

OTO-1 YEAR OVERVIEW: NAVAL MEDICAL CENTER (PGY-1 / INTERNSHIP)

A first year resident (Otolaryngology Intern) spends the year rotating on Residency Review Committee (RRC) required rotations at Naval Medical Center, San Diego, and trauma rotations at Scripps Mercy Hospital Level 1 Trauma Center. For the academic year 2005-06, the rotations consist of thirteen 28-day rotations, comprised of 3 rotations Otolaryngology, 2 rotations Plastic Surgery, 1 rotations Trauma/ICU, 1 rotation Pediatric Surgery, 1 rotation Anesthesia, 1 rotation Neurosurgery, 1 rotation Vascular Surgery, 1 rotation Cardiothoracic, 1 rotation Emergency Room, and 1 rotation OrthoTrauma. The rotations at this institution, Naval Medical Center, San Diego, as well as the Trauma experience at Scripps Mercy Hospital, provide a well-rounded basic surgical experience under the guidance of the Otolaryngology Program Director.

The above listed rotations provide an initial experience in diagnosis and treatment of adult and pediatric surgical patients. They include experience in traditional outpatient clinical delivery of surgical care, inpatient care, care of patients in an intensive care unit (SICU) setting, as well as operative experience as second or first assistant on a variety of operative procedures. Building on the solid general fund of basic science and clinical knowledge that was acquired in medical school, principles of diagnosis and treatment are taught progressively and continuity of care is emphasized. The otolaryngology intern will be supervised and instructed by staff surgeons and more senior residents. When more senior residents are present on the service, a hierarchical system will prevail, with the interns and junior residents reporting to the senior resident or chief resident of the surgical team, who in turn reports to the attending staff. It is expected that, until explicitly delegated more authority, the intern will discuss all issues with the chief resident or attending staff. Senior residents and attending surgical staff will be available in a rapid reliable manner. Delegation of authority and responsibility for patient care will increase as the resident demonstrates increased competence in the delivery of safe, effective, and compassionate care. The attending staff of each of the services with whom the intern rotates will formally evaluate each otolaryngology trainee's performance at the end of the rotation. Interns are expected to demonstrate progressive expertise over the course of the year, and be able to take and pass Part 3 of the USMLE in order to progress in training.

Educational Conferences that the OTO-1 residents are required to attend while on the Otolaryngology service include weekly Preoperative Conferences, consisting of a review of all cases for the upcoming week with an in-depth discussion of selected patients including preoperative evaluation, surgical options, surgical approaches, anatomy, complications, postoperative management and related issues. OTO-1 residents, when rotating on the Head and Neck (Blue) team, also attend the weekly multi-specialty Head and Neck Tumor Board. Patients are presented by the Chief Residents and tumor management recommendations are determined in a collaborative manner. Staff representatives from the departments of Oral Maxillofacial Surgery, Hematology/Oncology, Radiation Oncology, Pathology, along with input from Audiology and Speech Pathology assist in developing the plan. OTO-1 residents are also required to attend weekly clinical and basic science lectures on core topics. Basic science lectures include those presented by a PhD audiologist or staff, yearly anatomic lecture/lab session conducted by an anatomical pathologist, head and neck pathology lectures presented in the spring by the staff oral pathologist, and the neuroradiology conference held twice monthly. OTO-1 residents are also required to attend monthly department morbidity and mortality conferences, as well as a monthly Journal Club held jointly with the University of California, San Diego (UCSD) Otolaryngology residency program. The OTO-1 resident also attends the Monthly Grand Rounds at the Veterans Administration Medical Center on the first Friday of the month, and monthly grand rounds at Children's Hospital on the third Friday of the month.

Curriculum Summary

Reading Assignments:

Assigned by the Intern Supervisor for each rotation.

*For Otolaryngology rotations;

Head and Neck Surgery/Otolaryngology by *Bailey, et al. 4th^d ed.*

Chapters: 17, 18, 30, 31, 32, 50, 81, 82, 89

Clinical Conferences:

Journal Club, Preoperative Conference, Tumor Board (when on Head & Neck Team), Morbidity and Mortality Conference, Neuroradiology Conference, Clinical and Basic Science Lecture series, UCSD/VA Grand Rounds, and Children's Hospital Grand Rounds.

For convenience, the goals for the OTO-1 year rotations are divided into three general categories; Cognitive, Non-Cognitive, and Technical. In this schema, Cognitive generally refers to factual information and skills, Technical to kinesthetic or operative skills, and Non-cognitive to affective managerial skills and interpersonal competencies. The ACGME competencies that are mapped to these areas are noted in italics.

Goals

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Otolaryngology –
 - a. Learn (through supervised patient encounters in the otolaryngology outpatient clinics) to perform a complete physical examination of the head and neck in both pediatric and adult patients.
 - b. Learn the diagnosis and management of the broad spectrum of patients presenting to the otolaryngology/head & neck surgical clinic.
2. Plastic Surgery –
 - a. Learn (through supervised patient encounters in the plastic surgery outpatient clinics) to perform an appropriate physical examination of pediatric and adult patients.
 - b. Learn the diagnosis and management of the broad spectrum of patients presenting to the plastic surgery clinic.
3. Trauma/SICU –
 - a. Learn the rapid evaluation and appropriate treatment of the multiple injured patient presenting to the trauma service.
 - b. Learn the inpatient management and common complications associated with traumatic injuries.
 - c. Learn the inpatient management and common complications associated with patients admitted to the SICU.
 - d. Learn the common technical procedures employed to assist patients in the SICU.
 - e.
4. Pediatric Surgery -
 - a. Learn the diagnosis and management of the broad spectrum of patients presenting to the pediatric surgical clinic.
 - b. Learn the inpatient management and especially management issues specific to pediatric patients.
5. Anesthesia –
 - a. Learn the pre-anesthesia evaluation and assessment system used by the anesthesia department.
 - b. Learn the common perioperative administration and management of anesthesia, the important complications, and the routine postoperative management of the post anesthesia patient.
6. Neurosurgery –
 - a. Learn the neurologic evaluation and appropriate inpatient management of the spectrum of patients admitted to the neurosurgical service.
 - b. Learn the preoperative and postoperative management of patients with common neurosurgical conditions
7. Vascular Surgery-
 - a. Learn the evaluation and appropriate inpatient management of the spectrum of patients on the vascular surgery service.
 - b. Learn the preoperative and postoperative management of vascular surgery patients.
8. Ortho-trauma -
 - a. Learn the preoperative and postoperative management of patients with common traumatic orthopedic surgical conditions.
9. Emergency Room
 - a. Learn the assessment and management of common injuries and conditions presenting to the Emergency Department.
 - b. Learn the signs and symptoms of potentially fatal conditions.
10. Cardiothoracic.
 - c. Learn the evaluation and appropriate inpatient management of the spectrum of patients on the CT surgery service.
 - d. Learn the preoperative and postoperative management of CT surgery patients.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning).

1. Develop understanding and appreciation of the importance of networking in the professional environment.
2. Use and become adept with the ACGME on-line Otolaryngology operative database recording system.
3. Develop increased awareness of basic facial expressions (non-verbal communication).

Technical Goals

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain experience in assisting in the operating room.
2. Improve technical expertise in basic procedures required in the management of surgical patients.

Objectives/Cognitive

Objectives for Cognitive Goal 1a: Learn (through supervised patient encounters in the outpatient clinics) to perform a complete physical examination of the head and neck in both pediatric and adult patients. b). Learn the diagnosis and management of the broad spectrum of patients presenting to the Otolaryngology/Head & Neck surgical clinic.

1. Be able to describe the elements of a complete and targeted head and neck history including the patient's:
 - a. chief complaint
 - b. current illness history
 - c. allergies

- d. current medications
 - e. previous operations and hospitalizations
 - f. pertinent social history and cultural background.
 - g. congenital conditions (Apert's , Pierre Robin, Treacher-Collins, etc.)
2. Know how to use fiber optic nasopharyngoscope for nasal and laryngeal evaluation, the microscopic otoscope, and know what normal anatomy looks like with these instruments.
 3. Be able to describe the elements of a complete head and neck outpatient clinical note.
 4. Be able to identify and describe the common anomalies and conditions that are encountered in an otologic examination.
 5. Be able to identify and create an appropriate therapeutic plan for common conditions presenting to the otolaryngology – head and neck outpatient clinic.

Objectives for Cognitive Goal 2: Plastic Surgery: a). Learn (through supervised patient encounters in the Plastic Surgery outpatient clinics) to perform an appropriate physical examination of both pediatric and adult plastic surgical patients. b). Learn the diagnosis and management of the broad spectrum of patients presenting to the Plastic Surgery Clinic.

1. Be able to present a patient's history and the pertinent physical findings, preliminary diagnosis, & proposed management plan to staff in a concise and organized.
2. Be able to identify and create an appropriate therapeutic plan for common conditions presenting to the plastic surgery outpatient clinic.

Objectives for Cognitive Goal 3: Trauma/SICU: a). Learn the rapid evaluation and appropriate treatment of the multiple injured patients presenting to the trauma service. b). Learn the inpatient management and common complications associated with traumatic injuries.

1. Be able to demonstrate the evaluation and resuscitation of the trauma patient using the approach and algorithms taught in Advanced Trauma Life Support. (ATLS).
2. Be able to take and pass the ATLS provider course.
3. Be able to discuss management of acid/base balance.
4. Be able to discuss the use of antibiotics in the surgical patient
5. Be able to discuss the management of wounds, drains, and tubes.
6. Be able to discuss the management of diabetic, alcoholic, and steroid dependent patients.
7. Be able to discuss various blood components and indications for transfusion.

Objectives for Cognitive Goal 4: Pediatric Surgery: a). Learn the diagnosis and management of the broad spectrum of patients presenting to the Pediatric surgical clinic. b). Learn the inpatient management and especially management issues specific to pediatric patients.

1. Be able to present a patient's history and the pertinent physical findings, putative diagnosis, & proposed management plan to senior residents and staff in a concise and organized way.

Objectives for Cognitive Goal 5: Anesthesia: a). Learn the pre-anesthesia evaluation and assessment system used by the anesthesia department. b). Learn the common perioperative administration and management of anesthesia, the important complications, and the routine postoperative management of the post anesthesia patient.

1. Be able to do an anesthesia evaluation and correctly classify a patient using the ASA classification system.
2. Be able to assess a patient's airway using the Mallampatti classification system along with its implications.
3. Be able to discuss the use of intravenous sedation and local and regional anesthesia for ambulatory surgery including the pharmacology of those medications and the management of allergic and toxic reactions.

Objectives for Cognitive Goal 6: Neurosurgery: a). Learn the neurologic evaluation and appropriate inpatient management of the spectrum of patients admitted to the neurosurgical service. b). Learn the preoperative and postoperative management of patients with common neurosurgical conditions.

1. Be able to describe and use the Glasgow Coma Scale (GCS).
2. Know how to perform a complete neurological exam.
3. Know the signs and symptoms of increased intracranial pressure and be able to discuss management options.

Objectives for Cognitive Goal 7: Vascular Surgery: a). Learn the evaluation and appropriate inpatient management of the spectrum of patients on the vascular surgery service. b). Learn the preoperative and postoperative management of vascular surgery patients.

1. Be able to outline the expected perioperative course for common vascular surgery procedures.
2. Be able to enumerate and discuss management of common complications arising in the perioperative period.

Objectives for Cognitive Goal 8: Ortho-Trauma: Learn the preoperative and postoperative management of patients with common Ortho trauma conditions.

1. Be able to discuss fluid management for inpatient surgery patients and calculate fluid and electrolyte management.
2. Be able to discuss the normally functioning coagulation system, as well as common abnormalities (von Willbrand's, Factor IX deficiency, etc.)
3. Be able to discuss the prevention and management of DVT and pulmonary embolus.

Objectives for Cognitive Goal 9: a). Learn the assessment and management of common injuries and conditions presenting to the Emergency Department. b). Learn the signs and symptoms of potentially fatal conditions.

1. Be able to discuss the management of lacerations (e.g. assessment, cleaning, tetanus prophylaxis, closure, suture).
2. Be able to cogently discuss the diagnosis, evaluation, and treatment of cardiac arrhythmias.

Objectives for Cognitive Goal 10: a). Learn the preoperative and postoperative management of patients with common Cardiothoracic conditions.

1. Be able to discuss the management of ventilator assisted breathing.
2. Be able to discuss fluid/blood products management for cardiothoracic patients.
3. Be able to recognize and treat heart arrhythmias appropriately.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Develop understanding and appreciation of the importance of networking in the professional environment.

1. Be able to demonstrate the system (card, computer, etc.) for recording information about professional contacts.
2. Be able to explain how to get a patient admitted to a ward, along with appropriate departments/directorates to notify.

Objectives for Non-Cognitive Goal 2: Use and become adept with the ACGME on-line operative database recording system.

1. Have a log-on and be able to demonstrate a complete, up to date logging of cases for the ACGME's surgical case log.
2. Be able to explain and apply the Otolaryngology Residency Review Committee (RRC) guidelines on primary surgeon, assistant surgeon, and supervisory residents, as well as the details of category assignment (e.g. 50% of case, key portion of case, etc.).

