

DEPARTMENT:
COORDINATOR:
OFFICE LOCATION:

SURGERY
Liz Radford
LHSC - VH

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Phone: 519 685-8500 x75435

Introduction

Fourth year student clinical electives in the practice of surgery are offered at LHSC-University, LHSC-Victoria Hospital and St. Joseph's Health Care London and are designed to give the student exposure to clinical areas of his/her interest in any of the following surgical services: Cardiac Surgery, General Surgery, Orthopaedic Surgery, Paediatric General Surgery, Plastic & Reconstructive Surgery, Thoracic Surgery, Urology, and Vascular Surgery. **For each service, a student may attend a 2-week or 4-week elective per site with the maximum elective period on one service being 6 weeks.**

General Description

Students are integrated into the surgical team and assist in all aspects of patient care. Depending on the service, students will be expected to take part in ward rounds, clinics and observe and assist in operative procedures, as well students may be expected to attend resident teaching.

Type of Clinical Experience

Inpatient and Outpatient

Call Expectations

Night and weekend call will vary depending on the service.

Evaluation Procedure

This will be based on observation of the student's performance.

Other Comments, Regulations or Expectations

Choice of surgical subspecialty and hospital are subject to student quotas as shown below. Indicate your elective choices as instructed by the Undergraduate Medical Education Office. After the add/drop has closed, you may contact Liz Radford, the fourth year coordinator for Surgery, **to request a specific preceptor/or team**, in advance of your elective start date and prior to planned schedules.

Student Quotas for Specific Clinical Electives <i>Numbers Allotted per Location per Block</i>			
TITLE OF CLINICAL ELECTIVE	SJHC	LHSC - UH	LHSC - VH
Cardiac Surgery	0	1	0
General Surgery	0	4	4
Orthopaedic Surgery	3	2	2
Paediatric General Surgery	0	0	1
Plastic & Reconstructive Surgery	2	1	2
Thoracic Surgery	0	0	1
Urology	1	1	1
Vascular Surgery	0	0	1

Surgery Objectives

1. Medical Expert

- a) For each of the clinical conditions listed below, the student will be able to:
Describe the relevant aspects of the common surgical illnesses and clinical problems, listed below, according to the following headings:
- i. Definition
 - ii. Epidemiology
 - iii. Causes, including a consideration of each of the following factors:
 - biological
 - psychological
 - social
 - iv. Pathogenesis and pathophysiology
 - v. Clinical features and complications
 - vi. Investigations required to confirm a diagnosis
 - vii. Management, including:
 - medical
 - surgical
 - involvement of allied health care professionals
 - nutritional
 - viii. Prognosis
- I. Cardiac Surgery
- a. Coronary artery disease
 - b. Valvular heart disease
- II. General Surgery
- a. Anal disease and lower gastrointestinal bleeding
 - b. Upper gastrointestinal bleeding
 - c. Appendicitis
 - d. Inflammatory bowel disease
 - e. Biliary tract disorders of benign, malignant and congenital etiology
 - f. Pancreatic disorders of benign, malignant and congenital etiology
 - g. Acute abdominal pain and peritonitis
 - h. Bowel obstruction and abdominal wall hernia
 - i. Breast disease of benign and malignant etiology
 - j. Colorectal disorders of benign and malignant etiology
 - k. Disorders of the thyroid, parathyroid, and adrenal glands
 - l. Disorders of the spleen and liver and portal hypertension
 - m. Blunt and penetrating trauma
- III. Orthopaedic Surgery
- a. Musculoskeletal infections and tumours
 - b. Ligament Injuries and dislocations and musculoskeletal exam
 - c. Fracture care
 - d. Surgical principles of arthritis
 - e. Orthopedic trauma

