gland surgery.
- Discuss the variations, indications, contraindications and complications of nasal and sinus surgery.
- Describe the variations, indications, contraindications and complications of tracheotomy.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

B. HINES VA ROTATION (continued)

- Discuss potential alternative treatments such as longer medical therapy or radiation therapy.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCY PROFESSIONALISM): Begin to decide career interests

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Discuss academic practice with attendings.
- Discuss private practice with attendings.
- Research various fellowships.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT): Gain additional experience in performing basic otolaryngological office and surgical procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this rotation, the resident will be able to efficiently perform the following procedures:

- Direct and endoscopic biopsies of the oral cavity, nasal cavity oropharynx, and larynx.
- Tympanostomy with tube placement.
- Cutaneous biopsies, skin excisions, skin grafts, and local skin flaps.
- Septoplasty.
- Awake tracheotomy.
- Submandibular gland excision.
- Cervical lymphadenectomy.

REFERENCES:

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1-4, J. B. Lippincott Company, 1993.

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 1-4, Mosby, St Louis, 2000.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

C. RESEARCH ROTATION

This is a 4-month basic science rotation. The resident chooses a research project and a mentor in an area of interest. Planning for this rotation begins during the PGY-2 year. Residents are responsible for all aspects of the research project. The project should generate a paper and national presentation. In addition to this dedicated research time, residents are required to complete a yearly research project during the PGY-2, 4 and 5 years that will be presented at the Girgis Resident Research Competition held annually in January. At the completion of the research rotation, the resident should have the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT): Identify a research question.

OBJECTIVES FOR COGNITIVE GOAL 1

- Decide an area or topic of interest.
- Develop a relationship with a mentor in this area.
- Perform a literature review on prior related research.
- Develop a scientific question.
- Develop a hypothesis to answer the research question.

COGNITIVE GOAL 2 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT): Determine the best way to test the hypothesis.

OBJECTIVES FOR COGNITIVE GOAL 2

- Determine variables to be measured.
- Identify appropriate animal model.
- Identify appropriate research methodology.
- Explain basic biostatistics and compute number of animals needed to reach statistical significance.

COGNITIVE GOAL 3 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT): Design the research project.

OBJECTIVES FOR COGNITIVE GOAL 3

- Create an outline of the project, including animals, funding, space requirements, medication requirements, and timeline.
- Submit the outline to research mentor and the Departmental Research Committee for approval prior to the beginning of the research rotation.
- Obtain all necessary institutional approvals (IRB, Safety, IACUC, Research and Development) obtained prior to the beginning of the research rotation.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

C. RESEARCH ROTATION (continued)

COGNITIVE GOAL 4 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT): Perform the basic science research experiment and gather data.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Recall the relevant animal anatomy or research methodology.
- Practice surgical procedure on pilot animals.
- Gather baseline data on experimental animals.
- Perform experiment.
- Gather and record initial and ongoing data.
- Monitor animals frequently for pain and infection.
- Euthanize animals at end of experiment.
- Gather final data.

COGNITIVE GOAL 5 (ACGME COMPETENCY PRACTICE-BASED LEARNING AND IMPROVEMENT): Critically analyze data and assess how well the project answered the hypothesis.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Enter data into appropriate database.
- Show data in appropriate graphical fashion.
- Perform appropriate statistical analysis.
- Analyze results for significance.
- Discuss results with mentor identify potential future experiments.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PRACTICE-BASED LEARNING AND IMPROVEMENT, INTERPERSONAL AND COMMUNICATION SKILLS): Write research paper, submit for publication, and present locally and nationally.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Write abstract.
- Write introduction, materials and methods, and results.
- Form appropriate conclusions from the research experiment.
- Research and insert appropriate references.
- Submit paper for publication.
- Summarize key points of research project into PowerPoint presentation.
- Present at local research day and at national Otolaryngological meeting.

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

C. RESEARCH ROTATION (continued)

COGNITIVE GOAL 7 (ACGME COMPETENCIES PRACTICE-BASED LEARNING AND IMPROVEMENT, SYSTEMS-BASED PRACTICE):

Become proficient at critically analyzing journal articles.

OBJECTIVES FOR COGNITIVE GOAL 7:

- While performing research on the topic, go over articles with mentor.
- Read journal articles on a regular basis.
- Participate in monthly journal club.
- Evaluate journal articles for appropriate design, methodology, results, and conclusions.

COGNITIVE GOAL 8 (ACGME COMPETENCIES PRACTICE-BASED LEARNING AND IMPROVEMENT, INTERPERSONAL AND COMMUNICATION SKILLS, AND PROFESSIONALISM): Design, perform, publish, and present clinical research projects during the remainder of residency and afterwards.

OBJECTIVES FOR COGNITIVE GOAL 8:

Use skills learned during the research rotation to:

- Participate in at least one clinical project each year.
- Present project at annual Girgis Competition.
- Present project at local and national meeting.
- Publish paper in peer-reviewed journal.

BIBLIOGRAPHY:

Basic Statistics

Dunn and Chadwick

Otolaryngology/Head and Neck Surgery

Laryngoscope

Archives Head and Neck Surgery

Otology and Neurotology

VI. THIRD YEAR RESIDENT (PGY-3, OTO-2) (continued)

D. TEMPORAL BONE DISSECTION COURSE

This weekly course meets on Tuesday afternoons (September through March). Didactic and surgical instruction occur in graduated fashion. This is the second year that the resident has taken this course. He/she should understand the basic anatomy and surgical principles. The focus is on mastering basic surgical procedures. At the completion of this course, the resident should demonstrate the following knowledge and be able to perform the following skills:

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):
Increase otological surgical skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

By the completion of this course, the resident will be able to efficiently demonstrate the following technical skills on cadaveric temporal bones:

- Intact canal wall mastoidectomy
- Facial recess approach
- Extended facial recess approach
- Endolymphatic sac decompression
- Canal wall down mastoidectomy
- Labyrinthectomy
- Transmastoid exposure of the carotid artery and jugular bulb
- Middle Fossa Approach
- Ossiculoplasty/Stapedectomy

MEASUREMENT OF OBJECTIVES:

- Attendance will be taken.
- The resident will be observed performing the above procedures.
- The resident will be graded performing the above procedures (pass or unsatisfactory).
- The resident will not be allowed to proceed to the next surgical procedure until demonstrating proficiency in the current procedure.

Reference:

Surgery of the Ear, Edited by ME Glasscock and GE Shambaugh, 2002, WB Saunders, Philadelphia

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)

The overall goals of the PGY-4 year are:

- To further foster resident leadership skills as a senior resident and as chief of the Hines VA service.
- To finalize career plans for after residency.
- To give residents an advanced knowledge base in head and neck surgical anatomy, embryology, pharmacology, pathology, and pathophysiology.
- To have residents develop an advanced understanding of the evidence for the medical and surgical treatment of congenital, inflammatory, infectious, iatrogenic, traumatic, and neoplastic otolaryngological disease states.
- To have residents demonstrate competence in advanced Otolaryngological surgical skills including head and neck oncological procedures including parotidectomy, neck dissection, laryngeal surgery, oropharyngeal surgery, facial plastic surgery, and endoscopic sinus surgery.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)

A. OTOTOLOGY ROTATION

The purpose of this rotation is to prepare the Otolaryngology resident to properly care for patients with otological and neurotological medical and surgical problems. At the completion of this rotation, the resident should be able to demonstrate the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY PATIENT CARE): Increase skill in obtaining a complete neurotological history and physical examination.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Demonstrate continuous improvement in performing a thorough neurotological medical history and review of systems.
- Demonstrate continuous improvement in performing a thorough neurotological examination.
- Demonstrate continuous improvement in presenting new and established patients in a concise and focused fashion.
- Become adept at using the binocular microscope to correctly identify disease states of the ear canal and middle ear.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increased skill in the evaluation and management of patients with otological, neurotological, and skull base diseases.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Demonstrate increased knowledge about the indications, contraindications, and risks of otological, neurotological, and skull base surgical procedures, as well as the alternatives to such procedures, including tympanoplasty, ossiculoplasty, stapedectomy, aural atresia repair, cochlear implantation, bone-anchored cochlear stimulator placement, acoustic neuroma resection, endolymphatic sac decompression, and labyrinthectomy
- Describe the perioperative management of otological, neurotological, and skull base surgical patients.
- Expand knowledge of neurotological diagnostic radiology.

COGNITIVE GOAL 3 (ACGME COMPETENCY MEDICAL KNOWLEDGE): Increase knowledge of relevant otological anatomy.

OBJECTIVES FOR COGNITIVE GOAL 3:

Describe and discuss the surgical and microsurgical anatomy of the external ear, middle ear, cochlear system, vestibular system, temporal bone, and lateral skull base, including the middle cranial fossa, posterior cranial fossa, and infratemporal fossa.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in recognizing potential anesthetic complications in patients with neurotological diseases.

OBJECTIVES FOR COGNITIVE GOAL 4:

Discuss how to recognize and treat potential perioperative anesthetic complications in patients undergoing neurotological procedures including air embolism, malignant hyperthermia, and hypotension.

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge of audiological tests and their application to patients with otological and neurotological diseases.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the principles behind audiometric testing.
- Discuss the various types of tuning fork testing and their significance.
- Discuss the indications and interpretation of audiograms, tympanograms, auditory brain stem response tests, electrocochleography, otoacoustic emissions, electronystagmography, computerized dynamic posturography, and rotatory chair testing.

COGNITIVE GOAL 6 (ACGME COMPETENCY MEDICAL KNOWLEDGE): Increase knowledge of the embryology of the ear and skull base.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Recall the embryological development of the external, middle, and inner ear, and facial nerve, and skull base.
- Discuss classification systems and treatment of congenital anomalies of these areas including microtia, ear canal atresia, type I branchial cleft cysts, Mondini, Scheibe, Michel, Cochlear aplasia, hemifacial microsomia, Treacher Collins Syndrome.

