



**Weill Cornell Medicine**

**NewYork-Presbyterian**

**NewYork-Presbyterian Hospital – Weill Cornell Medicine**  
**Division of Oral and Maxillofacial Surgery & Dentistry**  
**Advanced Education Program in Oral and Maxillofacial Surgery**  
**Goals and Objectives**

The goal of our Program is to develop oral and maxillofacial surgery residents and surgeons who are highly skilled, knowledgeable, compassionate, and ethical providers of the full scope of the specialty, becoming productive and contributing members of the profession and community. Residents will achieve competency in the full range of procedures, treatment, and surgical techniques available to oral and maxillofacial surgeons. They will become competent in pain and anxiety control, local anesthesia, Moderate and Deep Sedation, and, as appropriate, general anesthesia. They will learn the importance of continuing their education after residency, including achieving Board Certification. They will learn the concept of ‘standard of care’ including the ability to utilize the AAOMS Parameters of Care throughout their career. They will gain an understanding of medico-legal matters including the importance of record-keeping and documentation, and the malpractice process.

**Secondary goals are to:**

- Encourage the individual growth and development of the resident.
- Encourage, if desired, further sub-specialization and/or joining academic practice.
- Learn how to interact with colleagues to insure excellence in patient care.
- Learn to give logical and concise case presentations demonstrating understanding of diagnostic testing, treatment options and alternatives, and anatomic and biologic bases.
- Understand consulting with others with additional expertise, differing outlooks, etc.
- Understand the need to routinely read, and critically evaluate, scientific literature.
- Participate in research activities.
- Constantly assess, and critically evaluate, new procedures, technology, etc.
- We also encourage by example participation in organized dentistry and OMS society activities

Clinically, the resident is exposed to the full scope of in-patient and outpatient surgery. This includes appropriate variety within the major areas - orthognathic, trauma, pathology, reconstructive, and dentoalveolar and dental implants, as well as the related surgical and medical sub-specialties.

The goals and objectives of the didactic program are accomplished through lectures, conferences, and seminars. The primary goals of the curriculum are to prepare the resident to assess, manage and treat head & neck disease, and provide them with the knowledge necessary to function and serve as an equal with Medical and Surgical House and Attending Staff and future colleagues. This is achieved through training in physical diagnosis, oral and maxillofacial pathology and histology, head & neck anatomy, orthognathic surgery, local, moderate & deep sedation, and general anesthesia, temporomandibular joint non-surgical and surgical management, and dentoalveolar surgery and implantology. Didactic training in trauma, clefts, and cosmetic and reconstructive surgical procedures is supplemented by preparing for specific anticipated surgical procedures as they arise. Knowledge and relevant competence in physiology, pharmacology, microbiology, and the other biomedical and clinical sciences, are achieved through both Division lectures and seminars and, for the OMS/MD track residents, the Weill Cornell educational experience. The resident will be introduced to practice management including staffing, third-party payors, etc., and medico-legal matters. The resident will be introduced to research including human subjects research, ethics of research, management of the research process including working with the Institutional Review Board (IRB), and working with the Division Research Coordinator. Through these experiences, it is anticipated that the resident will

be able to apply this knowledge in the treatment of patients and understand the necessity of continuing this on-going education as a practicing surgeon.

The curriculum is structured such that residents receive a progressively graduated experience in all aspects of their education as they progress from PGY-1 to PGY-4 or PGY-6 years of training. The Program Director and members of the Division Core Group regularly review resident progress during their clinical and didactic education to determine whether the goals and objectives are being met via:

- Frequent discussions and formal reviews with individual residents and residents as a group.
- Discussions with attendings responsible for the educational and training aspects of rotations both before and after each rotation.
- Discussions and reviews with the Division Attending Staff.
- Yearly reviews.
- Outcomes Assessments and informal discussions with former residents including those on-staff and those who are no longer affiliated with this institution.

### **History and Physical Exam, Anatomy, and Basic Sciences**

Residents will be provided with the skills, experience, and background to perform a comprehensive physical exam, understanding the physiology and pathophysiology of the individual patient's medical condition. The resident will achieve competency in assessing the patient for anesthetic and surgical risk, and determining the need for additional medical and/or surgical consultation.

In the 6-Year, MD-Integrated track, this will be achieved through the extensive education received as an enrolled member of years I, II, and III, of Weill Cornell Medical College.

In the 4-Year Certificate track, this will be achieved through the 50+ hour Physical Diagnosis and Medical Risk Management course currently taught by Dr. Carol Mancuso, an Internist at Weill Cornell Medicine and the Hospital for Special Surgery.

