McMaster University SURGERY

McMaster Otolaryngology-Head and Neck Surgery

Goals & Objectives & Competencies

Plastic Surgery Rotation

CanMEDS 2015

Foundations of Discipline Stage-First Year Resident

Overview

During the Foundation Stage the resident will spend 2 blocks on the Plastic Surgery service. The rotation will be divided among two sites; the McMaster University Medical Centre (MUMC) and the Hamilton General Hospital (HGH). The resident will gain experience in dealing with both inpatients and outpatients. The resident will care for patients in the clinic, on the wards, the operating room and in the emergency department. The Plastic Surgery service at MUMC involves a significant amount of pediatric population while the HGH involves an adult population only. The HGH is the dedicated Trauma Centre in Hamilton.

Staff Surgeons:

MUMC: Drs James Bain, Matthew Choi, and Nick Strumas
HGH: Drs Arianna Dal Cin and Ronen Avram

Schedule of the week:

You will be assigned to a team. You will be expected to make rounds with your team in the mornings. You are expected to make handover to the resident on call at the end of the day when indicated.

Outpatient clinic location:

MUMC: Pediatric 2G, 4F, Nasoendoscopy 3V1, Ron Joyce building for cleft lip/palate 7 plus clinic
HGH: Ambulatory care Clinic-Resident Clinic, Medical Day Procedure

Call:

You will be assigned on home call with the Plastic Surgery service from 17:00 to 08:00 on week days and from 08:00 to 08:00 on weekends. The senior resident will make up your call schedule. At the end of the call shift, you must make handover of patients to the team when indicated. Call will be set according to PARO guidelines.

Overall Objectives & Competencies

It is recognized that the resident may not be exposed to all elements of these objectives; however at the conclusion of the rotation the resident should demonstrate knowledge or competency in the following:

The resident is expected to gain understanding and knowledge of essential issues in plastic surgery including experience in the medical and surgical treatment of wounds, maxillofacial trauma, benign and malignant skin lesions, closure soft tissue defects, and tissue handling techniques.

Residents will be working at completing Entrustable Professional Activities (EPAs) observations from the Foundations of Discipline stage of the Surgical Foundations and Otolaryngology-Head and Neck Surgery programs. The EPAs are listed on the resident's Competence by Design road map schedule and at the end of this document. For the specific details of each EPA, please refer to the Royal College Mainport resident ePortfolio or McMaster MedSIS and to the educational resident manual located on the Otolaryngology-Head & Neck Surgery division website.

*(Please note that in brackets with SF you will find corresponding Surgical Foundations competencies when applicable; and objectives in **bold** are the ones assessed on the in training evaluation report-ITER)*

Specific Objectives & Competencies

Medical Expert

(1.4) Apply knowledge of the clinical and biomedical sciences relevant to surgical plastic patients

-Anatomy of the skin, facial skeleton and buttresses, and their soft tissue structures
-Growth and development of the facial skeleton and associated soft tissue structures from the stages of embryology to adult
-Principles of facial bone healing
-Principles of wound healing (SF 1.3.16.4.) and its complications:
-infections, necrotizing soft tissue infections (SF1.3.18.12.)
-indications for prophylactic antibiotics (SF 1.3.16.6., SF 2.4.3.1.)
-**Wound closure options** (debridement, suture materials, dressings, primary vs. secondary closure, skin grafting, local/regional flaps, free flap options) specifically pertinent to head and neck reconstruction (SF 3.4.17. SF 3.4.18.5., SF 3.4.18.6.)
-Principles of wound care (SF1.3.17.1.)

-**Benign and malignant skin lesions**
-Benign skin lesions (vascular, skin tag, keratoacanthoma, pyogenic granuloma, keloid, nevus, keratosis, neurofibroma)

-Malignant skin lesions (BCC, SCC, melanoma)

-Cleft lip/palate

-**Pediatric vascular anomalies**

-Prominauris

-**Maxillofacial Trauma including:**

-Initial management of Trauma resuscitation protocol (ATLS guideline) (SF1.3.1.3.)

-Securing the airway

-Ensuring and confirming adequate breathing as it relates to maxillofacial trauma

-Management of bleeding as it relates to maxillofacial trauma

-Assessment of the C-spine in trauma (SF2.2.2.3.)

-**Order and review imaging of facial trauma (plain x-rays, panorex, CT scan) (SF 2.2.2.3.)**

-Learning the surgical approaches (open/closed reduction with internal/external fixation) to facial fractures (midfacial, zygoma, orbital, naso-ethmoid, frontal sinus, and nasal bone)

-Complications of facial trauma and its management

-**Nerve injury and repair**

-**Skin burns and inhalation injuries (SF 2.4.1.1.)**

(2.1) Identify and recognize life threatening or emergent issues of surgical plastic patients including but not limited to patient involved in maxillofacial trauma and upper airway obstruction

(2.2) **Ability to elicit complete history, perform a physical exam and select appropriate investigations , and interpret their results for the purpose of diagnosis and management, disease prevention and health promotion of the above clinical presentation (SF 2.2.)**

(2.4) Establish a patient-centered management plan that includes non-surgical/medical management, preoperative, perioperative, and postoperative care (SF 2.4.)

(3.2) Obtain and document informed consent explaining the risks and benefits of, and the rational for, a commonly performed medical and surgical procedures and therapies, under supervision (SF 3.2.)

(3.4) Perform the following procedures in a skillful, fluid, and safe manner with minimal assistance:

-Gather and manage the availability of appropriate instruments and materials for minor procedures (SF3.4.2.)

-Local anesthesia of the head, face and neck, including loco-regional blocks (SF3.4.13.)

