

*Effective for residents who enter training on or after July 1<sup>st</sup>, 2024.*

## **DEFINITION**

Surgical Foundations encompasses the core foundational surgical competencies that are required for the following surgical specialties:

- Cardiac Surgery
- General Surgery
- Neurosurgery
- Obstetrics and Gynecology
- Orthopedic Surgery
- Otolaryngology – Head and Neck Surgery
- Plastic Surgery
- Urology
- Vascular Surgery

Surgical Foundations is that initial period of postgraduate training required to acquire the knowledge, skills, and attitudes underlying the basics to the practice of surgery in general; and to prepare for further training in a surgical specialty or subspecialty.

## **ELIGIBILITY REQUIREMENTS**

Enrolment in a Royal College accredited residency program in these disciplines.

## **GOALS**

Upon completion of Surgical Foundations, residents will be competent to provide the assessment and initial management of surgical patients, participate in surgical care, and assume responsibility for post-operative management.

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Residents will also be able to provide the initial management of patients with trauma and initial resuscitation and management of critically ill surgical patients with insight into and awareness of the limits of their own expertise.

## **SURGICAL FOUNDATIONS COMPETENCIES**

At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

### **Medical Expert**

#### ***Definition:***

As Medical Experts, Surgical Foundations residents integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care. Medical Expert is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.

#### ***Key and Enabling Competencies: Surgical Foundations residents are able to...***

### **1. Practise medicine within their defined scope of practice and expertise**

- 1.1. Demonstrate a commitment to high-quality care of their patients
- 1.2. Integrate the CanMEDS Intrinsic Roles into their practice
- 1.3. Apply knowledge of the clinical and biomedical sciences relevant to Surgical Foundations:
  - 1.3.1. Anatomy relevant to all basic surgical approaches
  - 1.3.2. Physiology as it relates to risk assessment, post-operative care, and the acute care setting
  - 1.3.3. Metabolic responses to surgical stress, including catabolic response, need for metabolic support, and endocrine changes
  - 1.3.4. Sepsis and the inflammatory response as it pertains to metabolic and hemodynamic patterns and their impact on organ systems
  - 1.3.5. Pre-existing conditions, their treatment, and impact on the surgical patient, including
    - 1.3.5.1. Cardiac
    - 1.3.5.2. Connective tissue
    - 1.3.5.3. Endocrine
    - 1.3.5.4. Frailty
    - 1.3.5.5. Gastrointestinal
    - 1.3.5.6. Genetic
    - 1.3.5.7. Genitourinary
    - 1.3.5.8. Hematologic

*SURGICAL FOUNDATIONS COMPETENCIES (2024)*

- 1.3.5.9. Hepatic
- 1.3.5.10. Musculoskeletal
- 1.3.5.11. Neurologic
- 1.3.5.12. Psychiatric
- 1.3.5.13. Renal
- 1.3.5.14. Respiratory
- 1.3.5.15. Vascular
  
- 1.3.6. Indications for, complications, and benefits of nutritional support, including enteral and parenteral feeding
- 1.3.7. Risk assessment strategies and scores for the pre- and peri-operative patient
- 1.3.8. Diagnostic modalities, including their technology and limitations
- 1.3.9. Radiation safety principles as they apply to patients and practitioners
- 1.3.10. Blood products and derivatives, including types, indications, and adverse reactions
- 1.3.11. Principles of oncology, including medical, surgical, and radiation oncology, particularly as they affect surgical management and outcomes
  - 1.3.11.1. Cell biology and tumour growth
    - 1.3.11.1.1. The cell cycle and normal regulatory mechanisms
    - 1.3.11.1.2. Effects of radiation on the cell cycle
    - 1.3.11.1.3. Mechanisms of action of systemic therapies, including targeted therapies, on the cell cycle
    - 1.3.11.1.4. Cellular differentiation in normal, premalignant, and malignant tissues
    - 1.3.11.1.5. Growth and dissemination patterns of cancer
  - 1.3.11.2. Principles of cancer staging and risk stratification
  - 1.3.11.3. Treatment options, including the role of radiation therapy, ablative therapy, systemic therapy, surgery, and palliative care
  - 1.3.11.4. Principles of surgical care for the patient with cancer, including margins, nodal disease, and surgery for palliative intent
  - 1.3.11.5. Acute and chronic effects of chemotherapy, immunotherapy, radiation therapy, and targeted therapy
- 1.3.12. Principles of advanced trauma life support (ATLS) or trauma care, including initial management