Additional knowledge will be gained through ongoing participation in the didactic and clinical oral and maxillofacial pathology and medicine course, the New York Institute of Clinical Oral Pathology clinico- pathologic conferences, and the Head & Neck Anatomy course taken with the Otorhinolaryngology residents.

## **CLINICAL**

### **Outpatient**

The resident will be able to obtain and document a concise chief complaint, history of present illness and past medical history.

The resident will be able to perform and document the appropriate clinical examination, including extra-oral, intra-oral, hard-tissue, soft-tissue, etc.

The resident will be able to perform and document the appropriate risk assessment, Informed Consent, and patient safety measures including the Time Out.

The resident will be able to perform and document the standard outpatient oral and maxillofacial surgical procedures such as:

- Attainment of local anesthesia
- Simple extractions
- Removal of impacted teeth
- Management of hard and soft tissues post-extraction
- Placement of osseointegrated implants; including using CT scans and computer programs, pre- surgical planning with the restorative dentist and surgical guide construction.
- Implant site development, ridge preservation, antral grafting, and salvage techniques
- Periapical surgery
- Management of simple and complex pathology
- Management of soft-tissue trauma
- Management of dentoalveolar trauma
- Management of minimally complicated skeletal trauma.

The resident will be able to perform and document the ability to safely administer parenteral and inhalation outpatient anesthetics.

The resident will be able to administer and document the appropriate post-operative care, instructions, medications, etc.

The resident will be able to demonstrate competence in dental implantology including didactic and clinical abilities with comprehensive preoperative, intraoperative and post-operative management of the implant patient. They will demonstrate competence in interdisciplinary consultation, diagnosis, treatment planning, biomechanics, biomaterials and biological basis of dental implants.

## CLINICAL

### In-Patient

- The resident will be able to perform and document the ability to admit and manage in-patients.
- The resident will be able to perform and document the appropriate risk assessment, Informed Consent, and patient safety measures.
- This includes admission notes, pre-operative preparation, orders, operative reports, post-operative notes, discharge instructions, etc.
- The resident will gain the necessary exposure to, and experience with, major dentoalveolar procedures.
- The resident will gain the necessary exposure to, and experience with, major soft-tissue trauma.
- The resident will gain the necessary exposure to, and experience with, major hard-tissue trauma including mandibular injuries, mid-face injuries, etc.
- The resident will gain the necessary exposure to, and experience with, single and multiple organ traumas.
- The resident will gain the necessary exposure to, and experience with, orthognathic surgery including the diagnostic work-up, mandibular and maxillary/mid-face surgeries and post-operative care.
- The resident will gain the necessary exposure to, and experience with, hard and soft tissue pathology including the diagnosis and management of benign and malignant disease.
- The resident will gain the necessary exposure to, and experience with, preprosthetic and reconstructive surgery. This will include soft-tissue and hard-tissue procedures such as management of tori, placement of osseointegrated implants in complex situations and autogenous, allogenic and xenogenic grafting and augmentation.
- The resident will gain the necessary exposure to, and experience with, the surgical management of disorders and derangements of the temporomandibular joint. This will include arthroscopic and open reconstructive procedures and total joint replacement.

## Clinical

Dentoalveolar surgery education and training will be progressive across the residency experience. The resident will achieve competency in the broad scope of dentoalveolar surgery. This will include didactic and clinical education and training in dentoalveolar injuries, infections, pathologic conditions, and other hard and soft tissue deformities or conditions of the dentoalveolar structures. Instruction will include basic principles of dentoalveolar surgery such as diagnosis, risk factors, surgical procedures, options, and alternatives, perioperative management, and recognizing and managing complications.

Specific training will include hard and soft tissue biopsy techniques, removal of erupted and impacted teeth, exposure of unerupted teeth, soft-tissue flaps, bone and soft-tissue grafting, and pre-prosthetic surgery including implantology.

Oral and maxillofacial implant reconstruction education and training will be progressive across the residency experience. The resident will achieve competency in treatment planning including 3D virtual surgical planning, placement including 3D guided surgery, and maintenance of dental implants, including an understanding of prosthetic and prosthodontic reconstruction. This will include knowledge of the biologic basis of implantology and bone and soft tissue physiology and healing, biomaterials, and biomechanics of implants and reconstruction. Residents will learn of different implant systems, and develop the ability to critically assess existing and new systems, techniques, and technologies. Risk assessment including radiographic evaluations, patient selection, and recognition and management of complications and emergencies will be learned. The importance of interdisciplinary consultation and the 'patient team' – patient, surgeon, restoring dentist, periodontist, etc., throughout the entire treatment process, will be learned. Clinical competency will be achieved in partial and complete edentulous situations, including graft and other adjunctive procedures. The resident will be able to demonstrate competency in didactic and clinical experience in comprehensive preoperative, intraoperative and post-operative management of the implant patient.

