

Elective: General Surgery - Orange Service

OVERVIEW

Orange Service is one of the three general surgery services at the Health Sciences Centre. The main focus of this rotation is hepatobiliary/pancreatic and GI surgery. All major hepatobiliary and pancreatic surgery in the Province is concentrated at the Health Sciences Centre. This rotation offers an excellent opportunity for the clinical clerks to gain exposure to this aspect of general surgery. Orange Service also has a strong emphasis on other areas of gastrointestinal surgery, endoscopy and laparoscopy.

INTRODUCTION

Location(s):

Health Sciences Centre

Attending Surgeons

Dr. Jeremy Lipschitz, Associate Professor

Dr. George Assuras, Assistant Professor

Dr. Andrew McKay, Assistant Professor

Contact Person:

Melissa Franzmann, Program Administrator

Phone: 204-787-8823

mfrazmann@hsc.mb.ca

LEARNING OBJECTIVES (CanMEDS)

At the completion of the Orange Service General Surgery rotation, the Clinical Clerk will be able to:

- Perform an appropriate assessment of the general surgical patient.
- Elicit a history that is relevant and accurate.
- Perform a focused physical examination that is relevant and accurate.
- Select medically appropriate investigations.
- Demonstrate skills in formulating a differential diagnosis and in organizing an effective management plan.
- Demonstrate proficient use of procedural skills as follows:
 - Venipuncture
 - Intravenous insertion
 - Nasogastric intubation
 - Urinary catheterization
 - Skin suturing

Medical Expert

As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills and professional attitudes in their provision of patient-centered care.

Preoperative assessment, including:

- Risk assessment
- Pulmonary assessment

Elective: General Surgery - Orange Service

- Cardiovascular assessment
- Renal assessment
- Metabolic assessment

Perioperative assessment, including:

- Components of informed consent
- Components/formulation of operative/procedure note; postoperative orders; postoperative note
- Indications/efficacy of monitoring techniques
- Fluid/electrolyte management
- Hemostasis/use of blood products
- Risk factors for alcohol withdrawal syndromes

Postoperative assessment, including:

- Providing adequate postoperative analgesia:
 - Pharmacologic action/side effects of analgesics
 - Epidural/nerve blocks
- Postoperative nutritional/fluid/electrolyte requirements

Postoperative complications, including:

- Differential diagnosis and appropriate diagnostic work-up and management of postoperative fever
- Wound infection
- Fascial dehiscence/incisional hernia

Diagnosis and management of respiratory complications:

- Atelectasis
- Pneumonia
- Aspiration
- Pulmonary edema
- ARDS
- Pulmonary embolism (including DVT)
- Fat embolism

Diagnosis and management of low urine output:

- Pre-renal causes
- Renal causes
- Post-renal causes

Diagnosis and management of hypotension, including:

- Hypovolemia
- Sepsis
- Cardiogenic causes
- Medication effects

Diagnosis and management of postoperative chest pain and arrhythmias.

Diagnosis and management of postoperative gastrointestinal disorders, including:

- Stress gastritis/ulceration
- Paralytic ileus
- Acute gastric dilatation
- Intestinal obstruction
- Fecal impaction
- External gastrointestinal fistulas

Elective: General Surgery - Orange Service

Diagnosis and management of postoperative metabolic disorders, including:

- Hyperglycemia
- Adrenal insufficiency
- Thyroid storm

Management of abnormal bleeding postoperatively, including:

- Inherited and acquired factor deficiencies
- Disseminated intravascular coagulation
- Transfusion reactions

Evaluation and management of disorders causing alteration of cognitive function postoperatively, including:

- Hypoxia
- Perioperative stroke
- Medication effects
- Metabolic/electrolyte abnormalities
- Functional delirium
- Convulsions

The Clinical Clerk should be knowledgeable in the following areas specific to the Orange Surgery rotation (including the etiology, presentation, diagnosis, and management):

Liver

- Jaundice (pre-hepatic, hepatic, and post-hepatic causes)
- Cirrhosis (alcoholic, viral (HCV/HBV), autoimmune, metabolic, etc.)
- Hepatitis
- Liver abscesses
- Liver masses:
 - Benign lesions (cysts, hemangiomas, adenoma, focal nodular hyperplasia, etc.)
 - Malignant lesions
 - Primary malignant lesions (hepatocellular carcinoma)
 - Secondary malignant lesions (colorectal metastases, other metastases)

Pancreas

- Pancreatitis
 - Acute
 - Chronic
 - Complications of pancreatitis (necrotizing pancreatitis, pseudocysts)
- Neoplastic Lesions
 - Adenocarcinoma
 - Peri-ampullary tumours
 - Cystic lesions
 - Serous cystadenoma
 - Mucinous cystadenoma/cystadenocarcinoma
 - Intraductal pancreatic mucinous neoplasm (IPMN)

Biliary Tract

- Gallstone disease
 - Biliary colic
 - Cholecystitis
 - Common bile duct stones
 - Acute cholangitis

Elective: General Surgery - Orange Service

- Gallstone ileus
- Pancreatitis
- Biliary tract obstruction
- Tumours
 - Cholangiocarcinoma
 - Ampullary tumours
 - Duodenal tumours
 - Pancreatic tumours
- Extrinsic compression

Stomach/Duodenum

- Gastritis/duodenitis
- Peptic ulcer Disease
- Upper GI bleeding
- Gastroesophageal reflux disease (GERD)
- Tumours
- Adenocarcinoma
- GIST
- Neuroendocrine

Small Bowel

- Obstruction
- Inflammatory bowel disease
- Tumours
 - Adenocarcinoma
 - GIST
 - Neuroendocrine

