## Rotation Specific Objectives: CTU # 2 Hepatico-pancreatic-biliary

These Rotation specific objectives cover FOD, Core, TTP as demonstrated by the appropriate EPA's (see below). It is expected that the EPA's will be completed as they pertain to the rotation and that clinical knowledge be acquired in a graduated fashion. The competencies are also covered in the academic curriculum.

**Rotation Description** CTU # 2 is staffed by Dr's Jalink Nanji and Bennett. The emphasis of the clinical experience on CTU # 2 is on the hepatico-pancreatico-biliary system, spleen and adrenal

**Goals and Objectives**
**FOD, Core TTP:**

a) *Knowledge*

- Well organised understanding of duodenum, liver, biliary tree, pancreas, spleen and adrenal gland anatomy, pathology and pathophysiology (see as per specific RCPSC goals of training in General surgery)

b) *Skills*

- Mastery of basic physician skills related to duodenum, liver, biliary tree, pancreas, spleen and adrenal gland pathology
- Introduction to hepatico-pancreatico biliary, splenic and adrenal specific surgical procedures with *graduated* performance in the operating room appropriate for the stage of training
- Perform basic upper GI endoscopic evaluation
- **At the end of this rotation the Resident in Surgical Foundations/ TTD will be able to:**
- Manage the ward with the guidance of a senior/chief resident.
- Recognize most common post-operative complications related to colorectal surgery and deal with them appropriately.
- Arrange and facilitate efficient investigation of patients in the emergency department and on the surgical ward.
- Competently initiate opening and closing the abdominal incision
- Undertake simple skin and soft tissue biopsies
- Assist with complex and laparoscopic hepatobiliary cases (including insertion of ports, laparoscopic retraction)
- Start to develop skills in laparoscopic cholecystectomy

- Participate in endoscopy (colonoscopy and flexible sigmoidoscopy) and competently perform basic endoscopic skills
- **At the end of this rotation the Resident in Core will be able to:**
- Manage the ward, and perform in-patient and outpatient consultations, and provide outpatient follow up care
- Participate in the care of common and complex hepatobiliary surgery:

Hepatic

- Competently perform open or laparoscopic biopsy of liver lesion or liver parenchyma
- Competently control hepatic hemorrhage
- Competently perform simple open wedge resections of the liver
- Competently assist in more advanced open and laparoscopic liver resections

Biliary

- Perform simple and difficult laparoscopic and open cholecystectomies
- Have an approach to the very challenging laparoscopic cholecystectomy, complete with potential bail-out maneuvers when safe cholecystectomy is not possible
- Be able to perform a temporizing decompression of the biliary tree for acute sepsis

Stomach/Duodenum:

- Competently perform diagnostic and therapeutic upper endoscopy
- Competently perform partial gastric wedge resections
- Competently manage acute perforations of the stomach and duodenum
- Competently perform a complete Kocherization of the duodenum
- Competently assist in the performance of an oncologic subtotal or total gastrectomy with lymphadenectomy

Pancreas:

- Competently assist in pancreatic resections and reconstructions for malignancy
- Competently assist in operations for pancreatitis including cystgastrostomy, pancreatic debridement, pancreaticojejunostomy

Spleen:

- Competently perform laparoscopic and open splenectomy for elective or urgent indications

Adrenal

- Competently perform open and laparoscopic adrenalectomy for benign and malignant indications

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c) *Attitudes*

- Manage the ward with the guidance of a senior/chief resident (junior).
- Function as a coordinator and supervisor of junior house staff and students on the heptico-pancreatic biliary service involving preoperative, intraoperative and postoperative patient management delivered in step down unit, ICU and on the ward (senior)
- Communicates effectively with patients and families, colleagues & allied health professionals
- Professional behaviours (honesty, reliability, & confidentiality)
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d) *Academics*

RC Competencies:

a) *MEDICAL EXPERT*

At the conclusion of the transition to practice the resident should meet all of the following objectives in spite of variations in rotation durations and resident exposure to hepatico-pancreatico-biliary system, spleen and adrenal surgery.