- f. Principles of pediatric orthopedics
 - g. Disorders of the lumbo-sacral spine
- IV. Pediatric General Surgery
- a. gastrointestinal obstruction and developmental anomalies
 - b. common abdominal wall, inguinal and scrotal disorders
 - c. common pediatric tumours
- V. Plastic & Reconstructive Surgery
- a. Common skin lesions, both benign and malignant
 - b. Facial trauma
 - c. Burns
 - d. Hand injuries including infections, fractures and lacerations
- VI. Thoracic Surgery
- a. Benign and malignant disorders of the stomach and esophagus
 - b. Tumours, infections and common disorders of lung, mediastinum, and pleural space
- VII. Urology
- a. Genitourinary trauma
 - b. Prostate disorders both benign and malignant
 - c. Common congenital and developmental urologic disorders
 - d. Urolithiasis
 - e. Neurogenic bladder
 - f. Urologic tumours including kidney, collecting system, bladder and scrotum
- VIII. Vascular Surgery
- a. Cerebrovascular disease
 - b. Aortic aneurysms
 - c. Limb ischemia both acute and chronic
 - d. Renal and mesenteric arterial occlusive disease

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Develop skills in life-long learning.

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- 6.7 Determine the validity and applicability of published evidence through critical appraisal.
- 6.8 Demonstrate a proclivity towards curiosity and humility, and the ability to question in the face of the unknown.

Contribute to the creation, dissemination, application and translation of new knowledge and practices.

- 6.9 Demonstrate skill in the use of the scientific method to further understanding of human health, disease and illness.

- 6.10 Attain familiarity with basic scientific and translational research and demonstrate how its results can be applied to clinical medicine.
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- 7.2 Recognize and respond appropriately to ethical issues.
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Demonstrate social accountability through a commitment to one's colleagues, patients, the profession and society.

- 7.5 Abide by the professional, legal and ethical codes of practice.
- 7.6 Respond appropriately to the diverse needs of individuals and communities served.
- 7.7 Recognize and respond appropriately to the unprofessional behaviour of others.

Demonstrate a commitment to personal health, balancing the goal of excellence in education with a sustainable work ethic.

- 7.8 Balance personal and professional priorities to ensure personal health, successful education and proficient service.
- 7.9 Strive to heighten personal and professional awareness and insight.
- 7.10 Demonstrate knowledge of obligations, resources and options for care in the event that they identify impairment in themselves or colleagues.

Demonstrate a commitment to reflective practice.

- 7.11 Develop skills in self-reflection, and an understanding of how one's biases, attitudes and feelings impact self-learning and service.
- 7.12 Demonstrate the ability to gather information about personal performance, to know one's own limits, and to seek help appropriately.
- 7.13 Reflect on events, especially critical incidents, to deepen self-knowledge.

CARDIAC SURGERY OBJECTIVES

Similar to all surgical specialties, cardiac surgery has its routine and commonly encountered cases. There is also a variety of cases we see and operations performed that are quite atypical, unusual and rare. Because you are only on service for two weeks, the cases you will be involved with can vary considerably. You can certainly expect to participate in cases of coronary revascularization as well as valve repairs and replacements. Other cases with which we deal include, but are certainly not limited

to, ascending aortic and arch reconstruction, ventricular remodeling, endocarditis, transplantation, cardiac tumours, congenital abnormalities and trauma. While much of your learning will focus on cases encountered during your rotation, it is important to achieve a good basic understanding of common cardiovascular diseases with which you will be confronted regardless of your chosen specialty. This would include identifying common cardiac disease and corresponding patient presentations/symptoms, natural history and management strategies. Below is a list of some of the goals and objectives we would expect you to achieve throughout your rotation.

