Structure of the Rotation

Duration: Two weeks.

Activities: Emergency Department consults
            Minor surgery
            Major surgery
            Plastics clinic

Teaching: Case by case, one-on-one discussion and demonstration

Goals and Objectives
The CFPC(EM) Residents are expected to gain experience and knowledge in certain key evaluative, cognitive, and procedural skills outlined below.

- Hand: fractures, tendon injuries, infection, etc.
- Wound care
- Burns
- Cold injury
- Suture techniques
- Anesthesia
- Splinting and casting
Overall Goal of the Rotation

- To utilize the relevant competencies contained within the CanMEDS-FM roles to effectively evaluate, diagnose and develop the procedural skills necessary to manage the patient under the Plastic Surgery service, with special emphasis on those clinical presentations common to the Emergency Department.

Educational Objectives:

Role of Family Medicine-Emergency Medicine (FM-EM) Expert

§ Develop relevant history and physical exam skills for assessing patients referred to a plastic surgery service.
§ Develop expertise in the use of the diagnostic imaging modalities available for the evaluation of plastic surgery disorders.
§ Develop the technical skills necessary to definitively manage the patients who present with plastic surgery problems that fall within the realm of responsibility of an emergency physician.
§ Develop a familiarity with the technical skills necessary to definitively manage patients who present with plastic surgery problems that fall within the realm of responsibility of a plastic surgeon.

Wounds

§ Describe the sequence of and develop an understanding of the factors influencing normal wound healing
§ Describe appropriate suture materials, techniques, and the timing of suture removal for the following wounds: Face, scalp, ears, trunk, extremities, tongue, fascia/muscle.
§ List treatment considerations (e.g., potential complications) in the care of animal and human bites.
§ List possible complications and infections associated with the closure of wounds in the emergency department.
  § List factors that increase risk of wound infection.
  § Describe techniques of appropriate wound preparation and describe proper wound care instructions.
  § Discuss the appropriate tetanus immunization regimen for different wounds.
  § Develop expertise in the assessment and management of pressure sores

Foreign Bodies

§ List specific complications and difficulties related to foreign body removal for glass, wood, organic material and chemicals.
§ Describe techniques for identification and removal of a foreign body

Needlestick Injuries

§ Outline the major steps and criteria in evaluating a patient with a needlestick injury.

Burns

§ Develop an approach to the identification and treatment of electrical burns and discuss the associated injuries.
§ List a prioritized, evaluative and treatment protocol in a patient with thermal burns.
§ Describe the evaluation of the magnitude of the burn injury with an estimation of the burn surface area and depth, and classification of the burn as critical, moderate, or minor.
§ List the criteria for referral to a burn center
§ Determine the appropriate fluid replacement therapy for a major burn patient according to a standard replacement fluid formula.
§ List depth, region, and surface area criteria for major burns to identify those requiring admission.
§ Cite possible complications of burn injuries.
§ For a patient with a thermal burn not requiring admission; describe appropriate outpatient management.
§ Compare and contrast frost nip and frost bite and outline the evaluation and treatment of patients injured with frostbite.

Trauma

Head and Neck
§ List the immediate considerations in the acutely injured patient who has sustained head, face, or neck injuries.
§ Describe the initial care, diagnosis, and treatment of soft tissue injuries of the face, including the following areas and topics:
  § Anesthesia (to include the pros and cons of epinephrine, the selection and placement of regional blocks and use of topical agents and techniques).
  § Bites, contusions, abrasions, tattoos, retained foreign bodies, puncture wounds, simple lacerations, avulsion flaps.
  § Demonstrate expertise in the regional anesthesia of the face including the blocks to the infraorbital nerve, supraorbital nerve, mental nerve and ear blocks
§ Develop an understanding of the regional anatomic considerations of injuries to the face and associated nerves, glands, ducts and muscles.
§ Given a patient with either a blunt or penetrating injury to the neck, describe the 3 anatomical regions and their importance to the wound.
§ Develop and understanding of anatomic considerations and treatments for repair of external ear injuries.
§ Outline a prioritized, evaluative and treatment protocol for a patient with facial bone fractures
§ Classify the following facial fractures and discuss their diagnosis and treatment:
  LeFort I, II, and III, zygoma, mandible, nose, orbit including blowout and tripod injuries.
§ Given a patient with a traumatic injury to the scalp or forehead, discuss the initial evaluation, hemostasis, regional anaesthesia, and repair of the scalp, forehead and injuries involving galea and bony structures.

Hand
§ Demonstrate knowledge of the bones in the hand.
§ Describe the motor and sensory innervation of the hand.
§ Describe the compartments of the hand as well as the fascial planes.
§ Describe the motions of the thumb.
§ Describe the assessment of the flexor digitorum profundus and superficialis.
§ Describe the extensor zones of the hand.
§ Demonstrate management of fractures and dislocations of phalanxes.
§ Describe management of metacarpal shaft and neck fractures.
§ Describe the mechanism of injury and management of mallet fingers and boutonnière deformity.
§ Describe “gamekeeper” thumb injury and outline management.
§ Demonstrate extensor tendon repair in the hand including appropriate suture selection and arrangement of local resources for rehabilitation
§ Describe management of partial and full digit amputation.
§ Demonstrate expertise in the management of partial amputation revision of digits
§ Describe and demonstrate split thickness skin grafting.
§ Differentiate between felon, paronychia and whitlow and describe the management of each.
§ Describe the signs and management of tenosynovitis.
§ Develop expertise in the management of injuries to the nailbed and associated structures

Procedural Skills
§ Outline the factors involved in the choice of anesthetic agents, toxicity, expected duration, and decision between regional block, field block, or topical anesthesia, as well as the choice of use of epinephrine.
§ Define, discuss, and demonstrate the ability to perform the following techniques:
  § Simple sutures, running sutures, mattress stitch (both horizontal and vertical), layered closures, subcuticular closure, Z plasty, simple skin grafts, excision of the dog ear.
  § Demonstrate closure techniques of vermillion border of lip as well as tongue and ear laceration repair.