1.4.1. **Surgical anatomy**, including arterial supply, venous and lymphatic drainage, and innervation of:
1.4.1.2. Stomach and duodenum, including relationships to other structures in the abdomen
1.4.1.6 Liver and biliary tract, including relationships to other structures in the abdomen, and segmental anatomy of the liver, common variants of biliary anatomy, common variants of hepatic arterial supply and venous drainage, and the relationship of the portal and systemic circulations
1.4.1.7 Pancreas, including relationships to other structures in the abdomen, and gross anatomic divisions of the pancreas, ductal anatomy and its common variants
1.4.1.8 Spleen, including relationships to other structures in the abdomen and specific attachments, and common locations of accessory splenic tissue
1.4.1.11 Adrenal glands, including relationships to other structures in the abdomen and the component zones of the glands

1.4.3. **Physiology** relevant to General Surgery, including:
1.4.3.2.Stomach and Dodenum (gastric acid secretion, gastric emptyng and duodenal exocrine and endocrine function)
1.4.3.6 Liver, biliary tract and pancreas (Liver blood flow, including imaging of blood flow and changes with regeneration, portal hypertension, Bilirubin metabolism, including bile production, excretion, and enterohepatic circulation, metabolic functions of the liver (glucose metabolism, coagulation factors, drug metabolism)Pancreatic endocrine function, Pancreatic exocrine function (secretin- bicarbonate), motility disorders (GB dyskinesia SOD)).
1.4.3.7 Spleen (Immunologic and hematologic function, alterations to peripheral blood and immune function post- splenectomy)
1.4.3.9 Adrenal glands (Hormones produced by each zone, Hormone regulation, Effect of exogenous adrenal hormones on the function of the adrenal glands)

1.4.6. **Principles of oncology** as it relates to the liver, gall bladder, pancreas spleen and adrenal gland)1.4.6.1. Tumour biology 1.4.6.1.1. The cell cycle and normal regulatory mechanisms 1.4.6.1.2. Effects of radiation on the cell cycle 1.4.6.1.3. Mechanisms of action of systemic therapies, including targeted therapies, on the cell cycle 1.4.6.1.4. Cellular differentiation in normal, premalignant, and malignant tissues 1.4.6.1.5. Growth and dissemination patterns of cancer 1.4.6.2. Tumour genetics 1.4.6.2.1. Oncogenes and tumour suppressor genes 1.4.6.2.2. Role of genetic testing in suspected hereditary cancers

1.4.6.2.3. Common familial cancer syndromes and their genetic mechanisms 1.4.6.3. Cancer epidemiology, including incidence, prevalence, and risk factor. 1.4.6.4. Prevention of malignancy 1.4.6.4.1. Methods that can be used to protect against or limit the risk of malignancy, including environmental factors, medications, and vaccines 1.4.6.4.2. Definition and important attributes of a screening test, and malignancies for which there are effective screening tests 1.4.6.4.3. Role of prophylactic surgery in patients at high risk 1.4.6.5. Diagnostic tools to establish diagnosis and evaluate patients with cancer 1.4.6.5.1. Role of and the potential impact of molecular diagnostics on treatment, prognosis, and outcome 1.4.6.6. Cancer staging and risk stratification 1.4.6.7. Treatment of patients with malignancies 1.4.6.7.1. Surgical options in the diagnosis and staging, cure, prolongation of survival, improvement in quality of life, and/or palliation of malignancy 1.4.6.7.2. Principles of neoadjuvant, adjuvant and palliative therapies for malignancies, including chemotherapy, radiotherapy, immunotherapy, and hormonal therapy 1.4.6.7.3. Role of treatments that provide effective palliation, enhance prevention and decrease recurrence, and improve quality of life 1.4.6.8. Principles of a follow-up program for patients who have been treated for malignancy 1.4.6.9. Guidelines for management of malignancy