1. Medical Expert

- a) Pre-Operative Cardiac Surgery History and Physical Examination
 - i. Review cardiac risk factors in conjunction with past medical history
 - ii. CCS classification of Angina
 - iii. NYHA classification of shortness of breath
 - iv. Perform complete cardiac surgery inpatient history and physicals
 - v. Attend outpatient clinic with consultants on your team.
- b) Basic Understanding of Cardiac Surgery Patients
 - i. Indications of coronary artery bypass grafting
 - What are possible graft conduits used for CABG
 - ii. Understand the rationale, indications, and benefits/drawbacks to various management strategies for coronary disease, including CABG, percutaneous coronary intervention and medical management.
 - iii. Approaches to coronary surgery
 - iv. Aortic valve diseases and indications for aortic valve surgery
 - Options for aortic valve replacement (review the types of aortic valves and indications for each type (i.e., bioprosthetic vs mechanical)
 - v. Indications for mitral valve repair or replacement
 - vi. Robotic heart surgery
- c) Basic Understanding of Intra-Operative Cardiac Surgery Techniques
 - i. Obtain a basic overview of cardiopulmonary bypass
 - ii. Intra-operative monitoring
 - iii. Review the waveform of CVP
 - iv. What is MAP? How do you calculate it?
 - v. What is Cardiac Index?
 - vi. How does Heparin work? What is ACT? What is a good ACT for starting CPB?
 - vii. What is Protamine? What is Coumadin? What is Plavix?
 - viii. Review of Gross Anatomy of:
 - Chambers of heart
 - Electrical pathway of heart
 - Aortic/Mitral/Pulmonic valves
 - Branches of great vessels of heart
 - Review angiogram with resident and review all branches of coronary arteries
 - Understand coronary artery dominance and its relevance
- d) Basic Understanding of Post-Operative Management of Cardiac Surgery Patients
 - i. Inotropic medications and their mechanisms of action
 - ii. Routine post-op ward and ICU management
- e) Basic Surgical Skills
 - i. Surgical assistance

- ii. Proper handling of surgical instruments
- iii. Performing simple interrupted and running sutures and placing skin staples
- iv. Knot tying
- f) Management of Specific Cardiac Surgery Issues
 - i. Post-operative atrial fibrillation
 - ii. Chest pain
 - iii. Shortness of breath
 - iv. Low urine output
 - v. Cardiac tamponade
 - vi. Post-operative bleeding
 - vii. Review treatment of NSTEMI, STEMI, cardiogenic shock
 - viii. What is an IABP and how does it work
- g) What is a Type A and Type B aortic dissection?
 - i. How are they treated
- h) Clinical Signs of Endocarditis
 - i. Acute vs subacute endocarditis
 - ii. Treatment options
- i) The remainder of assessment will be based on CANMEDS protocol.

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GENERAL SURGERY OBJECTIVES

1. Medical Expert

A. General

- a) Participate as a full member of the General Surgery team during ward rounds, teaching rounds, clinics, operating room and participate in daily clinical duties.
N.B. On the first day, the clerk should discuss the weekly schedule with the senior resident or consultant on his/her respective team.
- b) Gain knowledge of the anatomy, physiology and pathophysiology of common general surgical problems, including trauma.
- c) Learn how to take a detailed history, evaluate (physical examination and ancillary tests) and develop a management plan for patients presenting with common general surgery problems as well the multiply injured trauma patient.

B. Knowledge

- a) Have a basic understanding of the peri-operative evaluation of the surgical patient (including fluids and electrolytes, nutrition and common post-operative complications).

- b) Have a basic knowledge of the anatomy and physiology of the GI tract, endocrine systems (thyroid, adrenal, parathyroid), breast and hernias
- c) Have a basic understanding of the presentation, investigation and management of the following common general surgery problems:
 - i) the acute abdomen
 - ii) gallbladder disease
 - iii) hernias
 - iv) perianal disease
 - v) colorectal cancer
 - vi) breast cancer
 - vii) endocrine disorders (thyroid, parathyroid and adrenal)
 - viii) trauma patient

C. Skills

- a) Take appropriate history and physical exam on general surgery patients in both elective and emergent scenarios.
- b) Establish a management plan based on appropriate consideration of conservative, medical or surgical options for the disease process.
- c) Participate in the operating room and show appropriate skills and attitudes to:
 - i. Prep and drape a sterile field
 - ii. Insert urethral catheter (Foley)
 - iii. Insert naso-gastric tube
 - iv. Identify pertinent operative anatomy
 - v. Perform basic surgical techniques (retraction, tissue handling, and basic suturing).