Objectives for Non-Cognitive Goal 3: Develop increased awareness of basic facial expressions (non-verbal communication).

1. Be able to identify 6 basic facial expressions and name the facial muscles used to create them.

Objectives/Technical

Objectives for Technical Goal 1: Gain experience in assisting in the operating room.

1. Be able to suture effectively.
2. Be able to correctly suture a complex laceration using subcuticular sutures and skin sutures.

Objectives for Technical Goal 2: Improve technical expertise in basic procedures required in the management of surgical patients.

1. Be able to place an endotracheal tube
2. Be able to place a chest tube.

Objectives for Technical Goal 3: Gain experience in basic otolaryngologic surgical procedures.

1. Be able to perform tonsillectomies in the adult patient.
2. Be able to place tympanostomy tubes.

OTO-2 YEAR OVERVIEW: NAVAL MEDICAL CENTER

A second year resident (OTO-2) spends nine months at Naval Medical Center, San Diego (NMCS D). Approximately four and one half months are spent rotating on the Otolaryngology Head & Neck/General team and four and one half months rotating on the Otolaryngology Otolaryngology/Pediatrics/Telemedicine team. In addition, the resident rotates for three months at the nearby Children's Hospital, San Diego. The Head & Neck/General team has clinic on Monday and Thursday and operating rooms on Tuesday and Wednesday. The Otolaryngology/Pediatrics team has clinic on Tuesday and Wednesday and operating rooms on Monday and Thursday. On most Tuesday mornings, the OTO-2 resident conducts the telemedicine clinic with Branch Naval Clinic Lemoore, 29 Palms, or Port Hueneme under the supervision of Darrell Hunsaker, MD.

These rotations provide an initial experience in diagnosis and treatment of adult and pediatric otolaryngology surgical patients. These rotations include experience in traditional outpatient clinical delivery of surgical care, inpatient care, care of patients in an intensive care unit (SICU) setting, as well as initial operative experience as second or first assistant on a variety of operative procedures. Residents also gain a unique experience by conducting a telemedicine clinic under the supervision of an experienced telemedicine expert, Darrell Hunsaker, MD. Residents also gain experience as primary surgeon in basic otolaryngology surgical procedures such as tonsillectomy and tympanostomy tubes. Building on the solid general fund of basic science and clinical knowledge that was acquired during medical school and internship, principles of diagnosis and treatment are taught progressively and continuity of care is emphasized. The otolaryngology resident is supervised and instructed by staff surgeons and more senior residents. When more senior residents are present on the service a hierarchical system prevails, with the interns and junior residents reporting to the senior resident or chief resident of the surgical team, who in turn reports to the attending staff. It is expected that, until explicitly delegated more authority, the junior resident will discuss all

issues with the chief resident or attending staff. Senior residents and attending surgical staff are available in a rapid reliable manner. Delegation of authority and responsibility for patient care increases as the resident demonstrates increased competence in the delivery of safe, effective, and compassionate care. The attending staff formally evaluates each otolaryngology trainee's performance at the end of the rotation using an on-line evaluation program, "MyEvaluations.com".

During the nine months rotating on the Naval Medical Center, San Diego otolaryngology teams, OTO-2 residents are required to attend the weekly NMCS D Preoperative Conferences held Wednesday mornings. The Preoperative conference consists of a review of all cases for the upcoming week with an in-depth discussion of selected patients including preoperative evaluation, surgical options, surgical approaches, anatomy, complications, postoperative management and related issues. OTO-2 residents rotating at the Children's Hospital, San Diego, are excused from the Wednesday morning preoperative conference in order to avoid delay in arriving at the operating rooms at Children's..

OTO-2 residents, when rotating on the Head and Neck/Facial Plastic team, also attend the weekly multi-specialty Head and Neck Tumor Board. Patients are presented by the Chief Residents and tumor management recommendations are determined in a collaborative manner by staff representatives of the departments of Oral Maxillofacial Surgery, Hematology/Oncology, Radiation Oncology, Pathology, along with input from Audiology and Speech Pathology.

OTO-2 residents rotating at both NMCS D and Children's are required to attend weekly conferences, as well as clinical and basic science lectures on core topics on the Friday didactic day. With permission from the NMCS D program director, the Children's resident may be occasionally excused from the lecture for a particularly interesting surgical procedure at Children's Hospital, San Diego. The Friday morning lectures include basic science lectures presented by a PhD audiologist and audiology staff, yearly anatomic lecture/lab session conducted by an anatomical pathologist, head and neck pathology lectures presented by the staff oral pathologist, and a neuroradiology conference held twice monthly on Friday afternoons. OTO-2 residents are also required to attend the monthly department morbidity and mortality conference and a monthly Journal Club held jointly with the University of California, San Diego (UCSD) Otolaryngology residency program. The OTO-2 resident also attends the Monthly Grand Rounds at the Veterans Administration Medical Center on the first Friday of the month, and a monthly grand rounds at Children's Hospital on the third Friday of the month.

OTO-2 residents will read assigned chapters in Head and Neck Surgery/Otolaryngology (Bailey 4th ed) on a weekly basis and memorize the assigned study questions. At the end of the OTO-2 year, a comprehensive promotion exam consisting of the study questions assigned during the year will be used to determine academic readiness for promotion to the next year level.

Curriculum Summary

Reading assignments during this rotation include selected chapters of Bailey's Head and Neck Surgery/Otolaryngology 4th ed; the Home Study Course produced by the American Academy of Otolaryngology – Head and Neck Surgery, articles assigned for review at monthly journal clubs, as well as articles assigned by individual staff for particular cases.

Clinical Conferences:

Journal Club, Preoperative Conference, Tumor Board (when on Head & Neck Team), Morbidity and Mortality Conference, Neuroradiology Conference, Clinical and Basic Science Lecture series, UCSD/VA Grand Rounds, and Children's Hospital Grand Rounds.

Organized Courses:

3-day Temporal Bone surgical dissection course

For convenience, the goals for the OTO-2 year rotations are divided into three general categories; Cognitive, Non-Cognitive, and Technical. In the schema, Cognitive generally refers to factual information and skills, Technical to kinesthetic or operative skills, and Non-Cognitive to affective managerial skills and competencies. *The ACGME competencies that are mapped to these areas are noted in italics.*

Goals for OTO-2 Head & Neck/General Rotation at NMCS D

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Learn to perform a complete head and neck examination.
2. Learn to perform a general and targeted head and neck history and systems review.
3. Learn documentation and coding of history, physical findings, assessments, and treatment plans of otolaryngic conditions in the medical record in an organized and legible manner.
4. Learn the diagnosis and management of a broad spectrum of patients who present to general otolaryngology head and neck clinics.
5. Learn the indications, contraindications, and risks of basic head and neck diagnostic & surgical procedures including alternatives to surgery.
6. Learn the perioperative management of patients receiving surgical treatment for general head and neck conditions.

7. Acquire a basic understanding of the radiological anatomy and abnormal radiological findings associated with general/head and neck conditions.
8. Acquire knowledge in the basic anatomy, physiology, and embryology of the head and neck.
9. Acquire core knowledge in eight specific areas of otolaryngology through book reviews and departmental lectures.

Non-Cognitive Goals

(ACGME Goals: *Interpersonal/Communication; Professionalism, Practice-based Learning*)

1. Develop an understanding and appreciation of the importance of networking in the professional environment and how it can facilitate optimal patient care.
2. Gain increased insight into personal character and temperament and how they impact work.

Technical Goals

(ACGME Goals: *Medical Knowledge, Patient Care*)

1. Gain experience in basic otolaryngology surgical procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Learn (through supervised patient encounters in the outpatient clinics) to perform a complete head and neck examination on adult and pediatric patients.

1. Learn to use fiberoptic nasopharyngoscopy, indirect laryngoscopy, microscopic otoscopy, and pneumatic otoscopy. Also learn how the normal anatomy looks with these instruments.
2. Be able to describe the elements of a complete head and neck outpatient clinical note.
3. Be able to describe common anomalies and conditions that are encountered in the adult and the pediatric head and neck exam.

Objectives for Cognitive Goal 2: Learn to take a general and targeted head and neck history and systems review.

1. Be able to describe the elements of a complete and targeted head and neck history, including the patient's:
 - a) chief complaint
 - b) current illness history
 - c) allergies
 - d) current medications
 - e) previous operations and hospitalizations
 - f) pertinent social history and cultural background
2. Review systems, emphasizing systemic conditions that may affect the head and neck.
3. Be able to conduct a complete and targeted head and neck history and systems review, including the elements that are described above in Objective 2.1.

Objectives for Cognitive Goal 3: Learn to present new and established patients in a concise and focused manner. Be able to present a patient history and the pertinent physical findings, diagnosis, and proposed management plan to staff in a concise and organized way. Learn to present new and established patients to staff in a concise and focused manner.

Objectives for Cognitive Goal 4: Learn the diagnosis and management of a broad spectrum of patients presenting to the general head and neck clinic.

1. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of acute and chronic sinusitis.
2. Know the appropriate medications for sinusitis.
3. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of tonsillitis.
4. Be able to describe the diagnosis and management of sleep disorders in adult patients. Also be able to demonstrate a thorough understanding of sleep studies and their interpretation.
5. Be able to describe the natural history, clinical presentation, evaluation, and general options for treatment of squamous cell cancer of the head and neck.
6. Be able to describe the natural history, clinical presentation, evaluation, and general options for treatment of neck masses.
7. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of epistaxis.
8. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of parotid masses.
9. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of thyroid masses.
10. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of vocal cord paralysis, dysphonia, and dysphagia.

Objectives for Cognitive Goal 5: Learn indications, approaches, contraindications, and risks of basic head and neck surgical procedures as well as alternatives to surgery.

1. Be able to discuss the indications and risks of surgical correction of septal deviation and turbinate hypertrophy; and be able to discuss any alternative(s) to surgery.
2. Be able to discuss the indications and risks of surgical methods for controlling epistaxis; also be able to discuss any alternative(s) to surgery.

3. Be able to discuss the indications and risks of laryngoscopy, bronchoscopy, and esophagoscopy; also be able to discuss any treatment alternative(s).
4. Be able to discuss the indications and risks of parotidectomy; also be able to discuss any treatment alternative(s).
5. Be able to discuss the indications and risks of tracheotomy; also be able to discuss any treatment alternative(s).
6. Be able to discuss the indications and risks of tonsillectomy; also be able to discuss any treatment alternative(s).
7. Be able to discuss the indications and risks of surgery of the upper aerodigestive tract for snoring and obstructive sleep apnea; also be able to discuss any treatment alternative(s).
8. Be able to discuss the indications and risks of radiopalatoplasty, somnoplasty, and uvulopalatoplasty; also be able to discuss any treatment alternative(s).
9. Be able to discuss the indications and risks of functional endoscopic surgery (FESS); also be able to discuss any alternative(s) to surgery.
10. Be able to discuss the indications and risks of thyroidectomy; also be able to discuss any treatment alternative(s).
11. Be able to discuss the indications and complications of rhinoplasty.
12. Be able to draw the five basic surgical modifications that are performed on the nasal tip.
13. Be able to discuss the common surgical variations of otoplasty.
14. Be able to describe the basic repair options that are available for reduction of maxillary and mandibular fractures.
15. Be able to discuss the use of intravenous sedation and local and regional anesthesia for ambulatory surgery including the pharmacology of those medications and the management of allergic and toxic reactions.

Objectives for Cognitive Goal 6: Learn the perioperative management of patients who present to the general head and neck clinic—Be able to outline the expected perioperative course for the common otolaryngology procedures and the indicators of common complications that can arise in the perioperative period. Items to be learned include:

1. tympanostomy tubes
2. bronchoscopy
3. esophagoscopy
4. laryngoscopy
5. thyroidectomy
6. parotidectomy
7. tonsillectomy, adenotonsillectomy, uvulopalatopharyngoplasty, somnoplasty, and radiopalatoplasty
8. endoscopic sinus surgery
9. tracheotomy
10. epistaxis surgery
11. septoplasty & rhinoplasty
12. otoplasty

Objectives for Cognitive Goal 7: Acquire a basic understanding of the diagnostic radiology of the head and neck in adult patients.

1. Be able to identify important the features and landmarks of normal heads and necks of adult and pediatric patients, as seen on:
 - a. lateral neck plain film
 - b. AP neck plain film
 - c. axial/coronal CT scan
 - d. T1/T2 MRI scan
 - e. ultrasound
2. Be able to interpret and describe the classic appearance of sinusitis.
3. Be able to interpret and describe the fracture patterns of the facial skeleton as seen on a CT scan.

Objectives for Cognitive Goal 8: Acquire knowledge in the basic anatomy, physiology, and embryology of the head and neck.