1.4.10. **Principles of endoscopy** 1.4.10.1. Equipment function, common equipment-related problems, and their solutions 1.4.10.2. Potential risks and complications of endoscopic procedures for patient, operator, and assistant, and the measures appropriate to minimize such hazards 1.4.10.3. Infection control and sedation, as relevant to the endoscopy suite

1.4.11. **Principles of nutrition** 1.4.11.1. Normal requirements for calories, carbohydrates, fat, protein, vitamins, trace elements, and minerals 1.4.11.2. Nutritional assessment techniques 1.4.11.3. Effects of trauma and illness on nutritional requirements 1.4.11.4. Indications for enteral and parenteral nutrition supplementation and their potential complications

1.4.12. **Principles of palliative care** 1.4.12.1. Definition and goals of palliative care 1.4.12.2. Role of surgery in the palliation of malignancy, including debulking, relief of gastrointestinal obstruction, and prevention of bleeding

**Perform a patient-centred clinical assessment in the area of the hepatico-pancreatico-biliary system, spleen and adrenal and establish a specific management plan**

2.2 Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion 2.2.1. Gather a relevant clinical history 2.2.2. Identify and interpret the clinical significance of findings in a physical examination 2.2.4. Select appropriate methods to stage malignancies 2.2.5. Select and interpret medical imaging 2.2.5.1. Radiography 2.2.5.2. Ultrasonography 2.2.5.3. Computed tomography (CT) 2.2.5.4. Magnetic resonance imaging (MRI) 2.2.5.5. Nuclear imaging 2.2.5.6. Positron emission tomography (PET) 2.2.6. Interpret the clinical relevance of laboratory and pathology reports 2.2.7. Determine the indications for, and benefits and risks of surgical intervention for the clinical presentation 2.2.8. Assess peri-operative risk Establish goals of care in collaboration with patients and their families1 2.3. , which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation 2.3.1. Identify opportunities for advance care planning discussions and explore the patient's values, wishes and preferences related to end-of life-care 2.3.1.1. Apply knowledge of settings for end-of-life care, including home, hospice, palliative care units, and hospital.

**Establish a patient-centered management plan, including non-operative, preoperative, operative, and postoperative care for patients with the following conditions**:

Stomach and Duodenum
2.4.8 Gastric foreign bodies
2.4.9 Neoplasms of the stomach, including benign and malignant
2.4.10 Neoplasms of the duodenum, including benign and malignant
2.4.11 Peptic ulcer disease and its complications, including hemorrhage, perforation, and obstruction Long term complications after peptic ulcer surgery)
Liver
2.4.33 Acute liver failure, including referral for transplantation if indicated
2.4.34 Infections, including viral, bacterial, and parasitic
2.4.35 Liver cysts, including benign (simple and complex), and malignant
Portal hypertension
2.4.36 Neoplasms, including benign and malignant

Biliary Tract
2.4.38 Benign inflammatory processes

2.4.39 Biliary obstruction and its complications
2.4.40 Biliary tract injury
2.4.41 Neoplasms, including benign and malignant Stone formation and complications

Pancreas
2.4.43 Cystic lesions, including inflammatory, infectious, and neoplastic
2.4.44 Neoplasms, including benign and malignant
2.4.45Pancreatitis, including local and systemic complications

Spleen
2.2.46 Cystic lesions
2.4.47 Hemolytic anemias
2.4.48 Idiopathic thrombocytopenic purpura
2.4.49 Neoplasms, including benign and malignant
2.4.50 Overwhelming post-splenectomy sepsis/infection
2.4.51 Splenic abscess and infection
2.4.52 Splenic vein thrombosis and left sided portal hypertension
2.4.53 Splenomegaly and hypersplenism