- 1.3.13. Epidemiology, clinical presentation, prevention, and management of common infections
  - 1.3.13.1. Community and hospital acquired bacterial, fungal, and viral infections
  - 1.3.13.2. Impact of blood borne pathogens, including human immunodeficiency virus (HIV), hepatitis B, and hepatitis C
  - 1.3.13.3. Selection and dosing of antimicrobial agents
  - 1.3.13.4. Antimicrobial stewardship
  - 1.3.13.5. Infection prevention and control
- 1.3.14. Principles of transplant immunology
- 1.3.15. Principles of the conduct of a surgical procedure
  - 1.3.15.1. Principles of prophylaxis, including antimicrobial and thromboembolic
  - 1.3.15.2. Application of the surgical safety checklist
  - 1.3.15.3. Principles of general and regional anesthesia, analgesia, and sedation
  - 1.3.15.4. Attention to patient safety during the procedure
  - 1.3.15.5. Protection of patient and surgical team from pathogens
  - 1.3.15.6. Principles of energy sources, including electrocautery and laser
  - 1.3.15.7. Principles of wound healing
- 1.3.16. Principles of routine post-operative patient care
  - 1.3.16.1. Wound care
    - 1.3.16.1.1. Intentionally delayed wound closure
    - 1.3.16.1.2. Negative pressure wound therapy
  - 1.3.16.2. Management of tubes and drains
  - 1.3.16.3. Fluid management
- 1.3.17. Principles of peri-operative pain management
  - 1.3.17.1. Multimodal pain management, including
    - 1.3.17.1.1. Pharmacological
      - 1.3.17.1.1.1. Systemic
      - 1.3.17.1.1.2. Local and regional anesthesia
    - 1.3.17.1.2. Non-pharmacological

- 1.3.17.2. Multi-disciplinary care
- 1.3.17.3. Management of challenging peri-operative pain
  - 1.3.17.3.1. Chronic pain
  - 1.3.17.3.2. Complex regional pain syndrome
  - 1.3.17.3.3. Concurrent substance use disorders
- 1.3.18. Pathophysiology of complications in surgical patients in the postoperative period, including
  - 1.3.18.1. Airway
  - 1.3.18.2. Cardiac system
  - 1.3.18.3. Endocrine system
  - 1.3.18.4. Gastrointestinal system
  - 1.3.18.5. Genitourinary system
  - 1.3.18.6. Hemostatic system
  - 1.3.18.7. Hepatic system
  - 1.3.18.8. Infectious complications
  - 1.3.18.9. Musculoskeletal system
    - 1.3.18.9.1. Compartment syndromes: extremity
  - 1.3.18.10. Neurologic system
  - 1.3.18.11. Psychiatry
  - 1.3.18.12. Renal system
  - 1.3.18.13. Respiriology system
  - 1.3.18.14. Shock
    - 1.3.18.14.1. Multiple organ dysfunction syndrome
    - 1.3.18.14.2. Compartment syndromes: abdominal
  - 1.3.18.15. Soft tissue
    - 1.3.18.15.1. Pressure sores
  - 1.3.18.16. Vascular
- 1.3.19. Medical and psychosocial issues at the end of life and principles of palliative and end-of-life care, including medical assistance in dying (MAID)