Role of Communicator

Overall Goal
The resident will act to facilitate the doctor-patient relationship and establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy.

The resident should be able to:

- Demonstrate the ability to take into account the patients own experience of the injury (feelings, expectations, ideas) and the impact of the illness on the lives of patients and families, considering such factors as age, gender, socio-economic status, cultural and religious/spiritual values.
- Establish and maintain a therapeutic relationship with patients, their families and the medical team while fostering an environment characterized by understanding, trust, empathy and confidentiality.
- Develop expertise in the written documentation of injuries on the plastic surgery service including reasonable illustration.
- Develop the expertise to be able to describe the salient features of a patient’s injury to a plastic surgeon
- Keep thorough, legible and accurate records.
- Deliver information to the patient and family in a humane manner and in such a way that it is understandable, encourages discussion and promotes patient’s participation in decision-making to the degree that they wish.

Role of Collaborator:

Overall Goal

The resident will work cooperatively with patients on the plastic surgery service, their families, and other members of the healthcare team to achieve optimal patient care. Special emphasis will be given to communication between the emergency department and the consulting plastic surgery service.

The resident should be able to:

- Develop a care plan for a patient they have assessed, including investigation, treatment and continuing care, in collaboration with the members of the interdisciplinary team.
- Participate in an interdisciplinary team meeting, demonstrating the ability to accept, consider and respect the opinions of other team members, while contributing specialty-specific expertise him/herself.
• Develop expertise in the ability to determine which patients can be safely managed by 
  Emergency Department personnel and which patients require referral to the plastic 
  surgeon
• Maintain collegial and respectful relationships with medical and paramedical staff.
• Respect team ethics, confidentiality and professionalism
• Demonstrate an ability to promote the autonomy of patients and families and to promote 
  their involvement in decision-making.

Role of Manager

Overall Goal:

The resident will play a central role in the organization of the care delivered to the patient 
being cared for by the plastic surgery service. They will coordinate the members of the health 
care system and utilize resources in a way that sustains and improves the health of their 
patient population

The resident should be able to:

• Effectively manage the care of multiple patients while working in the Emergency 
  department, clinics, the wards, the recovery room and operating room.
• Make clinical decisions and judgments based on sound evidence for the benefit of 
  individual patients and the population served.
• Effectively use patient-related databases, access computer- based information and 
  understand the fundamentals of medical informatics.
• Develop and approach to balancing patient care responsibilities with other personal and 
  family responsibilities.

Role of Health Advocate

Overall Goal

The resident will use their role as a resident on the plastic surgery service to influence and 
advance the health and wellbeing of patients

The resident should be able to:
• Identify the patient's status with respect to one or more of the determinants of health (i.e., unemployment); adapting the assessment and management accordingly (i.e., the medical history to the patient's social circumstances);
• Develop the ability to assess the patient’s ability to access various services in the health and social system so as to promote health, enhance understanding, foster coping abilities, and enhance active participation in informed decision-making, including expertise in the ability to arrange follow up for injuries addressed by the plastic surgery service including:
  · Burns and frost bite
  · Hand injuries
  · Extensor tendon repairs
  · Complex wound care
  · Infected wounds

**Role of Scholar**

**Overall Goal**

To demonstrate a commitment to self-learning and the creation, translation, and dissemination of medical knowledge.

The resident should be able to:

• The resident will identify learning needs and make use of available learning resources. This may be especially important when the resident is seeking plastic surgery experience outside of a formal rotation in plastic surgery
• The resident should demonstrate critical thinking and integrate critical appraisal of the literature into the bedside approach.
• Develop an understanding of evidence based medicine as it relates to the Plastic Surgery patient.
• Demonstrate an enthusiasm for learning.

**Role of Professional**

**Overall Goal**

To display commitment to an ethical practice and high personal standards of behavior in a manner that is commensurate with the importance of the doctor-patient relationship.
The resident will display professional attitudes and behaviors, including:

- Punctual for rounds, family conferences, and educational events
- Following through on assigned tasks
- Respectful, honest and compassionate care when dealing with patients, families, and other professionals.
- Considering racial and cultural issues in selecting treatment regimens for patients
- Demonstrating responsibility by being reliable and dependable
- Demonstrate good self-assessment ability by being aware of own limitations and seeking feedback.
- Respect personal, cultural, and gender issues.
- Understand the consent and surrogate decision making process
- Demonstrate respect of the learning opportunities available from all aspects of the plastic surgery experience including the operating room, post-op ward, emergency department, office and outpatient clinic