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ORTHOPAEDIC SURGERY OBJECTIVES

1. Medical Expert

- a) Cognitive Skills – understand and describe
 - i. Pathophysiology
 - Fracture healing and response to injury
 - Soft tissue healing
 - Infection: bone, joint
 - Arthritis: non-inflammatory, inflammatory
- b) Psychomotor and Affective Skills – perform
 - i. Proficient History
 - Patient-centred
 - Accurate documentation
 - ii. Demonstrate Examination

- Anatomic landmarks
 - Range of motion
 - Peripheral nerves
 - Joint instability: paediatric hip, adult knee & shoulder
- iii. Patient Care: Emergency Room, Ward and Clinic
- Administration of analgesics
 - Closed reduction techniques (fractures and dislocations)
 - Splint and cast immobilization
 - Aspiration and injection
 - Utilization of investigations
 - Establish treatment plan for common disorders

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- 3.4 Work with others to assess, plan, provide and integrate care for individual patients (or groups of patients) and review other tasks, such as research problems and educational work.

Contribute to a positive working environment with colleagues and other members of the health care team.

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- 5.3 Identify the legal rights and responsibilities of physicians to the community and to patients.

- 5.4 Identify moral and ethical responsibilities of physicians to the community and to patients.
- 5.5 Describe determinants of health and explain their role in individual and community well being.

6.0 Scholar

Develop skills in life-long learning.

- 6.1 Identify areas of deficiency in one's personal knowledge or skills.
- 6.2 Identify appropriate educational resources to address knowledge or skill deficiencies.
- 6.3 Evaluate personal learning progress using appropriate tools.
- 6.4 Develop the self-knowledge necessary for personal growth.
- 6.5 Apply newly gained knowledge or skills to the care of patients.
- 6.6 Demonstrate skill in disseminating knowledge within the medical and scientific communities and the community.

Critically evaluate medical information and its sources, and apply this appropriately.

- 6.7 Determine the validity and applicability of published evidence through critical appraisal.
- 6.8 Demonstrate a proclivity towards curiosity and humility, and the ability to question in the face of the unknown.

Contribute to the creation, dissemination, application and translation of new knowledge and practices.

- 6.9 Demonstrate skill in the use of the scientific method to further understanding of human health, disease and illness.
- 6.10 Attain familiarity with basic scientific and translational research and demonstrate how its results can be applied to clinical medicine.
- 6.11 Adhere to the principles of ethical research.

7.0 Professional

Demonstrate commitment to one's teachers, classmates, patients, the profession and society through ethical behaviour.

- 7.1 Demonstrate and practice the Four Pillars of Professionalism: Altruism, Integrity, Responsibility and Respect.
- 7.2 Recognize and respond appropriately to ethical issues.
- 7.3 Maintain appropriate professional boundaries.
- 7.4 Appropriately identify and manage conflicts of interest.

Demonstrate social accountability through a commitment to one's colleagues, patients, the profession and society.

- 7.5 Abide by the professional, legal and ethical codes of practice.

- 7.6 Respond appropriately to the diverse needs of individuals and communities served.
- 7.7 Recognize and respond appropriately to the unprofessional behaviour of others.

Demonstrate a commitment to personal health, balancing the goal of excellence in education with a sustainable work ethic.

- 7.8 Balance personal and professional priorities to ensure personal health, successful education and proficient service.
- 7.9 Strive to heighten personal and professional awareness and insight.
- 7.10 Demonstrate knowledge of obligations, resources and options for care in the event that they identify impairment in themselves or colleagues.