-Appropriate handling of basic plastic instruments (SF3.4.14.)
-Choice of suture materials (SF3.4.17.)
-Wound debridement
-Appropriate tissue handling (SF 3.4.18.3.)

-Repair of skin lacerations, with special attention to the face and neck
-Surgical closure of wounds (SF 3.4.18.5.)
-Able to do variable suturing techniques (simple, subcutaneous, running, horizontal/vertical mattress, etc.) (SF 3.4.18.5.)
-Application of appropriate wound dressings (SF 3.4.18.6.)

-Excision of benign and malignant skin tumors, with special focus on the face and neck and closure with:
-Simple suturing
-Skin grafting (split and full thickness)
-Local skin flaps

-Application of tourniquet (SF 3.4.18.10.)
-Application of splint for bony injury or soft tissue injury (SF 3.4.18.11)
-Skin biopsy (shave, punch, incisional, excisional) (SF 3.4.18.13.)

-Preparation and handling of specimen for presentation to a pathologist (SF 3.4.20.)

-Reduction nasal fracture

(3.4) **Provide assistance and function as first or second assistance for the wide range of plastic surgical procedures (SF3.4.15.)**
-Facial fracture repair, application of arch bars, plating systems
-Cleft lip/palate repair
-Common cranio-facial procedures
-Nerve suture or repair

-Take direction from a lead surgeon (SF 3.4.15.2.)

(4.1) Implement a patient-centered care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation (SF4.1.))

(5.2) Use cognitive aids such as procedural checklists, surgical timeouts, debriefing, structured communication tools, or care paths to enhance patient safety

Communicator

(2.1) **Conduct a patient-centered interview, gathering all relevant biomedical and psychosocial information for any clinical presentation (SF2.1.)**

(5.1) Document clinical encounters in an accurate, legible, complete, timely and accessible manner to adequately convey clinical reasoning and rational for decisions (SF 5.1.))

Collaborator

(1.1) Establish and maintain positive relationships with physicians and other colleagues (SF1.1.)

(1.2) **Consult as needed with other health care professionals, including other physicians such as ophthalmologist, otolaryngology-head and neck surgery, neurosurgery, nurses and other ancillary medical staff - In particular dentists, orthodontists, maxillofacial oral surgeons, speech language pathologists, audiologists, pediatric growth and development of the cleft/palate clinic (SF 1.2.)**

(3.2) Demonstrate safe handover of care, verbal, dictated and written (SF3.2.)

Leader

(1.2) **Demonstrate knowledge and adhere to the standard safety guidelines that promotes patient safety (SF 1.2.)**

(1.4) Use health informatics to improve the quality of patient care and optimize patient safety (SF 1.4.)

(3.1) Demonstrate leadership skills by helping the plastic team to enhance health care by performing effective, complete and exemplary care of patients

Health Advocate

(1.2) Work with patients and their families to increase opportunities to adopt awareness of the health and preventive measures related to facial trauma/fractures in recreational activities, sports, hazardous workplaces, seatbelt safety, helmet safety etc. (SF1.2., 1.2.1.)

(1.3) Encourage modification of risk factors for skin cancer prevention and reducing aging process of the face (SF1.3)

Scholar

(1.1) **Prepare, read and learn around clinical and surgical cases, understand the steps of the proposed treatment and participate appropriately by asking questions (SF 1)**

(2.4) Teach medical students, more junior residents or other health care professionals (SF 2.)

(1.2) Maintain a surgical procedure log, surgical evaluation forms (SF1.1.2.1.)

(3.1) **Recognize practice uncertainty, knowledge gaps in plastic surgery and seek for advice/consultation when needed (SF3.1.)**

Professional

(1.1) Deliver health care to patients in an honest, ethical and professional manner (SF 1.1.)

(2.2) Demonstrate a commitment to patient safety and quality improvement through adherence to hospital policies and procedures while working in the operative room (SF2.2.)

Entrustable Professional Activities

Assessment:

In training evaluation report (ITER) on MedSIS (use only when residents did not complete sufficient observations from EPAs; at the discretion of the program director)

The following EPAs assessment forms must be completed during the rotation; however at the conclusion of the rotation it is not expected that all EPAs will be achieved:
Form 1-Royal College Mainport ePortfolio or McMaster MedSIS
Form 2-Royal College Mainport ePortfolio or McMaster MedSIS
Form 3-Royal College Mainport ePortfolio or McMaster MedSIS from Surgical Foundations program

During the rotation, you need to work on the following EPAs for competencies:

Surgical Foundations program:
EPA 2.2
Providing initial management for trauma patients
EPA 2.3
Assessing and performing risk optimization for preoperative patients in preparation for surgery
EPA 2.6
Participate in surgical procedures
EPA 2.7
Managing uncomplicated postoperative surgical patients
EPA 2.8
Managing postoperative patients with complications

Otolaryngology-Head and Neck Surgery program:

VERSION 1 (residents starting July 1st 2018)
EPA2.9
Closing soft tissue defects, applying the concept of the reconstructive ladder
EPA2.10
Assessing and participating in the care of patients with maxillofacial trauma

VERSION 2 (residents starting July 1st 2019)
EPA2.6
Performing primary skin closure: face or neck
EPA2.7
Assessing and participating in the care of patients with maxillofacial trauma

Bibliography suggestions
Byron J Bailey: *Head &Neck Surgery-Otolaryngology*
Cummings: *Otolaryngology- Head and Neck Surgery*
Baker and Swanson: *Local Flaps in Facial Reconstruction*
Jackson T Ian: *Local Flaps in Head and Neck Reconstruction*
Tardy M Eugene: *Rhinoplasty: The Art and the Science*
Papel Ira D: *Facial Plastic and Reconstructive Surgery on line*
Dolan W Robert: *Facial Plastic, Reconstructive and Trauma Surgery on line*