COGNITIVE GOAL 7 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, AND PRACTICE-BASED LEARNING): Increase knowledge of cochlear anatomy, physiology, and pathophysiology, as well as the evaluation and management of patients with hearing loss and tinnitus.

OBJECTIVES FOR COGNITIVE GOAL 7:

- Describe and discuss the current theories, diagnosis, evaluation, and management of sudden sensorineural hearing loss (SNHL), ototoxic SNHL, autoimmune SNHL, and congenital SNHL.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

- Describe current treatment options for unilateral and bilateral SNHL including digital and analog hearing aids, CROS hearing aids, implantable electromagnetic hearing devices, including the bone anchored cochlear stimulator (BAHA), and cochlear implantation.
- Describe the evaluation and management of patients with unilateral and bilateral subjective, objective, and pulsatile tinnitus.

COGNITIVE GOAL 8 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, AND PRACTICE-BASED LEARNING): Increase knowledge of external ear anatomy, physiology, and pathophysiology, as well as the evaluation and management of patients with congenital and acquired ear canal diseases.

OBJECTIVES FOR COGNITIVE GOAL 8:

- Recall the anatomy, embryology, physiology, microbiology, and pathophysiology of the ear canal.
- Describe the diagnosis, evaluation, and medical and/or surgical management of ear canal conditions including otomycosis, otitis externa, necrotizing otitis externa, benign and malignant neoplasms, ear canal cholesteatoma, and osteoradionecrosis.
- Describe the diagnosis, evaluation, and medical and/or surgical management of benign, malignant, traumatic, infectious, and inflammatory lesions of the pinna and related structures.
- Discuss the evaluation and management of patients with ear canal atresia and ear canal stenosis.

COGNITIVE GOAL 9 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, PROFESSIONALISM, AND PRACTICE-BASED LEARNING): Increase knowledge of facial nerve anatomy, physiology, and pathophysiology, as well as the evaluation and management of patients with facial paralysis.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Recall the anatomy of the intracranial, intracannicular, labyrinthine, tympanic, mastoid, and extratemporal facial nerve.
- Describe the diagnosis and treatment of inflammatory, infections, benign, malignant, and traumatic lesions resulting in facial nerve paralysis.
- Describe the current medical and surgical treatment of Bell's palsy, including steroid and antiviral therapy, surgical decompression.
- Discuss the indications for middle fossa, and transmastoid facial nerve decompression, as well as neurosurgical consultation.
- Describe the evaluation and management of iatrogenic facial paralysis.
- Explain facial nerve physiology as it relates to nerve repair and electrical testing.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

Describe the application of facial nerve testing methods including electroneurography and electromyography.

Discuss the principles underlying facial nerve repair.

Explain the evaluation and management of acute and long-standing facial nerve paralysis.

Describe static and dynamic facial reanimation procedures.

Discuss eye care and indications for ophthalmology consultation

COGNITIVE GOAL 10 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, PRACTICE-BASED LEARNING): Increase knowledge of middle ear, mastoid, temporal bone, and skull base anatomy, physiology, and pathophysiology, as well as the evaluation and management of patients with diseases in these areas.

OBJECTIVES FOR COGNITIVE GOAL 10:

Describe the evaluation and management of benign, malignant, infectious, inflammatory, and traumatic conditions such as otitis media, cholesteatoma, chronic otitis media, intratemporal and intracranial complications of otitis media, glomus tympanicum and jugulare tumors, jugulare foramen tumors, and squamous cell carcinoma, and metastatic lesions.

Discuss the surgical principles of tympanoplasty, ossiculoplasty, stapedectomy, mastoidectomy, and lateral temporal bone resection.

Describe the evaluation and management of complications of middle ear and mastoid surgery including injury to the facial nerve, dura, sigmoid sinus, labyrinth, ossicular chain, chorda tympani, and cochlea.

Discuss the diagnosis and treatment of perilymphatic fistula, labyrinthitis, SNHL, and CHL resulting from otological surgery.

Discuss the evaluation and management of potential complications of neurotological and skull base surgical procedures including venous and arterial hemorrhage, cranial nerve paralysis, brainstem injury, cerebrovascular accidents, cerebrospinal fluid rhinorrhea and otorrhea, meningitis, wound infection, brain abscess, and exposure keratopathy.

COGNITIVE GOAL 11 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, AND PRACTICE-BASED LEARNING): Increase knowledge of the parotid salivary gland anatomy, physiology, and pathophysiology.

OBJECTIVES FOR COGNITIVE GOAL 11:

Describe the anatomy of the extratemporal facial nerve as related to the parotid gland, styloid process, tragal pointer, digastric muscle, and stylomastoid foramen.

List the correct sequence of steps in performing a superficial parotidectomy with dissection and preservation of the facial nerve.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

Describe temporal bone surgical principles as related to the treatment of advanced salivary gland neoplasms, including management of the facial nerve, ear canal, pinna, and reconstructive options.

COGNITIVE GOAL 12 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, PROFESSIONALISM, AND PRACTICE-BASED LEARNING): Increase knowledge of vestibular system anatomy, physiology, and pathophysiology, as well as the evaluation and management of patients with vestibular diseases.

OBJECTIVES FOR COGNITIVE GOAL 12:

- Describe the physiology of the vestibular system, including the utricle, saccule, semicircular canals, and their central connections.
- Discuss the clinical evaluation of the patient with dysequilibrium and vertigo.
- Discuss the medical and surgical treatment of benign positional paroxysmal vertigo, vestibular neuronitis, perilymphatic fistula, and superior semicircular canal dehiscence syndrome.
- Describe the diagnosis and treatment of non-peripheral or central causes of vertigo and dysequilibrium including vestibular migraine, post concussive vertigo, dysequilibrium of aging, and cerebrovascular disease.
- Discuss the evaluation and treatment of chronic dysequilibrium from ototoxicity.
- Discuss the evaluation and management of vestibular schwannoma and other cerebellopontine angle tumors, including indications for observation, radiosurgery, and microsurgery.
- Describe the indications, surgical principles, and potential complications of the middle fossa, retrosigmoid, and translabyrinthine approach.
- Discuss the indications and potential complications of the radiosurgical treatment of vestibular schwannoma.
- Discuss the medical treatment of patients with Meniere's disease.
- Discuss the rationale, indications, and application of intratympanic gentamicin therapy, endolymphatic sac decompression, labyrinthectomy, and vestibular neurectomy.
- Discuss the role of other health care providers in the management of patients with vestibular diseases.
- Describe and list the indications for vestibular rehabilitation therapy.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES PRACTICE-BASED LEARNING AND IMPROVEMENT, INTERPERSONAL AND COMMUNICATION SKILLS, AND PROFESSIONALISM): Increase knowledge of essential practice management skills.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Discuss ways to build referrals in academic or private otolaryngological practice.
- Communicate with referring physicians, physical therapists, and audiologists.
- Correctly code for office visits and otological surgical procedures.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase skill in performing otological and neurotological procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

At the completion of this rotation, the resident will be able to efficiently perform the following procedures and skills:

- Office-based procedures including myringotomy, tympanostomy with ventilation tube placement, intratympanic gentamicin therapy, and intratympanic therapy for sudden sensorineural hearing loss.
- Properly position, prep, and drape a patient for ear surgery.
- Properly insert electrodes and test the facial nerve monitor.
- Inject the ear for surgical hemostasis
- Mark and make postauricular incisions.
- Surgically open an ear.
- Obtain pre-fascia and fascia grafts for tympanoplasty.
- Perform intact-canal wall mastoidectomy.

REFERENCES:

Atlas of Human Anatomy, Edited by FE Netter, 1989, Ciba-Geigy Corp, New Jersey

Complications in Otolaryngology – Head and Neck Surgery, Volume 1, Ear and Skull Base, Edited by RJ Wiet and BJ Cause, 1986, BC Decker

Controversies in Otolaryngology, Edited by ME Pensak, 2001, Thieme, New York

Head and Neck Surgery - Otolaryngology, Edited by BJ Bailey et al, 1993, JB Lippincott Co, Philadelphia

Neurotology, Edited by RK Jackler and DE Brackman, 1994, Mosby, St. Louis,

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 5, 2000, Mosby, St Louis

Practical Management of the Dizzy Patient, Edited by J.A. Goebel, 2001, Lippincott, Williams, & Wilkins, Philadelphia

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

A. OTOLOGY ROTATION (continued)

Surgery of the Ear, Edited by ME Glasscock and GE Shambaugh, 2002, WB Saunders, Philadelphia

The External Ear, Edited by FE Lucente, W Lawson, NL Novick, 1995, WB Saunders, Philadelphia

The Facial Nerve, Edited by Mark May, 2002, WB Saunders, Philadelphia

The Otology and Neurotology Journal, Edited by Jackler

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

B. HINES VA ROTATION

This rotation is 4 months in duration at Hines Veterans Administration Hospital. The resident is the chief of the service and is responsible for all patient care activities. He/she runs the service, teaches other residents and medical students, determines resident coverage of cases and clinic, and runs the tumor board conference. At the completion of this rotation, the resident should have a thorough understanding of the following areas and be able to demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Develop an advanced knowledge of the surgical anatomy, surgical physiology, and pathophysiology of head and neck oncology.

OBJECTIVES FOR COGNITIVE GOAL 1

- Describe the TNM staging system for all head and neck locations.
- Describe and draw the anatomy of the larynx.
- Describe the development of the larynx with implications of tumor spread.
- Describe and draw the anatomy of the fascial spaces of the neck.
- Explain current theories regarding the genetics of cancer.
- Describe the advantages and disadvantages of FNA of head and neck lesions.
- Describe the rationale for a particular chemotherapeutic approach.
- Describe the anatomy of the skull base and the various syndromes that are associated with tumor invasion of motor/sensory nerves.
- Describe the five-year survival rates for various head and neck tumors.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Develop an intermediate to advanced knowledge of the analysis of preoperative risk factors that influence the intraoperative and postoperative management of head and neck oncological patients.