Demonstrate a commitment to reflective practice.

- 7.11 Develop skills in self-reflection, and an understanding of how one's biases, attitudes and feelings impact self-learning and service.
- 7.12 Demonstrate the ability to gather information about personal performance, to know one's own limits, and to seek help appropriately.
- 7.13 Reflect on events, especially critical incidents, to deepen self-knowledge.

PAEDIATRIC SURGERY OBJECTIVES

1. Medical Expert

- a) For each of the clinical conditions listed below, the student will be able to describe the relevant aspects of the common surgical illnesses and clinical problems, listed below, according to the following headings:
 - i. Definition
 - ii. Epidemiology
 - iii. Causes (i.e., differential diagnosis), including a consideration of each of the following factors
 - Biological
 - Psychological
 - Social
 - iv. Pathogenesis and pathophysiology
 - v. Clinical features and complications
 - vi. Investigations required to confirm a diagnosis
 - vii. Management, including:
 - Medical
 - Surgical
 - Involvement of allied health care professionals
 - Nutritional
 - viii. Prognosis
- 1. Bilious vomiting
- 2. Non-bilious vomiting
- 3. Acute abdominal pain

4. Chronic abdominal pain
 5. Gastrointestinal bleeding
 6. Constipation
 7. Umbilical hernias
 8. Inguinal hernias / hydroceles / undescended testes
 9. Blunt and penetrating trauma
 10. Appendicitis
 11. Solid tumours of childhood
 12. Chest wall deformities
 13. Congenital lesions of the head and neck
- b) Predict common post-operative complications in children and initiate their treatment.
 - c) Recognize the unique natural history of surgical diseases in children and use this information to reach a diagnosis.
 - d) Recognize the heat regulation problem in infants and the need for careful environmental control during evaluation and management.
 - e) Recognize the limited host resistance and high risk of nosocomial infections in newborns, and the need for aseptic protocols to minimize environmental hazards.
 - f) Recognize the need to individualize drug dosage and fluid administration on the basis of weight and be able to calculate expediently fluid and electrolyte requirements using standard formulas.
 - g) Recognize and accommodate for altered physiological systems (such as immature hepatic and renal function) that affect drug and anaesthetic administration.
 - h) Recognize the difference between types of sutures and choose the appropriate type and size for various wounds.
 - i) Predict the risk of apnea post anaesthesia and post narcotic administration in small infants.
 - j) Technical skills:
 - i. Surgical procedures that each student should become familiar with during a paediatrics surgery rotation:
 - OR sterile technique
 - Wound closure (simple)
 - Suture removal
 - NG tube
 - IV
 - Foley catheter
 - Local anesthesia

2.0 Communicator

Develop rapport, trust, and ethical therapeutic relationships with patients and families.

- 2.1. Identify good communication as a core physician skill, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction and improved clinical outcomes.
- 2.2. Establish positive therapeutic relationships, characterized by understanding, trust, respect, honesty and empathy, with patients and their families.
- 2.3. Respect patient confidentiality and privacy.

Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals.

- 2.4. Gather relevant information about a disease, but also about a patient's beliefs, concerns, expectations and illness experience.
- 2.5. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals.

Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care.

- 2.6. Effectively identify and explore problems to be addressed from a patient encounter, including the patient's context, responses, concerns, and preferences.
- 2.7. Respect diversity and difference in shared decision-making including, but not limited to, the impact of gender, religion and cultural belief.
- 2.8. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care.
- 2.9. Effectively address challenging communication issues such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding.
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Convey effective oral and written information about a medical encounter.

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- 7.11 Develop skills in self-reflection, and an understanding of how one's biases, attitudes and feelings impact self-learning and service.
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PLASTIC & RECONSTRUCTIVE SURGERY OBJECTIVES

Plastic Surgery is a diverse specialty covering a number of body systems. The goal of the rotation in

Plastic Surgery is to provide the medical student with exposure to a broad spectrum of clinical problems with a focus on several areas in particular and to develop a systematic approach to a wide spectrum of problems including but not limited to skin cancer, hand injuries, facial fractures, burn injuries, and difficult wound problems.