- 1.3.20. The health and wellness of Indigenous peoples
  - 1.3.20.1. History of Indigenous peoples in Canada
  - 1.3.20.2. Effects of colonization on and the health care disparities experienced by Indigenous peoples of Canada
    - 1.3.20.2.1. Effects of intergenerational trauma on patient care access and outcomes
  - 1.3.20.3. Historical agreements and current legislation that govern health care for Indigenous populations
    - 1.3.20.3.1. Jordan's Principle and its application to pediatric care
  - 1.3.20.4. Health practices, approaches, knowledge, and beliefs of Indigenous healing and wellness
  - 1.3.20.5. Health care related findings of national reports, commissions, and inquiries related to Indigenous peoples and how these findings affect health care
- 1.4. Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner
- 1.5. Carry out professional duties in the face of multiple competing demands
- 1.6. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in surgical practice

**2. Perform a patient-centred clinical assessment and establish a management plan**

- 2.1. Prioritize issues to be addressed in a patient encounter
- 2.2. Elicit a history; perform a physical exam that is relevant, concise, and accurate to context; select appropriate investigations; and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion
  - 2.2.1. Select appropriate imaging studies
  - 2.2.2. Demonstrate an approach to the interpretation of common investigational modalities
    - 2.2.2.1. Radiography of the chest and abdomen
    - 2.2.2.2. Common cross-sectional imaging
    - 2.2.2.3. Routine imaging in trauma
    - 2.2.2.4. Ultrasound
    - 2.2.2.5. Electrocardiogram (ECG)

- 2.3. Establish goals of care in collaboration with patients and their families,<sup>1</sup> which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation
- 2.4. Establish a patient-centred management plan, including
  - 2.4.1. Pre-operative optimization of the patient with the following conditions:
    - 2.4.1.1. Burns and thermal injuries
    - 2.4.1.2. Cardiac disease
      - 2.4.1.2.1. Arrhythmias
      - 2.4.1.2.2. Heart failure
      - 2.4.1.2.3. Ischemic heart disease
      - 2.4.1.2.4. Valvular heart disease
    - 2.4.1.3. Hemostatic disorders: congenital and acquired
    - 2.4.1.4. Endocrine disease
      - 2.4.1.4.1. Adrenal
      - 2.4.1.4.2. Diabetes
      - 2.4.1.4.3. Thyroid
    - 2.4.1.5. Immunosuppression
      - 2.4.1.5.1. Chronic disease states
      - 2.4.1.5.2. HIV, including acquired immune deficiency syndrome (AIDS)
      - 2.4.1.5.3. Secondary to medications
        - 2.4.1.5.3.1. Immunomodulators
        - 2.4.1.5.3.2. Post-transplant
    - 2.4.1.6. Infections
    - 2.4.1.7. Liver disease
      - 2.4.1.7.1. Cirrhosis and its complications
    - 2.4.1.8. Malnutrition
    - 2.4.1.9. Morbid obesity
    - 2.4.1.10. Pregnancy

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<sup>1</sup> Throughout this document, references to the patient's family are intended to include all those who are personally significant to the patient and are concerned with their care, including, according to the patient's circumstances, family members, partners, caregivers, legal guardians, and substitute decision-makers.

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- 2.4.1.11. Respiratory disease
  - 2.4.1.11.1. Chronic obstructive pulmonary disease (COPD)
  - 2.4.1.11.2. Respiratory failure
  - 2.4.1.11.3. Sleep apnea
- 2.4.1.12. Renal disease
  - 2.4.1.12.1. Acid-base and electrolyte disorders
  - 2.4.1.12.2. Renal dysfunction
- 2.4.1.13. Shock of all types
- 2.4.1.14. Trauma (according to ATLS protocols)
- 2.4.2. Management of unexpected peri-operative bleeding, both surgical and nonsurgical
- 2.4.3. Use of prophylaxis:
  - 2.4.3.1. Antimicrobial
  - 2.4.3.2. Thromboembolic
  - 2.4.3.3. Immunization, including tetanus
- 2.4.4. Safe prescribing of opioids and other pain management