OBJECTIVES FOR COGNITIVE GOAL 2

Describe the incidence, identification, and management of the common complications of head and neck procedures, including fistula, hemorrhage, hematoma, seroma, cranial nerve paralysis, and chyle leak

Describe the nutritional assessment and nutritional support of head and neck cancer patients.

Discuss and order appropriate medical and cardiac consultations pre- and post-operatively.

Discuss the management of perioperative otolaryngological patients in the intensive care unit setting, including ventilator and airway management, central and arterial line management, monitoring of flaps and wounds.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

B. HINES VA ROTATION

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Develop an advanced knowledge of the surgical, radiological, immunological, and chemotherapeutic options that are available for the treatment of head and neck cancer.

OBJECTIVES FOR COGNITIVE GOAL 3

- Describe the natural history, clinical presentation, evaluation, and general options for treatment of non-squamous cell malignancies of the head and neck.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of nasopharyngeal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of sinonasal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of oral cavity carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of oropharyngeal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of hypopharyngeal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of laryngeal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of esophageal carcinoma.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of thyroid and parathyroid cancers.
- Describe the natural history, clinical presentation, evaluation, and general options for treatment of cervical metastases.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase knowledge about the indications and contraindications of otological surgical procedures, the risks of such procedures, and alternative treatments

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the variations, indications, contraindications and complications of tympanoplasty.
- Describe the variations, indications, contraindications and complications of mastoidectomy.
- Describe the variations, indications, contraindications and complications of ossiculoplasty and stapedectomy.
- Describe the variations, indications, contraindications and complications of lateral temporal bone resection.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

B. HINES VA ROTATION

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCY INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED PRACTICE): Develop leadership skills as a chief resident.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Practice feedback with junior residents on clinic and operative performance.
- Effectively organize the workload including clinic and operative scheduling.
- Organize your own personal goals and develop a plan for pursuing them.

NON-COGNITIVE (AFFECTIVE) GOAL 2 (ACGME COMPETENCY INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED PRACTICE): Develop skill in dealing with the psychosocial dimensions of head and neck oncology.

OBJECTIVES FOR NON-COGNITIVE GOAL 2

- Describe the ethical issues that are involved in the treatment of patients with life-threatening illnesses.
- Integrate the overall treatment plan as it relates the patient, family members, and other health-care providers.

TECHNICAL (PSYCHOMOTOR) GOAL 1:

Gain additional experience in a variety of otological and head and neck oncological surgical procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

- Appropriately plan and mark surgical incisions.
- Gain experience in tympanoplasty and mastoidectomy.
- Participate in the harvest of microvascular flaps.
- Gain experience in reconstructing mandibular defects.
- Gain experience in the design and transfer of myocutaneous flaps.
- Gain experience in the surgical rehabilitation of the voice, including tracheoesophageal puncture.
- Appropriately close surgical defects using local and regional flaps.
- Safely and appropriately complete surgical oncological operations, including:
 - Hemilaryngectomy.
 - Total laryngectomy.
 - Hemiglossectomy.
 - Total glossectomy.
 - Composite resection.
 - Maxillectomy.
 - Modified and radical neck dissections.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

B. HINES VA ROTATION

- Pharyngotomy
- Pharyngoesophageal reconstruction
- Cricopharyngeal myotomy
- Superficial parotidectomy

REFERENCES:

Cancer of the Head and Neck (Fourth Edition), Myers, EN, Suen JY, Myers JN, Hanna EYN, Saunders Company, Philadelphia, 2003

Management of Head and Neck Cancer (second edition), Million RR, Cassisi NJ, JB Lippincott, Philadelphia, 1994

Head and Neck Surgery and Oncology (Third edition), Shah J, Mosby, Philadelphia, 2003

Decision Making in Ear, Nose and Throat Disorders. Alper, Myers, Eibling. W. B. Saunders Company, Philadelphia, 2001.

Complications in Head and Neck Surgery. David W. Eisele. Mosby Year Book, 1993.

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1-4, J. B. Lippincott Company, 1993.

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 1-4, Mosby, St Louis, 2000.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

C. AESTHETIC FACIAL SURGERY

This 2-month rotation focuses on facial cosmetic surgery. The resident rotates at the private office of a facial aesthetic surgeon. He/she participates in the clinical evaluation of patients and assists in surgical procedures. At the completion of this rotation, the resident should have the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Expand understanding of the evaluation and management of patients with facial plastic medical and surgical conditions.

OBJECTIVES FOR COGNITIVE GOAL 1:

- Describe various surgical options for nasal deformities and be able to select the appropriate surgical procedure for a particular finding.
- Analyze the orbital region and describe the various approaches for correcting orbital pathology, including selecting appropriate surgical procedure for a particular finding.
- Describe the various surgical options for congenital facial deformities, such as cleft lip and cleft palate and select appropriate surgical procedure.
- Describe the patterns of hair loss and select appropriate surgical procedure for a particular patient.
- Analyze traumatic facial injuries and be able to prioritize their appropriate surgical management in coordination with other specialties.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Expand knowledge about contraindications, risks and surgical options of facial plastic procedures and alternatives to such procedures.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Evaluate and plan a surgical approach for common nasal deformities and discuss the common postoperative complications.
- Evaluate patients and plan a surgical approach for patients desiring a facelift.
- Select the appropriate patient for surgery. Identify patients who desire surgery for the wrong reasons.
- Demonstrate documentation by way of pre and post op photographs.
- Describe treatment options for blepharochalasis, including the common postoperative problems and best management practices.
- Discuss the indications and risks of surgical treatment of alopecia and alternatives to surgery.
- Discuss the technique and timing of repair of facial fractures and the potential complications both in the near and long term.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

C. AESTHETIC FACIAL SURGERY (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Expand knowledge of the perioperative management of patients who present to the Facial Plastic and Reconstructive clinic.

OBJECTIVES FOR COGNITIVE GOAL 3:

- Outline the perioperative course for common facial plastic procedures and describe in detail the common and unusual complications that can arise in the operative and postoperative periods for:
 - Rhinoplasty
 - Cleft lip and palate repair
 - Blepharoplasty
 - Otoplasty
 - Scar revision
 - Facial fracture repair
 - Mandible reconstruction
 - Rhytidectomy
 - Excision of skin lesions
 - Extratemporal facial reanimation
- Describe the management of facial burns, including potential complications and their treatment.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Develop a thorough understanding of the principles of soft tissue reconstruction and the advantages and disadvantages of each procedure.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the aesthetic facial subunits, including the nose.
- Describe and draw the relaxed skin tension lines of the face.
- Describe and draw the design of the rhombic flap and to understand when it is appropriate to use.
- Describe and draw the design of the bilobe flap and to understand when it is appropriate to use.
- Describe and draw the design of the forehead flap and to understand when it is appropriate to use.
- Describe and draw the design of the W- plasty and geometric broken line closure it is appropriate to use.
- Explain the steps of routine wound healing.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

C. AESTHETIC FACIAL SURGERY (continued)

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING AND IMPROVEMENT):
Acquire intermediate to advanced knowledge in facial and plastic surgery, through reading assignments and departmental lectures.

OBJECTIVES FOR GOAL 5:

- Recall the anatomy of the face, facial musculature, seventh cranial nerve, and the SMAS.
- Describe risk of infection to both patients and staff during common operative procedures such as blepharoplasty, rhinoplasty, face lift, and facial fracture repair.
- Assess the limitations of aesthetic surgery and have an appreciation of what constitutes realistic expectations on the part of the patient
- Select and interpret appropriate imaging and electrodiagnostic tests prior to surgery.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (PRACTICE-BASED LEARNING):
Develop an understanding and appreciation of the role of practice-based learning in Otolaryngology.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

Skillfully use journal articles, textbooks, clinical studies, and online searches to facilitate learning, and improve personal database.

NON-COGNITIVE (AFFECTIVE) GOAL 2 (PROFESSIONALISM): Develop an understanding and appreciation of the role of professionalism in Otolaryngology.

OBJECTIVES FOR NON-COGNITIVE GOAL 2:

Display leadership to the team by demonstrating behaviors that reflect a commitment to continuous professional development, ethical practice, understanding and sensitivity to diversity and a responsible attitude towards patients and society.

NON-COGNITIVE (AFFECTIVE) GOAL 3 (INTERPERSONAL AND COMMUNICATION SKILLS): Develop, apply and expand appropriate interpersonal skills and communication skills in interactions with patients, peers and staff.

OBJECTIVES FOR NON-COGNITIVE GOAL 3:

Display leadership to the team by demonstrating interpersonal and communication skills that establish and maintain professional relationships with patients, families and other members of health care teams.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

C. AESTHETIC FACIAL SURGERY (continued)

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Gain expertise in intermediate to advanced facial plastic and reconstructive surgical procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

Assist and perform common facial plastic procedures including:

- Rhinoplasty.
- Cleft lip and palate repair
- Blepharoplasty
- Otoplasty
- Scar revision
- Facial fracture repair
- Mandibular repair and reconstruction
- Rhytidectomy
- Excision of skin lesions
- Extratemporal facial reanimation
- Botox injections
- Hair transplantation

REFERENCES:

Converse JM, Plastic and Reconstructive Surgery, Second Edition, W.B Saunders, 1977.

McCarthy JG, Plastic Surgery, W.B. Saunders, 1990.