Adrenal
2.4.62 Adrenal hemorrhage
2.4.63 Adrenal insufficiency
2.4.64 Adrenal suppression
2.4.65 Catecholamine excess disorders
2.4.66 Cushing's disease and Cushing's syndrome
2.4.67 Neoplasms of the adrenal cortex and adrenal medulla, including benign and malignant
2.4.68 Primary hyperaldosteronism

i) **Plan and perform procedures and therapies for the purpose of assessment and/or management**

3.1.2. Screening and surveillance for malignancies 3.1.3. Prophylactic use of anticoagulants 3.1.4. Prophylactic and therapeutic use of pharmacologic agents, including antibiotics and corticosteroids 3.1.5 Selection and timing of immunization prior to splenectomy 3.1.7. Selection of open or MIS approach based on relevant patient and operating environment factor
3.1.8. Endoscopy 3.1.8.1. Appropriate monitoring of patients undergoing upper GI endoscopy

3.1.8.2. Use of medications to facilitate endoscopic procedures, including sedatives, narcotic analgesics, and antispasmodic medications
3.2. Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy 3.2.1. Recognize and address challenges arising in emergency situations and when patient capacity to provide consent is limited
3.3. Prioritize procedures or therapies, taking into account clinical urgency and available resources 3.3.1. Triage patients appropriately for emergent, urgent or elective care and interventions 3.3.2. Select patients appropriately for intraoperative pathology consultations
3.4. Perform procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances

## Diagnostic Procedures and technical skills specific to CTU 2

a. Demonstrate effective, appropriate, and timely performance of the following diagnostic procedures
i. Liver biopsy
ii. Diagnostic upper GI endoscopy and colonoscopy
iii. Diagnostic laparoscopy
iv. Intraoperative cholangiography
v. Intraoperative biopsy for frozen section
b. Demonstrate basic skills of minimally invasive surgery
i. Patient positioning
ii. Safe access to the peritoneal cavity (Hasson trochar and varies needle)
iii. Appropriate port site location, trochar insertions, and site closure
iv. Suture laparoscopically

## Have expert knowledge including indications, contraindications, complications and alternatives and ability to perform

### Stomach and Duodenum

3.4.19. Operative bypass for malignant or benign disease of the stomach or duodenum
3.4.20 Insertion of percutaneous endoscopic gastrostomy and open gastrostomy tubes
3.4.21 Operative management of the acute complications from bariatric surgery 3.4.22 Operative management of bleeding from duodenal and gastric ulcers 3.4.23 3.4.23 Operative management of complications from peptic ulcer disease

3.4.24 Operative management of the difficult duodenal stump
3.4.25 Bypass procedures for upper GI obstruction
3.4.26 Wedge resection of the stomach or duodenum
3.4.27 Partial or total gastrectomy for gastric neoplasms
3.4.28 Operative management of gastric volvulus

Hepatobiliary
3.4.56 Wedge resection of the liver (liver biopsy)
3.4.57 Cholecystectomy
3.4.58 Partial cholecystectomy
3.4.59 Common bile duct (CBD) exploration for choledocholithiasis
3.4.60 Cholecystostomy and tube decompression of the CBD for emergency management of severe infection

Pancreas
3.4.61 Operative management of necrotizing pancreatitis
3.4.62 Pancreatic cystogastrostomy

Spleen
3.4.63 Splenectomy
3.4.64 Ligation of a splenic artery aneurysm
3.4.65 Surgical management of cystic lesions of the spleen

iii. **Provide perioperative care and surgical management in collaboration with subspecialty surgeons**

Stomach and duodenum
3.5.9. Extended procedures for locally advanced gastric cancer
Hepatobiliary
3.5.15 Simple anatomical and non-anatomical liver resections
3.5.16 Marsupialization of simple liver cysts
3.5.17 Surgical management of Echinococcal cysts
3.5.18 Biliary enteric bypass and bile duct repair below common hepatic duct (CHD) bifurcation
Pancreas
3.5.18 Distal pancreatectomy
3.5.19 Transduodenal biopsy of the pancreas
Spleen
3.5.12 Partial splenectomy
Adrenal Gland
3.5.24 Adrenalectomy