### **3. Plan and perform procedures and therapies for the purpose of assessment and/or management**

- 3.1. Determine the most appropriate procedures or therapies
  - 3.1.1. Inform the patient and family of alternatives to operative and non-operative care
- 3.2. Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy
- 3.3. Prioritize procedures or therapies, taking into account clinical urgency and available resources
- 3.4. Perform procedures in a skilful and safe manner, adapting to unanticipated findings or changing clinical circumstances

Pre-procedural skills:

- 3.4.1. Apply aseptic and sterile technique for all procedures, as appropriate
- 3.4.2. Gather and manage the availability of necessary instruments and materials for minor procedures
- 3.4.3. Obtain assistance, as needed



- 3.4.4. Maintain sterility
- 3.4.5. Maintain routine practices and additional precautions
  - 3.4.5.1. Hand hygiene, gowning, and gloving
  - 3.4.5.2. Infection prevention and control strategies
- 3.4.6. Handle sharps safely
- 3.4.7. Position the patient appropriately
- 3.4.8. Mark appropriate side/site
- 3.4.9. Prepare the operative site
- 3.4.10. Cleanse the operative site
- 3.4.11. Demonstrate appropriate draping of the patient
- 3.4.12. Deliver pre-procedural local anesthesia, if required

Procedural skills:

- 3.4.13. Apply sterile technique
- 3.4.14. Use surgical instruments appropriately, including clamps, electrocautery, forceps, needle drivers, retractors, scalpel, and scissors
- 3.4.15. Demonstrate effective operative assistance
  - 3.4.15.1. Demonstrate how to provide operative assistance as necessary for the safe and effective performance of operative procedures
  - 3.4.15.2. Take direction from a lead surgeon
- 3.4.16. Demonstrate appropriate use of operative assistance
  - 3.4.16.1. Recognize when to use operative assistance for the safe and effective performance of operative procedures
  - 3.4.16.2. Demonstrate understanding of personal technical limitations
  - 3.4.16.3. Direct assistants
- 3.4.17. Select and use suture materials appropriately
- 3.4.18. Perform the following surgical skills
  - 3.4.18.1. Incision using sharp and energy-based instruments
  - 3.4.18.2. Blunt and sharp dissection without injury to adjacent structures
  - 3.4.18.3. Tissue handling with attention to the preservation of tissue vitality
  - 3.4.18.4. Vascular control in elective and critical situations

- 3.4.18.5. Closure of simple wounds
  - 3.4.18.5.1. Suturing and knot tying
- 3.4.18.6. Selection and application of a wound dressing
- 3.4.18.7. Selection and placement use of tubes and/or drains
- 3.4.18.8. Insertion of a urethral catheter
- 3.4.18.9. Insertion of a nasogastric tube
- 3.4.18.10. Application of a tourniquet
- 3.4.18.11. Application of a splint for bony injury or soft tissue injury
- 3.4.18.12. Drainage of a superficial abscess
- 3.4.18.13. Biopsy
- 3.4.18.14. Securing arterial and venous vascular access in critical and non-critical situations
- 3.4.18.15. Debridement of pressure sore or foot ulcer

3.4.19. Perform the following procedures in critical situations:

- 3.4.19.1. Needle thoracostomy
- 3.4.19.2. Tube thoracostomy
- 3.4.19.3. Surgical airway
  - 3.4.19.3.1. Needle cricothyroidotomy
  - 3.4.19.3.2. Cricothyroidotomy or tracheostomy

Post-procedural skills:

- 3.4.20. Prepare and handle specimens for intraoperative consultation with a pathologist
- 3.4.21. Use appropriate specimen collection techniques, including choosing correct specimen container and fixative/preservative
- 3.4.22. Perform appropriate wound surveillance and dressing care