Tardy ME, Rhinoplasty: The Art and The Science, W.B. Saunders, 1997.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

D. SINUS AND ALLERGY ROTATION

This two-month rotation focuses on the evaluation and management of patients with medical and surgical diseases of the nose, nasal cavity, paranasal sinuses, and related structures. At the completion of this rotation, the resident should have the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the evaluation and management of patients with sinonasal diseases:

OBJECTIVES FOR COGNITIVE GOAL 1:

- Describe the surgical anatomy and physiology of the nose, nasal cavity, nasal sinuses, nasopharynx, and related structures.
- Discuss the epidemiology, differential diagnosis, and pathophysiology of nasal diseases (congenital, inflammatory, infectious, neoplastic, traumatic, iatrogenic).
- Describe the various diagnostic radiological tools for imaging of the nose and paranasal sinuses:
 - Distinguish the differences between plain tray films, CT scanning, and MRI imaging.
 - Recognize normal radiological findings versus pathological findings.
 - Discuss the indications for and application of imaging studies in the evaluation and management of patients with nasal diseases.
- Assimilate the medical history, physical examination, endoscopic examination, and radiological studies in developing a diagnosis and differential diagnosis.
- Describe current medical treatment of nasal diseases:
 - Describe appropriate medical therapy for acute and chronic rhinosinusitis based on current clinical outcomes research and data.
 - Discuss the limitations, combinations, pharmacology and complications of medical therapy including nasal decongestants, nasal steroids, antibiotics, and oral steroids.
 - Discuss alternatives to medical treatment
 - Discuss the role of alternative medical treatments
 - Discuss the role of factors such as smoking, allergies, and immunosuppression and their effect on sinonasal diseases.
 - Discuss indications for medical therapy and its duration.
 - Discuss the indications for surgical treatment and its extent.

COGNITIVE GOAL 2 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in understanding the role of surgery in the treatment of sinonasal diseases.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

D. SINUS AND ALLERGY ROTATION (Continued)

OBJECTIVES FOR COGNITIVE GOAL 2:

Describe the indications for and potential complications of sinonasal procedures including:

Caldwell Lac.

Endoscopic control of epistaxis.

Open and endoscopic septoplasty.

Maxillary Antrostomy.

Anterior /Posterior/Complete Ethmoidectomy.

Sphenoidotomy.

Open and Endoscopic Frontal Sinus Surgery.

Endoscopic Orbital Decompression.

Endoscopic Optic Nerve Decompression.

Discuss co-morbidities and contraindications for nasal and sinus surgery.

Describe changes that can occur in the anatomy and physiology of the nasal cavity and paranasal sinuses in the postoperative period.

Identify, discuss, and communicate to patients the potential complications and risks of nasal and sinus surgery.

Discuss the timely recognition and treatment of complications of nasal and sinus surgery, including epistaxis, orbital injury, and intracranial penetration.

Discuss medical legal implications of performing nasal and sinus surgery and practice appropriate documentation.

COGNITIVE GOAL 3 (ACGME COMPETENCIES SYSTEMS BASED PRACTICE AND PRACTICE-BASED LEARNING): Increase skill in understanding outcomes assessment.

OBJECTIVES FOR COGNITIVE GOAL 3:

Discuss the basic principles of the assessment and reporting of results in treatment of nasal and sinus disorders.

Describe current literature results in nasal and sinus disorders and their treatment.

Differentiate current medical therapies for sinus diseases and their effect on quality of life.

Describe the different types of outcome assessment.

Apply outcomes assessment to practitioner database.

TECHNICAL (PSYCHOMOTOR) GOAL 1: (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase office endoscopy skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

Anesthetize the nasal cavity of the awake patient.

Become familiar with endoscopic nasal equipment.

Use the endoscope to recognized normal anatomy and normal variations.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

D. SINUS AND ALLERGY ROTATION (continued)

Use the endoscope to identify nasal pathology.
Perform diagnostic and therapeutic procedures in the outpatient clinic.

TECHNICAL (PSYCHOMOTOR) GOAL 2 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the performance of common sinonasal procedures.

OBJECTIVES FOR TECHNICAL GOAL 2:

At the completion of this procedure, the resident will be able to safely perform as first assistant and surgeon the following sinonasal procedures:

- Caldwell lac.
- Turbinate resection and cautery.
- Endoscopic control of epistaxis.
- Open and endoscopic septoplasty.
- Maxillary antrostomy.
- Anterior and posterior ethmoidectomy.
- Sphenoidotomy.

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCY INTERPERSONAL AND COMMUNICATION SKILLS): Increase communication skills with patients.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Effectively communicate the diagnosis, options for treatment, and the best plan for treatment with the patient and family members.
- Practice strategies (listening, empathy, body language) to effectively deal with the upset or angry patient.

REFERENCES:

Stammberger, H. Endoscopic diagnosis and treatment of the nose and sinuses, latest ed.

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1-4, J. B. Lippincott Company, 1993.

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 1-4, Mosby, St Louis, 2000.

Lore J. Atlas of Otolaryngology Surgery, latest edition

Yanigasaawa, E., Christmas E. et. al. Powered Endoscopic Nasal and Sinus Surgery.

VII. FOURTH YEAR RESIDENT (PGY-4, OTO-3)(continued)

E. TEMPORAL BONE DISSECTION COURSE

This weekly course meets on Tuesday afternoons (September through March). Didactic and surgical instruction occur in graduated fashion. This is the third year that the resident has taken this course. He/she should understand the basic anatomy and surgical principles. The focus is on performing more complex procedures. At the completion of this course, the resident should demonstrate the following knowledge and be able to perform the following skills:

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE): Increase otological surgical skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

At the end of this rotation, the resident will be able to demonstrate the following technical skills on cadaveric temporal bones:

1. Intact canal wall mastoidectomy
2. Facial recess approach
3. Extended facial recess approach
4. Endolymphatic sac decompression
5. Canal wall down mastoidectomy
6. Labyrinthectomy
7. Transmastoid exposure of the carotid artery and jugular bulb
8. Transmastoid facial nerve decompression
9. Middle Fossa Approach
10. Ossiculoplasty/Stapedectomy

MEASUREMENT OF GOALS:

1. Attendance will be taken.
2. The resident will be observed performing the above procedures.
3. The resident will be graded performing the above procedures (pass or unsatisfactory).
4. The resident will not be allowed to proceed to the next surgical procedure until demonstrating proficiency in the current procedure.

Reference:

Surgery of the Ear, Edited by ME Glasscock and GE Shambaugh, 2002, WB Saunders, Philadelphia

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)

The overall goals of the PGY-5 year are:

- To further foster resident leadership skills as a senior resident.
- To teach residents how to efficiently run a busy clinical service.
- To develop the teaching skills of residents as they relate to junior residents and medical students.
- To develop independent decision making skills.
- To further develop resident communication skills with other health care providers.
- To give residents a complete knowledge base in head and neck surgical anatomy, embryology, pharmacology, pathology, and pathophysiology.
- To have residents develop a complete understanding of the evidence for the medical and surgical treatment of congenital, inflammatory, infectious, iatrogenic, traumatic, and neoplastic otolaryngological disease states.
- To have residents demonstrate proficiency in advanced Otolaryngological surgical skills including parotidectomy, neck dissection, laryngeal surgery, oropharyngeal surgery, mandibular resection, rotational and free-flap reconstruction, facial plastic surgery, endoscopic sinus surgery, tympanoplasty, ossiculoplasty, stapedectomy, mastoidectomy, endolymphatic sac decompression, translabyrinthine, retrosigmoid, and middle fossa craniotomy.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION

This 4- month rotation in the chief residency year focuses on the application of surgical and clinical skills learned during the first years of residency. The resident is responsible for running a large and busy inpatient and outpatient otolaryngological practice that focuses on both the pediatric and otological/neurotological areas. He/she is also responsible for teaching of medical students and residents on the service. Surgical skills are refined and expanded by exposure to more complex cases. At the completion of this rotation, the resident should have the following knowledge and be able to demonstrate the following skills:

PEDIATRIC COMPONENT:

COGNITIVE GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE):
Increase knowledge of pediatric head and neck embryology and anatomy.

OBJECTIVES FOR COGNITIVE GOAL 1:

Recall and describe the embryology and developmental anatomy of the craniofacial structures, the ear, the nose and paranasal sinuses, the aerodigestive tract, and the neck, including the derivatives of the pharyngeal arches and their innervation.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric congenital syndromes.

OBJECTIVES FOR COGNITIVE GOAL 2:

Discuss the common craniofacial syndromes (Downs, Treacher Collins, Hemifacial Microsomy, Apert's, Turners) and their potential implications regarding sensory impairments, airway complications and/or systemic co-morbidities.

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the evaluation and management of pediatric congenital malformations.

OBJECTIVES FOR COGNITIVE GOAL 3:

Describe the evaluation and management of congenital malformations of the head and neck structures:

Ear – pits, tags, microtia and atresia.

Nasal passages – choanal, atresia, pyriform aperture stenosis.

Oral cavity – micrognathia, cleft lip and/or palate.

Laryngotracheal airway – laryngomalacia, vascular tracheal compression, complete tracheal rings, tracheo-esophageal fistula.

Neck – branchial anomalies, midline and lateral cervical cysts.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the diagnostic evaluation and management of pediatric sensory impairments.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the evaluation and management of conductive and sensorineural hearing loss, including age- appropriate audiological and language assessments and language developmental implications.
- Discuss the evaluation and management of pediatric vertiginous disorders (perilymphatic fistula, paroxysmal vertigo of childhood, migraine).
- Describe the evaluation and management of unilateral and bilateral true vocal cord paresis and paralysis.
- Discuss the evaluation and management of pediatric facial nerve paralysis.
- Describe the evaluation and management of the multiply sensory-impaired child (Moebius syndrome).

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric otolaryngological infections.

OBJECTIVES FOR COGNITIVE GOAL 5:

Describe and discuss the evaluation and management of pediatric otolaryngological infectious diseases and their complications including the:

- Ear – acute otitis media, otitis media with effusion, chronic otitis media.
- Nose and paranasal sinuses – acute and chronic rhinosinusitis, allergic rhinitis.
- Pharynx – acute and chronic recurrent adenotonsillitis.
- Airway – laryngotracheitis, epiglottitis.
- Neck – lymphadenitis, parapharyngeal and retropharyngeal abscesses.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric otolaryngological acquired disorders.