1. Be able to describe the physiology and draw the anatomy of the paranasal sinuses.
2. Be able to describe the physiology and draw the anatomy of the turbinates and septum.
3. Be able to describe the surgical anatomy that is encountered in tonsillectomy.
4. Be able to describe and draw the anatomy of the thyroid and adjacent structures.
5. Be able to describe the normal anatomy of the neck.
6. Be able to describe the anatomy of the parotid.
7. Be able to describe and draw the basic anatomy of the larynx.
8. Be able to draw the anatomy of the trachea and esophagus.

Objectives for Cognitive Goal 9: Acquire core knowledge in eight specific areas of Otolaryngology through book reviews and departmental lectures.

1. Be able to describe the physiology and pathophysiology of the tonsils and adenoids.
2. Be able to describe the physiology and pathophysiology of the larynx.
3. Be able to discuss the physiology and the pathophysiology of the parotid gland.
4. Be able to discuss the physiology and pathophysiology of the thyroid.
5. Be able to discuss the risk factors and etiology of head and neck cancer.
6. Be able to discuss the immunology of head and neck cancer.
7. Be able to describe the physiology, pathophysiology, and etiology of esophageal disorders.

8. Be able to identify and discuss the instrumentation for direct laryngoscopy, esophagoscopy, and bronchoscopy.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Develop an understanding and appreciation of the importance of networking in the professional environment and how it can facilitate optimal patient care.

1. Be able to discuss the rationale for networking in the professional environment.
2. Give examples of networking in the hospital environment.

Objectives for Non-Cognitive Goal 2: Gain increased insight into personal character and temperament and how they impact work.

1. Take the Kiersy-Bates temperament evaluation.
2. Be able to discuss individual type with 3 advantages / 3 disadvantages inherent within that particular type.

Objectives/Technical

Technical Objectives

1. Be able to suture efficiently.
2. Use medical instruments correctly and demonstrate good suturing technique.
3. Be able to correctly close a large wound using deep, subcuticular, and cutaneous sutures or staples.
4. Be able to correctly place a flat suction drain and secure it.
5. Be able to safely perform a tracheotomy.
6. Be able to safely perform an anterior endoscopic ethmoidectomy and opening of the osteomeatal complex.
7. Be able to safely place tympanostomy tubes.
8. Be able to safely perform a tonsillectomy or adenoidectomy.
9. Be able to safely perform a septoplasty.
10. Be able to safely and efficiently drain a peritonsillar abscess.

Goals for OTO-2 Otolaryngology/Pediatrics/Telemedicine Rotation at NMCS

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Learn (through supervised patient encounters in the outpatient clinics) to perform a complete physical examination of the head and neck with emphasis on the otologic aspects of the examination.
2. Learn to perform a complete head and neck evaluation of the pediatric patient.
3. Learn to perform a telemedicine head and neck patient evaluation and the unique aspects of using telemedicine.
4. Learn to present new and established patients to attending staff in a concise and focused manner.
5. Learn the diagnosis and management of the broad spectrum of patients presenting to the pediatric otolaryngology/otology clinic.
6. Learn the indications, contraindications, and risks of basic otologic and pediatric otolaryngology procedures; also learn the alternatives to such procedures.
7. Learn the perioperative management of the patients who present to the otology/pediatric clinic.
8. Acquire a basic understanding of the diagnostic radiology of the head and neck.
9. Acquire knowledge in the basic anatomy of the head and neck.
10. Acquire core knowledge in all areas of Otolaryngology through book reviews and departmental lectures.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Develop understanding and appreciation of the importance of networking in the professional environment.
2. Have a method to record operative experience.
3. Develop increased awareness of basic facial expressions (non-verbal communication).

Technical Goals

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain experience in general otolaryngologic procedures.
2. Gain experience in basic pediatric surgical procedures.
3. Gain experience in middle-ear otologic procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Learn (through supervised patient encounters in the outpatient clinics) to perform a complete physical examination of the head and neck with emphasis on the otologic aspects of the examination.

1. Learn how to use fiberoptic nasopharyngoscopy, indirect laryngoscopy, microscopic otoscopy, and pneumatic otoscopy; also learn how the normal anatomy looks with these instruments.
2. Be able to describe the elements of a complete head and neck outpatient clinical note.

3. Be able to identify and describe the common anomalies and conditions that are encountered in an otologic examination.
4. Be able to interpret an audiogram, and be able to discuss technical aspects of audiogram administration with audiologists (masking dilemma, sound fields).

Objectives for Cognitive Goal 2: Learn to perform a complete head and neck evaluation of the pediatric patient.

1. Be able to describe the elements of a complete and targeted head and neck history including the patient's:
 - a. chief complaint
 - b. current illness history
 - c. allergies
 - d. current medications
 - e. previous operations and hospitalizations
 - f. pertinent social history and cultural background.
 - g. congenital conditions, (Apert's , Pierre Robin, Treacher-Collins, etc)
2. Review systems, emphasizing systemic conditions that may impact care of the head and neck, (von Willbrand's, Factor IX deficiency, etc.).

Objectives for Cognitive Goal 3: Learn to perform a telemedicine head and neck patient evaluation and the unique aspects of using telemedicine.

1. Demonstrate increased clinical acumen in diagnosis and management of patients who present to a general otolaryngology clinic with direct supervision of a staff otolaryngologist in the special setting of telemedicine.
2. Be able to explain the technology of video teleconferencing, including dialing up, using a KODEC unit and the demands of 180 bit secure connecting.
3. Know about bandwidth and the use of ISDN and ATM with the vagaries of public telephone line connections.
4. Be able to complete a consultation note, and coding, including printing out from a customized telemedicine scheduling and recording system.
5. Be able to direct the examiner at the receiving site to manipulate the otoscope and nasopharyngoscope cameras in order to provide a satisfactory otolaryngology examination.

Objectives for Cognitive Goal 4: Learn to present new and established patients to attending staff in a concise and focused manner.

1. Be able to present a patient's history and the pertinent physical findings, putative diagnosis, & proposed management plan to staff in a concise and organized way.

Objectives for Cognitive Goal 5: Learn the diagnosis and management of the broad spectrum of patients presenting to the pediatric otolaryngology/otology clinic.

1. Be able to interpret an auditory brainstem evoked response test (ABR).
2. Be able to interpret an audiogram and a tympanogram.
3. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of otitis media.
4. Know the appropriate medications for acute and chronic otitis media.
5. Be able to describe the evaluation of acute and chronic hearing loss and any treatment option(s).
6. Be able to describe the evaluation of acute and chronic vertigo (e.g., balance tests and their rationale) and the treatment options.
7. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of acute facial nerve palsy.
8. Be able to describe the evaluation of patients with acute / chronic sore throat.
9. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of pediatric sinusitis.
10. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of stridor.
11. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of laryngeal papillomatosis.
12. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of choanal atresia.
13. Be able to describe the evaluation of pediatric patients with neck masses.
14. Be able to describe the evaluation of pediatric patients with airway symptoms.

Objectives for Cognitive Goal 6: Learn the indications, contraindications, and risks of basic general, otologic, and pediatric otolaryngology procedures; also learn the alternatives to such procedures.

1. Be able to describe surgical options for treatment of otitis media, including the indications and risks of surgical options and any alternatives to surgery.
2. Be able to describe the five types of tympanoplasty and their indications.
3. Be able to describe options for reconstruction of absent middle ear ossicles.
4. Be able to describe the various types of mastoidectomy.
5. Be able to discuss the common complications of tympanoplasty and ossiculoplasty.
6. Be able to discuss the indications, and complications of tonsillectomy; be able to discuss the management of postoperative hemorrhage.
7. Be able to discuss the indications and risks of removing laryngeal papillomas and the alternatives to removal.
8. Be able to discuss the indications and risks of surgical correction of choanal atresia; also be able to discuss any treatment alternative(s).

9. Be able to describe the evaluation of pediatric neck masses, diagnostic procedures, indications for special imaging, and surgical approaches for removal.
10. Be able to discuss the use of intravenous sedation and local and regional anesthesia for ambulatory surgery including the pharmacology of those medications and the management of allergic and toxic reactions.
11. Be able to describe and draw the correct design for the bilobe local flap and indicate the appropriate areas for its use.
12. Be able to describe and draw the correct design for the rhombic local flap and indicate the appropriate areas for its use.
13. Be able to describe and draw the correct design for the forehead flap and indicate the appropriate areas for its use.
14. Be able to describe and draw the correct design for the cervico-facial rotation flap and indicate the appropriate areas for its use.
15. Be able to discuss the complications of local flaps.
16. Be able to describe the basic surgical and non-surgical options that are available for reduction of maxillary and mandibular fractures.

Objectives for Cognitive Goal 7: Learn the perioperative management of patients presenting to the otolaryngology clinic. Be able to outline the expected perioperative course for common otolaryngology procedures and indicators of common complications arising in the perioperative period including:

1. tympanostomy tubes
2. tonsillectomy
3. tympanoplasty
4. ossiculoplasty
5. mastoidectomy
6. septoplasty
7. rhinoplasty
8. facial fractures
9. facial flaps
10. lacerations and avulsion repairs

Objectives for Cognitive Goal 8: Acquire a basic understanding of the diagnostic radiology of the head and neck.

1. Be able to identify the important features and landmarks of a normal head and neck on standard:
 - a. axial/coronal CT scan
 - b. T1/T2 MRI scan
 - c. ultrasound
2. Be able to identify the classic presentation of a schwannoma on a Gadolinium-enhanced MRI scan.
3. Be able to interpret and describe the classic appearance of croup.
4. Be able to interpret and describe the classic appearance of epiglottitis.
5. Be able to identify the classic presentation of a juvenile angiofibroma.

Objectives for Cognitive Goal 9: Acquire knowledge in basic head and neck anatomy.

1. Be able to describe the surgical anatomy that is encountered in mastoidectomy.
2. Be able to describe and draw the anatomy of the skin.
3. Be able to describe the normal anatomy of the external ear.
4. Be able to describe the anatomy of the internal and external nose.
5. Be able to describe and draw the facial subunits of the face.
6. Be able to draw the anatomy of the facial skeleton.
7. Be able to describe and draw the anatomy of the tympanic membrane, the middle ear, and the temporal bone.
8. Be able to describe and diagram the anatomy of the vestibular system.

Objectives for Cognitive Goal 10: Acquire core knowledge in all areas of Otolaryngology through book reviews and departmental lectures.

1. Be able to describe the physiology of the middle ear, the inner ear, and neural connection pathways through the brain.
2. Be able to interpret an audiogram and describe concepts of masking, over- masking, over-closure, speech discrimination, and speech reception threshold.
3. Be able to describe the physiology of the nose and septum.
4. Be able to describe the physiology of relaxed skin tension lines.
5. Be able to describe and draw the aesthetic units of the face.
6. Be able to draw the classic fracture patterns of the facial skeleton.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Be able to show evidence of implementation of a networking system.

1. Have a system (card, computer, etc.) for recording information about professional contacts.

Objectives for Non-Cognitive Goal 2: Have a method to record operative experience.

1. Have, and be able to demonstrate, a system (card, computer, or other) for recording surgical case log information.

Objectives for Non-Cognitive Goal 3: Develop increased awareness of basic facial expressions (non-verbal communication).

1. Be able to identify 6 basic facial expressions and name the facial muscles used to create them.

Objectives/Technical

Objectives for Technical Goal 1: Gain experience in general otolaryngologic procedures.

1. Be able to suture effectively.
2. Be able to perform a septoplasty.
3. Be able to correctly use the facial plating system.
4. Be able to correctly suture a complex laceration using subcuticular sutures and skin sutures.

Objectives for Technical Goal 2: Gain experience in basic pediatric Otolaryngologic surgical procedures.

1. Be able to perform tonsillectomies.
2. Be able to perform a basic otoplasty with assistance.
3. Be able to place tympanostomy tubes.

Objectives for Technical Goal 3: Gain experience in otologic procedures.

1. Be able to place a tympanostomy tube.
2. Be able to perform a tympanoplasty.
3. Be able to perform a simple mastoidectomy.
4. Be able to do a complete mastoidectomy in the temporal bone lab.

Goals for OTO-2 Pediatrics Rotation at Children's Hospital San Diego

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Increase skill in performing the head and neck examination of the pediatric patient.
2. Increase skill in performing the general and targeted head and neck history and systems review.
3. Increase skill in presenting new and established patients in a concise and focused manner.
4. Increase skill in the diagnosis and management of patients who present to the pediatric otolaryngology clinic.
5. Increase knowledge about the indications, contraindications, and risks of pediatric surgical procedures; also learn the alternatives to such procedures.
6. Learn the perioperative management of surgical patients who present to the pediatric otolaryngology clinic.
7. Expand knowledge of pediatric diagnostic radiology.
8. Expand knowledge of the anatomy and embryology of the pediatric head and neck.
9. Acquire core knowledge in pediatric otolaryngology through book reviews and departmental educational activities.
10. Improve in the ability to write for professional journals.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Expand contacts in the regional professional environment.
2. Develop an understanding of professional practice in a specialty hospital environment, including an appreciation of the different styles of interacting with pediatric patients and their parents.
3. Continue the habit of intermediate and long-term planning.