**4. Establish plans for ongoing care and, when appropriate, timely consultation**

4.1. Implement a patient-centred care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation

4.1.1. Implement a post-operative care plan for management of patients with

4.1.1.1. Complicated post-operative course:

4.1.1.1.1. Airway

4.1.1.1.2. Cardiac

4.1.1.1.2.1. Arrhythmias

4.1.1.1.2.2. Heart failure

4.1.1.1.2.3. Ischemia

4.1.1.1.3. Compartment syndrome

4.1.1.1.3.1. Abdominal

4.1.1.1.3.2. Extremity

4.1.1.1.4. Fat embolism

4.1.1.1.5. Fever

4.1.1.1.6. Gastrointestinal

4.1.1.1.6.1. Anastomotic leak

4.1.1.1.6.2. Bleeding

4.1.1.1.6.3. Bowel obstruction

4.1.1.1.6.4. Bowel perforation

4.1.1.1.6.5. Fistula

4.1.1.1.6.6. Ileus

4.1.1.1.7. Pressure sores

4.1.1.1.8. Renal

4.1.1.1.8.1. Acid-base and electrolyte disorders

4.1.1.1.8.2. Oliguria; anuria

4.1.1.1.8.3. Renal dysfunction

4.1.1.1.9. Respiratory

4.1.1.1.9.1. Aspiration pneumonia

4.1.1.1.9.2. Hospital-acquired pneumonia

4.1.1.1.9.3. Pneumothorax

4.1.1.1.9.4. Pulmonary embolus

4.1.1.1.9.5. Respiratory failure

4.1.1.1.10. Sepsis associated with

4.1.1.1.10.1. Catheter

4.1.1.1.10.2. Superficial surgical site infection

4.1.1.1.10.3. Deep surgical site infection

4.1.1.1.11. Thromboembolic

4.1.1.1.11.1. Acute arterial occlusion

4.1.1.1.11.2. Deep venous thrombosis

4.1.1.2. Uneventful post-operative course

**5. Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety**

5.1. Recognize and respond to harm from health care delivery, including patient safety incidents

5.1.1. Demonstrate an understanding of the steps to take when there has been a break in routine practices or a potential contamination

5.1.2. Recognize complications that arise from operative positioning

5.2. Adopt strategies that promote patient safety and address human and system factors

5.2.1. Apply an error prevention system in the operating room

**Communicator**

***Definition:***

As *Communicators*, Surgical Foundations residents form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.

***Key and Enabling Competencies: Surgical Foundations residents are able to...***

**1. Establish professional therapeutic relationships with patients and their families**

1.1. Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion

1.2. Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety

- 1.3. Recognize when the perspectives, values, or biases of patients, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
  - 1.3.1. Respect diversity and differences in decision-making, including but not limited to those that arise as an impact of
    - 1.3.1.1. Age
    - 1.3.1.2. Cultural beliefs
    - 1.3.1.3. Family composition
    - 1.3.1.4. Gender and gender identity
    - 1.3.1.5. Race/ethnicity
    - 1.3.1.6. Religion
    - 1.3.1.7. Sexual orientation
    - 1.3.1.8. Socioeconomic status
  - 1.3.2. Apply an understanding of the effects of previous adverse individual or population experiences on a patient's interaction with the health care system, including intergenerational, psychological, physical, and sexual traumatic experiences
- 1.4. Respond to a patient's non-verbal behaviours to enhance communication
  - 1.4.1. Apply knowledge of cultural diversity and differences in non-verbal communication, including those that may affect a patient's expression of pain and the surgical treatment of pain
- 1.5. Manage disagreements and emotionally charged conversations, including those that result from
  - 1.5.1. Addressing anger, confusion, and misunderstanding
  - 1.5.2. Cultural differences
  - 1.5.3. Language barriers
  - 1.5.4. Delivering bad news
  - 1.5.5. Disclosing adverse events
  - 1.5.6. Discussing end-of-life care
  - 1.5.7. Discussing organ donation
- 1.6. Adapt to the unique needs and preferences of each patient and to the patient's clinical condition and circumstances
  - 1.6.1. Encourage discussion, questions, and interaction in the encounter