OBJECTIVES FOR COGNITIVE GOAL 6:

Describe and discuss the evaluation and management of acquired otolaryngologic disorders involving the:

- Ear – cholesteatoma, temporal bone trauma.
- Pharynx – obstructive tonsiladenohypertrophy.
- Laryngotracheal airway – post-intubation laryngotracheal stenosis.
- Aerodigestive tract – foreign body aspirations, foreign body and caustic ingestion.
- Facial skeleton – maxillofacial trauma.

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase knowledge of pediatric neoplastic and paraneoplastic diseases.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 7:

Describe and discuss the management of paraneoplastic and neoplastic lesions including:

- Hemangiomas, teratomas.
- Vascular malformations.
- Soft tissue sarcoma.
- Lymphoma.
- Langerhan's cell histiocytosis.
- Juvenile angiofibromas.
- Recurrent respiratory papillomatosis.

COGNITIVE GOAL 8 (ACGME COMPETENCY PATIENT CARE): Increase skill in performing pediatric otolaryngological history and physical examination.

OBJECTIVES FOR COGNITIVE GOAL 8:

- Demonstrate ability to obtain a comprehensive or focused pediatric otolaryngological history as dictated by the inpatient or outpatient clinical setting, including comorbid conditions, developmental status, perinatal history and family/social dynamics.
- Demonstrate ability to provide appropriate pediatric otolaryngological examination including flexible endoscopic evaluation of the upper airway.

COGNITIVE GOAL 9 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the medical management of pediatric otolaryngological patients.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Demonstrate ability to provide appropriate perioperative pediatric care including fluid/electrolyte management and pharmacological dosing on an appropriate age/weight basis
- Demonstrate ability to assess and prioritize the initial management of pediatric otolaryngological emergencies.

TECHNICAL (PSYCHOMOTOR) GOAL 1:

Gain experience in performing advanced pediatric otolaryngological procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

At the completion of this rotation the resident will be able to efficiently perform the following pediatric otolaryngological procedures:

- Microtia and aural atresia repair.
- Otoplasty.
- Midfacial degloving.
- Lefort procedures.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

Palatoplasty.
Tracheotomy.
Cricoid split.
Laryngotracheal reconstruction.
Microscopic laryngeal surgery.
Excision of branchial anomalies and congenital cervical cysts.
Modified neck dissection for vascular malformations or neoplasms.
Parotidectomy.
Open and endoscopic nasal sinus procedures.

NON-COGNITIVE (AFFECTIVE) GOAL 1: (ACGME COMPETENCIES INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM)

Develop a comprehensive understanding of the factors involved in caring for the critically ill pediatric Otolaryngological patient.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Answer family questions as related to patient care.
- Integrate the inpatient care and involve necessary consultants and health care personnel.
- Practice listening, understanding, and empathy when interacting with family members of patients with life-threatening illnesses.

REFERENCES:

- Bluestone CD, Stool SE, Kenna MA: Pediatric otolaryngology. Third edition. W.B. Saunders Company, 1996.
- Cotton RT, Myer CN III: Practical pediatric otolaryngology. First edition. Lippincott-Raven, 1999.
- Wetmore RF, Muntz HR, McGill TJ: Pediatric otolaryngology: Principles and practice pathways. First edition. Thieme, 2000.
- Bluestone CD, Stool SE: Atlas of pediatric otolaryngology. First edition. W.B. Saunders Company, 1995.
- Lust RP: Pediatric sinusitis. First edition. Raven Press, 1992.
- Myer CM III, Cotton RT, Shott SR: The pediatric airway: an interdisciplinary approach. First edition. JB Lippincott Company, 1995.
- Smith JD, Bumsted RM: Pediatric facial plastic and reconstructive surgery. First edition. Raven Press 1993.
- Healy JB: Common problems in pediatric otolaryngology. First edition. Year Book Medical Publishers, 1990.
- Hotaling AJ, Stankiewicz JA: Pediatric otolaryngology for the general otolaryngologist. First edition. Agaku-Shoin, 1996.
- Applicable readings from AAO-HNS Home Study Course, and SIPAC series.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

OTOLOGY/NEUROTOLOGY/SKULL BASE SURGERY COMPONENT:

COGNITIVE GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE):
Increase knowledge of skull base anatomy and pathophysiology.

OBJECTIVES FOR COGNITIVE GOAL 1:

Describe the surgical anatomy, embryology, and differential diagnosis of lesions (congenital, traumatic, inflammatory, neoplastic,) of the:

- Anterior Skull Base.
 - Paranasal sinuses.
 - Bifrontal intracranial.
 - Vascular structures (Cavernous sinus, carotid artery).
 - Cranial nerves I-IV.

Lateral Skull Base.

Parapharyngeal space.

Infratemporal fossa.

Vascular structures (Terminal branches of carotid).

Cranial nerves V, VII, IX-XII

Posterior Skull Base.

Temporal bone.

Venous sinuses.

Jugular Foramen.

Petrous carotid artery.

Cranial nerves V-XII.

COGNITIVE GOAL 2 (ACGME COMPETENCY PATIENT CARE):
Increase skill in the clinical evaluation of patients with skull base diseases.

OBJECTIVES FOR COGNITIVE GOAL 2:

Demonstrate ability to clinically evaluate patients with skull base diseases by obtaining complete histories, performing physical examination (including cranial nerve testing and microscopic otoscopy), and obtaining appropriate record review.

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the radiographic evaluation of patients with skull base diseases.

OBJECTIVES FOR COGNITIVE GOAL 3:

Describe the indications for, and be able to critically read radiographic studies of patients with skull base diseases including computed tomography, magnetic resonance imaging, cerebral angiography (diagnostic and interventional).

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the surgical treatment of patients with skull base diseases.

OBJECTIVES FOR COGNITIVE GOAL 4:

- Describe the indications, risks, and potential complications of anterior approaches to the skull base including the craniofacial approach, midface degloving approach, and transbasal approach.
- Describe the indications risks, and potential complications of lateral approaches to the skull base including the infratemporal fossa approaches, middle fossa approach, and orbitocraniozygomatic approach.
- Describe the indications, risks, and potential complications of posterior approaches to the skull base including the translabyrinthine approach, transcochlear approach, retrosigmoid approach, petrosal approach, and transcondylar/far lateral approach.

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the perioperative and postoperative management of patients with skull base diseases.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Discuss the principles and application of intraoperative patient positioning, head fixation, stereotactic intraoperative monitoring, lumbar drainage, cranial nerve monitoring.
- Discuss postoperative lumbar drain management, neurological assessment, diet and activity, clinical pathways, physical therapy, and vestibular rehabilitation.
- Discuss the evaluation and management of postoperative complications including cranial nerve paralysis, intracranial bleeding, and cerebrospinal fluid fistulae.

NON-COGNITIVE (AFFECTIVE AND PSYCHOMOTOR) GOAL 1:

Become more efficient in the clinic and operating room, and learn how to successfully build your practice.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

Efficiently run a clinic, set up rooms, and staff rooms.

Efficiently communicate with referring doctors.

Efficiently set up and run an operating room.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

A. CHIEF PEDIATRIC AND OTOTOLOGY ROTATION (continued)

TECHNICAL (PSYCHOMOTOR) GOAL 1(ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase surgical skills required for the treatment of patients with skull base diseases.

OBJECTIVES FOR TECHNICAL GOAL 1:

- Display proficiency in the technical performance of anterior approaches to the skull base including the craniofacial approach, midface degloving approach, and transbasal approach.
- Display proficiency in the technical performance of lateral approaches to the skull base including the infratemporal fossa approaches, middle fossa approach, and orbitocraniozygomatic approach.
- Display proficiency in the technical performance of the translabyrinthine approach, transcochlear approach, retrosigmoid approach, petrosal approach, and transcondylar/far lateral approach.
- Display proficiency in performing an intact canal wall tympanomastoidectomy, canal wall down tympanomastoidectomy, labyrinthectomy, decompression of the sigmoid sinus, and retrosigmoid craniotomy.

REFERENCES:

- Atlas of Human Anatomy, Edited by FE Netter, 1989, Ciba-Geigy Corp, New Jersey.
- Complications in Otolaryngology – Head and Neck Surgery, Volume 1, Ear and Skull Base, Edited by RJ Wiet and BJ Cause, 1986, BC Decker.
- Controversies in Otolaryngology, Edited by ME Pensak, 2001, Thieme, New York.
- Head and Neck Surgery - Otolaryngology, Edited by BJ Bailey et al, 1993, JB Lippincott Co, Philadelphia.
- Neurotology, Edited by RK Jackler and DE Brackman, 1994, Mosby, St. Louis.
- Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 5, 2000, Mosby, St Louis.
- Practical Management of the Dizzy Patient, Edited by J.A. Goebel, 2001, Lippincott, Williams, & Wilkins, Philadelphia.
- Microsurgery of the Skull Base, Edited by Fisch HE, and Mattox DM, 1988, Thieme.
- Surgery of the Ear, Edited by ME Glasscock and GE Shambaugh, 2002, WB Saunders, Philadelphia.
- The External Ear, Edited by FE Lucente, W Lawson, NL Novick, 1995, WB Saunders, Philadelphia.
- The Facial Nerve, Edited by Mark May, 2002, WB Saunders, Philadelphia.
- The Otology and Neurotology Journal, Edited by Jackler

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION

This rotation is 4 months in duration at Loyola University Medical Center. The resident is the chief of the service and is responsible for all patient care activities. He/she runs the service, teaches other residents and medical students, determines resident coverage of cases and clinic, and runs the tumor board conference. At the completion of this rotation, the resident should have a thorough understanding of the following areas and be able to demonstrate the following skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the etiology, pathogenesis, and epidemiology of head and neck carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 1:

Assess general biologic principles pertaining to the development (carcinogenesis) and growth (tumorigenesis) of benign and malignant head and neck tumors including:

- Describe the cell cycle and the multi-step carcinogenesis model, and discuss the role of environmental, toxic and viral agents in head and neck carcinogenesis
- Discuss the geographic, gender and population based disparities in particular varieties of head and neck tumors.
- Recognize and recall the American Joint Commission on Cancer (AJCC) staging paradigms for all head and neck cancers
- Describe the preoperative evaluation of patients presenting for therapy of malignant head and neck tumors including an understanding of relevant comorbidities and their potential impact on recovery, and the cost effective preoperative assessment including appropriate use of consultations, imaging studies and antibiotics.
- Discuss potential surgical and non-surgical complications of the treatment of head and neck malignancies.