Orthognathic surgery education and training will be progressive across the residency experience. The resident will achieve competency in the surgical correction of skeletal deformities of the maxillofacial region, including maxillary, mandibular, and genial surgical procedures. The resident will achieve a fundamental knowledge of relevant anatomy, embryology, growth and development, physiology, and biomechanics of the maxillofacial region. Residents will learn techniques of functional and esthetic analysis, and treatment planning including 3D virtual surgical planning. Didactic education will include analysis of facial form, analysis of growth prediction and potential, diagnosis of malocclusion and relationship to facial form, biomechanics of orthodontics and orthodontic capabilities and limitations, comprehensive treatment planning, and surgical procedures and options and alternatives. Residents will understand indications, risk factors, informed consent, standard of care, outcomes assessment, and recognition and management of complications. Use of orthognathic surgical techniques for management of 'non-orthognathic' problems, such as sleep apnea and access to Head & Neck or Neurological Surgical disease, will be learned.

Reconstructive surgery education and training will be progressive across the residency experience. The resident will achieve competence in the evaluation and management of patients with hard and soft tissue defects of the maxillofacial region. Comprehensive care with the goal of restoring form and function will be taught, including treatment planning and surgical and perioperative management.

Instruction will include soft and hard tissue healing in pedicled, free, and microvascular grafts, graft survival, revascularization and remodeling, and use of autogenous, allogenic, xenogenic, and recombinant human Bone Morphogenic Protein materials. Residents will learn harvesting of soft tissue and bone, and local, regional, and free flap reconstruction. Residents will understand indications, risk factors and assessment, informed consent, standard of care, assessment of outcomes, and recognition and management of complications.

## Clinical continued

Temporomandibular Joint Disorder and management – non-surgical and surgical – education and training will be progressive across the residency experience. The resident will achieve competence in the evaluation and surgical management of patients with intra-capsular disease and disorders, including systemic and local processes. Residents will understand the evaluation of patients with temporomandibular joint disorders including differential diagnosis of head, neck, and facial pain, non-surgical treatment options, and the various surgical options and alternatives. Residents will understand normal and abnormal/pathologic anatomy and physiology of the joint and related structures, the mechanisms of pain, surgical indications, techniques including arthrocentesis, arthroscopy, and open-joint surgery including autogenous or prosthetic replacement. The resident will understand indications for surgery including risk assessment, risk factors, informed consent, standard of care, assessment of outcomes, and recognition and management of complications.

The resident will achieve competence in the diagnosis and management of patients who have suffered oral and maxillofacial injuries. This education and training will be progressive across the residency experience. Residents will learn perioperative, operative, and long-term management of these patients including diagnostic/imaging techniques. Residents will learn the biomechanics and physiology of hard and soft tissue injuries including sharp, blunt, and projectile injury, and the physiology and mechanisms of tissue repair. Residents will learn airway management as it relates to trauma situations, patient and injury assessment, risk factors and assessment, informed consent, standard of care, assessment of outcomes, and recognition and management of complications. Residents will learn surgical techniques including tracheostomy, management of fractures of the lower, middle, and upper facial thirds, and repair of soft tissue injuries.

The resident will achieve competence in the diagnosis and management of patients with infectious, inflammatory, and benign neoplastic disease of the oral and maxillofacial region. Residents will be experienced and understand overall management of patients with malignant disease of the head and neck, including diagnosis, evaluation, treatment planning, and pre, peri, and post-operative care. Residents will understand normal and abnormal hard and soft tissue clinical and microscopic presentation, biopsy and bacterial/fungal culturing techniques, and specimen preparation and reporting. Residents will understand patient and disease assessment, risk factors and assessment, informed consent, standard of care, assessment of outcomes, and recognition and management of complications. Residents will achieve competence in management of oral and maxillofacial inflammatory, benign neoplastic, and infectious disease.

## **Pain and Anxiety Control**

The resident will achieve competency in assessing and managing the pediatric and adult patient in pre, peri, and post sedation/anesthesia. This will include training in local anesthesia, Moderate & Deep Sedation, general anesthesia, and other modalities of anxiety and pain control.