1. Medical Expert

- a) To be competent in obtaining a history from patients presenting with any of the categories listed above.
- b) To be able to apply basic anatomy and physiological principles to assessment of patients presenting with problems in the various categories listed above.
- c) To be able to formulate a differential diagnosis for patients presenting with the variety of categories listed above.
- d) To perform a directed physical examination for a variety of common problems in the disease groupings listed.
- e) To outline the steps in the initial investigation and treatment of patients with injuries in the listed categories of injury.
- f) To identify appropriate timing of treatment of common problems in the listed disease groupings.
- g) To perform basic procedures commensurate with their abilities such as casting, biopsy, excision of lesions, wound debridement, administering local anaesthesia, suturing, choice and application of dressings, under the supervision of consultants and residents.
- h) To develop an understanding of the spectrum and importance of post-operative care for patients with a variety of surgical conditions in the listed disease groupings.
- i) To achieve a basic level of competence in the following technical procedures:
 - i. Incisional and/or punch biopsy of suspicious cutaneous lesions
 - ii. Wound closure
 - iii. Incision and drainage of abscess, hematoma.

It is the goal to provide the student with a set of tools to deal comfortably with a wide variety of problems which they may encounter in their training and subsequent practice.

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THORACIC SURGERY OBJECTIVES

1. Medical Expert

A. General

- a) Participate as a full member of the Thoracic Surgery team during ward rounds, teaching rounds, clinics, operating room and participate in daily clinical duties.
- b) Gain knowledge of the anatomy, physiology and pathophysiology of the cardio-pulmonary and upper gastrointestinal systems.

- c) Learn how to evaluate and develop a management plan for patients presenting with common thoracic surgery problems.

B. Knowledge

- a) Have a basic knowledge of the anatomy and physiology of the heart, great vessels, pleura, trachea, bronchi, lungs, diaphragm, chest wall, phrenic and vagus nerves, mediastinum, esophagus and stomach.
- b) Have a basic understanding of the presentation, investigation (including staging) and management of the following common thoracic problems:
 - i. Carcinoma of the lung
 - ii. Pneumothorax
 - iii. Pleural effusions (hemothorax, infectious, malignant, etc.)
 - iv. Gastro-esophageal reflux
 - v. Benign esophageal disorders (achalasia, spasms, diverticulum)
 - vi. Esophageal cancer
- c) Understand basic principles of pulmonary physiology to interpret adequately an arterial blood gas and pulmonary function tests.
- d) Develop an approach to the interpretation of chest radiographs.
- e) Have a basic understanding of the principles of pleural drainage (chest tube insertion and management) and the functioning of various drainage systems (Heimlich valve, Pleurevac)
- f) Recognize the indications and principles of endoscopic investigations (bronchoscopy and esophagogastroduodenoscopy – EGD)

C. Skills

- b) Take an appropriate history and physical exam of thoracic surgery patients.
- c) Order the proper investigations (CXR, CT scan, ABG, PFT's, endoscopy, etc) based on an adequate differential diagnosis and demonstrate the knowledge in the interpretation of these investigations.
- d) Establish a management plan based on appropriate consideration of conservative, medical or surgical options for the disease process.
- e) Know and demonstrate the basic steps involved in the insertion and removal of chest tubes, with minimal physical and emotional discomfort to the patients.
- f) Participate in the operating room and show appropriate skills and attitudes to:
 - i. Prep and drape a sterile field
 - ii. Insert a urethral catheter (Foley)
 - iii. Identify thoracic anatomy
 - iv. Make reasonable suggestions and inquiry
 - v. Perform basic surgical techniques (retraction, tissue handling, and basic suturing).