COGNITIVE GOAL 2 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in fundamental head and neck pathology.

OBJECTIVES FOR COGNITIVE GOAL 2:

- Review principles of microscopic tissue examination; discuss indications and contraindications for fine needle aspiration biopsy and open biopsy of head and neck tumors.
- Discuss the role of immunohistochemistry and molecular pathology in diagnosing head and neck cancer.
- Contrast the histological heterogeneity of the thyroid and parathyroid, salivary glands, mandible, maxilla, odontogenesis, mesenchymal tissues of the craniofacial skeleton, temporal bone, and laryngo-tracheal framework.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the radiographic evaluation of head and neck tumors.

OBJECTIVES FOR COGNITIVE GOAL 3:

At the end of the rotation, residents will have a clinically useful knowledge base in each of the following areas:

The radiographic anatomy of the craniofacial skeleton and specialized tissues of the head and neck.

The basic principles and indications for plain radiographs, computed tomography scans, and magnetic resonance images in the evaluation of head and neck tumors.

The role of functional barium examination of the upper aerodigestive tract in the evaluation of patient pre- and post- treatment of head and neck malignancies.

The basic principles and indications for specialized nuclear medicine studies including lymphatic mapping and positron emission tomographic scanning.

COGNITIVE GOAL 4 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the oral cavity and pharynx.

OBJECTIVES FOR COGNITIVE GOAL 4:

Describe the relevant anatomy including all subdivisions, boundaries, and contents of the oral cavity and pharynx (nasopharynx, oropharynx, hypopharynx).

Discuss the elements of the physical examination critical to the diagnosis of oral cavity and pharyngeal malignancies obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of oral and pharyngeal malignancies, understand important potential treatment related complications.

Discuss rationale and principles of the nonsurgical therapy of nasopharyngeal carcinoma.

List the staging of oral cavity and pharyngeal cancer.

Describe predictable patterns of lymphatic metastasis.

Explain the normal physiology of swallowing and the impact of cancer therapy on swallowing function.

Discuss fundamentals of surgical extirpation of oral cavity and pharyngeal carcinoma with particular attention to surgical approaches to these tumors, principles of mandibular preservation in the surgical treatment of oral carcinoma, and fundamentals of soft tissue reconstruction.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

COGNITIVE GOAL 5 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the larynx.

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the relevant anatomy including all subdivisions, boundaries, and contents of the larynx (supraglottic, glottic, subglottic).
- Discuss the elements of the physical examination critical to the diagnosis of laryngeal malignancies obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of laryngeal carcinoma.
- Describe important potential treatment related complications including fistulae, dysphagia, hoarseness, voice change, and airway obstruction.
- Discuss rationale and principles of the nonsurgical therapy of laryngeal carcinoma.
- Recall the staging of laryngeal cancer.
- Identify predictable patterns of lymphatic metastasis.
- Describe the normal physiology of phonation and the impact of cancer therapy on phonatory function.
- Discuss fundamentals of surgical extirpation of laryngeal carcinoma including:
 - Endoscopic versus open techniques.
 - Principles of laryngeal preservation in the surgical treatment of laryngeal carcinoma.
 - Prevention and management of tracheostomal recurrence.

COGNITIVE GOAL 6 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with salivary gland carcinoma.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Describe the relevant anatomy of the major and minor salivary glands including all subdivisions, boundaries, and contents of the pertinent anatomical spaces in the head and neck.
- Discuss the elements of the physical examination critical to the diagnosis of salivary gland malignancies and interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management.
- Describe important potential treatment related complications including cranial nerve paresis and xerostomia.
- Describe inherent biological differences in the behavior of malignancies arising in the major and minor salivary glands and rationale and principles of the nonsurgical therapy of salivary gland carcinoma.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Recall the staging of salivary gland cancer.

Review predictable patterns of lymphatic metastasis and the rationale for neck dissection.

Describe the normal physiology of the production of saliva, salivary flow and the sequellae of xerostomia.

Review fundamentals of surgical extirpation of salivary gland carcinoma.

Compare important differences in biologic behavior between the different histologies of the salivary gland malignancies

Summarize indications for facial nerve resection.

Review indications and techniques for the various forms of static and dynamic facial rehabilitation

COGNITIVE GOAL 7 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cervical lymph node metastases.

OBJECTIVES FOR COGNITIVE GOAL 7:

Describe the relevant anatomy of the neck including all subdivisions, boundaries, and contents of the Memorial Sloan-Kettering Cancer Center classification of the compartments of the neck.

Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.

Obtain and accurately interpret appropriate imaging studies.

Develop and implement a correct plan for surgical and non-surgical management of neck and subclinical neck disease.

Outline the role and limitations of fine needle aspiration biopsy in the evaluation of a metastatic neck mass.

Discuss the principles, indications, and limitations of sentinel node biopsy of head and neck malignancies.

Define the staging of cervical node metastasis.

Discuss the algorithm for the systematic evaluation of the occult cervical lymph node metastasis.

Discuss predictable patterns of lymphatic metastasis and the rationale for neck dissection in all sites of the head and neck.

Describe the complications and consequences of the radical, modified radical and selective neck dissections.

COGNITIVE GOAL 8 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cutaneous neoplasms of the head and neck.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 8:

- Describe the relevant histology of the skin as it relates to the development of the various types of cutaneous malignancies.
- Discuss the elements of the physical examination critical to the diagnosis of cervical node metastasis.
- Obtain and accurately interpret appropriate imaging studies.
- Formulate and implement a correct plan for surgical and non-surgical management of cutaneous malignancies.
- Summarize the indications and limitations for the various types of biopsy of cutaneous malignancies (shave, excisional, incisional, punch).
- Distinguish the principles, indications, and limitations of sentinel node biopsy and Moh's micrographic excision of head and neck malignancies.
- Recall staging of cutaneous malignancy, particularly the staging of melanoma.
- Summarize the indications and goals of elective and therapeutic neck dissection in the management of cutaneous malignancies.
- Compare the basic principles and options for the reconstruction of partial thickness, full thickness, and through-and-through cutaneous defects of the head and neck including basic geometries of local flaps.

COGNITIVE GOAL 9 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the paranasal sinuses and skull base.

OBJECTIVES FOR COGNITIVE GOAL 9:

- Describe the relevant anatomy of the paranasal sinuses and the related anterior and middle cranial base.
- List the elements of the physical examination critical to the diagnosis of carcinoma of the paranasal sinuses and skull base including epidemiological and etiologic factors.
- Obtain and correctly interpret appropriate imaging studies including radiological evaluation of the carotid circulation and endovascular interventions as necessary.
- Develop and implement a correct plan for surgical and non-surgical management of paranasal sinus and skull base malignancies.
- Explain the indications and limitations for the various types of biopsy of malignancies of the skull base and paranasal sinuses (endoscopic, excisional, incisional).
- Recall the staging of malignant tumors of the paranasal sinuses.
- Describe the biologic heterogeneity of paranasal sinus and skull base malignancies and how biology dictates management principles.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

Describe oncologic concepts critical and unique to the surgical management of paranasal sinus malignancies including management of the orbit, craniofacial skeleton, and dura.

Discuss the differential diagnosis and management of tumors involving the parapharyngeal space and infratemporal fossa.

Discuss fundamental concepts of reconstruction of paranasal sinus and skull base defects including oronasal separation, restoration of mastication, protection of the dura, and restoration of acceptable aesthetics.

COGNITIVE GOAL 10 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge in the evaluation and management of patients with cancer of the temporal bone.

OBJECTIVES FOR COGNITIVE GOAL 10:

- Recall the relevant anatomy of the ear and temporal bone.
- Identify elements in the history and physical examination critical to the diagnosis of temporal bone cancer.
- Obtain and accurately interpret appropriate imaging studies.
- Develop and implement a correct plan for surgical and non-surgical management of temporal bone cancer.
- Recall staging of malignant tumors of the ear and temporal bone.
- Distinguish oncologic concepts critical and unique to the surgical management of temporal bone malignancies including management of the facial nerve, middle ear and auditory apparatus, and dura.
- Justify rationale for the treatment of loco-regional lymphatics including the roles of parotidectomy and neck dissection.

COGNITIVE GOAL 11 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase knowledge of principles of radiation oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 11:

- Describe the fundamental principles of radiation oncology as they relate to the primary and/or adjuvant treatment of malignant head and neck tumors.
- Discuss basic principles of radiation physics.
- Outline differences between electromagnetic and particle irradiation.
- List radiation effects on living tissues and describe the concept of the absorbed dose.
- Discuss fundamental concepts of radiation biology including mechanisms of cell killing, radiation effects on cell cycle, and dose response curves.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

- Describe the major factors affecting the radiation sensitivity of various tissues.
- Discuss basic differences in dose fractionation and their biologic bases.
- Contrast current advances in radiation oncology used in the combined modality treatment of patients with advanced stage malignant head and neck tumors, including conformal and intensity-modulated radiotherapy, radiosensitizing chemotherapy, and target combined modality therapy.

COGNITIVE GOAL 12: (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING):

Increase knowledge of principles of medical oncology of the head and neck.