Technical Goals

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain additional experience in basic pediatric otolaryngology procedures.
2. Gain experience in pediatric endoscopy.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Increase (through supervised patient encounters in the outpatient clinics) skill in performing the head and neck examination of the pediatric patient.

1. Increase skill in the use of fiberoptic nasopharyngoscopy, indirect laryngoscopy, microscopic otoscopy, and pneumatic otoscopy and increase in the knowledge of abnormal anatomy.
2. Be able to describe the elements of a complete pediatric specialty head and neck outpatient clinical note.
3. Be able to describe the common and uncommon anomalies and conditions that may be encountered in the pediatric head and neck exam.

Objectives for Cognitive Goal 2: Increase skill in performing the general and targeted head and neck history and systems review.

1. Be able to describe the elements of a complete and targeted pediatric head and neck history including the patient's;
 - a. chief complaint
 - b. current illness history

- c. allergies
- d. current medications
- e. previous operations, hospitalizations
- f. pertinent social history and cultural background
- g. psychosocial level of development
2. Be able to review systems, emphasizing systemic conditions that may affect the head and neck.
3. Be able to efficiently conduct a complete and targeted head and neck history and systems review including the elements that are described above in Objective 1.

Objectives for Cognitive Goal 3: Increase skill in presenting new and established patients in a concise and focused manner. Be able to consistently present the patient's history and the pertinent physical findings, putative diagnosis, and proposed management plan to staff in a concise and organized way.

Objectives for Cognitive Goal 4: Increase skill in the diagnosis and management of patients who present to the pediatric otolaryngology clinic.

1. Be able to interpret an auditory brainstem evoked response test (ABR).
2. Be able to interpret an audiogram and know the appropriate technique to obtain audiologic information based on the patient's age.
3. Be able to describe the natural history, clinical presentation, and evaluation of otitis media and any treatment options.
4. Be able to describe the potential complications of acute otitis media and management options for each complication.
5. Know the appropriate medications for acute and chronic otitis media and be able to explain bacteriology and the patterns of resistance that influence the selection of antibiotics.
6. Be able to describe the diagnostic criteria of central auditory disorders.
7. Be able to describe the appropriate pediatric audiologic interventions (hearing aids, etc.) based on the patient's age and audiologic situation.
8. Be able to efficiently evaluate pediatric patients with airway complaints such as subglottic stenosis and laryngomalacia.
9. Be able to describe the evaluation of blunt laryngeal trauma in the pediatric age group.
10. Be able to describe the appropriate management of pediatric airway emergencies, including epiglottitis.
11. Be able to describe the etiology and evaluation of bilateral vocal cord paralysis.
12. Be able to describe the types and natural histories of pediatric laryngeal neoplasms.
13. Be able to describe the evaluation of gastro-esophageal reflux disease (GERD) and its manifestations.
14. Be able to describe the anatomy and pathophysiology of developmental anomalies of the neck (e.g., tracheobronchial fistulae).
15. Be able to do an appropriate evaluation of a pediatric patient who has head and neck masses and cervical adenopathy.
16. Be able to describe the evaluation of pediatric sinusitis.
17. Be able to describe the Arnold-Chiari malformation and its otolaryngologic manifestations.

Objectives for Cognitive Goal 5: Increase knowledge about the indications and contraindications of pediatric surgical procedures, the risks of such procedures, and alternative treatments.

1. Be able to describe the surgical options for the treatment of otitis media, including the indications and risks of such options and the alternatives to surgery.
2. Be able to describe the surgical options for complicated pediatric sinusitis.
3. Be able to describe the surgical options for treating laryngomalacia.
4. Be able to describe the surgical options for treating subglottic stenosis.
5. Be able to describe the surgical options for treating vocal cord paralysis.
6. Be able to describe the surgical options for treating laryngeal papillomatosis.
7. Be able to describe the surgical options for treating nasal angiofibroma.
8. Be able to describe the surgical treatment of neck masses depending on their etiology.

Objectives for Cognitive Goal 6: Learn the perioperative management of patients who present to the pediatric otolaryngology clinic. Be able to outline the expected perioperative course for common pediatric otolaryngology procedures and the indicators of potential complications that arise in the perioperative period including:

1. myringotomy and tympanostomy tube placement
2. tympanoplasty
3. tracheotomy
4. laryngoscopy
5. bronchoscopy
6. esophagoscopy
7. endoscopic sinus surgery (FESS)
8. arytenoidectomy/arytenoidpexy
9. laryngotracheoplasty/cricoid split
10. excision of nasopharyngeal angiofibroma

Objectives for Cognitive Goal 7: Expand knowledge of pediatric diagnostic radiology of the head and neck.

1. Understand the diagnostic modalities that are used in evaluation of the upper aerodigestive tract including the different techniques that are used to evaluate the potential of foreign bodies in the pediatric age group.

2. Be able to identify important features and landmarks of pediatric head and neck studies:
 - a. axial/coronal CT scan
 - b. T1/T2 MRI scan
 - c. ultrasound
3. Be able to identify the classic appearance of epiglottis as shown on the lateral neck film.
4. Be able to identify the classic appearance of laryngotracheal bronchitis as shown on the AP neck film.

Objectives for Cognitive Goal 8: Expand knowledge of the anatomy and embryology of the pediatric head and neck.

1. Be able to describe the surgical anatomy of the pediatric larynx and cricoid.
2. Be able to describe the embryology of the larynx and cricoid.
3. Be able to describe the surgical anatomy of the pediatric trachea.
4. Be able to describe the embryology of the trachea.
5. Be able to describe the surgical anatomy of the pediatric paranasal sinuses.
6. Be able to describe the embryology of pediatric sinuses.

Objectives for Cognitive Goal 9: Acquire core knowledge in pediatric otolaryngology through book reviews and departmental educational activities.

1. Be able to identify selected clinical photographs from Practical Pediatric Otolaryngology by Cotton, 1st ed 1998 without looking at the description under the photograph.

Objectives for Cognitive Goal 10: Improve in the ability to write for professional journals.

1. Write a paper (or a case report on an interesting case that has been encountered during the rotation) and submit it for presentation at the annual NMCSA Academic Research Competition.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Be able to show evidence of implementation of a networking system.

1. Have, and be able to demonstrate, a system (card, computer, or other) for recording information about professional contacts.

Objectives for Non-Cognitive Goal 2: Develop an understanding of professional practice in a specialty hospital environment, including an appreciation of the different styles of interacting with pediatric patients and their parents.

1. Be able to demonstrate an appropriate approach to the evaluation of pediatric patients in the specialty clinic environment.

Objectives for Non-Cognitive Goal 3: Develop the habit of intermediate and long term planning.

1. Have written one-year and five-year goals.

Objectives/Technical

Objectives for Technical Goal 1: Gain additional experience in basic pediatric otolaryngology procedures.

1. Be able to efficiently perform an adenotonsillectomy.
2. Be able to efficiently perform tympanoplasty tube placement.
3. Be able to perform basic endoscopic sinus surgery (anterior ethmoidectomy and opening of the osteomeatal complex).

Objectives for Technical Goal 2: Gain experience in pediatric endoscopy—Develop clinical and surgical skills to allow the thorough evaluation and management of pediatric patients with compromised airway (inflammatory, congenital, acquired disorders) under the supervision of the attending pediatric otolaryngologist. Be able to perform a pediatric:

1. laryngoscopy
2. bronchoscopy
3. esophagoscopy
- 4.

OTO-3 YEAR OVERVIEW: NAVAL MEDICAL CENTER

A third year resident (OTO-3) spends six months at the Kaiser Foundation Hospital, San Diego and six months on an Research / Allergy Rotation at the Naval Medical Center, San Diego. The Kaiser Hospital rotation generally consists of clinic on Mondays and Wednesdays, with Operating room assignments on Tuesdays and Thursdays. When rotating on the Allergy/Research team, the resident works in the Otolaryngology Allergy clinic on Wednesday afternoons, which is the only clinical obligation that is required, the rest of the time is devoted to the resident's research interest.

These rotations provide an more advanced experience in diagnosis and treatment of adult and pediatric otolaryngology surgical patients, and allows for the resident to have experience as the primary resident surgeon in a variety of cases. The Kaiser rotation include experience in traditional outpatient clinical delivery of surgical care, inpatient care, and operative care of, as well as initial operative experience as primary surgeon on a variety of operative procedures. Residents also gain a unique experience by conducting an allergy clinic under the supervision of an experienced Otolaryngology Allergist, Darrell

Hunsaker, MD. Principles of allergy diagnosis and treatment are taught progressively and continuity of care is emphasized. The otolaryngology resident is supervised and instructed by staff surgeons and more senior residents. When more senior residents are present on the service a hierarchical system prevails, with the interns and junior residents reporting to the senior resident or chief resident of the surgical team, who in turn reports to the attending staff. It is expected that, until explicitly delegated more authority, the junior resident will discuss all issues with the chief resident or attending staff. Senior residents and attending surgical staff are available in a rapid reliable manner. Delegation of authority and responsibility for patient care increases as the resident demonstrates increased competence in the delivery of safe, effective, and compassionate care. The attending staff formally evaluates each otolaryngology trainee's performance at the end of the rotation using an on-line evaluation program, "MyEvaluations.com".

During the six months rotating at the NMCS D Research/Allergy rotation, OTO-3 residents are required to attend the weekly NMCS D Preoperative Conferences held Wednesday mornings. The Preoperative conference consists of a review of all cases for the upcoming week with an in-depth discussion of selected patients including preoperative evaluation, surgical options, surgical approaches, anatomy, complications, postoperative management and related issues. OTO-3 residents rotating at the Kaiser Foundation Hospital, are excused from the Wednesday morning preoperative conference in order to avoid delay in arriving at the operating rooms at Kaiser.

OTO-3 residents rotating at both NMCS D and Kaiser, are required to attend weekly conferences, as well as clinical and basic science lectures on core topics on the Friday didactic day. With permission from the NMCS D program director, the Kaiser resident may be occasionally excused from the lecture for a case that is a "Key" operative case the the resident has low numbers in. The Friday morning lectures include basic science lectures presented by a PhD audiologist and audiology staff, yearly anatomic lecture/lab session conducted by an anatomical pathologist, head and neck pathology lectures presented by the staff oral pathologist, and a neuroradiology conference held twice monthly on Friday afternoons. OTO-3 residents are also required to attend the monthly department morbidity and mortality conference and a monthly Journal Club held jointly with the University of California, San Diego (UCSD) Otolaryngology residency program. The OTO-3 resident also attends the Monthly Grand Rounds at the Veterans Administration Medical Center on the first Friday of the month, and a monthly grand rounds at Children's Hospital on the third Friday of the month.

OTO-3 residents attend two organized courses during the year; the 1 week NMCS D Microvascular Surgery Course, and the 3-day Basic Otolaryngic Allergy Course. These practical and didactic classes provides an excellent opportunity for the resident to gain additional fine motor skills as well as the opportunity to put in significant time working with an operating microscope (in the case of the Microvascular Course), and an opportunity to improve knowledge of Otolaryngic allergy.

Curriculum Summary OTO-3 Year

Reading assignments during this rotation include selected chapters of *The Neck* by Pillsbury, the Home Study Course by the American Academy of Otolaryngology.; Local Facial Flaps by Baker and Swanson. Chapters 16-22, 26 and above, an allergy syllabus assigned by Dr. Hunsaker for the Allergy rotation, articles assigned for review at monthly journal clubs, as well as articles assigned by individual staff for particular cases.

Clinical Conferences:

Journal Club, Preoperative Conference, Tumor Board (when on Head & Neck Team), Morbidity and Mortality Conference, Neuroradiology Conference, Clinical and Basic Science Lecture series, UCSD/VA Grand Rounds, and Children's Hospital Grand Rounds.

Organized Courses:

The 5-day Microvascular Surgery Course at NMCS D
The 3-day Basic Otolaryngic Allergy Course held by the AAOA.

For convenience, the goals for the OTO-3 year rotations are divided into three general categories; Cognitive, Non-Cognitive, and Technical. In the schema, Cognitive generally refers to factual information and skills, Technical to kinesthetic or operative skills, and Non-Cognitive to affective managerial skills and competencies. *The ACGME competencies that are mapped to these areas are noted in italics.*

Goals for OTO-3 Kaiser Community Hospital Rotation

Cognitive Goals:

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Develop a thorough understanding of the principles of soft tissue reconstruction and the advantages and disadvantages of each reconstructive approach.
2. Increase knowledge about medical and surgical conditions of the adult head and neck and the common surgical procedures that are used to treat such conditions.
3. Learn the perioperative management of patients in the managed care environment.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Develop an understanding and appreciation of the manifestations of otolaryngologic diseases in the adult population.

Technical Goals:

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain additional skill in common head and neck procedures and an introduction to oncologic surgery.
2. Gain skill in the management of otolaryngic trauma and emergency room consultations.
3. Gain experience in the repair of soft tissue defects from excision of skin malignancies.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Develop a thorough understanding of the principles of soft tissue reconstruction and the advantages and disadvantages of each reconstructive approach.