The didactic program includes discussion of assessment for anesthesia, risk factors, standard of care, and outcomes. This will include discussion of healthy and medically-compromised children and adults, including infants and the elderly.

The clinical program includes instruction in analgesia, local anesthesia, Moderate & Deep Sedation, general anesthesia, and other means of pain control and anxiety management. Residents will be continuously credentialed in Basic Life Support, Advanced Cardiac Life Support and Pediatric Advanced Life Support, and Advanced Trauma Life Support as appropriate. Residents will be instructed in patient evaluation, risk assessment, monitoring, sedation and anesthesia techniques, and recognition, diagnosis, and management of complications and emergencies.

## **Anesthesia Rotation**

- The resident will gain experience in the management of operating room anesthesia.
- The resident will gain experience in the use and pharmacokinetics of anesthetic agents, muscle relaxants, etc.
- The resident will gain experience in the physiology of anesthesia.
- The resident will gain experience in the pre-operative assessment of the patient for anesthesia.
- The resident will gain experience in the post-operative management of anesthetic patients.
- The resident will gain experience in airway management.
- The resident will gain an understanding of the relationship of anesthesia to basic respiratory, cardiovascular and other organ system physiology.
- The resident will gain an understanding of monitoring techniques for the patient under anesthesia.
- The resident will gain an understanding of recognition and management of anesthetic complications.

The Oral and Maxillofacial Surgery resident is assigned to the Anesthesia service full-time during their rotation with daily and on-call duties and responsibility equivalent to other Anesthesia residents and commensurate with their abilities. The five-month rotation includes one month of Pediatric anesthesia experience. Instruction is provided both clinically and didactically by the Attending and resident staff. The resident participates in all lectures, seminars, etc., during this rotation.

## **General Surgery and Surgical Specialties**

The OMS/MD resident spends 8 weeks of sub-intern experience on General Surgery and the Surgical Specialties during their Weill Cornell Medicine year-III clerkship. They spend an additional 6 months on service during their PGY-5 OMS - PGY-1 Surgery experience. The OMS Certificate resident spends 4 months rotating on General Surgery, 1 month on Otorhinolaryngology/Head & Neck Surgery, and 1 month on Facial Plastic Surgery during their PGY-2 and/or PGY-3 years. This experience will provide the OMS resident with an understanding of the general principles of surgery including:

- Management of hard- and soft-tissues.
- Aseptic surgical technique.
- Hemostasis.
- Pre- and post-operative patient and wound/incision care.
- Management of specific organ system diseases such as gastro-intestinal, etc.
- Physiologic response of the patient to surgery.
- Surgical nutrition.
- Fluid, blood and electrolyte balance and replacement.
- Management of shock and hemorrhage.
- Management of organ system complications.
- Management of infections including surgical site, post-operative, etc.
- Management of respiratory support, parameters, mechanical ventilation, etc.
- Emergent evaluation and stabilization.

The Oral and Maxillofacial Surgery resident is assigned to these services full-time during their rotation with daily and on-call duties and responsibilities equivalent to other respective residents, and commensurate with their level of knowledge and training. Instruction is provided both clinically and didactically by the Attending and resident staff. The resident participates in all lectures, seminars, etc.

## **Medicine, Pediatrics, Neurology, Psychiatry, Obstetrics & Gynecology, and Primary Care Rotations**

The OMS/MD track resident's Weill Cornell Medicine Clerkship experience includes 8 weeks on Medicine, 6 weeks on Pediatrics, 6 weeks on Obstetrics and Gynecology, 4 weeks on Neurology, 8 weeks on Primary Care, and 2 weeks each on Public Health and Palliative Care.

The OMS Certificate resident rotates on Urgent Care Medicine for 2 months during their PGY-2 year after completing their Physical Diagnosis and Medical Risk Management course with Dr. Carol Mancuso.

Through this experience, the OMS resident will:

- Develop an understanding of adult and pediatric medical problems such as cardiovascular and pulmonary disease, etc., their presentations, work-up and methods of management. Additional experience in obtaining an appropriate history and physical examination would be gained.
- Enhance their understanding of organ systems physiology and pathology with of urgent and emergent concerns. Further understanding of diagnostic aids such as general and specialized studies and clinical laboratory diagnosis would be provided.

The OMS resident is assigned to these services full-time with daily and on-call duties and responsibilities commensurate with their level of knowledge and training. Instruction is provided both clinically and didactically by the Attending and resident staff. The resident participates in all lectures, seminars, etc.