- 1.6.2. Recognize and respond when a patient's or family's past experiences affect interaction with the health care system
- 1.6.3. Apply a trauma-informed approach to patient care

**2. Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families**

- 2.1. Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information
  - 2.1.1. Identify and effectively explore issues to be addressed in a surgical patient encounter, including patient context and preferences
- 2.2. Provide a clear structure for and manage the flow of an entire patient encounter
- 2.3. Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent

**3. Share health care information and plans with patients and their families**

- 3.1. Share information and explanations that are clear, accurate, and timely, while assessing for patient and family understanding
  - 3.1.1. Obtain appropriate consent for sharing information
  - 3.1.2. Plan and discuss appropriate post-operative care and issues with patients and families
  - 3.1.3. Discuss immediate and long-term follow-up issues with patients and families, as appropriate
- 3.2. Disclose harmful patient safety incidents to patients and their families

**4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals**

- 4.1. Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe
- 4.2. Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health
  - 4.2.1. Use technology to improve patient access to care, including patients in rural and remote settings
- 4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

**5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy**

- 5.1. Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements
  - 5.1.1. Prepare recommendations in written and/or verbal form in response to a request from another health care professional
- 5.2. Communicate effectively using a written health record, electronic medical record, or other digital technology
  - 5.2.1. Demonstrate understanding of the risks of breaching patient confidentiality as a result of the use of technologies such as telehealth and internet or digital storage and transmission devices
- 5.3. Share information with patients and others in a manner that enhances understanding and that respects patient privacy and confidentiality

**Collaborator**

***Definition:***

*As Collaborators*, Surgical Foundations residents work effectively with other health care professionals to provide safe, high-quality patient-centred care.

***Key and Enabling Competencies: Surgical Foundations residents are able to...***

**1. Work effectively with physicians and other colleagues in the health care professions**

- 1.1. Establish and maintain positive relationships with physicians and other colleagues in the health care professions to support relationship-centred collaborative care
- 1.2. Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care
- 1.3. Engage in respectful shared decision-making with physicians and other colleagues in the health care professions

**2. Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts**

- 2.1. Show respect toward collaborators
- 2.2. Implement strategies to promote understanding, manage differences, and resolve conflict in a manner that supports a collaborative culture

**3. Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care**

- 3.1. Determine when care should be transferred to another physician or health care professional
- 3.2. Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different health care professional, setting, or stage of care
  - 3.2.1. Arrange for the appropriate resources and health care professional assistance to be available for the surgical patient

**Leader**

**Definition:**

As *Leaders*, Surgical Foundations residents engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

**Key and Enabling Competencies: Surgical Foundations residents are able to...**

**1. Contribute to the improvement of health care delivery in teams, organizations, and systems**

- 1.1. Apply the science of quality improvement to contribute to improving systems of patient care
  - 1.1.1. Describe the use of a pre-operative team checklist and how it improves patient safety
- 1.2. Contribute to a culture that promotes patient safety
  - 1.2.1. Adhere to institutional safety procedures
  - 1.2.2. Report patient safety incidents
- 1.3. Analyze patient safety incidents to enhance systems of care
  - 1.3.1. Participate in continuous quality improvement activities
- 1.4. Use health informatics to improve the quality of patient care and optimize patient safety

**2. Engage in the stewardship of health care resources**

- 2.1. Allocate health care resources for optimal patient care
  - 2.1.1. Demonstrate understanding of the cost of investigations and interventions
  - 2.1.2. Demonstrate understanding of ecological cost and stewardship