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

Implement a patient-centred care plan that supports ongoing care, follow-up on. investigations, response to treatment, and further consultation
4.1.1. Identify indications for consultation with other health care professionals
4.1.1.1. Provide referral for advanced operative or endoscopic procedures
4.1.1.2 Identify indications for and timing of consultation with medical.and/or radiation oncologists
4.1.2. Provide follow-up on results of investigations and response to treatment
4.1.3. Recognize and manage complications
Perioperative complications related to pneumoperitoneum, 4.1.3.1.including acidosis, hypotension, hypoxia, and pneumothorax
4.1.3.2 Perioperative complications of abdominal access, including injuries.to the abdominal viscera and blood vessels
4.1.4. Provide management of and/or referral for end-of-life care

**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**

5.1Recognize and respond to harm from health care delivery, including patient safety.incidents
5.2 Adopt strategies that promote patient safety and address human and system.factors 5.2.1 Participate and/or lead in a pause or checklist immediately before surgical.incision
5.2.2 Apply strategies to enhance patient and provider safety and reduce the.risk of complications from surgical interventions

## *b) COMMUNICATOR*

**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, patients' families, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
1.4. Respond to a patient's non-verbal behaviours to enhance communication

1.5. Manage disagreements and emotionally charged conversations
1.5.1. Discuss autopsy and organ donation when appropriate
1.6. Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances 1.6.1 Apply a proactive approach to managing patient expectations and needs through the course of their illness

**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
2.2 Provide a clear structure for and manage the flow of an entire patient encounter
2.2.1 Gather information accurately and effectively under time constraints
2.3 Seek and synthesize relevant information from other sources, including the.patient's family, with the patient's consent

**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 Convey treatment options, including operative, nonoperative, interventional radiology, and endoscopic measures

**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
4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

**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
management

5.2 Communicate effectively using a written health record, electronic medical record,.or other digital technology
5.3. Share information with patients and others in a manner that enhances understanding and that respects patient privacy and confidentiality

*COLLABORATOR*

**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

**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

**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 oral and written communication, during a patient transition to a different health care professional, setting, or stage of care

*Leader*

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

1.1 Apply the science of quality improvement to systems of patient care
1.1.1 Demonstrate awareness of guidelines for reporting surgical results
1.1 Contribute to a culture that promotes patient safety
1.3 Analyze patient safety incidents to enhance systems of care
1.3.1 Participate in reviews of patient complications and deaths
1.4 Use health informatics to improve the quality of patient care and optimize patient safety

Engage in the stewardship of health care resources

2.1 Allocate health care resources for optimal patient care
2.2 Apply evidence and management processes to achieve cost-appropriate care
2.2.1 Recognize the responsibility to forgo treatments that are futile

Demonstrate leadership in professional practice

3.1 Demonstrate leadership skills to enhance health care
3.2 Facilitate change in health care to enhance services and outcomes

Manage career planning, finances, and health human resources in a practice

4.1 Set priorities and manage time to integrate practice and personal
4.2 Manage personal professional practice(s) and career
4.3 Implement processes to ensure personal practice improvement
4.3.1 Maintain an electronic record of operative procedures performed, including treatment complications and surgical complications as a source of reflection on performance and stimulus for personal practice improvement

Health Advocate

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
1.2 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

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.affect them
2.2 Improve clinical practice by applying a process of continuous quality improvement 2.2.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
2.3.2 Promote organ donation