2.0 Communicator

Develop rapport, trust, and ethical therapeutic relationships with patients and families.

- 2.1. Identify good communication as a core physician skill, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction and improved clinical outcomes.
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UROLOGY SURGERY OBJECTIVES

1. Medical Expert

- a) An understanding of the relevant anatomy, physiology and pathophysiology of patients' clinical conditions encountered during the selective.
- b) Able to perform a thorough history and physical examination on patients assessed in the outpatient clinic and emergency department.
- c) Able to present the case history of patients assessed in clinic in a concise manner, and to propose differential diagnoses and possible treatment strategies.
- d) Able to perform urethral catheterization and minor suturing under supervision.
- e) An understanding of the relevant investigations and indications for intervention of the following urologic conditions:
 - i. Benign prostatic hyperplasia
 - ii. Prostate cancer
 - iii. Urinary tract infections
 - iv. Erectile dysfunction
 - v. Infertility
 - vi. Urinary incontinence
 - vii. Urinary stone disease
 - viii. Bladder cancer
 - ix. Kidney cancer
 - x. End-stage renal failure
 - xi. Enuresis

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- 3.4 Work with others to assess, plan, provide and integrate care for individual patients (or groups of patients) and review other tasks, such as research problems and educational work.

Contribute to a positive working environment with colleagues and other members of the health care team.

- 3.5 Recognize interpersonal differences, misunderstandings and limitations that may contribute to interprofessional tension.
- 3.6 Contribute to the working relationships on teams and participate in a collegial process to maximize the effective functioning of individuals and the team.

4.0 Manager

Contribute to the effectiveness of the healthcare system.

- 4.1 Describe the structure and function of the healthcare system.
- 4.2 Describe and access community resources and health care services.
- 4.3 Access and manage appropriate resources for learning and patient care.
- 4.4 Develop the skills required to make ethical decisions for the allocation of finite health care resources.

- 4.5 Participate effectively in committees and meetings.
- 4.6 Describe and participate in quality assurance initiatives.

5.0 Health Advocate

Advance the health and well-being of individual patients, communities and populations.

- 5.1 Use health-related knowledge and skills to contribute to community well-being.
- 5.2 Identify opportunities for advocacy, health promotion, disease prevention and health care quality improvement in the community, and respond appropriately.
- 5.3 Identify the legal rights and responsibilities of physicians to the community and to patients.
- 5.4 Identify moral and ethical responsibilities of physicians to the community and to patients.
- 5.5 Describe determinants of health and explain their role in individual and community well being.

6.0 Scholar

Develop skills in life-long learning.

- 6.1 Identify areas of deficiency in one's personal knowledge or skills.
- 6.2 Identify appropriate educational resources to address knowledge or skill deficiencies.
- 6.3 Evaluate personal learning progress using appropriate tools.
- 6.4 Develop the self-knowledge necessary for personal growth.
- 6.5 Apply newly gained knowledge or skills to the care of patients.
- 6.6 Demonstrate skill in disseminating knowledge within the medical and scientific communities and the community.

Critically evaluate medical information and its sources, and apply this appropriately.

- 6.7 Determine the validity and applicability of published evidence through critical appraisal.
- 6.8 Demonstrate a proclivity towards curiosity and humility, and the ability to question in the face of the unknown.

Contribute to the creation, dissemination, application and translation of new knowledge and practices.

- 6.9 Demonstrate skill in the use of the scientific method to further understanding of human health, disease and illness.
- 6.10 Attain familiarity with basic scientific and translational research and demonstrate how its results can be applied to clinical medicine.
- 6.11 Adhere to the principles of ethical research.

7.0 Professional

Demonstrate commitment to one's teachers, classmates, patients, the profession and society through ethical behaviour.