2.2. Apply evidence and management processes to achieve cost-appropriate care

**3. Demonstrate leadership in health care systems**

3.1. Demonstrate leadership skills to enhance health care

3.2. Facilitate change in health care to enhance services and outcomes

3.2.1. Demonstrate an understanding of the introduction of new technologies and the need for:

3.2.1.1. Health technology assessment

3.2.1.2. Education of self, others, and teams

3.2.1.3. Credentialing

**4. Manage career planning, finances, and health human resources in a personal practice(s)**

4.1. Set priorities and manage time to integrate practice and personal life

4.2. Manage personal professional practice and career

4.3. Implement processes to ensure personal practice improvement

4.3.1. Demonstrate an understanding of the appropriate use of information technology to enhance surgical practice, including

4.3.1.1. Presentation software

4.3.1.2. Mobile devices

4.3.1.3. Simulation and other technologies

4.3.1.4. Social media

## Health Advocate

### **Definition:**

As *Health Advocates*, Surgical Foundations residents contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.

### **Key and Enabling Competencies: Surgical Foundations residents are able to...**

#### **1. Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment**

- 1.1. Work with patients to address determinants of health that affect them and their access to needed health services or resources
  - 1.1.1. Apply knowledge of how social and ecological determinants of health affect patients' ability and willingness to access care
  - 1.1.2. Facilitate patient access to services and resources, adjusting care to accommodate patient needs
  - 1.1.3. Work with patients who may not have access to technology to ensure they receive equal access to care
- 1.2. Work with patients and their families to increase opportunities to adopt healthy behaviours
- 1.3. Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients
  - 1.3.1. Perform screening for
    - 1.3.1.1. Child abuse
    - 1.3.1.2. Elder abuse
    - 1.3.1.3. Intimate partner abuse
    - 1.3.1.4. Domestic violence
  - 1.3.2. Counsel regarding risk factors to health
    - 1.3.2.1. Obesity
    - 1.3.2.2. Smoking
    - 1.3.2.3. Substance use and abuse
    - 1.3.2.4. Other behaviours that increase risk for injury or disease
  - 1.3.3. Counsel regarding opportunities for health and wellness
  - 1.3.4. Encourage patients to wear appropriate safety equipment for work and leisure pursuits

**2. Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner**

- 2.1. Work with a community or population to identify the determinants of health that affect its members
  - 2.1.1. Recognize and respond to determinants that affect equity in access to and outcomes of surgical care
- 2.2. Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
- 2.3. Contribute to a process to improve health in the community or population they serve
  - 2.3.1. Demonstrate an appreciation of the importance of organ transplantation and identify potential donors

**Scholar**

**Definition:**

As *Scholars*, Surgical Foundations residents demonstrate a lifelong commitment to excellence in practice through continuous learning, and by teaching others, evaluating of evidence, and contributing to scholarship.

**Key and Enabling Competencies: Surgical Foundations Residents are able to...**

**1. Engage in the continuous enhancement of their professional activities through ongoing learning**

- 1.1. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
  - 1.1.1. Recognize the duality of being a learner as well as a practitioner
  - 1.1.2. Utilize learning portfolios, which may incorporate
    - 1.1.2.1. Surgical logs
    - 1.1.2.2. Encounter cards
    - 1.1.2.3. Personal reflection pieces
- 1.2. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources
- 1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice

**2. Teach students, residents, the public, and other health care professionals**

- 2.1. Recognize the influence of role modeling and the impact of the formal, informal, and hidden curricula on learners
- 2.2. Promote a safe and respectful learning environment
- 2.3. Ensure patient safety is maintained when learners are involved
  - 2.3.1. Demonstrate an understanding of the role of appropriate supervision
- 2.4. Plan and deliver learning activities
- 2.5. Provide feedback to enhance learning and performance
- 2.6. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner

**3. Integrate best available evidence into practice**

- 3.1. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them
- 3.2. Identify, select, and navigate pre-appraised resources
- 3.3. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
- 3.4. Integrate evidence into decision-making in their practice

**4. Contribute to the creation and dissemination of knowledge and practices applicable to health**

- 4.1. Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
- 4.2. Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations
- 4.3. Contribute to the work of a research program
- 4.4. Pose questions amenable to scholarly investigation and select appropriate methods to address them
- 4.5. Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry

## **Professional**

### **Definition:**

As *Professionals*, Surgical Foundations residents are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.