### Scholar

**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

1.2. 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

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

2.1. Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners

2.2. Promote a safe learning environment

2.3. Ensure patient safety is maintained when learners are involved

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

### Professional

**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 and respond to ethical issues encountered in practice

1.4. Recognize and manage conflicts of interest

1.5 Exhibit professional behaviors in the use of technology enabled communication

## Surgical Foundations EPAs – Transition to Discipline

| EPA | Observation | Specific Criteria<br>(Contextual Variables) | Number Req'd |
|---|---|---|---|
| D1: Performing the preoperative preparation of patients for basic surgical procedures | Case discussion and/or review of documentation by supervisor or senior surgical assistant | None | 1 |
| D3: Documenting clinical encounters | Direct observation or case discussion by supervisor or senior surgical assistant **with review of clinical documentation** | None | 2 |
| D4: Demonstrating handover technique | Direct observation by supervisor or senior surgical assistant | At least 1 in a clinical (not sim) setting<br>At least 2 different assessors | 2 |
| D5: Demonstrating the ability to function in the operating room | Direct observation by supervisor or senior surgical assistant | None | 1 |
| D6: Suturing incisions | Direct observation by supervisor or senior surgical assistant | At least 1 wound > 5cm long<br>At least 1 in a clinical (not sim) setting<br>At least 2 different assessors | 2 |
| D7: Managing tubes, drains, and central lines | Direct observation or case discussion by supervisor (surgeon, fellow or senior resident) | 2 different types of tubes / drains<br>At least 1 in a clinical (not sim) setting<br>At least 2 different assessors | 2 |

* Unless otherwise specified, supervisor = attending surgeon, fellow or senior resident

* Gold shaded rows are high likelihood and/or high priority

## Surgical Foundations EPAs – Foundations of Discipline

| EPA | Observation | Specific Criteria (Contextual Variables) | Number Req'd |
|---|---|---|---|
| F1: Providing initial management for critically ill patients | Direct observation or case discussion by supervisor or physician | At least 2 different presentations<br>At least 2 different assessors<br>No more than 1 in a simulation setting | 3 |
| F4: Providing risk assessment and management for preoperative patients in preparation for surgery | Direct or indirect observation by supervisor | At least 2 different assessors<br>At least one emergency procedure<br>At least one elective procedure<br>At least one high risk or critically ill patient | 4 |
| F5: Providing patient education and informed consent in preparation for surgical care | Direct observation by supervisor | At least 2 different assessors<br>At least one emergency procedure<br>At least one elective procedure<br>At least 2 in clinical (non-sim) settings | 3 |
| F6A & B: Participating in surgical procedures | Part A<br>Direct observation by supervisor | Part A<br>At least 2 by attending/faculty surgeon<br>At least 2 different types of procedures | 4 |

| EPA | Observation | Specific Criteria<br>(Contextual Variables) | Number<br>Req'd |
|---|---|---|---|
| | Part B (MSF)<br>Direct observation by members of the health care team | At least 2 different assessors<br>Part B<br>3 different observers<br>2 different roles<br>(at least 1 by a Nurse) | 3 |
| F7A & B: Managing patients with an uncomplicated post-operative course (Part A) | Part A<br>Direct observation or case discussion by supervisor<br>Part B (MSF)<br>Direct observation by members of the health care team | Part A<br>At least 2 high complexity patients<br>At least 2 different assessors<br>Part B<br>3 different observers<br>2 different roles | 4<br>6 |
| F8: Managing post-operative patients with complications | Direct observation or case discussion by supervisor **with review of documentation** | At least 4 different complications<br>At least 3 different assessors | 8 |
| F9: Supervising junior learners in the clinical setting | Direct observation by supervisor or junior learners (medical students) | At least 2 different senior residents or faculty | 3 |

* Unless otherwise specified, supervisor = attending surgeon, fellow or senior resident