1. Be able to describe the aesthetic facial subunits including the nose.
2. Be able to describe and draw the relaxed skin tension lines of the face.
3. Be able to describe and draw the design of the rhombic flap and to indicate when it is appropriate to use.
4. Be able to describe and draw the design of the bilobe flap and to indicate when it is appropriate to use.
5. Be able to describe and draw the design of the forehead flap and to indicate when it is appropriate to use.
6. Be able to describe and draw the design of the W-plasty and geometric broken line closure (GBLC) and to indicate when it is appropriate to use.
7. Be able to explain the steps of routine wound healing.

Objectives for Cognitive Goal 2: Increase knowledge of medical and surgical conditions of the adult head and neck and the common surgical procedures that are used to treat these conditions.

1. Be able to describe and draw the anatomy of the adult larynx.
2. Be able to describe the evaluation and treatment of laryngeal cancer.
3. Be able to describe the variations and indications of laryngectomy.
4. Be able to describe the evaluation and treatment of vocal cord paralysis.
5. Be able to describe the variations and indications of arytenoidectomy.
6. Be able to describe the evaluation and treatment of blunt laryngeal trauma.
7. Be able to describe the evaluation and treatment of sinusitis.
8. Be able to describe the anatomy and physiology of the paranasal sinuses.
9. Be able to describe the variations and indications of sinus surgery.
10. Be able to describe and draw the anatomy of the adult neck.
11. Be able to describe the evaluation and treatment of neck masses.
12. Be able to describe the variations and indications of neck dissections.
13. Be able to describe and draw the anatomy of the major salivary glands.
14. Be able to describe the evaluation and treatment of salivary gland cancer.
15. Be able to describe the variations and indications of parotidectomy and the excision of submandibular glands.
16. Be able to achieve a 80% of higher score on the home study open book quiz.

Objectives for Cognitive Goal 3: Learn the perioperative management of patients in the managed care environment.

1. Be able to outline the expected perioperative course for otolaryngology procedures and the indicators of common complications that may arise in the perioperative period for:
 - a. fractures of the maxillofacial skeleton
 - b. laryngeal fractures.
 - c. arytenoidectomy and arytenoidopexy
 - d. parathyroidectomy
 - e. excision of parapharyngeal space masses
 - f. caustic ingestion injuries
 - g. Zenker's diverticulectomy
 - h. ethmoidectomy
 - i. sphenoidectomy
 - j. thyroglossal duct cyst
 - k. branchial cleft cyst
2. Learn the management issues related to adult tracheotomy, including the use of:
 - a. formal tracheostoma versus routine tracheotomy
 - b. methods and indications for decannulation
 - c. techniques of tube changes
 - d. tubes (e.g., metal tubes, Shiley tubes, hyperflex tubes, stoma vents, t-tubes, and tracheosophageal prostheses)

Objectives/Non-Cognitive

Objectives for Non-cognitive Goal 1: Develop an understanding and appreciation of the manifestations of otolaryngologic diseases in the adult population.

1. Be able to describe differences between patients who present in the community hospital setting compared to those who present in a military hospital setting.

Objectives/Technical

Objectives for Technical Goal 1: Gain additional skill in common head and neck procedures and an introduction to oncologic surgery.

1. Be able to appropriately plan and mark the surgical incision for thyroidectomy.
2. Be able to appropriately plan and mark the surgical incision for parotidectomy.
3. Be able to appropriately plan and mark the surgical incision for pharyngotomy.
4. Be able to appropriately plan and mark the surgical incision for laryngectomy.
5. Be able to appropriately plan and mark the surgical incision for neck dissections.
6. Be able to raise surgical flaps in a technically satisfactory manner.
7. Be able to appropriately close surgical defects using local and regional flaps.
8. Be able to safely and efficiently perform excisions of skin lesions.

Goals for OTO-3 NMCSA Allergy/Research Rotation

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Increase knowledge about conducting research.
2. Increase knowledge about Otolaryngology allergy.
3. Increase knowledge about leadership in the military medical arena.

Non-Cognitive Goals:

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Identify and improve a non-cognitive area of low performance.

Technical Goals:

(ACGME Goals: Medical Knowledge, Patient Care)

1. Improve the technical ability to work in magnified surgical environments.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Increase knowledge about conducting research.

1. Select a research lab and mentor.
2. Conduct a thorough review of the literature in the selected research area.
3. Assist in writing a Clinical Investigative Department (CID) protocol.
4. Participate in conducting a CID-approved research protocol.
5. Learn and/or understand the basic statistical methods.
6. Learn the appropriate procedures and skills needed for the research that is being conducted.

Objectives for Cognitive Goal 2: Increase knowledge about Otolaryngic Allergy.

1. Be able to interpret serum IGE levels.
2. Be able to interpret RAST results.
3. Be able to interpret skin test results.
4. Be able to describe the presentation and evaluation of food allergy.
5. Be able to describe the treatment of anaphylactic reactions.
6. Be able to perform skin endpoint titration (SET) therapy.
7. Be able to mix and give the appropriate allergy treatment sets.

Objectives for Cognitive Goal 3: Increase knowledge about leadership in the military arena.

1. Be able to describe situational leadership and other standard leadership techniques.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Identify and improve a non-cognitive area of low performance.

1. Identify an area for improvement and implement a personal growth plan in it.

Objectives/Technical

Objectives for Technical Objective 1: Improve the technical ability to work in magnified surgical environments.

1. Successfully complete a one-week microvascular surgery course at the Naval Medical Center, San Diego.
2. Successfully complete four (4) drillings of temporal bones in the Temporal Bone lab, under the supervision of a neurotology staff member during the OTO-3 year.

OTO-4 YEAR OVERVIEW: NAVAL MEDICAL CENTER

A fourth year resident (OTO-4) spends three months at the Mayo Hospital, Scottsdale, and Mayo Clinic, Scottsdale and nine months on Otolaryngology and Head & Neck services at NMCS D. The Mayo Hospital rotation generally consists of clinic on Mondays and Fridays, with Operating room assignments on Tuesdays, Wednesday, and Thursdays. The NMCS D Head & Neck/General team has clinic on Monday and Thursday and operating rooms on Tuesday and Wednesday. The Otolaryngology/Pediatrics team has clinic on Tuesday and Wednesday and operating rooms on Monday and Thursday. On most Wednesday mornings, the OTO-4 resident conducts the vestibular / balance clinic with with the otology staff at the NMCS D Spatial Orientation Lab

These rotations provide an advanced, pre-chief level experience in diagnosis and treatment of adult and pediatric otolaryngology surgical patients, and allows for the resident to have experience as the primary resident surgeon in a variety of cases. An intensive inpatient Head and Neck clinical experience in a subspecialty oncology practice setting is the fundamental focus for this OTO-4 resident rotation, which builds on the clinical experience of previous rotations. Major elements of this rotation include additional experience managing patients with serious head and neck malignancies, more intensive operative experience with Head and Neck subspecialists, and the development of increased sophistication in surgical techniques.

The NMCS D rotations include experience in traditional outpatient clinical delivery of surgical care, inpatient care, and operative care of, as well as operative experience as primary surgeon on a variety of operative procedures. Principles of diagnosis and treatment are taught progressively and continuity of care is emphasized. The otolaryngology resident is supervised and instructed by staff surgeons and more senior residents. When more senior residents are present on the service a hierarchical system prevails, with the interns and junior residents reporting to the senior resident or chief resident of the surgical team, who in turn reports to the attending staff. It is expected that, until explicitly delegated more authority, the junior resident will discuss all issues with the chief resident or attending staff. Senior residents and attending surgical staff are available in a rapid reliable manner. Delegation of authority and responsibility for patient care increases as the resident demonstrates increased competence in the delivery of safe, effective, and compassionate care. The attending staff formally evaluates each otolaryngology trainee's performance at the end of the rotation using an on-line evaluation program, "MyEvaluations.com" .

During the nine months rotating at the NMCS D H&N and Otolaryngology rotations, OTO-4 residents are required to attend the weekly NMCS D Preoperative Conferences held Wednesday mornings. The Preoperative conference consists of a review of all cases for the upcoming week with an in-depth discussion of selected patients including preoperative evaluation, surgical options, surgical approaches, anatomy, complications, postoperative management and related issues. OTO-4 residents rotating at the Mayo Clinic Hospital In Scottsdale, AZ are excused from the NMCS D meetings and instead attend the academic activities of the Otolaryngology Department at Mayo.

Curriculum Summary OTO-4 Year

Reading assignments during this rotation include a monthly journal club, with assignments from the *Laryngoscope* and *Archives of Otolaryngology*; and other articles of Head and Neck interest as assigned
Supplemental Reading: *Cancer of the Head & Neck* by Meyers & Suen.
Head and Neck Pathology with Clinical Correlation by Wenig 2 ed.
Head & Neck Cancer by Jatin Shaw

Clinical Conferences:

Journal Club, Preoperative Conference, Tumor Board (weekly), Neuroradiology Conference, Clinical and Basic Science Lecture series, Grand Rounds, and Morbidity and Mortality Conference—Monthly

.For convenience, the goals for the OTO-4 year rotations are divided into three general categories; Cognitive, Non-Cognitive, and Technical. In the schema, Cognitive generally refers to factual information and skills, Technical to kinesthetic or operative skills, and Non-Cognitive to affective managerial skills and competencies. *The ACGME competencies that are mapped to these areas are noted in italics.*

Goals for OTO-4 Mayo Head & Neck Rotation

Cognitive Goals

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Develop an intermediate to advanced level of knowledge of the surgical anatomy, surgical physiology, and pathophysiology of head and neck oncology.
2. Develop an intermediate to advanced level of knowledge of the analysis of preoperative risk factors that influence the intraoperative and postoperative management of oncology patients.
3. Develop an intermediate to advanced knowledge of the surgical, radiological, immunological, and chemotherapeutic options that are available for the treatment of head and neck cancer.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Develop an understanding of the profound social stress that life-threatening conditions place on patients and their families and an appreciation of the manifestations of such stress.
2. Develop skill in dealing with the psychosocial dimension of head and neck oncology.

Technical Goals:

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain additional experience in a variety of head and neck oncological procedures.
2. Gain an intermediate level of skill in head and neck oncological procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Develop an intermediate to advanced level of knowledge of the surgical anatomy, surgical physiology, and pathophysiology of head and neck oncology.

1. Be able to describe the TNM staging system for all head and neck locations.
2. Be able to describe and draw anatomy of the larynx.
3. Be able to describe development of the larynx with implications of tumor spread.
4. Be able to describe and draw the anatomy of the fascia spaces of the neck.
5. Be able to explain current theory regarding the genetics of cancer.
6. Be able to describe the advantages and disadvantages of FNA of head and neck lesions.
7. Describe the rationale for a particular chemotherapeutic approach.
8. Know the anatomy of the skull base and the various syndromes that are associated with tumor invasion of motor/sensory nerves.
9. Describe the five-year survival rates for various tumors and locations.

Objectives for Cognitive Goal 2: Develop an intermediate to advanced level of knowledge of the analysis of preoperative risk factors that influence the intraoperative and postoperative management of oncology patients.

1. Describe the incidence, identification, and management of the common complications of head and neck procedures.
2. Be able to describe the nutritional assessment and nutritional support of head and neck cancer patients.
3. Be able to demonstrate an understanding of the management of perioperative patients in the intensive care unit setting, including fluids, electrolytes, hemodynamic instability, and ventilator management.

Objectives for Cognitive Goal 3: Develop an intermediate to advanced knowledge of the surgical, radiological, immunological, and chemotherapeutic options that are available for the treatment of head and neck cancer.

1. Be able to describe the natural history, clinical presentation, evaluation, and general options for treatment of non-squamous cell malignancies of the head and neck.
2. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of nasopharyngeal carcinoma.
3. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of sinonasal carcinoma.
4. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of oral cavity carcinoma.
5. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of oropharyngeal carcinoma.
6. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of hypopharyngeal carcinoma.
7. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of laryngeal carcinoma.
8. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of esophageal carcinoma.
9. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of thyroid and parathyroid cancers.
10. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of cervical metastasis.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Develop an understanding of the profound social stress that life-threatening conditions place on patients and their families, and an appreciation of the manifestations of such stress.

1. Be able to describe a variety of coping reactions that are commonly employed by patients with life-threatening illnesses.
2. Be able to describe an appropriate therapeutic response for each of the common coping reactions that are employed by patients with life-threatening illnesses.

Objectives for Non-Cognitive Goal 2: Develop skill in dealing with the psychosocial dimension of head and neck oncology.

1. Be able to describe the ethical issues that are involved in the treatment of patients with life-threatening illnesses.
2. Be able to effectively communicate with patients and their families.

Objectives/Technical

Objectives for Technical Goal 1: Gain additional experience in a variety of head and neck oncological procedures.

1. Gain experience in the design and harvest of microvascular flaps.
2. Gain experience in the design and reconstruction of mandibular defects.
3. Gain experience in the design and transfer of myocutaneous flaps.
4. Gain experience in surgical rehabilitation of the voice, including tracheoesophageal puncture.

Objectives for Technical Goal 2: Gain an intermediate level of skill in head and neck oncological procedures.