Colorectal

- Colorectal polyps
- Colorectal cancer
- Inflammatory bowel disease
- Diverticular disease
- Obstruction

The Clinical Clerk should also acquire expertise in the following skill sets:

Communicator

Physicians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

- Establish rapport, trust and a therapeutic relationship with patients and families.
- Listen effectively.
- Elicit relevant information and perspectives of patients, families, and the health care team.
- Convey relevant information and explanations to patients, families and the health care team.
- Convey effective oral and written information about a medical encounter.
- Maintain clear, accurate, appropriate, and timely records of clinical encounters and operative procedures
- Address challenging communication issues effectively

Elective: General Surgery - Orange Service

- Obtain informed consent
- Deliver bad news
- Disclose adverse events
- Discuss end-of-life care
- Discuss organ donation
- Addressing anger, confusion and misunderstanding using a patient centric approach

Collaborator

Physicians effectively work within a healthcare team to achieve optimal patient care.

- Demonstrate a team approach to health care
- Participate effectively in an interprofessional and interdisciplinary health care team.
- Recognize and respect the diversity of roles, responsibilities, and competences of other health professionals in the management of the surgical patient.
- Work with others to assess, plan, provide, and integrate care of the surgical patient.

Leader

Physicians 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.

- Employ information technology appropriately for patient care.
- Allocate finite health care resources appropriately

Health Advocate

Physicians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations.

- Concern for the best interest of patients
- Identifying health needs of individual patients, and advocate for the patient in cases where appropriate
- Promote and participate in patient safety

Scholar

Physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

- Demonstrate the ability for continuing self-learning
- Discuss the principles of surgery and the application of basic sciences to surgical treatment.
- Demonstrate appropriate presentation skills, including formal and informal presentations.
- Critically evaluate medical information and its sources and apply this appropriately to clinical decisions.
- Critically appraise the evidence in order to address a clinical question.
- Integrate critical appraisal conclusions into clinical care.

Elective: General Surgery - Orange Service

Professional

As Professionals, physicians are committed to the health and well-being of individuals and society through ethical practice, profession-Led regulation, and high personal standards of behaviour.

- Exhibit professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism.
 - Demonstrate a commitment to delivering the highest quality care.
 - Recognize and respond appropriately to ethical issues encountered in practice.
 - Recognize and respect patient confidentiality, privacy and autonomy.
 - Participation in peer review
 - Manage conflicts of interest
 - Maintain appropriate relations with patients.
 - Demonstrate awareness of industry influence on medical training and practice
 - Recognition of personal and clinical limitations
-

INFORMATION

Required Reading

Lawrence *Essentials of General Surgery*, 3rd ed.

Chapters of particular relevance to this rotation include:

- Chapter 2 - Preoperative Medical Evaluation of Surgical Patients
- Chapter 3 - Fluid & Electrolytes
- Chapter 4 - Nutrition
- Chapter 5 - Surgical Bleeding & Blood Replacement
- Chapter 6 - Shock
- Chapter 7 - Wounds & Wound Healing
- Chapter 8 - Surgical Infections
- Chapter 11 - Abdominal Wall, Including Hernia
- Chapter 13 - Stomach & Duodenum
- Chapter 14 - Small Intestine & Appendix
- Chapter 15 - Colon, Rectum & Anus
- Chapter 16 - Biliary Tract
- Chapter 17 - Pancreas
- Chapter 18 - Liver
- Chapter 19 - Breast
- Chapter 20 - Surgical Endocrinology
- Chapter 21 - Spleen
- Chapter 26 - Surgical Procedures, Techniques & Skills

Teaching Unit

- The surgical ward is located on GH3 at the Health Sciences Centre.
- The clinic is located at GA1 (Pink Desk) at the Health Sciences Centre.

Elective: General Surgery - Orange Service

Evaluations

- The student is evaluated by all the Orange Service General Surgeons with input from the residents and nursing staff
- An exit interview will be performed on leaving the service, and should be scheduled by the student.

Call Responsibilities

- Students are on-call in-hospital, to a maximum of 1-in-4.
- Students on Orange Surgery will be placed on call with the Trauma and Acute Surgical Care (Gold Surgery) service. Call will consist of consult calls and OR (not ward call).
- An on-call room is provided.

First Day Instructions

The student is to page the Orange Service senior resident the day before the start of the rotation through hospital paging at 787-2071.

WARD ACTIVITIES

Expectations

- Students are expected to attend morning ward rounds (Monday through Friday).
- Students are expected to participate in morning ward rounds under supervision of the resident staff.
- Students are expected to participate in the management of the inpatient ward under the supervision of the junior and senior surgery residents.
- Times will be divided equally between the clinics and operating room to gain as wide as exposure as possible to this field of General Surgery.

Operating Room Schedule

Students should check with the Senior Resident on the service for operating room schedules. Generally, there is at least one full OR slate every day of the week, with the exception of Wednesdays. Often there are two operating room slates occurring simultaneously. Students are encouraged to make every effort to attend.

In addition to surgery performed in the operating rooms, there will be regularly scheduled endoscopic procedures that take place in A1 (Pink Desk) Endoscopy. These procedures will include ERCPs, gastroscopies and colonoscopies.

Clinic Schedule

Dr. Lipschitz
Tuesday AM
Thursday AM

Elective: General Surgery - Orange Service

Dr. Assuras
Tuesday PM
Wednesday PM
Thursday AM

Dr. McKay
Monday AM
Tuesday PM

Academic Schedule

Surgery Grand Rounds
Wednesday 0745-0900
Usually Theatre C or Theatre A, BSB or SBGH

Complication Rounds
Wednesday 0900-1000

Orange Service Rounds
Wednesday 1000-1100