OBJECTIVES FOR COGNITIVE GOAL 12:

Describe the basic principles of medical oncology as they relate to the treatment of patients with malignant head and neck tumors.

Recall the cell cycle and the events occurring in each phase.

Discuss differences between induction, primary (neoadjuvant), and adjuvant chemotherapy.

Explain the basic classes of chemotherapeutic agents used in treating patients with head and neck cancer and the general cell cycle effects of each, including antitumor alkylating agents, cisplatin and analogues, antimetabolites, topoisomerase inhibitors and DNA intercalation, and antimicrotubule agents.

Discuss concepts of systemic agents used to enhance (sensitize) the local effects of radiation therapy.

Compare the principles of surgical and nonsurgical palliation and identify the integral role of the medical oncologist the management of patients with end stage and unresectable head and neck cancer.

COGNITIVE GOAL 13 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING): Increase knowledge of principles of outcomes assessment as they apply to patients with head and neck cancer.

OBJECTIVES FOR COGNITIVE GOAL 13:

- Describe the basic principles of the assessment and reporting on the results of treatment of patients with malignant head and neck tumors.
- Identify the principal differences between Phase I, II, and III clinical trials.
- Discuss differences in levels of evidence included in various clinical studies.
- Contrast the strengths and weakness of the following methods of results reporting including co-morbidity scores, retrospective chart reviews, quality of life scales, prospective clinical trials, industry sponsored trials, and oncologic results reporting.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

NON-COGNITIVE (AFFECTIVE) GOAL 1 (ACGME COMPETENCIES INTERPERSONAL AND COMMUNICATION SKILLS, PROFESSIONALISM, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Develop an understanding of the profound social stresses that life-threatening conditions place on patients and their families, and an appreciation of the manifestations of such stress.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

- Describe a variety of coping reactions that are commonly employed by patients with life-threatening illnesses.
- Discuss an appropriate therapeutic response for each of the common coping reactions that are employed by patients with life-threatening illnesses.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING, AND SYSTEMS-BASED LEARNING AND IMPROVEMENT): Increase skill in advanced head and neck oncological procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

At the completion of this rotation, the resident will be able to efficiently perform the following cervical procedures:

- Cervical lymphadenectomy – radical, modified, and suprahyoid.
- Maxillectomy.
- Thyroidectomy.
- Composite resection.
- Hemi, supracricoid, and total laryngectomy
- Hemiglossectomy/glossectomy
- Floor of mouth resection
- Endoscopic resection of nasal and oropharyngeal cancers
- Anterior Craniofacial Resection.
- Thyroplasty

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

B. HEAD AND NECK SURGICAL ONCOLOGY ROTATION (continued)

REFERENCES:

- Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1 & 2, J. B. Lippincott Company 1993.
- Cancer of the Head and Neck (Fourth Edition), Myers, EN, , Suen JY, Myers JN, Hanna EYN, Saunders Company, Philadelphia, 2003
- Management of Head and Neck Cancer (second edition), Million RR, Cassisi NJ, JB Lippincott, Philadelphia, 1994
- Head and Neck Surgery and Oncology (Third edition), Shah J, Mosby, Philadelphia, 2003
- Decision Making in Ear, Nose and Throat Disorders. Alper, Myers, Eibling. W. B. Saunders Company, Philadelphia, 2001.
- Complications in Head and Neck Surgery. David W. Eisele. Mosby Year Book, 1993.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

C. SINUS AND ALLERGY ROTATION

This two-month rotation focuses on the evaluation and management of patients with medical and surgical diseases of the nose, nasal cavity, paranasal sinuses, and related structures. At the completion of this rotation, the resident should have the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in the evaluation and management of patients with sinonasal diseases:

OBJECTIVES FOR COGNITIVE GOAL 1:

- Describe the surgical anatomy and physiology of the nose, nasal cavity, nasal sinuses, nasopharynx, and related structures.
- Discuss the epidemiology, differential diagnosis, and pathophysiology of nasal diseases (congenital, inflammatory, infectious, neoplastic, traumatic, iatrogenic).
- Describe the various diagnostic radiological tools for imaging of the nose and paranasal sinuses:
 - Distinguish the differences between plain tray films, CT scanning, and MRI imaging.
 - Recognize normal radiological findings versus pathological findings.
 - Discuss the indications for and application of imaging studies in the evaluation and management of patients with nasal diseases.
- Assimilate the medical history, physical examination, endoscopic examination, and radiological studies in developing a diagnosis and differential diagnosis.
- Describe current medical treatment of nasal diseases:
 - Describe appropriate medical therapy for acute and chronic rhinosinusitis based on current clinical outcomes research and data.
 - Discuss the limitations, combinations, pharmacology and complications of medical therapy including nasal decongestants, nasal steroids, antibiotics, and oral steroids.
 - Discuss alternatives to medical treatment
 - Discuss the role of alternative medical treatments
 - Discuss the role of factors such as smoking, allergies, and immunosuppression and their effect on sinonasal diseases.
 - Discuss indications for medical therapy and its duration.
 - Discuss the indications for surgical treatment and its extent.

COGNITIVE GOAL 2 (ACGME COMPETENCY PATIENT CARE, MEDICAL KNOWLEDGE, AND PRACTICE-BASED LEARNING): Increase skill in understanding the role of surgery in the treatment of sinonasal diseases.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

C. SINUS AND ALLERGY ROTATION (Continued)

OBJECTIVES FOR COGNITIVE GOAL 2:

Describe the indications for and potential complications of sinonasal procedures including:

Caldwell Lac.

Endoscopic control of epistaxis.

Open and endoscopic septoplasty.

Maxillary Antrostomy.

Anterior /Posterior/Complete Ethmoidectomy.

Sphenoidotomy.

Open and Endoscopic Frontal Sinus Surgery.

Endoscopic Orbital Decompression.

Endoscopic Optic Nerve Decompression.

Discuss co-morbidities and contraindications for nasal and sinus surgery.

Describe changes that can occur in the anatomy and physiology of the nasal cavity and paranasal sinuses in the postoperative period.

Identify, discuss, and communicate to patients the potential complications and risks of nasal and sinus surgery.

Discuss the timely recognition and treatment of complications of nasal and sinus surgery, including epistaxis, orbital injury, and intracranial penetration.

Discuss medical legal implications of performing nasal and sinus surgery and practice appropriate documentation.

COGNITIVE GOAL 3 (ACGME COMPETENCY MEDICAL KNOWLEDGE):

Increase knowledge of the anatomic structures responsible for smell and taste.

OBJECTIVES FOR COGNITIVE GOAL 3:

Describe the anatomy of the olfactory epithelium, olfactory bulb, taste bud, and intracranial connections.

Discuss the input for olfactory, trigeminal, glossopharyngeal, and vagus nerves.

Describe the role of olfactory mucus and saliva.

COGNITIVE GOAL 4 (ACGME COMPETENCY MEDICAL KNOWLEDGE):

Increase knowledge of the pathophysiology of smell and taste.

OBJECTIVES FOR COGNITIVE GOAL 4:

Describe the airflow patterns in the nose.

Discuss olfactory and gustatory transduction and coding.

Discuss olfactory and gustatory cognition.

COGNITIVE GOAL 5 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of the etiology of taste and smell disorders.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

C. SINUS AND ALLERGY ROTATION (Continued)

OBJECTIVES FOR COGNITIVE GOAL 5:

- Describe the most common causes of olfactory and gustatory disorders and the probable mechanisms of dysfunction.
- Discuss the role of sinus disease, upper respiratory infection, head trauma, aging, toxic exposure, neoplasm, and medications in smell and taste disorders.

COGNITIVE GOAL 6 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge in the diagnostic workup of taste and smell disorders.

OBJECTIVES FOR COGNITIVE GOAL 6:

- Demonstrate proficiency in obtaining a detailed history in a patient with a smell and taste disorder.
- Demonstrate proficiency in performing an adequate nasal and oral cavity examination to assess these taste and smell disorders.
- Discuss the benefits, limitation, application, and interpretation of various diagnostic tests:
- Describe the difference between threshold testing and identification ability.
 - Discuss the factors affecting olfactory and gustatory testing.
 - Discuss the appropriate time to obtain these tests.
 - Explain the role of radiological evaluation.

COGNITIVE GOAL 7 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge in the treatment of taste and smell disorders.

OBJECTIVES FOR COGNITIVE GOAL 7:

- Describe the role and appropriateness of medical therapy.
- Discuss the indications and contraindications for surgical therapy.
- Explain the anticipated benefits/limits of medical and/or surgical therapy when counseling patients with smell and taste disorders

COGNITIVE GOAL 8 (ACGME COMPETENCIES SYSTEMS BASED PRACTICE AND PRACTICE-BASED LEARNING): Increase skill in understanding outcomes assessment.

OBJECTIVES FOR COGNITIVE GOAL 8:

- Discuss the basic principles of the assessment and reporting of results in treatment of nasal and sinus disorders.
- Describe current literature results in nasal and sinus disorders and their treatment.
- Differentiate current medical therapies for sinus diseases and their effect on quality of life.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

C. SINUS AND ALLERGY ROTATION (Continued)

Describe the different types of outcome assessment.
Apply outcomes assessment to practitioner database.

TECHNICAL (PSYCHOMOTOR) GOAL 1: (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase office endoscopy skills and postoperative endoscopic management skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

Anesthetize the nasal cavity of the clinic patient for examination and postoperative debridement.
Perform endoscopic office procedures in patients in the clinic.

TECHNICAL (PSYCHOMOTOR) GOAL 2 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the performance of common and complex sinonasal procedures.