1. Be able to appropriately plan and mark surgical incisions.
2. Be able to raise surgical flaps in a technically satisfactory manner.
3. Be able to safely and efficiently perform a tracheotomy.
4. Be able to appropriately close surgical defects using local and regional flaps.
5. Be able to safely and appropriately complete the majority of surgical oncologic operations, including:
 - a. total laryngectomy
 - b. hemilaryngectomy
 - c. hemiglossectomy
 - d. composite resection of oral cavity tumor
 - e. maxillectomy
 - f. neck dissection
 - g. pharyngotomy
 - h. pharyngoesophageal reconstruction
 - i. cricopharyngeal myotomy.

Goals for OTO-4 NMCSO Facial Plastic/Otology/Peds Rotation

Cognitive Goals:

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Expand understanding of the evaluation and management of patients with facial plastic, otologic, and pediatric medical/surgical conditions.
2. Expand knowledge regarding, contraindications, risks, and surgical options of facial plastic, otologic, and pediatric otolaryngic procedures; also expand knowledge of alternative treatments.
3. Expand knowledge of the embryology, anatomy, physiology, and pathophysiology of the head and neck as it relates to facial plastic, otologic, and pediatric otolaryngic conditions.
4. Expand knowledge of the perioperative management of patients who present to the otolaryngology clinic.
5. Acquire intermediate/advanced knowledge about all areas of otolaryngology, especially facial plastic, otologic, and pediatric otolaryngology through reading assignments and departmental lectures.

Non-Cognitive Goals:

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Increase understanding and appreciation of the role of practice based learning in otolaryngology.
2. Increase understanding and appreciation of the role of professionalism in otolaryngology.
3. Increase skill and understanding of interpersonal skills and communication in otolaryngology.

Technical Goals:

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain experience in intermediate to advanced facial plastic and reconstructive surgical procedures.
2. Gain experience in intermediate to advanced otologic procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Expand understanding of the evaluation and management of patients with facial plastic, otologic, and pediatric otolaryngic medical/surgical conditions.

1. Be able to describe the characteristics of the aging neck and describe the Dedo classification of the neck.
2. Be able to describe the classic appearance and position of the brow and the expected gender differences.
3. Be able to analyze the orbital region and identify the periorbital sequelae of aging (e.g., crows feet, pseudoherniation of fat).
4. Be able to describe characteristics of the aging nose.
5. Be able to describe the characteristics of the aging mouth.
6. Be able to describe midfacial changes that occur with aging, including changes in the malar, suborbital, and buccal fat pads.
7. Be able to describe the evaluation and management of post-stapedectomy vertigo and/or hearing loss.
8. Be able to describe the evaluation and management of post-mastoidectomy vertigo, hearing loss, or facial nerve paralysis.
9. Be able to describe the evaluation and management of acute vertigo.
10. Be able to describe the evaluation and management of chronic vertigo.

Objectives for Cognitive Goal 2: Expand knowledge about contraindications and risks of facial plastic, pediatric otolaryngic, and otologic procedures as well as surgical options and alternative treatments.

1. Be able to describe the surgical variations of tympanomastoidectomy and the appropriate alternatives based on CT and physical examination.
2. Be able to describe surgical options for treatment of chronic vertigo, including the indications and risks of such options; also be able to discuss alternative treatments.
3. Be able to describe surgical options for treatment of otosclerosis, including the indications and risks of such options; also be able to discuss alternative treatments.
4. Be able to describe indications and risks of surgical correction of nasal valve stenosis, external nasal valve collapse, "twisted" noses, "polly-beak" deformities, nasal bossing, overprojecting tips, ptotic nasal tips, alar retraction, and the over-rotated nasal tip; also discuss alternative treatments.
5. Be able to describe treatment options for brow ptosis, including the indications and risks of such options; also be able to discuss surgical alternatives.
6. Be able to describe treatment options for blepharochalasis, including the indications, risks, and potential complications of such options; also be able to discuss surgical alternatives.
7. Be able to describe treatment options for malar and mandibular hypoplasia, including the indications and risks of such options; also be able to discuss surgical alternatives.
8. Be able to describe the indications, use, technique, and potential complications of botulium toxin.
9. Be able to describe indications and risks of surgical treatment of the aging face; also be able to discuss alternative treatments.
10. Be able to describe indications and risks of surgical treatment of aging neck; also be able to discuss alternative treatments.
11. Be able to describe indications and risks of for surgical treatment of cicatrix; also be able to discuss alternative treatments.

Objectives for Cognitive Goal 3: Expand knowledge of the embryology, anatomy, physiology, and pathophysiology of the head and neck as it relates to otologic, pediatric otolaryngic, and facial plastic conditions.

1. Be able to describe the natural history, clinical presentation, evaluation, and options for treatment of congenital ossicular anomalies.
2. Be able to describe the effect of mechanism of injury, clinical presentation, and evaluation of patients with skull-base injury.
3. Be able to describe the management of burn patients based on the principles of Advanced Trauma Life Support (ATLS).
4. Be able to describe the management options of endolymphatic hydrops.

Objectives for Cognitive Goal 4: Expand knowledge of the perioperative management of patients who present to the otolaryngology clinic.

1. Be able to outline the expected perioperative course for facial plastic and otological procedures and the indicators of common complications that can arise in the perioperative period, including:
 - a. canaloplasty
 - b. stapedectomy
 - c. meatoplasty
 - d. endolymphatic sac surgery
 - e. repair of perilymphatic fistula
 - f. transtympanic installation of ototoxic drugs
 - g. vestibular nerve section
 - h. labyrinthectomy
 - i. cochlear implantation
 - j. congenital middle ear reconstruction
 - k. extratemporal facial reanimation

- l. mandibular reconstruction
- m. reconstruction of cleft lip and palate deformities
- n. skin resurfacing techniques
- o. reconstruction and expansion of soft tissue defects

Objectives for Cognitive Goal 5: Acquire intermediate/advanced knowledge in all areas of otolaryngology, especially otology, pediatric otolaryngology, and facial plastic surgery, through readings and departmental lectures.

1. Be able to describe the physiology and pathophysiology of the eyelids.
2. Be able to describe the physiology and pathophysiology of the acoustic system.
3. Be able to describe the physiology of the vestibular system.
4. Be able to select the appropriate electrodiagnostic nerve function test for facial nerve injuries based on duration of paralysis.
5. Possess a thorough knowledge of the surgery of the facial nerve and methods for rehabilitation of the paralyzed face.
6. Be able to describe the indications and contraindications for the use of assistive hearing devices.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Increase understanding and appreciation of the role of practice-based learning in otolaryngology.

1. Be able to demonstrate the ability to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

Objectives for Non-Cognitive Goal 2: Increase understanding and appreciation of the role of professionalism in otolaryngology.

1. Be able to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity, and a responsible attitude toward patients and society.

Objectives for Non-Cognitive Goal 3: Increase skill and understanding of interpersonal skills and communication in otolaryngology.

1. Be able to demonstrate interpersonal and communication skills that enable you to establish and maintain professional relationships with patients, families, and other members of healthcare teams.

Objectives/Technical

Objectives for Technical Goal 1: Gain experience in intermediate to advanced facial plastic and reconstructive surgical procedures.

1. Be able to perform an open rhinoplasty.
2. Be able to perform an endoscopic browlift.
3. Be able to perform a bleparoplasty.
4. Be able to assist in performing a rhytidectomy.

Objectives for Technical Goal 2: Gain experience in intermediate to advanced otologic procedures.

1. Be able to perform a tympanoplasty.
2. Be able to perform a mastoidectomy.
3. Be able to perform an ossicular reconstruction.
4. Be able to perform a stapedectomy.

Goals for OTO-4 NMCS Head & Neck Rotation

Cognitive Goals:

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Increase clinical acumen in the diagnosis and management of patients who present to the head and neck and general otolaryngology clinic.
2. Learn the indications, contraindications, and risks of advanced head and neck/general otolaryngology surgical procedures; also learn alternative treatments.
3. Expand knowledge of the perioperative management of patients presenting to the general and head and neck clinic.
4. Expand knowledge about diagnostic radiology of the head and neck.
5. Increase knowledge about the basic anatomy and embryology of the head and neck.
6. Increase in-depth knowledge in all areas of otolaryngology through book reviews and departmental lectures.

Non-Cognitive Goals:

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Increase understanding and appreciation of the role of practice based learning in otolaryngology.
2. Increase understanding and appreciation of the role of professionalism in otolaryngology.
3. Increase skill and understanding of interpersonal skills and communication in otolaryngology.

Technical Goals:

ACGME Goals: Medical Knowledge, Patient Care)

1. Gain proficiency in intermediate otolaryngology surgical procedures and experience in advanced otolaryngology procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Increase clinical acumen in the diagnosis, management, and development of treatment plans for the patients who present to the head and neck and general otolaryngology division.

1. Be able to describe the presentation of atypical mycobacterial infection of the head and neck.
2. Be able to describe the presentation of fungal infections of the head and neck including coccidiomycosis, histoplasmosis, and blastomycosis.
3. Be able to describe the presentation of invasive and non-invasive fungal sinusitis.
4. Be able to describe the presentation of vascular diseases of the head and neck.
5. Be able to describe the presentation of granulomatous diseases of the head and neck.
6. Be able to describe the ENT manifestations of HIV disease.
7. Be able to describe the clinical presentation of autoimmune diseases, including Sjogren's disease.
8. Be able to describe the difference between locations of various deep head and neck abscesses.
9. Be able to describe the various presentations of Multiple Endocrine Anomalies syndromes (MEA-1, MEA-2A and MEA-2B).
10. Be able to describe presentation and evaluation of common voice disorders including glottic insufficiency, muscle tension dysphonia, and vocal fold lesions, edema, and scarring.

Objectives for Cognitive Goal 2: Learn the indications, contraindications, and risks, of advanced head and neck and general otolaryngology surgical procedures; also learn alternative treatments.

1. Be able to discuss the indications and risks of surgical treatment of laryngeal carcinoma, and any alternative treatment(s).
2. Be able to discuss the indications and risks of surgical treatment of neck metastasis, and any alternative treatment(s).
3. Be able to discuss the indications and risks of surgical treatment of parathyroid disease, and any alternative treatment(s).
4. Be able to discuss the indications and risks of surgical treatment of thyroid cancer, and any alternative treatment(s).
5. Be able to discuss the indications and risks of surgical treatment of vocal cord paralysis, and any alternative treatment(s).
6. Be able to discuss the potential etiologies of cerebrospinal fluid (CSF) leak, the diagnostic modalities available for localizing CSF leaks, and the management of CSF leaks from the perspective of otolaryngology and of neurosurgery.

Objectives for Cognitive Goal 3: Expand knowledge about the perioperative management of patients who present to the general and head and neck clinic.

1. Be able to describe the potential complications of sinusitis and their management.
2. Be able to describe the postoperative management of uncomplicated sinus surgery.
3. Be able to describe the potential complications of parotid surgery and their management, including fistula and facial nerve paralysis.
4. Be able to describe the potential complications of thyroid surgery and their management, including hypocalcemia and vocal cord paralysis.
5. Be able to describe the potential complications of neck dissection and their management, including XI nerve injury, chyloous fistula, and flap necrosis.
6. Be able to describe the potential complications of radiation therapy for nasopharyngeal carcinoma and their management.
7. Be able to describe the potential complications of oral cavity carcinoma resection and their management.
8. Be able to describe the potential complications of surgical and radiological hypopharyngeal and laryngeal carcinoma treatment and their management.
9. Be able to outline the expected perioperative course for otolaryngology procedures and the indicators of common complications that can arise in the perioperative period including:
 - a. arterial ligation
 - b. neck dissection
 - c. arytenoidectomy and arytenopexy
 - d. phonatory surgery and framework surgery
 - e. mandibulectomy and mandibular osteotomy
 - f. excision of congenital cysts and sinuses (brachial cleft, TGD)
 - g. parathyroidectomy
 - h. deep neck abscess drainage
 - i. Zenker's diverticulectomy
 - j. endoscopic sinus surgery

Objectives for Cognitive Goal 4: Expand knowledge about the diagnostic radiology of the head and neck.

1. Be able to describe and identify the CT/MRI appearance of acute and chronic sinusitis.
2. Be able to describe and identify the appearance of deep neck abscesses on a CT/MRI.
3. Be able to describe and identify the appearance of invasive malignancies on a CT/MRI.
4. Be able to describe and identify the appearance of a thyroid nodule on ultrasound.
5. Be able to describe and identify the appearance of a thyroid nodule on an I-128 scan.

Objectives for Cognitive Goal 5: Increase knowledge about basic head and neck anatomy and embryology.

1. Be able to describe the various foramen syndromes, including Villarents, Vernets, and jugular foramen.
2. Be able to describe the innervations of the otic, pterygoid, submandibular, and ciliary ganglia and their tributaries.
3. Be able to describe the branches of the internal maxillary artery.

Objectives for Cognitive Goal 6: Acquire core knowledge about all areas of otolaryngology through book reviews and departmental lectures.