### **Key and Enabling Competencies: Surgical Foundations residents are able to...**

#### **1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards**

- 1.1. Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
- 1.2. Demonstrate a commitment to excellence in all aspects of practice
- 1.3. Recognize ethical issues encountered in practice
- 1.4. Recognize and manage conflicts of interest
  - 1.4.1. Demonstrate an awareness of the influence of industry on practice and training
- 1.5. Exhibit professional behaviours in the use of technology-enabled communication
  - 1.5.1. Demonstrate understanding of the limitations of technology

#### **2. Demonstrate a commitment to society by recognizing and responding to societal expectations in health care**

- 2.1. Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians
  - 2.1.1. Demonstrate professional attitudes and model behaviours that uphold societal expectations of the profession, including conduct outside of practice and on social media
- 2.2. Demonstrate a commitment to patient safety and quality improvement

#### **3. Demonstrate a commitment to the profession by adhering to standards and participating in surgeon-led regulation**

- 3.1. Fulfil and adhere to professional and ethical codes, standards of practice, and laws governing practice
  - 3.1.1. Demonstrate an awareness of and adhere to regulations related to
    - 3.1.1.1. The Canada Health Act
    - 3.1.1.2. Pertinent provincial and federal health legislation

- 3.1.1.3. Provincial regulatory bodies
- 3.1.1.4. Hospital governance
- 3.1.1.5. Operating room governance
- 3.1.1.6. Role of the Coroner's Office/Medical Examiners
- 3.1.1.7. Public health as it relates to mandatory reporting of disease
- 3.1.1.8. Referral practices and legislation related to MAID
- 3.1.1.9. Canadian Medical Association (CMA) code of ethics and professionalism
  
- 3.1.2. Apply knowledge of institutional policies procedures and guidelines for residency code of conduct
- 3.1.3. Apply the law, as well as local policies and procedures relevant to substitute decision making, goals of care, advanced health care directives, and MAID
  
- 3.2. Recognize and respond to unprofessional and unethical behaviours in physicians and other colleagues in the health care professions
- 3.3. Participate in peer assessment and standard setting

**4. Demonstrate a commitment to physician health and well-being to foster optimal patient care**

- 4.1. Exhibit self-awareness and manage influences on personal well-being and professional performance
  - 4.1.1. Demonstrate an understanding of techniques for stress reduction
    - 4.1.1.1. Coping mechanisms for loss and adverse outcomes
  - 4.1.2. Demonstrate an understanding of occupational risks and their prevention and management
    - 4.1.2.1. Poor ergonomics
    - 4.1.2.2. Infection
    - 4.1.2.3. Radiation
    - 4.1.2.4. Fire

*SURGICAL FOUNDATIONS COMPETENCIES (2024)*

4.1.3. Promote a healthy lifestyle and recognize and manage personal at-risk behaviours

4.1.3.1. Substance use

4.1.3.2. Fatigue management

4.1.3.3. Healthy relationships

4.1.3.4. Immunization

4.2. Manage personal and professional demands for a sustainable practice throughout the surgeon life cycle

4.3. Promote a culture that recognizes, supports, and responds effectively to colleagues in need

*This document is to be reviewed by the Surgical Foundations Advisory Committee by December 2026.*

**APPROVED** – Specialty Standards Review Committee – September 2017

**APPROVED** – Specialty Standards Review Committee – October 2023