* Gold shaded rows are high likelihood and/or high priority

## General Surgery EPAs – Foundations of Discipline

| EPA | Observation | Specific Criteria (Contextual Variables) | Number Req'd |
|---|---|---|---|
| F 1. Assessing and providing initial management plan for patients presenting with a simple General Surgery problem | Direct and indirect observation by surgeon, surgical fellow, Core or TTP resident | At least 2 different observers<br>At least 3 observations by faculty<br>At least 1 direct observation | 5 |
| F 2. Recognizing and initiating management for patients with a surgical abdomen/acute abdomen | Direct observation and/or case review by general surgeon, critical care physician, surgical subspecialty trainee, or Core or TTP resident | At least 2 observations by faculty | 3 |
| F 3. Performing fundamental skills in General Surgery | Direct observation by surgeon, surgical fellow, or Core or TTP resident | At least 2 laparotomy, including 1 opening and 1 closing<br>At least 2 laparoscopy<br>No more than 1 simulation per task<br>At least 3 observations by faculty | 6 |
| F 4. Performing the pre-procedural assessment and risk optimization for patients undergoing endoscopy (PART A) | Direct observation by faculty surgeon, subspecialty trainee (GS, GS subspecialty or GI), or Core or TTP GS resident | At least 1 observation by faculty | 2 |

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|---|---|---|---|
| F 4. Performing the pre-procedural assessment and risk optimization for patients undergoing endoscopy (PART B) | Direct or indirect observation by faculty, subspecialty trainee (GS, GS subspecialty or GI), or Core or TTP GS resident | At least 1 upper endoscopy<br>At least 1 lower endoscopy<br>At least 1 non-elective<br>At least 2 different observers<br>At least 2 observations by faculty | 4 |

* Unless otherwise specified, supervisor = attending surgeon, fellow or senior (Core or TTP) resident

* Gold shaded rows are high likelihood and/or high priority

## General Surgery EPAs – Core of Discipline

| EPA | Observation | Specific Criteria (Contextual Variables) | Number Req'd |
|---|---|---|---|
| C 1. Providing surgical consultation | Direct observation and/or case review by general surgeon, surgical subspecialist, subspecialty trainee, or TTP trainee | At least 2 different settings<br>No more than 1 sim<br>At least 5 complex<br>At least 1 thyroid or parathyroid<br>At least 3 different observers<br>At least 5 observations by faculty | 10 |
| C2: Providing initial assessment and management of patients with multiple traumatic injuries | Direct observation and/or case review by a general surgeon, emergency physician, trauma team leader (TTL) or trauma fellow | At least 1 penetrating trauma, may be sim<br>At least 1 unstable patient<br>At least 3 direct observations<br>At least 3 observations by faculty | 5 |

| EPA | Observation | Specific Criteria<br>(Contextual Variables) | Number<br>Req'd |
|---|---|---|---|
| C3: Leading the team providing care for an inpatient surgical service | Direct and indirect observation by supervisor | At least 1 in a community setting<br>At least 1 in a General Surgery acute care service<br>At least 3 in a service with more than 10 patients on average<br>At least 3 different observers | 5 |
| C4: Providing follow-up care | Direct observation and/or case discussion or chart review by supervisor | At least 2 in outpatient setting<br>At least 2 complex<br>At least 1 transition to palliative<br>At least 2 different observers<br>A range of treatment decisions | 5 |
| C5: Performing procedures on the stomach and duodenum | Direct observation by general surgeon or subspecialty trainee | At least 6 observations by faculty<br>At least 2 of each surgical task<br>At least 1 resection of stomach in a malignant case<br>At least 2 different observers | 12 |
| C6: Performing procedures on the small bowel | Direct observation by general surgeon or subspecialty trainee | At least 6 observations by faculty<br>At least 2 different observers<br>At least 2 of each surgical task | 12 |