OBJECTIVES FOR TECHNICAL GOAL 2:

At the completion of this procedure, the resident will be able to safely perform as first assistant and surgeon the following sinonasal procedures:

- Caldwell lac.
- Turbinate resection and cautery.
- Endoscopic control of epistaxis.
- Open and endoscopic septoplasty.
- Maxillary antrostomy.
- Anterior and posterior ethmoidectomy.
- Sphenoidotomy.
- Open and endoscopic frontal sinus procedures.
- Endoscopic biopsies of skull base lesions.
- Endoscopic management of paranasal neoplasms.
- Endoscopic orbital decompression.
- Endoscopic optic nerve decompression.
- Endoscopic repair of CSF rhinorrhea.
- Placement and use of intraoperative navigation equipment.

NON-COGNITIVE (AFFECTIVE) GOAL 1(ACGME COMPETENCY INTERPERSONAL AND COMMUNICATION SKILLS): Increase communication skills with patients and other health care providers.

OBJECTIVES FOR NON-COGNITIVE GOAL 1:

Answer patient clinical and surgical questions.
Perform appropriate informed consent.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

C. SINUS AND ALLERGY ROTATION (Continued)

Order appropriate consultations from ophthalmology and neurosurgery when managing patients with nasal pathology involving the eye and cranium.

REFERENCES:

Stammberger, H. Endoscopic diagnosis and treatment of the nose and sinuses, latest ed.

Byron J. Bailey – Head & Neck Surgery – Otolaryngology. Jonas T. Johnson, Robert I. Kohut, Harold C. Pillsbury, III, M. Eugene Tardy, Jr. Volume 1-4, J. B. Lippincott Company, 1993.

Otolaryngology – Head and Neck Surgery, Edited by ME Cummings et al, Volume 1-4, Mosby, St Louis, 2000.

Lore J. Atlas of Otolaryngology Surgery, latest edition

Yanigasaawa, E., Christmas E. et. al. Powered Endoscopic Nasal and Sinus Surgery.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

D. PLASTICS AND RECONSTRUCTIVE SURGERY ROTATION

This one-month rotation focuses on the reconstruction of head and neck defects, as well as trauma, and facial cosmetic surgery. At the completion of this rotation, the residents will have the following knowledge and skills:

COGNITIVE GOAL 1 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of soft tissue reconstruction.

OBJECTIVES FOR COGNITIVE GOAL 1:

Understand the management of a variety of defects ranging from traumatic injury to defects secondary to tumor ablation.

Assess size, depth and types of tissue lost in each case and decide the reconstructive options based on this assessment.

Explain the benefits and limitations of skin grafts (including STSG, FTSG and dermal grafts), composite grafts (including auricular grafts), regional flaps (including Z plasty, rhomboid and other rotation flaps), axial flaps (including fascial flaps such as temporoparietal, fasciocutaneous flaps such as deltopectoral and paramedian forehead, myofascial and musculocutaneous flaps such as pectoralis major, trapezius, sternocleidomastoid, latissimus dorsi and platysma) and free tissue transfer (including the trapezius system, scapula, forearm, rectus abdominus, iliac crest and fibula).

Describe the harvest technique for the above named flaps.

COGNITIVE GOAL 2 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT): Increase knowledge of bony reconstruction.

OBJECTIVES FOR COGNITIVE GOAL 2:

Become proficient at the management of a variety of bony defects resulting from different insults, including trauma and tumor extirpation.

Assess the extent, type and location of bony injury. This includes assessment of bone loss, injury to adjacent structures (e.g. frontal sinus fractures that involve the nasofrontal duct), location and extent of midface and mandible fractures

Discuss the reconstructive options depending on the defect (e.g. lateral vs. anterior mandibular defects).

Describe the defect in standard anatomic terms.

Discuss the use and limitations of alloplastic material, free bone grafts and vascularized free bone.

Explain the setup, sizing and use, and limitations of various plating systems, including miniplates, mesh materials, compression plates, reconstructive plates, osseointegrated systems, absorbable plates and external fixators.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

D. PLASTICS AND RECONSTRUCTIVE SURGERY ROTATION (continued)

COGNITIVE GOAL 3 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of cranial base reconstruction:

OBJECTIVES FOR COGNITIVE GOAL 3:

Become proficient at the management of defect requiring reconstruction of the skull base and protection of the dura.

- Assess the extent of the defect and determine if dura will be exposed to the aerodigestive tract.

- Describe the reconstructive options including pericranial flap, free bone grafts, alloplastic material and free tissue transfer.

- Discuss the harvest techniques, limitations, and complications of the above named flaps.

COGNITIVE GOAL 4 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of oral cavity and sinus reconstruction:

OBJECTIVES FOR COGNITIVE GOAL 4:

Become proficient at the management of defects including those in which the oral cavity and sinonasal cavity communicate.

- Assess the size and extent of the defect, including involvement of surrounding structures such as the orbit

- Describe the reconstructive options including the use of dental obturators; local flaps, pedicled flaps and free tissue transfer, including the limitations and advantages of each.

COGNITIVE GOAL 5 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of maxillofacial reconstruction:

OBJECTIVES FOR COGNITIVE GOAL 5:

Become proficient at the management of defects including portions of the face, including the orbit, midfacial skeleton and/or skin and soft tissue of the face.

- Assess the defect including the type of tissue lost and the extent of loss

- Discuss the reconstructive options including prosthetics, local flaps, pedicled flaps and free tissue transfer, including the benefits and limitations of each.

COGNITIVE GOAL 6 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of laryngopharyngeal reconstruction:

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

D. PLASTICS AND RECONSTRUCTIVE SURGERY ROTATION (continued)

OBJECTIVES FOR COGNITIVE GOAL 6:

Increase knowledge in the management of defects resulting from total laryngectomy +/- partial pharyngectomy as well as that resulting from total laryngopharyngectomy.

- Describe the limitations and benefits of the different reconstructive options including formation of a pharyngostome and esophagostome with delayed reconstruction, pedicled flap and free tissue transfer.

COGNITIVE GOAL 7 (ACGME COMPETENCIES MEDICAL KNOWLEDGE AND PATIENT CARE): Increase knowledge of free tissue transfers.

OBJECTIVES FOR COGNITIVE GOAL 7:

- Describe the benefits and limitations of free tissue transfer.
- Explain the harvest techniques for a variety of flaps, including the trapezius system, scapula, latissimus dorsi, rectus abdominus, radial forearm and fibula.
- Discuss the defects resulting from the above-mentioned flaps, and the possible complications and their management.
- Describe the technique of microvascular anastomosis

COGNITIVE GOAL 8 (ACGME COMPETENCIES MEDICAL KNOWLEDGE, PATIENT CARE, AND PRACTICE-BASED LEARNING): Increase knowledge of complications of head and neck reconstruction.

OBJECTIVES FOR COGNITIVE GOAL 8:

- Explain the evaluation and management of complications resulting from resulting reconstruction of head and neck defects.
- Recognize and assess the extent of wound breakdown, including the involvement of surrounding vital structures such as the great vessels.
- Assess whether infection is significant in the complication, understand appropriate culture technique and select appropriate antibiotics.
- Describe the options for wound care, including the use of dressings and closure by secondary intention, local flaps, pedicled flaps, and free tissue transfer.

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCIES PATIENT CARE AND MEDICAL KNOWLEDGE): Increase skill in the performance of head and neck reconstructive procedures.

OBJECTIVES FOR TECHNICAL GOAL 1:

- Perform basic skin grafting.
- Perform pedicled flap transfers including pectoralis major, trapezius, and latissimus dorsi.
- Assist in the performance of various free tissue transfers, including trapezius, scapula, latissimus dorsi, rectus abdominus, radial forearm, and fibula

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

D. PLASTICS AND RECONSTRUCTIVE SURGERY ROTATION (continued)

REFERENCES:

- Cummings ME, et al. Atlas of Access and Reconstruction in Head and Neck Surgery.
Mosby, 1992.
- Converse JM, Plastic and Reconstructive Surgery, Second Edition, W.B Saunders,
1977.
- McCarthy JG, Plastic Surgery, W.B. Saunders, 1990.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

E. ELECTIVE ROTATION

This rotation is designed to allow the resident to spend one month pursuing an area of Otolaryngology in which he/she has a special interest. Residents will submit goals and objectives for this rotation before beginning the rotation, and will be evaluated at the end of this rotation on the accomplishments of these goals by the instructor he/she has arranged this rotation with.

VIII. FIFTH YEAR (CHIEF) RESIDENT (PGY-5, OTO-4)(continued)

F. TEMPORAL BONE DISSECTION COURSE

This weekly course meets on Tuesday afternoons (September through March). Didactic and surgical instruction occur in graduated fashion. This is the fourth year that the resident has taken this course. He/she should understand the basic anatomy and surgical principles. The focus is on mastering the surgical anatomy and surgical procedures. The goals and objectives are as follows:

TECHNICAL (PSYCHOMOTOR) GOAL 1 (ACGME COMPETENCY MEDICAL KNOWLEDGE): Increase otological surgical skills.

OBJECTIVES FOR TECHNICAL GOAL 1:

At the completion of this course, the resident should demonstrate the proficiency in performing the following procedures in cadaveric temporal bones:

- Intact canal wall mastoidectomy.
- Facial recess approach.
- Extended facial recess approach.
- Endolymphatic sac decompression.
- Canal wall down mastoidectomy.
- Labyrinthectomy.
- Internal Auditory Canal Exposure.
- Transmastoid exposure of the carotid artery and jugular bulb.
- Transmastoid facial nerve decompression.
- Lateral Temporal Bone Resection.
- Middle Fossa Approach.
- Ossiculoplasty/Stapedectomy

MEASUREMENT OF GOALS:

- Attendance will be taken.
- The resident will be observed performing the above procedures.
- The resident will be graded performing the above procedures (pass or unsatisfactory).
- The resident will not be allowed to proceed to the next surgical procedure until demonstrating proficiency in the current procedure.

REFERENCE:

Surgery of the Ear, Edited by ME Glasscock, and GE Shambaugh, 2002, WB Saunders, Philadelphia.