1. Be able to describe the physiology and pathophysiology of the vocal cords and phonatory apparatus.
2. Be able to describe the physiology and pathophysiology of the lacrimal gland, nasolacrimal system, and orbital contents.
3. Acquire a thorough understanding of the safety precautions that are necessary when using lasers as well as the complications that may arise and the management of those complications.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Increase understanding and appreciation of the role of practice-based learning in otolaryngology.

1. Be able to demonstrate the ability to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

Objectives for Non-Cognitive Goal 2: Increase understanding and appreciation of the role of professionalism in otolaryngology.

1. Be able to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity, and a responsible attitude toward patients and society.

Objectives for Non-Cognitive Goal 3: Increase skill and understanding of interpersonal skills and communication in otolaryngology.

1. Be able to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of healthcare teams.

Objectives/Technical

Objectives for Technical Goal 1: Gain proficiency in intermediate otolaryngology surgical procedures and experience in advanced procedures.

1. Be able to safely perform a complete endoscopic sphenoidethmoid ethmoidectomy.
2. Be able to safely and efficiently drain a deep neck abscess.
3. Be able to safely and efficiently perform a thyroidectomy.
4. Be able to safely and efficiently perform a parotidectomy.
5. Be able to safely and efficiently perform micro-laryngeal surgery.
6. Be able to safely and efficiently perform a lymph node biopsy.
7. Gain experience in neck dissection.
8. Gain experience in composite resection.
9. Be able to use the proper techniques for complex wound management.

OTO-5 YEAR OVERVIEW: NAVAL MEDICAL CENTER CHIEF RESIDENT YEAR

A Fifth year resident (OTO-5) spends six months on the Otolaryngology/Pediatrics Service, and six months on the Facial Plastics / and Head & Neck services at NMCS. The NMCS Facial Plastics/Head & Neck/General team has clinic on Monday and Thursday and operating rooms on Tuesday and Wednesday. The Otolaryngology/Pediatrics team has clinic on Tuesday and Wednesday and operating rooms on Monday and Thursday. On most Wednesday mornings, the OTO-5 resident conducts the vestibular / balance clinic with the otology staff at the NMCS Spatial Orientation Lab

The OTO-5 Chief Resident of the Blue Team is expected to have an in depth knowledge of the diagnosis and treatment of Head and Neck conditions. During this rotation the resident is expected to further refine an existing knowledge base by continued reading of material and by taking an active role in the education of more junior residents.

Advanced reading should be performed for all operative procedures so that a detailed knowledge of the indications, contraindications, complications and controversies surrounding the management of the particular disease are understood and the resident is prepared to teach these principals to more junior residents, interns, and medical students.

The rotation allows for continuity of care wherein the Chief resident is able to manage the most complex cases preoperatively, be primary surgeon in, and managing the patient's postoperative recovery through discharge and the outpatient clinic. The Chief resident will present cases to the weekly combined H&N tumor board. The Chief resident is also expected to prepare monthly morbidity and mortality conference material including a thoughtful evaluation of the cases presented so that a coherent analysis can be formulated along with a plan to avoid such complications in the future.

The Blue Team Chief Otolaryngology Resident will supervise the more junior residents and interns and receive instruction and guidance from staff surgeons. The Chief Resident is expected to manage all administrative activities of the team such that

quality care is both documented and delivered. Attending surgical staff will be available in a rapid reliable manner. The Otolaryngology staff will formally evaluate each Chief Otolaryngology Resident trainee's performance at the end of the rotation

The NMCSO rotations include experience in traditional outpatient clinical delivery of surgical care, inpatient care, and operative care of, as well as operative experience as primary surgeon on a variety of operative procedures. Principles of diagnosis and treatment are taught progressively and continuity of care is emphasized. The otolaryngology resident is supervised and instructed by staff surgeons and more senior residents. When more senior residents are present on the service a hierarchical system prevails, with the interns and junior residents reporting to the senior resident or chief resident of the surgical team, who in turn reports to the attending staff. It is expected that, until explicitly delegated more authority, the junior resident will discuss all issues with the chief resident or attending staff. Senior residents and attending surgical staff are available in a rapid reliable manner. Delegation of authority and responsibility for patient care increases as the resident demonstrates increased competence in the delivery of safe, effective, and compassionate care. The attending staff formally evaluates each otolaryngology trainee's performance at the end of the rotation using an on-line evaluation program, "MyEvaluations.com" .

During the twelve months as a Chief, rotating at the NMCSO H&N and Otolaryngology rotations, the OTO-4 residents are required to attend the weekly NMCSO Preoperative Conferences held Wednesday mornings. The Preoperative conference consists of a review of all cases for the upcoming week with an in-depth discussion of selected patients including preoperative evaluation, surgical options, surgical approaches, anatomy, complications, postoperative management and related issues. OTO-5 residents are expected to know the location and whereabouts of all of the more junior residents on the team.

OTO-5 residents attend one organized courses during the year; the 5-day Iowa Head and Neck Course. The practical and didactic classes put on at this course provides an excellent opportunity for the resident to gain additional sophistication and knowledge of Head and Neck conditions.

Curriculum Summary OTO-5 Year

Reading assignments during this rotation include a monthly journal club, with assignments from the staff for particular cases.

In addition: *Essential Otolaryngology: K. J. Lee*

Supplemental:

Comprehensive Management of Tumors: Thawley

Essentials of Functional Endoscopic Sinus Surgery: Stammberger & Hawke

Pathology of the Head and Neck: Wenig

Videotapes:

Board Review Course in Otolaryngology: CME Tapes 1997 (14 tapes)

Clinical Conferences:

Journal Club, Preoperative Conference, Tumor Board (weekly), Neuroradiology Conference, Clinical and Basic Science Lecture series, Grand Rounds, and Morbidity and Mortality Conference—Monthly

.For convenience, the goals for the OTO-5 year rotations are divided into three general categories; Cognitive, Non-Cognitive, and Technical. In the schema, Cognitive generally refers to factual information and skills, Technical to kinesthetic or operative skills, and Non-Cognitive to affective managerial skills and competencies. *The ACGME competencies that are mapped to these areas are noted in italics.*

Goals for OTO-5 NMCSO Chief Head & Neck Rotation

Cognitive Goals:

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Refine clinical acumen in the diagnosis, management, and development of treatment plans for patients presenting to the head and neck and general otolaryngology division.
2. Know the indications, contraindications, risks, and alternatives to the spectrum of head & neck /general otolaryngology surgical procedures.
3. Have an in-depth knowledge of the perioperative management of general and head and neck surgical patients.
4. Develop advanced diagnostic skills in interpreting imaging studies of the head and neck for both the diagnosis and mapping of head and neck neoplasms.
5. Have an in-depth knowledge of head and neck anatomy and embryology.

Non-Cognitive Goals

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Comprehensive understanding and appreciation of the role of practice based learning in otolaryngology.
2. Comprehensive understanding and appreciation of the role of professionalism in otolaryngology.
3. Skillful in the application of interpersonal skills/communication skills with patients, peers, and staff.

Technical Goals

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain expertise in the spectrum of otolaryngology surgical procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Refine clinical acumen in the diagnosis, management, and development of treatment plans for patients presenting to the head and neck and general otolaryngology division.

1. Be able to identify and describe common congenital syndromes/anomalies (e.g. Treacher-Collins, MEN2-A), including molecular genetics of the condition, if they have been described.
2. Be able to describe the presentation of specific fungal, bacterial, and viral infections depending on location and diagnostic tests used to differentiate (e.g. Coccidiomycosis, HIV).
3. Be able to describe the presentation/diagnosis/staging of neoplastic diseases based on location, their histology, and therapeutic options for their treatment.
4. Be able to describe the presentation/diagnosis of granulomatous, vasculitis, and misc. diseases of the head and neck, along with their histology and therapeutic options for their treatment (e.g. Castleman's disease, Kawasaki disease).
5. Be able to describe the clinical presentation/diagnosis of autoimmune diseases, their histology, and therapeutic options for their treatment (e.g. Sjogren's syndrome, Hashimoto's thyroiditis, Myasthenia gravis).
6. Be able to generate a comprehensive differential diagnosis of lesions/masses for a specific head and neck anatomic location (e.g. neck mass: tumor, infection, congenital etc with specific conditions under each heading).
7. Be able to describe the clinical presentation, diagnosis, and management of trauma to the head and neck (e.g. laryngeal fracture, La Fort fractures, temporal bone fractures, nasoethmoid fractures).
8. Be able to describe the clinical presentation, diagnosis, and management of injuries and foreign bodies in the larynx, esophagus, and bronchial tree (e.g. caustic ingestion, esophageal perforation).
9. Be able to describe the clinical presentation, diagnosis, complications, and management of acute and chronic sinusitis (e.g. orbital abscess, cavernous sinus thrombosis).
10. Be able to describe clinical presentation, diagnosis, and management of injuries to nerves (e.g. marginal mandibular, recurrent laryngeal).
11. Be able to describe clinical presentation, diagnosis, and management of dysphonias/motility disorders of the head and neck (e.g. spastic dysphonia, swallowing disorders).

Objectives for Cognitive Goal 2: Know the indications, contraindications, risks, and alternatives to the spectrum of head & neck - general otolaryngology surgical procedures.

1. Be able to discuss indications, contraindications, risks, and alternatives for treatment of squamous cell carcinoma of the head and neck depending on specific locations (e.g. laryngeal carcinoma treatments based on staging, chemo/rad before surgical tx, when to treat the neck, etc.).
2. Be able to discuss indications, contraindications, risks, and alternatives for reconstruction of defects resulting from surgical excision of head and neck malignancies (e.g. local, regional, myocutaneous, and free flap options for reconstruction).
3. Be able to discuss indications, contraindications, risks, and alternatives for treatment of thyroid and parathyroid disease (e.g. Hurtle cell thyroid cancer, parathyroid in MEN syndromes, laryngeal nerve injury).
4. Be able to discuss the indications risks and alternatives for treatment of acute and chronic sinusitis (e.g. risk of FESS includes fovea penetration, optic nerve damage).
5. Be able to discuss the indications risks and alternatives for surgical treatment of laryngeal dysfunction (e.g. vocal cord paralysis, laryngomalacia, aspiration).
6. Be able to discuss the indications, risks, and alternatives for treatment of benign and malignant disease of the salivary glands (e.g. risk of parotidectomy includes VII paralysis, salivary fistula, ranula).
7. Be able to discuss indications, contraindications, risks, and alternatives for treatment of congenital conditions of the head and neck depending on specific locations (e.g. lymphangioma of neck, nasal dermoid, thyroglossal duct cyst).
8. Be able to discuss indications, contraindications, risks, and alternatives for treatment of obstructive sleep apnea conditions (e.g. genioid advancement, resection of tongue base, tracheotomy).

Objectives for Cognitive Goal 3: Expand knowledge of the perioperative management of patients presenting to general and head and neck clinic.

1. Be able to describe how to manage postoperative sinus surgery patients and possible presentation of complications.
2. Be able to describe how to manage postoperative salivary gland patients and possible presentation of complications.
3. Be able to describe how to manage postoperative thyroid/parathyroid surgical patients and the possible presentation of complications (e.g. hypocalcemia and vocal cord paralysis).
4. Be able to describe how to manage postoperative head and neck tumor resection patients and the possible presentation of complications (e.g. oropharyngeal fistula, hyponatremia, infection).

5. Be able to outline the expected perioperative course for specific otolaryngology procedures and indicators of common complications arising in the perioperative period including:
 - a. tracheostomy
 - b. arterial ligation
 - c. maxillectomy (with and without orbital exenteration /partial maxillectomy/intraoral resection/oral cavity resection/composite resection/glossectomy)
 - d. pharyngotomy
 - e. uvulopharyngopalatoplasty/office uvulopharyngopalatoplasty
 - f. direct laryngoscopy/microlaryngoscopy
 - g. phonatory surgery/framework surgery
 - h. laryngotracheoplasty/epigottoplasty
 - i. management of laryngeal fractures
 - j. repair of caustic injection injuries of the pharynx/esophagus and thermal injury of upper airway
 - k. partial laryngectomy/ total laryngectomy/pharyngectomy
 - l. artyenoidectomy/arytenoidopexy
 - m. mandibulectomy/mandibular osteotomy
 - n. parotidectomy
 - o. neck dissection
 - p. excision of mass of parapharyngeal space (including chemodectoma, neurilemmoma removal)
 - q. cricopharyngeal myotomy
 - r. excision of congenital cysts and sinus (branchial cleft, thyroglossal duct)
 - s. resection of vascular malformations (lymphatic, venous, hemangioma)
 - t. paryngoesophageal reconstruction
 - u. neck abcess drainage
 - v. repair of penetrating injuries of the head and neck
 - w. Zenker's diverticulectomy
 - x. treatment of laryngeal clefts and tracheoesophageal fistulas
 - y. surgical voice restoration (TEP)
 - z. tracheal resection
 - aa. thyroidectomy
 - bb. parathyroidectomy
 - cc. skull base surgery
 - dd. ethmoid/ ethmoidectomy/fornioethmoidectomy
 - ee. maxillary/caldwell luc
 - ff. frontal trephination/obliteration/ablation
 - gg. sphenoid/hypophysectomy
 - hh. septoplasty/turbinate surgery
 - ii. dacrocystorhinostomy
 - jj. epistaxis management
 - kk. orbital decompression

Objectives for Cognitive Goal 4: Develop advanced diagnostic skills in interpreting imaging studies of the head and neck for both the diagnosis and mapping of head and neck neoplasms.