| EPA | Observation | Specific Criteria<br>(Contextual Variables) | Number<br>Req'd |
|---|---|---|---|
| C9: Performing procedures on the hepatobiliary system | Direct observation by general surgeon or subspecialty trainee | At least 7 observations by faculty<br>No more than 2 sim<br>At least 2 different observers<br>At least 2 each of the following surgical tasks: mobilization of liver; wedge resection/biopsy of liver; dissection of biliary tree; dissection of gallbladder; and intraoperative cholangiogram<br>At least 1 dissection of gallbladder must be complex<br>At least 1 CBD drainage (may be completed in simulation)<br>At least 1 biliary-enteric anastomosis<br>At least 1 hemorrhage control | 13 |
| C10: Performing procedures on the pancreas | Direct observation by general surgeon or subspecialty trainee | At least 1 observation by faculty | 2 |
| C11: Performing procedures on the spleen | Direct observation by general surgeon or subspecialty trainee | At least 1 emergent or sim-trauma setting<br>No more than 1 in simulation setting<br>At least 1 observation by faculty | 2 |

| EPA | Observation | Specific Criteria<br>(Contextual Variables) | Number<br>Req'd |
|---|---|---|---|
| C14: Performing procedures on the abdominal wall and hernia | Direct observation by general surgeon or subspecialty trainee | At least 1 emergent procedure<br>At least 2 in each region (abdominal wall, groin)<br>At least 1 temporary abdominal wall closure<br>At least 2 of each surgical task<br>At least 2 different observers<br>At least 5 observations by faculty | 10 |
| C17: Performing the skills of minimally invasive surgery (MIS) | Direct observation by general surgeon or subspecialty trainee | At least 1 of each surgical task<br>At least 2 different observers<br>At least 2 observations by faculty | 4 |
| C19: Performing esophagogastroduodenoscopy | Direct observation by general surgeon, subspecialty surgeon, gastroenterologist or subspecialty trainee | At least 2 therapeutic procedures<br>At least 2 different observers<br>At least 5 observations by faculty | 10 |
| C20: Performing colonoscopies | Direct observation by general surgeon, subspecialty surgeon, gastroenterologist or subspecialty trainee | At least 6 colonoscopies to the level of the terminal ileum<br>At least 5 polypectomies including 2 >1cm<br>At least 2 different observers<br>At least 5 observations by faculty | 10 |

| EPA | Observation | Specific Criteria (Contextual Variables) | Number Req'd |
|---|---|---|---|
| C 22 (SA 2): Delivering scholarly teaching to a variety of audiences, including peers, junior trainees, and/or other health professionals | Direct observation by surgeon | None | 2 |

* Gold shaded rows are high likelihood and/or high priority

## General Surgery EPAs – Transition to Practice

| EPA | Observation | Specific Criteria (Contextual Variables) | Number Req'd |
|---|---|---|---|
| P1: Managing an outpatient clinic | Direct and indirect observation of clinic management by general surgeon | 2 different assessors<br>2 clinics of at least ½ day each | 2 |
| P2: Managing the day's list of endoscopy procedures | Direct observation by general surgeon or gastroenterologist | 2 different assessors | 2 |
| P3: Managing the day's list of operative procedures | Direct observation by general surgeon or subspecialty trainee, incorporating feedback from anesthesiologist and operating room charge nurse or OR nurses | 2 Different assessors<br>1 Faculty observation<br>Mix of inpatients and outpatients | 2 |

| | | | |
|---|---|---|---|
| P4: Performing therapeutic endoscopic interventions of the upper and lower gastrointestinal tract (OPTIONAL) | Direct observation by general surgeon, subspecialty surgeon, gastroenterologist or subspecialty trainee | 2 Different assessors<br>8 Faculty observations<br>2 Hemostasis in active bleeding<br>2 Dilations<br>2 Foreign body removal<br>5 Polypectomy > 1 cm<br>1 Endoluminal stent insertion<br>1 Colonic decompression | 15 |
| P5 (SA #1): Performing the administrative, human resource and financial aspects of independent practice | Review of portfolio of activities by supervisor | None | 1 |

* Gold shaded rows are high likelihood and/or high priority

Last Reviewed; Nov 2024

To be reviewed Nov 2025