- 7.1 Demonstrate and practice the Four Pillars of Professionalism: Altruism, Integrity, Responsibility and Respect.
- 7.2 Recognize and respond appropriately to ethical issues.
- 7.3 Maintain appropriate professional boundaries.
- 7.4 Appropriately identify and manage conflicts of interest.

Demonstrate social accountability through a commitment to one's colleagues, patients, the profession and society.

- 7.5 Abide by the professional, legal and ethical codes of practice.
- 7.6 Respond appropriately to the diverse needs of individuals and communities served.
- 7.7 Recognize and respond appropriately to the unprofessional behaviour of others.

Demonstrate a commitment to personal health, balancing the goal of excellence in education with a sustainable work ethic.

- 7.8 Balance personal and professional priorities to ensure personal health, successful education and proficient service.
- 7.9 Strive to heighten personal and professional awareness and insight.
- 7.10 Demonstrate knowledge of obligations, resources and options for care in the event that they identify impairment in themselves or colleagues.

Demonstrate a commitment to reflective practice.

- 7.11 Develop skills in self-reflection, and an understanding of how one's biases, attitudes and feelings impact self-learning and service.
- 7.12 Demonstrate the ability to gather information about personal performance, to know one's own limits, and to seek help appropriately.
- 7.13 Reflect on events, especially critical incidents, to deepen self-knowledge.

VASCULAR SURGERY OBJECTIVES

1. Medical Expert

A. General

- a) Participate as a full member of the vascular surgery team during ward rounds, teaching rounds, clinics, operating room and participate in daily clinical duties.
- b) Learn how to evaluate and treat vascular surgery patients and to understand the systemic nature of atherosclerosis.

B. Knowledge

- a) Have a basic understanding of the systemic nature of atherosclerosis and the medical management of vascular surgery patients.

- b) Have a basic understanding of what an aneurysm is and the indications for repair as well as treatment options.
- c) Have a basic understanding of the indications for intervention in carotid artery disease and the treatment options.
- d) Have a basic understanding of the classification of peripheral vascular disease and to understand the indications for intervention and the treatment options.
- e) Have a basic understanding of venous and lymphatic disease.

C. Skills

- a) Take an appropriate history and physical exam of vascular surgery patients.
- b) Order the appropriate investigations for vascular surgery patients.
- c) Scrub in and assist in vascular surgery cases.
- d) Develop basic suturing, tissue handling and surgical techniques.

2. Communicator

Develop rapport, trust, and ethical therapeutic relationships with patients and families.

- 2.1. Identify good communication as a core physician skill, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction and improved clinical outcomes.
- 2.2. Establish positive therapeutic relationships, characterized by understanding, trust, respect, honesty and empathy, with patients and their families.
- 2.3. Respect patient confidentiality and privacy.

Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals.

- 2.4. Gather relevant information about a disease, but also about a patient's beliefs, concerns, expectations and illness experience.
- 2.5. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals.

Develop a common understanding on issues, problems and plans with patients, families, and other professionals to develop a shared plan of care.

- 2.6. Effectively identify and explore problems to be addressed from a patient encounter, including the patient's context, responses, concerns, and preferences.
- 2.7. Respect diversity and difference in shared decision-making including, but not limited to, the impact of gender, religion and cultural belief.
- 2.8. Engage patients, families, and relevant health professionals in shared decision-making to develop a plan of care.
- 2.9. Effectively address challenging communication issues such as obtaining informed consent, delivering bad news, and addressing anger, confusion and misunderstanding.
- 2.10. Deliver information to a patient and family, colleagues and other professionals in a humane manner and in such a way that it is understandable, and encourages discussion and participation in decision-making.

Convey effective oral and written information about a medical encounter.

- 2.11. Maintain clear, accurate, and appropriate records (i.e., written or electronic) of clinical encounters and plans.
- 2.12. Effectively present verbal reports of clinical encounters and plans.

3.0 Collaborator

Participate effectively and appropriately in an interprofessional healthcare team.

- 3.1 Work effectively with patients and families.
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