1. Be able to describe and identify the CT/MRI appearance of abnormalities in the head and neck conditions (e.g. deep neck abscesses).
2. Be able to describe and identify the CT/MRI appearance of invasive malignancies.
3. Be able to describe and identify the appearance of a thyroid nodule on ultrasound.
4. Be able to indicate appropriate studies and read nuclear medicine imaging studies of the thyroid and parathyroid.

Objectives for Cognitive Goal 5: Have an in-depth knowledge of head and neck anatomy and embryology.

1. Be able to describe the routes of clinically significant nerves in the head and neck (e.g. greater superficial petrosal nerve, vidian nerve).
2. Be able to describe the branches and routes of clinically significant arteries/veins in the head and neck (e.g. internal maxillary artery, thoracoacromial artery).

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Comprehensive understanding and appreciation of the role of practice based learning in otolaryngology.

1. Be able to skillfully use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

Objectives for Non-Cognitive Goal 2: Comprehensive understanding and appreciation of the role of professionalism in otolaryngology.

1. 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 toward patients and society.

Objectives for Non-Cognitive Goal 3: Skillful in the application of interpersonal skills/communication skills with patients, peers, and staff.

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

Objectives/Technical

Objectives for Technical Goal 1: Gain expertise in the spectrum of otolaryngology surgical procedures:

1. tracheostomy
2. arterial ligation
3. maxillectomy (with and without orbital exenteration/partial maxillectomy/intraoral resection/oral cavity resection/composite resection/glossectomy)
4. pharyngotomy
5. uvulopharyngopalatoplasty/office uvulopharyngopalatoplasty
6. direct laryngoscopy/microlaryngoscopy
7. phonatory surgery/framework surgery
8. laryngotracheoplast /epigottoplasty
9. management of laryngeal fractures
10. repair of caustic injection injuries of the pharynx/esophagus and thermal injury of upper airway
11. partial laryngectomy/total laryngectomy/pharyngectomy
12. arytoidectomy/arytenoidopexy
13. mandibulectomy/mandibular osteotomy
14. parotidectomy
15. neck dissection
16. excision of mass of parapharyngeal space (including chemodectoma, neurilemmoma removal)
17. cricopharyngeal myotomy
18. excision of congenital cysts and sinus (branchial cleft, thyroglossal duct)
19. resection of vascular malformations (lymphatic, venous, hemangioma)
20. paryngoesophageal reconstruction
21. neck abscess drainage
22. repair of penetrating injuries of the head and neck
23. Zenker's diverticulectomy
24. treatment of laryngeal clefts and tracheoesophageal fistulas
25. surgical voice restoration (TEP)
26. tracheal resection
27. thyroidectomy
28. parathyroidectomy
29. skull base surgery
30. ethmoid/ ethmoidectomy/forntoethmoidectomy
31. maxillary/caldwell luc
32. frontal trephination/obliteration/ablation
33. sphenoid/hypophysectomy
34. septoplasty/ turbinate surgery
35. dacrocystorhinostomy
36. epistaxis management
37. orbital decompression

Goals for OTO-5 NMCSO Chief Otolaryngology Rotation

Cognitive Goals:

(ACGME Goals: Medical Knowledge, Patient Care & System-Based Learning)

1. Expand understanding of the evaluation and management of patients with facial plastic, medical, and surgical conditions.
2. Expand knowledge about contraindications, risks, and surgical options of facial plastic and otologic procedures and alternatives to such procedures.
3. Expand knowledge of the perioperative management of patients who present to the neurotology clinic.
4. Expand knowledge of the perioperative management of patients who present to the facial plastic and reconstructive clinic.
5. Acquire intermediate to advanced knowledge in all areas of otolaryngology, especially otology and facial plastic surgery, through reading assignments and departmental lectures.

Non-Cognitive Goal:

(ACGME Goals: Interpersonal/Communication; Professionalism, Practice-based Learning)

1. Comprehensive understanding and appreciation of the role of practice based learning in otolaryngology.
2. Comprehensive understanding and appreciation of the role of professionalism in otolaryngology.

3. Skillful in the application of interpersonal skills/communication skills with patients, peers, and staff.

Technical Goals:

(ACGME Goals: Medical Knowledge, Patient Care)

1. Gain expertise in intermediate to advanced facial plastic and reconstructive surgical procedures.
2. Gain expertise in intermediate to advanced otologic procedures.
3. Gain expertise in intermediate to advanced pediatric otolaryngology procedures.

Objectives/Cognitive

Objectives for Cognitive Goal 1: Expand understanding of the evaluation and management of patients with facial plastic, medical, and surgical conditions.

1. Be able to describe various surgical options for treating the aging neck and be able to select an appropriate approach for a selected neck.
2. Be able to describe the various approaches for correcting ptotic brows and be able to select an appropriate approach for a selected neck.
3. Be able to analyze the orbital region and describe the various approaches for correcting orbital pathology, including being able to select the correct procedure for a particular finding.
4. Be able to describe the various approaches to correcting nasal anomalies and be able to select the correct procedure for a particular finding.
5. Be able to describe surgical options for correction of ptotic malar fat pads, suborbital fat pads, and buccal fat pads, and the criteria that are used for the selection of each procedure.
6. Be able to describe the surgical and medical options for treatment of post-stapedectomy vertigo and/or hearing loss; be able to select the correct approach for a particular patient.
7. Be able to describe the evaluation and management of post-mastoidectomy vertigo, hearing loss, or facial nerve paralysis, and be able to select the correct approach for a particular patient.
8. Be able to describe the evaluation and management of acute vertigo.
9. Be able to describe the evaluation and management of chronic vertigo.

Objectives for Cognitive Goal 2: Expand knowledge about contraindications, risks, and surgical options of facial plastic and otologic procedures and alternatives to such procedures.

1. Be able to describe the surgical variations of tympanomastoidectomy and the appropriate alternatives based on CT and physical examination; be able to select the appropriate patient for each approach.
2. Be able to describe surgical options for treatment of chronic vertigo and be able to create an appropriate treatment plan for a particular patient.
3. Be able to describe surgical options for treatment of otosclerosis, including the indications, risks, and complications of such procedures and medical alternatives to them. Also, be able to apply an appropriate approach based on the clinical findings.
4. Be able to evaluate and correctly plan and conduct a surgical approach for:
 - a. valve stenosis
 - b. external nasal valve collapse
 - c. "twisted" noses
 - d. "polly-beak" deformities
 - e. nasal bossing
 - f. overprojecting tips
 - g. ptotic nasal tips
 - h. alar retraction
 - i. the over-rotated nasal tip
5. Be able to describe treatment options for blepharochalasis, including the most common postoperative problems and the best management practices.
6. Be able to describe treatment options for malar and mandibular hypoplasia, including the indications and risks of such treatments; also describe any surgical alternatives to them.
7. Be able to describe the use and dosage of botulism toxin with dosage and the management of potential complications.
8. Be able to discuss various alternatives for surgical treatment of the aging face and a schema for the timing and selection of procedures.
9. Be able to discuss the indications and risks of surgical treatment of alopecia and alternatives to surgery.
10. Be able to discuss options and alternatives for surgical treatment of soft and/or hard tissue defects of the head and neck, including local, regional, and microvascular flaps of the head and neck.

Objectives for Cognitive Goal 3: Expand knowledge about the perioperative management of patients who present to the neurotologic clinic.

1. Be able to describe the surgical options for congenital ossicular anomalies, including:

- a. fixed malleus
 - b. fused ossicular bones
 - c. congenital stapes fixation
2. Be able to describe the effect of mechanism of injury, clinical presentation, and evaluation of patients with skull-base injury, and be able to describe the potential complications of these injuries such as internal carotid artery aneurysm.
 3. Have a thorough understanding of the potential etiologies for cerebrospinal fluid (CSF) leaks and the diagnostic modalities that are available to localize them; be able to select an appropriate means of correcting CSF leak based on location and etiology.
 4. Be able to describe the options for management of Meniere's disease, including the classic surgical procedures, how they are performed, and the current thinking about how best to manage this condition.
 5. Be able to outline the expected perioperative course for otological procedures and be able to describe both the common and unusual complications that arise in the early and distant operative period, including:
 - a. canaloplasty
 - b. stapedectomy
 - c. meatoplasty
 - d. endolymphatic sac surgery
 - e. repair of perilymphatic fistula
 - f. transtympanic installation of ototoxic drugs
 - g. vestibular nerve section
 - h. labyrinthectomy
 - i. cochlear implantation
 - j. congenital middle ear reconstruction

Objectives for Cognitive Goal 4: Expand knowledge of the perioperative management of patients who present to the facial plastic and reconstructive clinic.

1. Be able to describe the management of burns to the ears, including potential complications and their treatment.
2. Be able to outline the expected perioperative course for facial plastic procedures and describe in detail the common and unusual complications that can arise in the operative and postoperative periods for:
 - a. rhinoplasty.
 - b. endoscopic browlift and forehead lift
 - c. bleparoplasty
 - d. rhytidectomy
 - e. otoplasty
 - f. liposuction
 - g. placement of facial augmentation prosthetics
 - h. laser resurfacing and chemical peel.
 - i. botulin toxin
 - j. scar revision
 - k. reconstructive scalp surgery
 - l. extratemporal facial reanimation
 - m. soft tissue expansion
 - n. mandible reconstruction
 - o. reconstruction of cleft lip and palate deformities
 - p. reconstruction of other craniofacial deformities (e.g., microtia, facial dystosis)
 - q. treatment of facial fractures
 - r. excision of skin lesions
 - s. reconstruction of soft tissue defects

Objectives for Cognitive Goal 5: Acquire intermediate to advanced knowledge in all areas of otolaryngology, especially otology and facial plastic surgery, through reading assignments and departmental lectures.

1. Be able to describe the anatomy, physiology, and pathophysiology of the head and neck in detail.
2. Be able to describe the infectious risks to patients and staff during operative procedures.
3. Be able to assess the limitations of aesthetic surgery of the face and have an appreciation of what constitutes realistic expectations on the part of the patient with regard to this type of surgery.
4. Be able to describe the physiology of the vestibular and acoustic systems.
5. Be able to select the appropriate electrodiagnostic tests for facial nerve function and demonstrate a thorough knowledge of the surgery of the facial nerves and methods for rehabilitation of the paralyzed face.
6. Be able to demonstrate a thorough knowledge of the indications and contraindications for the use of assistive hearing devices.
7. Be able to demonstrate an in-depth knowledge of the surgical approaches to the middle ear, inner ear, temporal bone, and cerebellopontine angle.

Objectives/Non-Cognitive

Objectives for Non-Cognitive Goal 1: Comprehensive understanding and appreciation of the role of practice based learning in otolaryngology.

1. Be able to skillfully use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

Objectives for Non-Cognitive Goal 2: Comprehensive understanding and appreciation of the role of professionalism in otolaryngology.

1. 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.

Objectives for Non-Cognitive Goal 3: Skillful in the application of interpersonal skills/communication skills with patients, peers, and staff.

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

Objectives/Technical

Objectives for Technical Goal 1: Gain expertise in intermediate to advanced facial plastic and reconstructive surgical procedures—Be able to perform facial plastic procedures including:

1. rhinoplasty
2. endoscopic browlift and forehead lift
3. blepharoplasty
4. rhytidectomy
5. otoplasty
6. liposuction
7. placement of facial augmentation prosthetics
8. laser resurfacing and chemical peel
9. botulin toxin injection
10. scar revision
11. reconstructive scalp surgery
12. extratemporal facial reanimation
13. soft tissue expansion
14. mandibular reconstruction
15. treatment of facial fractures
16. assisting in cleft lip and palate repair
17. assisting in microtia repair
18. excision of skin lesions
19. reconstruction of soft tissue defects

Objectives for Technical Goal 2: Gain expertise in intermediate to advanced otologic procedures. Be able to perform otologic and neurotologic procedures, including:

1. canaloplasty
2. middle ear exploration
3. tympanoplasty and myringoplasty
4. stapedectomy
5. mastoidectomy
6. tympanomastoidectomy
7. meatoplasty
8. myringotomy
9. endolymphatic sac surgery
10. repair of perilymphatic fistula
11. transtympanic installation of ototoxic drugs
12. vestibular nerve section
13. labyrinthectomy
14. cochlear implantation
15. assisting in the removal of vestibular schwannoma and other cerebellopontine angle tumors
16. assisting in glomus tumor removal
17. congenital middle ear reconstruction

Objectives for Technical Goal 3: Gain expertise in intermediate to advanced pediatric otolaryngology procedures. Be able to perform pediatric otolaryngic procedures, including: