

**Department of Medicine**  
*Division of Gastroenterology*

**Rotation Orientation Manual**

Sunnybrook Health Sciences Centre

Version 5 2013

## **Orientation Email**

Welcome to GI at Sunnybrook. Our orientation session will be held: **[date, location]**

Please confirm with me your half-days, vacation days, and any other days away. You are asked to review the following before the rotation:

### **Call Schedule**

Your **Call schedule** is the GIM call schedule which is distributed by Sally Ganesh. Please let me know of your call dates.

### **Clinic Schedule**

Your **Clinic schedule** is on the Trainee Schedule, found on the blog under Rotation Schedules. Currently, your clinic blocks are assigned as follows:

**[date, staff]**

### **Teaching Schedule**

The **Teaching schedule**. This is found on the blog under Rounds & Teaching (<http://sunnybrookgi.wordpress.com/rounds/>) along with previous presentations and teaching session/seminar summaries and reference articles. Currently, the teaching sessions are as follows:

**[date, staff]**

Please check the blog regularly for updates as these are subject to change.

You MAY be expected to present at the City-wide Journal Club or the local Journal Club. Speak to Dr. Tinmouth ([jill.tinmouth@sunnybrook.ca](mailto:jill.tinmouth@sunnybrook.ca)) for dates and details.

### **Evaluation**

Formal feedback will be given at the midway point and end of the rotation. Your feedback sessions are booked as follows:

**[date, time]**

### **Division of Time**

Overall, the expectation for the division of your time during the rotation breaks down as follows:

    Consults/inpatients 35% (you can expect to see 2 new consults per day)

    Rounding with staff 25% (you can expect to round 1-2 hours per day)

    Teaching sessions 20% (you will be in teaching 8 hours per week, including your ½ days)

    Clinic 20% (you can expect to see 3 patients 2 days per week)

## **Introduction to the Education Blog**

I invite you to join our private blog (<http://sunnybrookgi.wordpress.com>) which has all your:  
rotation objectives (<http://sunnybrookgi.wordpress.com/rotation-goals-objectives/>)  
orientation documents (<http://sunnybrookgi.wordpress.com/reference-documents/orientation-documents/>)  
GI call schedules (<http://sunnybrookgi.wordpress.com/call-schedules/calendar/>)  
training schedules (<http://sunnybrookgi.wordpress.com/call-schedules/trainee-schedules/>)  
reference articles (<http://sunnybrookgi.wordpress.com/articles/>)  
an image atlas (<http://sunnybrookgi.wordpress.com/atlas/>)  
practice quizzes (<http://sunnybrookgi.wordpress.com/quizzes/>)

You will receive an *invitation* in a separate email.

It is a good idea to **'Follow'** the blog so that you receive email notification of new posts. Simply click the 'Follow' button in the right sidebar.

### **Blog Education Activities**

#### **Image of the Week**

Each Friday, new images will be posted. The purpose of this activity is to enhance the opportunity to see images beyond what you may have the opportunity to see while in clinic or on service. You will be expected to have a look at the images each week and to document that you have done so by adding your comments to the post. In follow-up, further details about the case will be posted the following week.

If you are interested in making a submission, simply email me ([elaine.yong@sunnybrook.ca](mailto:elaine.yong@sunnybrook.ca)) the image(s) with a short intro and 'answer'.

#### **Discussion Forum**

We've also established a *Discussion Forum* accessible through the blog (<http://sunnybrookgi.freeforums.net/>). A new supervised discussion thread will be posted each week. As part of your evaluation, your contribution to the discussion will be assessed by the moderator of the category. As a guideline, it is expected that you sign in to the blog every 1-2 days. Also, feel free to use the forum to discussion with your staff and colleagues any topics of interest.

We hope that you have a good rotation. Please don't hesitate to contact me for any questions, concerns or suggestions.

Thanks and welcome.

Elaine Lin Yong  
Site Director of Education  
[elaine.yong@sunnybrook.ca](mailto:elaine.yong@sunnybrook.ca)

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## On Blog

<http://sunnybrookgi.wordpress.com/>

OR Non-Elective Booking Form  
Endoscopy Reference Articles  
Endoscopy Practical Manual

# IMPORTANT PHONE NUMBERS

Dr. Johane **Allard**  
(Division Director)  
Secretary: Alisa Gayle  
Office: 416-480-5910  
Fax: 416-480-4845  
[johane.allard@sunnybrook.ca](mailto:johane.allard@sunnybrook.ca)

Dr. Michael **Bernstein**  
Secretary: Sam Ramsammy  
Office: 416-480-5495  
Fax: 416-480-5977  
Pager: ID: 5588  
[michael.bernstein@sunnybrook.ca](mailto:michael.bernstein@sunnybrook.ca)

Dr. Lawrence **Cohen**  
Secretary: Devi Rosan  
Office: 416-480-4725  
Fax: 416-480-5977  
Back line: 2462  
Pager: 416-235-9900 / ID 6015  
[lawrence.cohen@sunnybrook.ca](mailto:lawrence.cohen@sunnybrook.ca)

Dr. Mary Anne **Cooper**  
Secretary: Juliet Anderson  
Office: 416-480-6799  
Fax: 416-480-5977  
Back line: 2281  
Pager: 416-600-8079 / ID 6885  
[maryanne.cooper@sunnybrook.ca](mailto:maryanne.cooper@sunnybrook.ca)

Dr. Fred **Saibil**  
Secretary: Liz Alcon  
Office: 416-480-4727  
Fax: 416-480-5977  
Back line (private): 2776  
Pager: 416-379-9760 / ID 6121  
[fred.saibil@sunnybrook.ca](mailto:fred.saibil@sunnybrook.ca)

Dr. Piero **Tartaro**  
Secretary: Juliet Anderson  
Office: 416-480-6799  
Fax: 416-480-5977  
[piero.tartaro@sunnybrook.ca](mailto:piero.tartaro@sunnybrook.ca)

Dr. Jill **Tinmouth**  
(Deputy Division Director)  
Secretary: Alisa Gayle

Fax: 416-480-4845  
Pager: 416-545-3062 / ID 6967  
[jill.tinmouth@sunnybrook.ca](mailto:jill.tinmouth@sunnybrook.ca)

Dr. Elaine Lin **Yong**  
(Education Director)  
Secretary:  
Office: 416-480-6890  
Fax: 416-480-5977  
Pager: 416-237-2320 / ID 7071  
[elaine.yong@sunnybrook.ca](mailto:elaine.yong@sunnybrook.ca)

**Endoscopy:**  
Charge Nurse x83657  
Room 1/North room: 4005, 3137  
Room 2/South room: 2662/7080  
Room 3/ERCP room 3814  
Endo bookings (C610) 4318  
Endo Recovery 4006

Hospital Locating 4244  
Bed Flow x4692/4315 p6329  
Med. Imaging 4336  
CT reading room 3170 / 3171  
U/S reading room 2261  
Special Procedures/IR 1424  
GI Imaging Dr. Jane Wall x7071 p4336  
ER triage desk x3791  
ER general 7207  
C6 4945  
AIMGP clinic 6737 Fax 6739  
Microbiology 4242  
IT help desk 7100

**IF CALLING FROM OUTSIDE, YOU CAN  
DIAL NUMBERS DIRECTLY, eg, 416-480-  
5210 STARTING WITH 4, 5, OR 6  
FOR ALL OTHER EXTENSIONS YOU  
MUST USE 416-480-6100 first**

**Gastroenterology Rotation Goals**  
<http://sunnybrookgi.wordpress.com/rotation-goals-objectives/>

- To develop a basic but comprehensive approach to the management of common GI disorders both in the inpatient and outpatient setting
- To appreciate the range and limitations of endoscopic management
- To triage resources efficiently in the management of patients presenting with GI emergencies

**Site-Specific Learning Objectives**

**Medical Expert**

- Assessment and work-up of dysphagia
  - Be able to distinguish oropharyngeal vs. esophageal dysphagia
  - Appreciate the role of endoscopy, radiological imaging, manometry and fluoroscopy in the work-up of patients with dysphagia
- Management of upper and lower GI bleeds.
  - Be able to triage upper GI bleeds using validated scoring tools
  - Be able to initiate immediate management for patients with upper or lower GI bleeding
- To learn management strategies

for diagnosis and treatment of IBD

- To have an approach to patients presenting with chronic abdominal pain in the outpatient setting
- To be able to define, diagnose and manage patients with irritable bowel syndrome and functional dyspepsia
- To learn evaluation and management of healthy pregnant patients who manifest liver disease; and patients with liver disease who become pregnant
- To learn approach to and management of abnormal liver biochemistry
- To understand the principles of jaundice
- Approach to inpatient/outpatient presenting with elevated liver enzymes or cirrhosis
  - Be able to order appropriate investigations for outpatients or inpatients referred for elevated liver enzymes
  - Be able to determine and describe the severity of liver disease
  - Be able to manage patients with decompensated liver disease including ascites, variceal bleeding and SBP
- Chronic pancreatitis
  - Know the definition and list the causes of chronic pancreatitis

- Recognize the possible manifestations of chronic pancreatitis
- Be able to manage the manifestations of chronic pancreatitis
- List the possible structural complications of chronic pancreatitis
- To develop a general approach to pancreatico-biliary diseases and their endoscopic management specifically ERCP and EUS
- To understand how to diagnose pancreatic tumors and understand the principles of management
- Diagnosis and management of malnutrition
  - Learn how to assess for malnutrition at the bedside
  - Learn how to use a simple guide to assessment of nutritional needs
  - Learn how to administer an enteral diet
  - Learn how to order TPN
- To learn about the neuro-hormonal influences in obesity, and evolving endoscopic management strategies of obesity
- To know how to manage a patient presenting with a GI emergency
- How to use e-mail in clinical practice:
  - models for new patient histories
  - history updates for former patients
  - use of the CMPA e-mail contract
  - uses of e-mail in patient management.
- To appreciate the importance of a positive patient-physician relationship in the management of patients with functional GI disorders
- To appreciate the importance of providing a positive diagnosis for patients with functional GI disorders

### **Collaborator**

- Appreciate the collaborative role of GI, Radiology and Surgery in the management of patients with GI bleeding
- To be aware of the role of the dietician in the management of inpatients
- Work in a collaborative fashion with allied health team (endoscopy nurses, dieticians etc.)

### **Manager**

- Learn to triage patients for endoscopic procedures based on acuity and available resources

### **Health Advocate**

- Appreciate the role of screening in prevention of colorectal cancer
- Communicate risks of benefits of endoscopic procedures to patients and family

### **Communicator**

- How to employ patient education in clinical practice, with a particular focus on IBD
  - how to use drawings
  - how to help patients derive value from the Internet.

- Effectively discuss importance of compliance with treatment in young patients with IBD
- appreciate the role of the physician, allied health care members, and the pharmaceutical industry in assisting patients with reimbursement for expensive drug therapies such as biologics and antiviral therapy

### **Professional**

- Recognize and appropriately respond to ethical issues such as withdrawal of care or decision to not treat patient with advanced disease

### **Scholar**

- To be able to present an evidence-based review of a GI topic as part of city-wide journal club
- Demonstrate effective teaching of students and junior house staff and allied health professionals



**Educational Curriculum**

<http://sunnybrookgi.wordpress.com/rounds/teaching-session-overview/>

**Clinics & Teaching Sessions**

	<b>Monday</b>	<b>Tuesday</b>
<b>800</b>		Teaching session
<b>900</b>	GI Clinic - Tartaro	GI Clinic - Cohen
<b>1200</b>		
<b>100</b>		

**Clinical Education**

Inpatient GI Consult Service

Inpatient Ward Service

Outpatient Luminal Clinic  
Cohen

Bernstein

Tartaro

Tinmouth

Outpatient Liver Clinic  
Cooper

Outpatient IBD Clinic  
Saibil

Outpatient HPB Clinic  
Yong

**Seminars – 2 sessions per week**

**Luminal**

Chronic/Recurrent Abdominal Pain Tartaro

Dysphagia Tartaro

Inflammatory Bowel Disease

Bernstein

**Nutrition**

Nutrition

Capland

Obesity Cohen

**Liver**

Iron overload & Hemochromatosis Tartaro

Cirrhosis, Ascites & SBP Tartaro

Jaundice

Cooper

Pregnancy & Liver Disease Yong

**Pancreatobiliary**

Acute Pancreatitis

Bernstein

ERCP & Pancreatobiliary Disase Yong

(choledocholithiasis, chronic pancreatitis, pseudocysts, tumors, post-operative complications)

**Cancer**

Hereditary Colon Cancer

Bernstein

Pancreatic Tumors Yong

**Endoscopy**

Complications of Colonoscopy

Bernstein

**Critical Appraisal**

Journal Club

Tinmouth

Bedside Teaching Saibil

**Service Teaching Sessions – 2 sessions per week**

**Luminal**

GERD  
Tinmouth  
Anal Disease  
Tinmouth  
Chronic Diarrhea  
Bernstein  
Constipation & Chronic abdo pain  
Saibil  
GI Infections & Fulminant colitis  
Saibil  
Malabsorption  
Tartaro  
Vascular Diseases of the bowel  
Yong

### **Liver**

Hepatitis C  
Cooper  
Hepatitis B  
Yong  
Cirrhosis-Renal Failure  
Yong  
Acute Liver Failure  
Cooper

### **Cancer**

Colorectal Cancer Screening  
Tinmouth  
HCC  
Yong

### **GI Emergencies**

### **GI Resident Teaching Sessions / Online Discussion Forum Topics – 1 discussion topic per week**

#### **Moderator**

Upper GI Bleeding  
Bernstein  
Lower GI Bleeding  
Bernstein  
Celiac disease  
Bernstein  
Colonic polyps & surveillance  
Bernstein  
IBD  
Bernstein

Cirrhosis-variceal bleeding  
Tartaro  
Liver transplantation  
Tartaro  
Risks/Benefits of Endoscopic procedures  
Yong

### **Image of the Week**

Contributions by all staff

Educational Resources & References,  
Pertinent Documents, Trainee & Call  
Schedules and access to the Discussion  
Forum can be found on our Divisional Blog.  
<http://sunnybrookgi.wordpress.com>  
<http://sunnybrookgi.freeforums.net>

# Gastroenterology Royal College Objectives

## 1. Medical Expert

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- To develop a diagnostic approach to common presenting gastrointestinal disorders:
  - Abdominal pain
  - Dysphagia
  - Malabsorption
  - Diarrhea
  - Weight loss
  - Jaundice
  - Transaminitis
  - Ascites
  - Intestinal obstruction
- To develop an approach to the investigation and management of esophageal disorders:
  - Dysphagia, dyspepsia, and heartburn
  - Gastroesophageal reflux disease
- To develop an approach to the investigation and management of gastrointestinal bleeding:
  - Upper and lower GI bleeding
- To develop an approach to the investigation and management of peptic ulcer disease:
  - Treatment of *Helicobacter pylori* infection
- To develop an approach to the investigation and management of idiopathic inflammatory bowel disease:
  - To be able to differentiate Crohn's disease from ulcerative colitis
  - To be knowledgeable about extra-intestinal manifestations of IBD
  - To be knowledgeable about treatment options
  - Indications for surgery
  - To be aware of the complications and their treatments
- To develop an approach to the investigation and management of enteric infections:
  - Bacterial infections
  - Protozoal infections
  - Pseudomembranous colitis
- To develop an approach to the investigation and management of diarrhea:
  - Acute and chronic diarrhea in various hosts
- To develop an approach to the investigation and management of functional bowel disease:
  - Non-ulcer dyspepsia
  - Irritable bowel disease
- To develop an approach to the investigation and management of cholelithiasis:
  - Awareness of the spectrum of presentations of gallstone disease
  - Diagnostic options for gallstone disease
  - Management of complications of gallstone disease, i.e. pancreatitis

- To develop an approach to the investigation and management of pancreatitis:
  - Acute and chronic pancreatitis
  - To be able to assess severity of acute pancreatitis
  - To be knowledgeable about the complications of pancreatitis
- To develop an approach to the investigation and management of malabsorption:
  - Celiac disease
- To develop an approach to the investigation and management of acute liver failure:
  - To develop an approach to the differential diagnosis
  - To understand indications for transplantation
- To develop an approach to the investigation and management of chronic liver failure:
  - Definitive management of alcoholic liver disease
  - Management of hemochromatosis-associated liver disease
  - To understand the pathophysiology of portal hypertension
  - Variceal bleeding/hepatic encephalopathy/ascites
  - Renal disease in the setting of chronic liver disease
- To develop an approach to the investigation and management of infectious hepatitis:
  - To understand the pathophysiology of infections with various hepatitis viruses
  - To be able to interpret hepatitis B serology
  - Treatment options for HBV and HCV infections
- To be knowledgeable about liver transplantation:
  - Indications for transplantation
  - Complications of transplantation including rejection, malignancy, and infection
- To develop an approach to the investigation and management of nutrition:
- To have a familiarity with different forms of enteric and parenteral nutrition:
  - To be aware of complications of parenteral nutrition
- To develop an approach to the investigation and management of GI malignancies:
  - To be aware of common presenting symptoms of various GI malignancies, including esophageal, gastric, pancreatic, colon, and hepatocellular cancer
  - To be aware of the management of benign colonic polyps
  - To be aware of the risk factors and epidemiologic associations for certain GI malignancies
  - To be aware of screening recommendations for colon cancer

- To develop an approach to the investigation of vascular diseases of the bowel:
  - Risk factors for mesenteric ischemia
  - Management of mesenteric ischemia
- To develop technical skills related to the practice of gastroenterology:
  - Techniques for both diagnostic and therapeutic paracentesis
  - To understand the role of the serum albumin ascites gradient (SAAG) in defining the etiology of ascites
  - Knowledge of parameters for diagnosis of spontaneous bacterial peritonitis
  - Nasogastric tube insertion

## **2. Communicator**

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- To demonstrate effective tools for gathering historical information from patients
- To be able to effectively communicate information regarding risks and benefits of treatments and procedures to patients
- To be able to communicate treatment and follow-up plans to the patient

## **3. Scholar**

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- To be able to critically appraise the literature regarding the

diagnosis and treatment of gastrointestinal disease

## **4. Manager**

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- To develop the ability to perform focussed histories and physical examination in the time-limited environment of the hospital
- To develop time management skills to reflect and balance priorities for patient care, sustainable practice, and personal life

## **5. Collaborator**

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- To understand the role of allied healthcare professionals in the management of the patient, particularly the clinical nutritionist

## **6. Health Advocate**

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- To identify opportunities for patient counseling and education regarding their medical conditions
- To educate patients regarding the role of diet in the maintenance of wellness

## **7. Professional**

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- To demonstrate professional attitudes in interactions with patients and other healthcare professionals

Reviewed and Updated August 2006  
by Drs. Wayne Gold & Kevin Imrie

# SUB-SPECIALTY RESIDENT RESPONSIBILITIES

1. Please refer to the **Trainee Teaching Schedule** for your weekly schedules. ***It is your responsibility*** to notify the attending if you are unable to attend any of the assigned blocks.
2. For the GI Consults Service, the GI PGY-4 or PGY-5 is team leader; responsibilities include supervision of all other house staff, knowledge (and management, if asked) of any patients in GI beds, and knowledge of all patients on consultation service. An R5 is expected to provide at least 1 formal teaching session per week to the rest of the house staff.
3. In-patient consults include K and L wings, but patients from there are treated as out-patients for endoscopy booking. An **“Out-Patient Procedure (OPP) Form”** must be completed. These can be obtained in the Endoscopy suite.
4. Policy re veterans: If there are 2 identical patients in the ER, and only 1 bed, the veteran gets the bed.
5. **E.R. consults**: If an ER doctor wants to send a patient home, with follow-up in GI as an outpatient, you must assess the patient to determine if this is appropriate. This MAY be done over the phone, depending on the circumstances. However, the covering staff must agree to the arrangement, since the clinics are all overloaded, and cannot fit in extra patients easily. The **Inpatient Follow-up (IPFU) Clinic** with your Service Attending may be a good option.
6. On **weekends**, rounds should include all patients on the GI service (ie, under the care of 1 of the staff gastroenterologists), even if a patient is being cared for by the staff during the week. It is the responsibility of the staff to update the person on call about the case.
7. Consideration and respect to our Endoscopy nurses will reap dividends; a failure to “pitch in” will be noted, and will make them less helpful to you. Do not call a case “urgent” when it is not.
8. **Julia Young**, our Endoscopy Charge Nurse, will supply you with a key to the unit and the change room. Please provide your 4 digit pager ID AND your long-range # to her ASAP. Her number is **x83657**.
9. For residents who perform endoscopic procedures, **case tracking** for procedures is mandatory. An example is appended. At the end of the rotation, these forms or your own version should be returned to Dr. Yong. There should be a breakdown of your numbers for

the various procedures, such as # of OGDs, Scleros, bougies, foreign body extractions, flex sigs, colos, hot biopsies, polypectomies, PEGs and anything else you did.

10. A “rounds and seminars” schedule and a call schedule will be provided separately.

11. The **signout list** must be maintained daily on the Sunnybrook Intranet.



## On-Call Responsibilities

### GI Call

The GI senior residents, fellows and the general surgery residents are responsible for GI Call. The GI Call schedule is available on the blog website. No changes are to be made after the start of the rotation unless you are arranging a switch with another resident, and have the approval of the Site Director.

### Call Responsibilities

	<b>1<sup>st</sup> Call</b>
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GI Consults	GI on-call resident; if none then MCR if General Medicine patient then GI Staff
GI Ward	CNG intern (including elective admissions)
Emergency Rm	General Medicine CTU Senior Resident

### GIM Call

GIM residents participate in cross-coverage call as part of the general medicine call pool. All requests or concerns should be directed to the Chief Medical Resident or the Program Director, Dr. Steve Shadowitz.

## E.R. REFERRALS

When a GI bleed comes to the ER, the ER staff may request a “double consult” to GI and to GIM. One of the main purposes of this is to try and prevent us from finding out about GI bleeds at 4PM, when the arrival time was in the AM.

The reason for this is that the ER staff have voiced frustration about delays in management of some GI bleed cases because *they* currently have to wait for GIM to come and assess the patient. However, even if we respond before GIM, there should be no assumption that we are the “primary” service. This policy has functioned well in the past; **if problems are encountered, please let me know ASAP.**

## GUIDELINES FOR FOLLOW-UP ARRANGEMENTS FOR E.R. PATIENTS

### **BY THE GI SERVICE**

YOU MAY RECEIVE CALLS FROM THE ER STAFF TELLING YOU THAT THEY WANT TO SEND SOMEONE HOME, AND HAVE FOLLOW-UP BY GI. DUE TO THE HIGH VOLUME IN OUR OUTPATIENT OFFICES, YOU SHOULD:

1. Obtain the history. This may be done over the phone; it depends on the complexity of the case, and your ability to get useful information from the caller. Do not simply accept the decision that the patient can go home.
2. Depending on your assessment, you may choose any of the following:
  - a. Advise the caller that you think the patient needs urgent endoscopy. Contact the staff-on-call.
  - b. Advise the caller that the patient should be admitted to the GIM service, and that the patient will be seen (or re-assessed) in consultation by our service.
  - c. Advise the caller that the patient should be admitted to the GI service, under the name of the consultant on call **OR** under the name of the consultant having this patient in his/her practice. **This can only be done after you have spoken to the staff on call, and he/she has agreed.**
  - d. Advise the caller that the patient can be discharged, and will be seen in follow-up. How quickly this will be done depends on your conversation with the staff-on-call. If the patient does not already belong to a member of the Division, then the follow-up is the responsibility of the staff-on-call.
  - e. Advise the caller that the patient can be discharged, and should contact their **own** gastroenterologist, or their family doctor for follow-up. You **may** elect to give some advice (such as “clear fluid diet” for a Crohn’s patient having a flare, but not sick enough to be admitted). **Do not promise** that you will arrange an urgent referral, or any other referral.
  - f. Advise the caller that the patient can be discharged, and should contact their family doctor for follow-up. Do not promise that you will arrange an urgent referral, or any other referral.

## CHECKLIST FOR THE TREATMENT OF ACUTE UPPER GASTROINTESTINAL BLEEDING (NON-VARICEAL)

This checklist is to be used as a **memory recall tool** for the proper treatment of acute upper GI bleeding.

**INSTRUCTIONS:** Review all items when treating patients diagnosed with acute upper GI bleeding.

For questions related to the content/use of this checklist please contact Dr. Matthew Heffer at [m.heffer@utoronto.ca](mailto:m.heffer@utoronto.ca)

### DIAGNOSIS OF ACUTE UPPER GI BLEEDING

- History: Bleeding (hematemesis, melena, hematochezia, presyncope), NSAIDs, ASA, PMHx liver disease
- Physical Exam: Hemodynamic instability (tachycardia, hypotension, orthostatic changes), signs of chronic liver disease
- In-and-out NG tube with aspiration may be useful when the diagnosis is unclear (sensitivity ~80%)

### DIFFERENTIAL

- PUD most common cause
  1. Esophagitis, gastropathy, duodenitis, bleeding secondary to portal hypertension (e.g. varices, portal gastropathy), Mallory-Weiss tear, malignancy, AV malformation, Dieulafoy lesion, hemobilia, and nasopharyngeal sources

### RISK STRATIFICATION

- Clinical predictors of increased risk of re-bleeding or mortality are:
  - Age > 65, comorbid illnesses, fresh gastric aspirate, hemodynamic instability
- Endoscopic predictors of recurrent bleeding:
  - Active bleeding, non-bleeding visible vessels, adherent clots

### ACUTE NON-INVASIVE THERAPEUTIC INTERVENTIONS

- Bloodwork, monitoring and IV access
  - STAT CBC, electrolytes, creatinine, urea, INR, PTT, type and cross
  - 2 large bore IV sites, cardiac monitoring, SpO<sub>2</sub>, postural vital signs
- Hemodynamic resuscitation
  - IV normal saline until postural hypotension and tachycardia resolves
  - pRBC transfusions for low Hb (maintain HCT>30% with cardiac disease, otherwise >20%)
- Correct coagulopathies
  - Follow INR, maintain <1.5; Use FFP 1 - 4 units and Vitamin K 1-10mg po/iv (depending on severity) x 1
  - Maintain platelets >50
- Empiric therapy
  - High dose PPI: iv vs. po, based on risk stratification and severity of bleed
    - IV infusion: pantoprazole 80mg bolus then 8mg/h
    - PO: double standard dose (i.e., omeprazole 40 mg bid)
  - If variceal bleeding is likely (PMHx liver disease or variceal bleed, signs of portal hypertension), consider octreotide
    - Dosage: 50 mcg IV bolus then 50mcg/h

### ACUTE INVASIVE THERAPEUTIC INTERVENTIONS

- Consultation required from gastroenterology

- Upper endoscopy
  - Diagnostic and therapeutic modality of choice

### **REFRACTORY BLEEDING AFTER ENDOSCOPY**

- “Second look” endoscopy
- Surgery
  - When endoscopic therapy fails (i.e, continued active bleeding)
  - If patient rebleeds after second endoscopy
- Angiography
  - Alternative to surgery in appropriate patients (bleeding site not identified or surgery less desirable)

### **ADMISSION**

- Endoscopic findings determine clinical plan:
  - High risk stigmata (active bleeding, visible vessel, clot):
    - IV PPI X 72h (time of greatest risk of re-bleed) then step down to oral PPI
    - Consider admission to intensive monitoring unit
  - Low risk stigmata (clean base, flat spot):
    - Oral PPI (stop IV PPI if initiated prior to scope)
    - Discharge if stable VS, no serious co-morbidities

### **DON'T FORGET**

- Temporarily hold all medications that increase bleeding risk or lower blood pressure
- Monitor patient frequently with postural vital signs and serial CBCs

### **PRIOR TO DISCHARGE**

- Discuss issues including anti-coagulation and NSAID use
- H. pylori* testing and eradication, if necessary, should be done
- Oral iron therapy should be instituted
- Follow-up with family MD should be arranged to follow Hb and manage medications

### **REFERENCES**

- Barkun A. et al. A Canadian clinical practice algorithm for the management of patients with nonvariceal upper gastrointestinal bleeding. *Can J Gastroenterol* 2004;18(10):605-609.
- Barkun A. et al. Consensus recommendations for managing patients with nonvariceal upper gastrointestinal bleeding. *Ann Int Med* 2003;139(10):843-857.

## **CHECKLIST FOR THE TREATMENT OF ACUTE LOWER (COLONIC) GASTROINTESTINAL BLEEDING**

This checklist is to be used as a **memory recall tool** for the proper treatment of acute lower GI bleeding. It can be used by all physicians in the treatment of patients diagnosed with acute lower GI bleeding.

**INSTRUCTIONS:** Review all items when treating patients diagnosed with acute lower GI bleeding.

**For questions related to the content/use of this checklist please contact Dr. Hemant Shah at [hemant.shah@utoronto.ca](mailto:hemant.shah@utoronto.ca)**

### **DIAGNOSIS OF ACUTE LOWER GI BLEEDING**

Recent onset bleeding distal to the ligament of Treitz resulting in hematochezia, with or without hemodynamic instability or a drop in haemoglobin concentration

### **IMPORTANT FACTS – DON'T FORGET!**

Significant hemodynamic instability (low systolic BP, postural hypotension, mental status  $\Delta$ 's) should prompt consideration of massive upper GI bleeding (in and out NG tube with aspiration to identify blood may be useful in this situation – specific but not sensitive). \*See UGI bleeding checklist for further direction.

Lower GI hemorrhage is commonly caused by diverticulosis, ischemia, tumors, and radiation proctitis but also consider other causes including inflammatory bowel disease, hemorrhoids, angiodysplasia, post-polypectomy bleeding and colonic varices

Rectal bleeding without hemodynamic instability or change in hemoglobin may be hemorrhoidal and may not require admission to hospital

Hemoglobin drop is often only apparent after fluid resuscitation so the initial haemoglobin concentration may be misleading

### **ACUTE NON-INVASIVE THERAPEUTIC INTERVENTIONS**

Bloodwork, monitoring and IV access

- STAT CBC, lytes, BUN, Creatinine, INR, PTT, Type and Cross for 2 to 4 units pRBC
- 2 large bore IV sites, cardiac monitoring, SpO<sub>2</sub>, postural vital signs q15mins until stable

Hemodynamic resuscitation

- IV normal saline until postural hypotension and tachycardia resolves
- pRBC transfusions for low Hb (no accepted guidelines: maintain >100 with cardiac disease or >70 with ongoing bleeding)

Correct any coagulopathy

- Follow INR, maintain <1.5; Use FFP 1 to 4 units and Vit K 1-10mg po/iv (depending on severity) x 1
- Maintain platelets >50

### **ACUTE INVASIVE THERAPEUTIC INTERVENTIONS**

Consultation required to gastroenterology OR general surgery

- Colonoscopy
  - Diagnostic and therapeutic modality of choice
  - Speak with GI resident/staff prior to bowel preparation
- Angiography
  - Performed for refractory cases or when colonoscopy is unavailable
  - Requires 1mL/min (clinical evidence of active bleeding) of blood loss for accurate detection of bleeding vessel and allows for therapeutic intervention at time of procedure
- Surgery
  - Required for a minority of cases
  - Consider when hemodynamic instability persists despite aggressive resuscitation, blood transfusion requirement is greater than 6 units pRBC, or severe bleeding recurs

### **DIAGNOSTIC ADJUNCTS**

- RBC Scanning
  - Useful for localization of bleeding when rate greater than 0.1-0.5 mL/min
  - Will still require an invasive confirmatory test prior to surgery
- Upper gastrointestinal and small bowel imaging
  - Consider for cases where colonoscopy is negative

### **DON'T FORGET**

- Consider holding medications temporarily that increase bleeding or that are anti-hypertensives
- Monitor patient frequently with postural vital signs and CBC

### **PATIENT EDUCATION PRIOR TO DISCHARGE**

- Discuss issues including anti-coagulation, and NSAID use
- Provide patient with results of diagnostic imaging tests; consider complete colonic imaging if not done during hospitalization
- Most patients will require Fe supplementation

### **REFERENCES**

1. JJ Farrell and LS Friedman. Review article: the management of lower gastrointestinal bleeding. *Aliment Pharmacol Ther* 2005. 21: 1281-1298.
2. GM Eisen, JA Dominitz, DO Faigel, JL Goldstein and the Standards of Practice Committee for the American Society for Gastrointestinal Endoscopy. An Annotated Algorithmic Approach to Acute Lower Gastrointestinal Bleeding. *Gastrointestinal Endoscopy* 2001. 53: 859-863.
3. DC Rockey. Lower Gastrointestinal Bleeding. *Gastroenterology* 2006. 130: 165-171.

## Care plan for patients who swallow foreign bodies (TGH)

**Contributors:** Louis Liu (gastroenterology), Jon Hunter, Anna Skorzevska, (psychiatry), Harold Ovens (emergency medicine), Linda Wright (bioethics)

**Introduction:** Care of patients who swallow foreign bodies requires effective communication and shared management amongst emergency room, gastroenterology, psychiatric, and general surgical staff. The purpose of this document is to provide a template for the management of such patients, in order to streamline their care, ease communication amongst team members, and manage resources as effectively as possible. It is understood that these principles will be tailored to fit a particular individual, as required by clinical judgment.

### Emergency room:

- Swallowing behaviour is not specifically suicidal and in and of itself is not evidence to place someone on a Form 1.
- The patient should be approached with courtesy and compassion as per any patient, but limits should also be set and communicated; the patient should be informed that we will try to help them but they **MUST** not swallow objects in the ER and must cooperate with their care or they may be asked to leave.
- We should generally consider the patient competent to refuse care. IF they refuse care, they should be discharged (write a good note!)
- If they agree to be scoped for object removal, consult GI. Only consult Gen Surg if there is evidence of or concern for a perforation.
- If GI advises removal by scope and patient agrees, in general, do it as quickly as possible and discharge them. This may mean scoping in the ER under conscious sedation. Please facilitate this any way we can. If volume permits the ER doc to assist with sedation, that's fine, otherwise call anaesthesia for assistance.
- If patient requires admission, Medicine should admit with GI consulting as this situation does not meet the criteria for GI admission.
- Patients generally do not require psych consultation every presentation. IF they disclose a personal crisis or acute emotional issues that would benefit from consultation that is fine, but psych. assessment - especially if it leads to a delay in enacting this plan - is not necessary on every visit. Call them if you need then, however.
- These patients frequently have psych f/u in place somewhere. Encourage the patient to return there on discharge.
- Avoid a power struggle. Patients should NOT end up forced and restrained in most circumstances.
- These patients can often swallow in hospital, especially post-endoscopy. Even if not forced, we can request constant observation. The guard should be instructed to remove all dangerous objects that could be swallowed from their vicinity; their room, clothing, personal belongings and immediate vicinity. Watch for batteries, utensils (even plastic), medical devices such as cannulas and needles, pens are all a risk. Coins are not much risk (see GI section below for details). If patient is not on a Form the guard should not prevent them from leaving, but they should be escorted out to ensure no further swallowing happens within the hospital. Patients should be warned that they will be discharged if they try to swallow and then we should follow through. If patient is discharged and returns having swallowed again, just repeat the entire process.

## **Psychiatry:**

*Presentation:* Typically such patients are young women with a long established practice of swallowing a variety of objects such as razor blades, pens or needles. They typically present with a flat affect, and will describe their actions but not elaborate on precipitants or history. They may be well known to staff from multiple presentations in the past. It is frequently the case that the swallowing behavior occurs in 'runs', such that they may present repeatedly to the same (or a variety) of ER's in a short period of time. Characteristic of this patient population is the degree of frustration and powerlessness created in the treating staff.

*Diagnosis:* The psychiatric differential diagnosis includes psychotic behavior, pica, antisocial personality, and factitious disorder. However by far the commonest diagnosis assigned to these patients is borderline personality disorder, often as a consequence of significant prolonged childhood trauma (1). The swallowing is best understood as a variation on chronic self-harming behavior such as cutting or para-suicidal overdoses. If an alliance is established with the patient it is often the case that a fairly straightforward precipitant has occurred, such as losing housing or a rejection in an important relationship. The swallowing is understood as an impulsive and maladaptive attempt at emotional regulation. However, it is characteristic of these patients that a therapeutic alliance is difficult to establish under calm circumstances, and often essentially unavailable in the pressurized emergency treatment situation.

*Staff reactions:* Staff will find it helpful in managing their own reactions to these patients to keep in mind the extent of their past trauma, current difficulties, and severe impairment in managing basic human interactions. The 'invitation' from the patient's presentation is to enter into a power struggle, with the physician working hard to control the behavior of the patient, and inevitably being defeated by them. This can evoke tremendous frustration in treating staff, which in turn can precipitate dismissiveness or over-control. However, our job is to ensure safety as a consequence of the swallowing that has occurred, and prevent further swallowing whilst the patient is in the care of the institution. We cannot regulate the patient's behavior in the community, even a few steps outside the door. Refusing the invitation to participate in a power struggle by not assuming responsibility for their swallowing behavior is a more useful stance which does not challenge the patient to prove they have more power than we do. It may also create a space in which some therapeutic alliance occurs, as the patient understands that despite their testing of staff they are being treated as adults. Occasionally in these circumstances the patient demonstrates higher abilities and capacity than one would have anticipated from her initial presentation, and can participate in solving the here-and-now issue that is most troublesome.

*Management:* Most such patients have identified therapists or treatment teams that are their primary supports, even if they only attend sporadically. Ultimately the treatment for this behavior depends on the establishment of a trusted relationship with this specific treatment team. Therefore, whenever possible management should be as brief as is consistent with medically appropriate care and the patient should then be directed back to their team. This consistent message diminishes fragmentation of care.

Psychiatric consultation in the emergency room is recommended in order to determine diagnosis and disposition and to address whether or not certification is required. Typically such patients are not placed under a Form (i.e. restricted from leaving) and are understood to be competent to make treatment decisions, even when they remain at high risk for repeating the self harming behavior. Where the patient requires admission on the basis of medical or surgical grounds, the consultation-liaison psychiatric team should be immediately involved, to help manage behavior on the ward and organize effective discharge. Psychiatric inpatient admission is rarely used and should be reserved for those times when a clear therapeutic contract can be established between the patient and the inpatient service which specifically addresses the goals of treatment, and delineates the consequences of further swallowing on the ward, which should include discharge from the service as soon as is medically appropriate. The patient should be provided with a copy of her contract. Absence of such a contract will typically permit accelerated regression and further swallowing or self-harm.

Utilization of therapies shown to be helpful for self-harm, such as dialectic behavior therapy, show some promise in helping this population. However these teams are not available on an urgent basis.

Psychiatric summary:



1. Swallowing foreign objects occurs as a consequence of impulsive maladaptive emotional regulation at a time of high stress.
2. There is no established specific pharmacological or psychotherapeutic intervention for this population.
3. Patient management should be guided by the principle of the minimum intervention that is compatible with safe clinical management, control of the environment to reduce opportunities for further swallowing, and diminution of fragmentation of care.
4. Notwithstanding the obvious maladaptive nature of this behavior, patients are most frequently competent to make treatment decisions in that they understand and appreciate what they have done, and what the consequences of treatment or non-treatment will be.
5. Patients should be understood to have a reason, albeit often obscure or apparently insufficient for this behavior. Appreciating this can help in not engaging in a power struggle, which may in turn diminish an escalation of behavior.

### **Gastroenterology:**

1. This documentation serves as general guiding principles regarding management of foreign objects ingested in the GI tract. However, the treating physician is required to use his/her clinical judgment on a case-to-case basis that may deviate from the following suggested recommendations. Details can be referred to the ASCE guideline (2).
2. In general, **urgent endoscopic intervention is required** when:
  - 2.i. A disc battery or sharp objects are lodged in the esophagus
  - 2.ii. Ingested foreign object causes high grade obstruction such that the patient is unable to manage his/her saliva.
  - 2.iii. Under no circumstances, should foreign objects remain in the esophagus beyond 24 hour from presentation.
3. **General anesthesia is usually not required.** However, the endoscopist needs to take into account the patient's ability to co-operate, the number and type of objects to be retrieved or removing a foreign object that has likely been lodged in the esophagus for a prolonged, or unknown, duration period of time.
4. **Blunt objects** (e.g. coins):
  - 4.i. If lodged in the esophagus, need to be removed (2, iii)
  - 4.ii. If in stomach, most will pass in 4-6 days, but may take up to 4 weeks. If patient is asymptomatic, continue regular diet, and weekly radiography is adequate. However, round objects > 2.5 cm in diameter are less likely to pass the pylorus; hence, if it fails to leave the stomach in 3-4 weeks, it should be removed endoscopically.
  - 4.iii. Once it passes the stomach, surgical removal is required if object remains the same location for > 1 week.
5. **Long objects** (e.g. pens, spoons or toothbrush):
  - 5.i. Objects longer than 6-10 cm will have difficulty passing the duodenal sweep and should be removed with the appropriate techniques. A longer (>45 cm) overtube that extends beyond the GEJ is beneficial.
6. **Sharp-pointed objects** (e.g. paperclips, toothpicks, needles, bread bag clips and dental bridgework)
  - 6.i. One must define the location of the object urgently
  - 6.ii. If lodged in the esophagus, it is a medical emergency
    - 6.ii.1.a. if above the cricopharyngeus, consult ENT for direct laryngoscopy
    - 6.ii.1.b. if in esophagus, urgent endoscopy is required
    - 6.ii.1.c. Once the object enters the stomach, the majority will pass. However, the estimated complication rate is ~ 35%. If the object is reachable by an endoscope, it should be removed with a long overtube.
    - 6.ii.1.d. If it passes beyond the proximal duodenum, follow it with daily abdominal X-ray until passage occurs. Consider surgical intervention if it fails to progress for 3 consecutive days; intervene sooner if the patient becomes symptomatic.

**7. Disc batteries**

- 7.i. If in esophagus, see 2
- 7.ii. If in stomach, most disc batteries are passed without consequences. Batteries > 2 cm in diameter which do not pass beyond the stomach in 48 hr require endoscopic removal.
- 7.iii. Once entering the duodenum, 85% pass within 72 hours. Abdominal X-ray every 3-4 days is recommended.

8. **Call Poison Control** if you have concerns or questions regarding the need of urgent removal of ingested foreign body (Toronto region: 416 813 5900 or toll free number: 1-800-268-9017)

**Bioethics:**

The ethical issues in providing care for these patients include:

- 1. the requirement to fulfill our duty to care which extends to all patients. It is important that our approach incorporates recognition of the vulnerability of those with psychiatric issues that influence behaviours.
- 2. the need to allow resource allocation decisions to be made at the level of policy rather than at the bedside

**References:**

- 1. Foreign body ingestion in patients with personality disorders, Gitlin DF, Caplan J.P., et. al. *Psychosomatics* 48:2, March-April 2007
- 2. Guideline for the Management of ingested foreign bodies. ASGE Endorsed Guideline. *Gastrointestinal Endo.* 55: 2, 802-806, 2002

## Endoscopy Reference

### Complications or Unplanned Events of Endoscopy

Unplanned events are relatively trivial deviations from the expected plan of care.

Complications are unplanned events that require the patient to be admitted to hospital, to stay in hospital longer than expected, or to undergo other interventions to treat the event.

#### Upper Endoscopy

Risk of severe complication less than 1:500

1. Adverse reactions to sedation (eg, hypoxemia, hypotension, cardiac arrhythmia) occurring during the procedure could require reversal agents
2. Adverse reaction to topical local anesthesia
3. Tenderness at the intravenous (IV) site
4. Perforation risk (1-3:10,000) is increased with the presence of pathology such as Zenker's diverticulum, esophageal stricture or tumor, or large cervical osteophyte or bar, or if performing therapy such as stricture dilatation (0.1% in benign strictures, 1% in pneumatic dilatation for achalasia, 5-10% in malignant lesions), polypectomy or mucosal resection.
5. Bleeding
  - From preexisting lesions due to endoscopic manipulation (biopsy, polypectomy), or due to retching from Mallory-Weiss tear
  - Increased risk with anticoagulation or bleeding diathesis
  - 2.5% risk for PEG placement
6. Pulmonary aspiration risk is 1:10,000 particularly in patients with retained food residue, or active bleeding
7. Trauma to the pharynx resulting in sore throat
8. Allergic reaction to latex or medications
9. Unstable blood sugar in diabetics due to prolonged fasting
10. Damage to loose teeth or crowns

#### Colonoscopy

1. Adverse reactions to sedation (eg, hypoxemia, hypotension, cardiac arrhythmia) occurring during the procedure could require reversal agents
2. Adverse reaction to topical local anesthesia
3. Tenderness at the intravenous (IV) site
4. Perforation 1:1000 (screening) to 1:300 (polypectomy)
  - Endoscope shaft or tip perforations can result from excessive force particularly if the colon is fixed, ulcerated or necrotic.
  - Air pressure perforations include blow outs of diverticula, pneumoperitoneum and ileocecal perforation. High air pressures result if the scope tip is impacted in a diverticulum or if excessive insufflation is used trying to pass a stricture or diverticular disease.
  - Increased risk with therapeutic procedures including dilatations (6%), electrocoagulation, or polypectomy
5. Bleeding
  - Increased risk with anticoagulation

- Increased risk after polypectomy 1.5-3% immediate or delayed up to 1 month
- 6. Aspiration pneumonia 1:10,000
- 7. Allergic reaction to latex or medications
- 8. Electrolyte imbalance due to bowel preparation
- 9. Unstable blood sugar in diabetics due to fasting
- 10. Missed lesions
- 11. Death very rare, less than 1:17,000

### **Sigmoidoscopy**

Same risks as colonoscopy with incidence rate approximately half or less.

### **ERCP**

Overall complication risk 5-10%

1. Perforation 1%
  - Perforation of ducts or tumors
  - Retroduodenal perforation due to sphincterotomy 1%, one quarter require surgery
  - Perforation of the esophagus, stomach or duodenum with the endoscope
  - Stent-related perforation
2. Pancreatitis 3-5%
  - Higher in younger patients and in women, suspected sphincter dysfunction, history of recurrent pancreatitis or post-ERCP pancreatitis
  - 75% are mild cases, 1% severe
3. Bleeding 2% can occur immediately after sphincterotomy or delayed up to 2 weeks
4. Infection 1.5% (mainly cholangitis)
5. Mortality <0.5%

References:

1. Practical Gastrointestinal Endoscopy: The Fundamentals. Peter B. Cotton, Christopher B. Williams. 6<sup>th</sup> ed. Wiley-Blackwell 2008.
2. Advanced Digestive Endoscopy: ERCP. Peter B. Cotton, Joseph Leung. Blackwell 2006.

### **Peg Tubes**

Major complications (3%)

- Peritonitis (1.2%, 31% mortality)
- hemorrhage (2.5)
- aspiration (infrequent, mortality 57%)
- peristomal wound infection (5-30%, reduced with cefazolin 1g prior to procedure)
- buried bumper syndrome
- gastrocolic fistula

If major complication occurs, mortality risk is 25%. These patients are debilitated and cannot tolerate adverse events. Prevention and early recognition of complications are important in preventing morbidity and mortality.

Heparin should be discontinued before the procedure. Patients receiving warfarin should be temporarily placed on heparin, and the procedure should be performed 6 hours after discontinuation of the heparin infusion. Anticoagulation should be held for 24 hours after PEG tube placement. When PEG tube dislodgment is recognized before gastrocutaneous fistula maturation, treatment with NG suction and antibiotics should be started. Pneumoperitoneum has been observed in 36% of patients undergoing PEG tube placement.

## Issues of Informed Consent

Informed consent must be obtained and documented. The discussion should include:

- The reasons why the procedure is recommended and its expected benefits
- What will be done and expected discomfort
- The potential risks and benefits of the procedure including those of sedation. Not every possible risk or complication needs to be disclosed, but those that occur with significant frequency and those of a serious nature.
- The limitations of the procedure
- The alternative methods of investigation or management
- The opportunity to ask questions

Two-step system to judge adequacy of consent in Canada:

- Did the physician meet what would be considered to be the standard of a normal, prudent practitioner of the same experience and standing in outlining the diagnosis, proposed treatment, risks and alternatives, including the risk of no treatment
- Would a reasonable patient, having been informed of risks that were allegedly not mentioned, have agreed to the procedure or treatment

### Emergencies

In Canada, patients who are competent, even in the face of an emergency situation, may refuse treatment even though that refusal may result in harm or death.

In emergency situations regarding incompetent patients, in the absence of a legally recognized substitute decision maker (SDM), physicians have a duty to provide care that is life and limb saving.

### Record

Legal action may occur many years after the fact, therefore a note recording the interview during which the endoscopist solicited and answered questions, can be invaluable and is highly recommended.

References:

1. MacSween HM. Can J Gastroenterol 1997;11(6):533-534.
2. ASGE Guidelines. Preparation of patients for GI endoscopy. Gastrointest Endosc 2003;57(4):446-450.

## **Patient Preparation**

There should be a pre-procedure assessment of the patient and review of medical records including:

- Past medical history
- Past surgery
- Previous endoscopy
- Medications
- Drug allergies
- Bleeding tendencies

For upper GI endoscopy and ERCP, patients should fast a minimum of 4 hours after consuming clear liquids and 6 hours after consuming light meals before sedation. If delayed gastric emptying is suspected, a longer period should be considered.

For colonoscopy, the colon needs to be purged of fecal material prior to the procedure. For sigmoidoscopy, the left colon needs to be purged. Patients should be instructed to discontinue iron-containing medications 3-4 days in advance of preparation and to take a low residue fluid diet. Patients with chronic constipation or patients who have had a recent barium enema may require more prolonged preparation.

### **Bowel preparations**

The most commonly used preparation is an oral purge with specially balanced polyethylene glycol (PEG) based electrolyte lavage solution typically 2-4 litres administered at 1-2 litres per hour the evening prior to the procedure. For afternoon procedures, consider splitting the dose between the evening before and the morning of the procedure as there is evidence that split dosing may improve quality of preparation (Reference 2). If a patient cannot ingest large quantities of liquid, nasogastric infusion is a safe and effective method of administration.

#### Alternative regimens

Sodium phosphate (Oral Fleet®)

Magnesium Citrate

Pico-Salax® (magnesium citrate and bisacodyl)

These regimens may be easier to ingest because of their smaller volume, but adjunctive fluid ingestion is necessary. The risk of electrolyte disturbance and dehydration may be higher thus careful patient selection for use of these preparations is recommended.

For flexible sigmoidoscopy, effective preparation of the sigmoid and rectum can usually be achieved with 1-2 enemas. In severe, constipated patients, a more extensive bowel preparation may be required. Bowel preparation may not be necessary in patients with active colitis or diarrhea.

### **Diabetic Medications**

The approach to pre-procedural management of diabetic medications should be individualized. In patients who take insulin, an acceptable regimen is to administer half the usual morning dose of insulin at the usual time,

perform the early morning procedure. Administer the second half of the insulin dose with the post-procedure meal.

Oral hypoglycemic agents are usually withheld until after the early morning procedure.

### **Pacemakers and Implantable Cardio-Defibrillators (ICDs)**

The use of electrosurgical equipment for endoscopic therapy is not contraindicated in patients with pacemakers. Patients with ICDs should have their unit deactivated when using electrocautery. Grounding pads should be placed on the legs in a way that avoids the circuit from including the precordial region. Cardiac monitoring is mandatory and resuscitation equipment should be readily available.

\*References:

1. ASGE Guidelines. Preparation of patients for GI endoscopy. *Gastrointest Endosc* 2003;57(4):446-450
2. El Sayed AM et al. A randomized single-blind trial of whole versus split-dose polyethylene glycol-electrolyte solution for colonoscopy preparation. *Gastrointest Endosc* 2003;58:36-40

### **Antibiotic Prophylaxis**

Antibiotic prophylaxis solely for the prevention of infective endocarditis is no longer recommended for GI procedures. Antibiotic prophylaxis continues to be recommended for specific conditions as outlined in the following table by the American Society of Gastrointestinal Endoscopy (ASGE). These guidelines have varying grades of evidence and should not be substituted for individualized clinical judgment.

**Table 1: Antibiotic Prophylaxis in Endoscopic Procedures**

<b>Patient Condition</b>	<b>Planned Procedure</b>	<b>Antibiotic Recommendation</b>
Bile duct obstruction without cholangitis	ERCP with complete drainage	Not recommended
Bile duct obstruction without cholangitis	ERCP with anticipated incomplete drainage (eg, PSC, hilar strictures)	Recommended with continuation after (ie, ceftriaxone 1g on call)
Sterile pseudocyst with pancreatic duct communication	ERCP	Recommended (ie, ceftriaxone 1g on call)
Poor or no oral intake	Percutaneous endoscopic gastrostomy (PEG) placement	Recommended (ie, cefazolin 1g on call and 8h post)
Cirrhosis with acute gastrointestinal bleed (GIB)	All patients	Recommended on admission (ie, ceftriaxone 1g q 24h)
Synthetic vascular graft or nonvalvular cardiovascular device	Any	Not recommended
Prosthetic joints	Any	Not recommended

\*Adapted from Baron TH et al. ASGE Guidelines. Antibiotic prophylaxis for GI endoscopy. *Gastrointest Endosc* 2008;67(6):791-798



References:

1. Baron TH et al. ASGE Guidelines. Antibiotic prophylaxis for GI endoscopy. *Gastrointest Endosc* 2008;67(6):791-798
2. Nishimura RA et al. ACC/AHA 2008 guideline update on valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation* 2008; 118:887
3. Wilson W et al. Prevention of infective endocarditis: guidelines from the American Heart Association. *Circulation*. 2007 Oct 9;116(15):1736-54

**Anticoagulants**

In order to appropriately decide how to manage anticoagulants with regards to performing endoscopic procedures, one must consider the procedure’s associated risk of bleeding and the likelihood of controlling any bleeding that occurs (table 2).

**Table 2: Procedure Risk for Bleeding**

Higher Risk	Low Risk
Polypectomy	Diagnostic
Biliary / pancreatic sphincterotomy	EGD possible biopsy
Pneumatic or bougie dilation	Sigmoidoscopy possible biopsy
PEG placement	Colonoscopy possible biopsy
Therapeutic balloon-assisted enteroscopy	ERCP without sphincterotomy
EUS-FNA	EUS without FNA
Endoscopic hemostasis	Enteroscopy & diagnostic balloon-assisted Enteroscopy
Tumor ablation by any technique	Capsule endoscopy
Cystgastrostomy	Enteral stent (without dilatation)
Treatment of varices	

\*Adapted from Anderson MA et al. ASGE Guideline: management of antithrombotic agents for endoscopic procedures. *Gastrointest Endosc* 2009;70(6):1060-70.

The probability of a thromboembolic complication related to interruption of antithrombotic therapy depends on the preexisting condition (table 3). The risk of major embolism in patients with mechanical valves not taking antithrombotic therapy is 4:100 patient-years, with antiplatelet therapy 2.2:100 patient-years, and with warfarin 1:100 patient-years. The annual stroke rate is 4.5% in nonanticoagulated patients with sustained AF, higher with concomitant dilated CM, valvular HD, or recent TE events.

Patients with coronary stents (especially if drug-eluting) are at higher risk of thrombosis especially if dual antiplatelet therapy is stopped before minimum recommended duration (12 months for drug-eluting) (see ref. 5).

**Table 3: Condition Risk for Thrombotic or Embolic Event**

Higher Risk	Low Risk
Atrial fibrillation (AF) associated with: - valvular heart disease	Uncomplicated or paroxysmal nonvalvular AF

<ul style="list-style-type: none"> <li>- prosthetic valves</li> <li>- active CHF</li> <li>- LVEF &lt;35%</li> <li>- History thromboembolic event, HTN, DM</li> <li>- Age &gt;75 yr</li> </ul>	
Mechanical mitral valve	Bioprosthetic valve
Mechanical valve and prior thromboembolic event	Mechanical aortic valve
Coronary stent <1 yr	DVT
Acute coronary syndrome	
Nonstented PCI after MI	

\*Adapted from Anderson MA et al. ASGE Guideline: management of antithrombotic agents for endoscopic procedures. *Gastrointest Endosc* 2009;70(6):1060-70.

### **Nonaspirin Antiplatelet Agents**

#### **Elective Endoscopic Procedure**

- In the patient taking clopidogrel or ticlopidine, the decision to stop this therapy must be weighed against risking an adverse ischemic event, including stent occlusion.
  - o For high-risk procedures, there is no clear recommendation. If discontinued, they should be stopped 7-10 days before the procedure. It may be appropriate to restart the drug the following day because of the slow onset of action. Patients receiving both clopidogrel plus aspirin may be at an additional increased risk of bleeding, therefore consider reverting to a single agent (preferably aspirin) before the procedure.
  - o For low-risk procedures no adjustments need to be made. See table 2 for list of low-risk and high-risk procedures.
- In patients taking dipyridamole, in the absence of a preexisting bleeding disorder, endoscopic procedures may be performed but the safety in patients undergoing high-risk procedures is unknown.

### **Low Molecular Weight Heparin (LMWH)**

#### **Elective Endoscopic Procedure**

- The decision to stop or reverse this therapy must be weighed against the risk of an adverse ischemic or thromboembolic event.
  - o For high-risk procedures, discontinue LMWH at least 8 hours prior to the procedure. The decision about timing of re-initiation of therapy should be individualized.
  - o For low-risk procedures no adjustments need to be made. See table 2 for list of low-risk and high-risk procedures.

#### **As Bridging Therapy**

- In the patient on warfarin undergoing an elective endoscopic procedure who may need bridging therapy, LMWH may extend the period of systemic anticoagulation while the effects of warfarin wear off.
  - o For high-risk procedures, discontinue warfarin 3-5 days before the procedure with concomitant initiation of LMWH. Dosing is the same as for treatment of acute DVT (eg, enoxaparin 1 mg/kg SC q 12 h). Discontinue LMWH at least 8 hours before the procedures. The decision about timing of re-initiation of therapy should be individualized.
  - o For low-risk procedures no adjustments need to be made.

## **Warfarin**

### **Acute GI Bleed**

- The decision to reverse anticoagulation risking thromboembolic consequences must be weighed against the risk of continued bleeding. A supratherapeutic INR may be treated with FFP. Vitamin K has a delayed onset of action. The degree of reversal should be individualized. Correction to 1.5-2.5 allows successful endoscopic diagnosis and therapy (see ref. 2). After endoscopic therapy, warfarin can generally be reinstated with a few days. When rapid resumption of anticoagulation is needed, IV heparin should be used.

### **Elective Endoscopic Procedure**

- Vitamin K should be avoided because it delays re-establishment of therapeutic anticoagulation. If anticoagulation is temporary, such as for deep venous thrombosis (DVT), elective procedures should be delayed if possible.
  - o For high-risk procedures in patients with low-risk conditions, hold warfarin 3-5 day before the procedure. Preprocedure INR can be obtained.
  - o For high-risk procedures in patients with high-risk conditions, hold warfarin 3-5 days before the procedure. IV heparin may be administered. If used, it should be stopped 4-6 hours before the procedure and resumed 2-6 hours after. Warfarin may be resumed the night of the procedure. Heparin can be discontinued once the INR is in the therapeutic range for 2-3 days.
  - o For low-risk procedures no adjustments need to be made. Elective procedures should be deferred if anticoagulation is supratherapeutic. See table 2 for list of low-risk and high-risk procedures. See table 3 for list of low-risk and high-risk conditions for thromboembolism.

**Table 4: Antithrombotic Drugs: Duration Of Action & Routes For Reversal**

<b>Drug Class</b>	<b>Drug</b>	<b>Duration of Action</b>	<b>Reversal – Elective</b>	<b>Reversal – Urgent</b>
Antiplatelet	ASA	10d		Transfuse platelets
	NSAIDs	Variable		Transfuse platelets
	Dipyridamole	2-3d	Hold	Transfuse platelets
	Thienopyridines (clopidogrel / ticlopidine)	3-7d	Hold	Transfuse platelets +/- desmopressin if overdose
	GP IIb/IIIa inhibitors (tirofiban, abciximab, eptifibatide)	Variable		Transfuse platelets +/- dialysis for o/d
Anticoagulants	Warfarin	3-5d	Hold	FFP +/- vit. K, consider protamine sulfate
	Unfractionated heparin	4-6h	Hold	Hold or consider protamine sulfate
	LMWH	12-24h	Hold	Hold or consider protamine sulfate

\*Adapted from Anderson MA et al. ASGE Guideline: management of antithrombotic agents for endoscopic procedures. Gastrointest Endosc 2009;70(6):1060-70.

References:

1. Zuckerman MJ, et al. ASGE Guideline: the management of low-molecular-weight heparin and nonaspirin antiplatelet agents for endoscopic procedures. *Gastrointest Endosc* 2005;61(2):189-194
2. Choudari CP et al. Acute gastrointestinal hemorrhage in anticoagulated patients: diagnosis and response to endoscopic treatment. *Gut* 1994;35:464-6
3. Eisen GM et al. Guidelines on the management of anticoagulation and antiplatelet therapy for endoscopic procedures. *Gastrointest Endosc* 2002;55:775-9
4. Anderson MA et al. ASGE Guideline: management of antithrombotic agents for endoscopic procedures. *Gastrointest Endosc* 2009;70(6):1060-70.
5. King SB 3<sup>rd</sup> et al. 2007 focused update of the ACC/AHA/SCAI 2005 guideline update for percutaneous coronary intervention: a report of the American College of Cardiology/American Heart Association Task Force on Practice guidelines. *J Am Coll Cardiol* 2008;51:172-209.

## ENDOSCOPY ADD-ON BOOKING POLICY FOR IN-PATIENTS OR ER PATIENTS WHO ARE STABLE AND CAN BE DISCHARGED WHILE WAITING FOR THEIR ENDOSCOPY: “IN-OUT PATIENTS”

**Principles:** These are “C” and “D” cases who are non-elective stable patients, assessed on the ward or in the Emergency Room, and who can be discharged but required an endoscopy either within 48 hours for “C” cases or 7 days for “D” cases in order to make a diagnosis and provide a treatment plan.

### **Process:**

1. These patients will be referred to the GI service for consultation. GI assessment will determine if a patient is fit to be discharged and have his/her endoscopy as an out-patient within the time frame of a “C” or a “D” case.
2. GI will then notify the service under which the patient is being seen (eg. GIM, ER). This service will plan the discharge and a follow-up visit to their clinic (eg. Rapid referral clinic, GIM)
3. During week days, GI will then contact the Endoscopy clerk (Hanna x4318) to book the patient within an in-patient slot, with the appropriate timing according to “C” or “D” cases. During week-ends and after hours, the GI service will keep the patient’s contact information and provide it to the Endoscopy clerk and the Team Leader (Julia x83657) or delegate on the next working day
4. For the discharge, GI will explain to the patient and/or family the preparation required for the procedure and will provide the written instructions. If the time of the endoscopy is known, GI will write it down on the instructions. If not, Endoscopy will contact the patient with the appropriate time.
5. On the instruction sheet to the patient, a number to call Endoscopy will also be provided if the Endoscopy Unit fails to reach the patient. In this event, the patient will be instructed to call the Endoscopy within the first working day to book the procedure.
6. Once the patient completes the procedure, a follow-up with GI will be arranged if indicated. Otherwise, the patient will present at his/her follow-up with the appropriate service (eg. GIM, rapid referral clinic)
7. It is the expectation that the GI resident or staff will provide in a timely fashion, the usual complete patient information to the Endoscopy Unit (clerk, Team Leader or delegate) as per the process for in-patients. This means that the GI staff or resident will provide the Team Leader or designate with a completed **booking form**, including:
  - a. Patient name and HFN
  - b. Category/Priority
  - c. Provisional diagnosis

- d. Procedure required (OGD, colonoscopy, sigmoidoscopy)
  - e. Additional procedures anticipated (+ argon, + injection, + banding, etc)
  - f. Patient location indicating that the patient is now an out-patient but requires an in-patient slot: service where original consultation was performed and home address, telephone
  - g. Special circumstances (eg. Isolation status, special equipment, ...)
8. These patients, once booked, need to be done on the day of the booked endoscopy and will not be bumped to another day.
  9. If the number of in-out patients requests exceed the available slots for the "C" or "D" cases within the defined time frame (48 hours or less than 7 days), the on service GI staff will triage the patients in consultation with the Team Leader. However, once the time is set, the patient will need to be done that same day.
  10. It is expected that the Endoscopy will provide 5 in-out patient slots per week for these cases.
  11. Once the patient arrives to the Endoscopy Unit for the procedure, it is expected that patient care will be equivalent to any elective cases. However, the GI resident will be required to briefly **assess the patient** to make sure that the patient has remained stable since the consultation.
  12. If the patient requires re-admission, either because the patient's condition changed before endoscopy or as a result of the endoscopy (diagnosis, treatment, complication), the original referring service or ER will be contacted and it is expected that the referring service or the ER will promptly take back the patient and be responsible for the re-admission and the care of the patient.
  13. If a dispute arises the following process will be followed: there will be communication between the referring service and the "on service" GI staff in an attempt to resolve the dispute; if this is not successful, then the GI staff should request the involvement of the Endoscopy Medical Director to participate in the patient planning; if after consultation with the Director no resolution has been reached, the Director should involve the Executive Vice President, Chief Medical Executive to become involved as an arbitrator.

## **BILIARY SEPSIS PROCESS for ERCP or PTC**

### **Background:**

Currently, there is no 24/7 coverage for ERCP at Sunnybrook (or in the city, for that matter). The availability of ERCP is determined by the availability of an endoscopy nurse.

There is no endoscopy nurse on-call Monday to Friday nights. Friday, there is an endoscopy nurse until 9 pm for additional cases. On weekends, there is an endoscopy nurse from 10am to 6 pm Saturday and Sunday. Only 3/6 endoscopists do ERCP (Dr Lawrence Cohen, Dr Elaine Yong, Dr MaryAnne Cooper). The ERCP endoscopists are not always available during the weekdays to do ERCP so please refer to the on-call schedule. In-patient ERCP are usually booked on weekdays from 1 to 4 pm but if urgent for biliary sepsis, it can be performed in the morning and out-patient cases can be delayed to accommodate. Patients with biliary sepsis may need ICU and need to be assessed for urgency according to the criteria below. If ERCP is not available at Sunnybrook for urgent cases, the patient with acute biliary sepsis needs to be transferred to ICU St. Michael's Hospital, either Dr Gary May or Dr Paul Kortan, can be contacted. If ERCP is possible at St-Michael Hospital, the patient needs to be transferred from ICU to ICU's have been taking some ERCPs for different hospitals; however, there is an additional charged levied to the sending hospital for approximately \$2000. General surgery is called to manage all biliary stone disease. Therefore, our discussion centered around management of biliary sepsis from biliary stones. Interventional radiology is available 24/7. However, there are only 3 IR radiologists.

### **Process:**

1. General surgery would classify cases of non-malignant obstructive jaundice as:

- Code Biliary sepsis (sepsis or impending sepsis)
- Non-emergent obstructive jaundice.

2. For Code Biliary Sepsis:

#### Process:

- GI to see the patient within 1 hour of consultation request;
- GI to notify immediately General Surgery if ERCP is available based on their ERCP on-call schedule
- if ERCP is to be done by GI and is urgent according to criteria above, elective out-patient endoscopy cases in the AM may be delayed to accommodate a biliary sepsis case so that the patient does not have to wait until 1 pm to have the case done. GI staff or GI resident to contact Julia Yong, nurse manager to arrange and

GI staff to discuss with staff who's patient(s) is(are) delayed (GI, respirology, surgery)

- if decompression is required, and ERCP is not available at Sunnybrook, General Surgery will determine if patient is stable enough to transfer elsewhere for ERCP, or if PTC is required urgently. General Surgery Staff to contact St-Michael hospital GI Staff, Dr. Gary May or Dr. Paul Kortan, to discuss and if ERCP is possible (on a case by case basis) General Surgery is to arrange transfer ICU to ICU. Charges of about \$2000 are expected by St. Michael's and should be directed to Sunnybrook Endoscopy, Denyse Henry, Administrative Manager.

- 2/6 weekends, ERCP will be available Sat/Sun from 10-6 pm at Sunnybrook. Weekends when Dr. Lawrence Cohen or Dr. Elaine Yong are on call, ERCP is available. Other weekends, General Surgery should contact St. Michael's for ERCP or Radiology for PTC.

- Information for Residents: some weekdays ERCP may not be available. Therefore, the PTC request at 4 am may still be the best option as ERCP may not be available in the am. The request for PTC should be done by General Surgery staff to Radiology staff, after confirming with GI that ERCP is not available.

4. For non-emergent obstructive jaundice:

- GI aims at doing ERCP within 48 hours of consult request;
- For consults on Thursdays, GI aims at doing ERCP for Friday.

5. We all commit to keeping good data. GI resident is to provide patient information (whether ERCP performed at Sunnybrook, St. Michael's or PTC) to Julia Yong, Endoscopy nurse manager, who will keep data.

6. PTC: there is 24/7 coverage for PTC.



## Formal Teaching Schedule

<b>Monday</b>	<b>8:00am</b>	<b>GI Oncology Rounds</b> , T-wing Dembo theatre (optional) <i>With food, you will receive topic via email</i>
<b>Tuesday</b>	<b>8:00am</b>	<b>GI Teaching Session</b> , Dr. M. Bernstein M1, Dr. P. Tartaro HG 64 or Dr. E. Yong HG60
<b>Wednesday</b>	<b>12:00pm</b>	<b>Medicine Grand Rounds</b> , EG McLaughlin theatre (optional)
<b>Thursday</b>	<b>12:00pm</b>	<b>GI Core Seminar Series</b> , E330 <i>With food</i>
<b>Friday</b>	<b>8:00am</b>	<b>Citywide GI Journal Club</b> , M1600 <i>With food</i>
	<b>12:00pm</b>	<b>GI Grand Rounds</b> , E325 <i>With food</i>

# City Wide GI Journal Club

~Instructions for Residents, Med Students and Fellows~

When: Friday mornings at 8am

Where: M1600

What do you do to prepare: Read the article being presented and come hungry, food is provided.

To get the article:

1. Go to **<http://www.utorontogi.ca/>**
2. Join website (if you have done this already, you can skip this step)
  - a. Click on “Join” (upper right hand corner)
  - b. Follow directions on screen to obtain screen name and password
3. Click on “G.I. Journal Club”
4. Login using your screen name and password
5. Scroll down to table of dates for Journal Club
6. Click on “Article” to get pdf of the article for that week

Note – articles are usually posted by Thursday at the latest.

Thanks and see you there!

## GI Grand Rounds

For the residents: you can choose any topic but should not be a case presentation. You can give us a talk on something that interests you, even if it's not GI. You can also give us a talk you've already given somewhere else.

Your talk should be about 40 mins long. There is generally a lot of discussion.

We will supply a laptop, and a data projector, so you can just bring your talk on a flash drive. You can bring your own laptop, if you want.

Please give Dr. Fred Saibil, [fred.saibil@sunnybrook.ca](mailto:fred.saibil@sunnybrook.ca) a title and 2-3 learning objectives 3 days in advance so we can send out a notice.

If he is away, give/send the information to Dr. Bernstein, [michael.bernstein@sunnybrook.ca](mailto:michael.bernstein@sunnybrook.ca); if he's unavailable, then to Dr. Yong.

**Appendices**

**ERCP Request Form**

Use if your Service Attending does not perform ERCP

Name: \_\_\_\_\_ Date of Request: \_\_\_\_\_

MRN: \_\_\_\_\_ Most responsible trainee: \_\_\_\_\_

Location: \_\_\_\_\_ Pager ID: \_\_\_\_\_

Indication: **Check one in this column.** **AND** **Check one in this column.**

- |   |  |
|---|--|
| <input type="checkbox"/> obstructive jaundice   | <input type="checkbox"/> choledocholithiasis |
| <input type="checkbox"/> biliary colic          | <input type="checkbox"/> pancreatic mass     |
| <input type="checkbox"/> gallstone pancreatitis | <input type="checkbox"/> CBD stricture       |
| <input type="checkbox"/> other _____            | <input type="checkbox"/> hilar stricture     |
|   | <input type="checkbox"/> other _____         |

Summary

\_\_\_\_\_

Relevant Imaging (including results)

\_\_\_\_\_

Relevant Labs - Date: \_\_\_\_\_

Hb \_\_\_\_\_ WBC \_\_\_\_\_ Platelets \_\_\_\_\_ INR \_\_\_\_\_

AST \_\_\_\_\_ ALT \_\_\_\_\_ ALP \_\_\_\_\_ Bili \_\_\_\_\_ amylase \_\_\_\_\_ lipase \_\_\_\_\_

Other \_\_\_\_\_

- Anticoagulants  on ASA  on Plavix  on warfarin  on heparin  None of the above

**Checklist (complete prior to scheduling)**

- Has been reviewed with Dr. \_\_\_\_\_ (Service Attending)
- Consent has been obtained by \_\_\_\_\_ (trainee)
- Is the patient in ISOLATION?  Y  N Type \_\_\_\_\_
- check if Prophylactic Antibiotics required?  Y → If Y, ordered by \_\_\_\_\_ (trainee)  
 N →  not indicated OR  already on antibiotics
- Medications have been HELD (name, date): \_\_\_\_\_  No meds held
- NPO and IV S/L have been ordered

**Tentative Booking**

Date \_\_\_\_\_ Time \_\_\_\_\_ Dr. \_\_\_\_\_

### EUS Request Form

Name: \_\_\_\_\_ Date of Request: \_\_\_\_\_

MRN: \_\_\_\_\_ Most responsible trainee: \_\_\_\_\_

Location: \_\_\_\_\_ Pager ID: \_\_\_\_\_

<b>Indication:</b> <i>Check one in this column.</i> <input type="checkbox"/> obstructive jaundice <input type="checkbox"/> biliary colic <input type="checkbox"/> gallstone pancreatitis <input type="checkbox"/> tumor staging <input type="checkbox"/> other _____	<b>AND</b>	<i>Check one in this column.</i> <input type="checkbox"/> choledocholithiasis <input type="checkbox"/> pancreatic mass <input type="checkbox"/> CBD stricture <input type="checkbox"/> pancreatic cyst <input type="checkbox"/> tumor of _____ <input type="checkbox"/> other _____
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Summary

\_\_\_\_\_

\_\_\_\_\_

Relevant Imaging (including results)

\_\_\_\_\_

\_\_\_\_\_

Relevant Labs - Date: \_\_\_\_\_

Hb \_\_\_\_\_ WBC \_\_\_\_\_ Platelets \_\_\_\_\_ INR \_\_\_\_\_

AST \_\_\_\_\_ ALT \_\_\_\_\_ ALP \_\_\_\_\_ Bili \_\_\_\_\_ amylase \_\_\_\_\_ lipase \_\_\_\_\_

Other \_\_\_\_\_

Anticoagulants    on ASA         on Plavix         on Coumadin         on heparin  
 None of the above

**Checklist (must be complete prior to booking)**

- Has been Reviewed with Dr. \_\_\_\_\_ (service attending)
- Consent has been obtained by \_\_\_\_\_ (trainee)
- check if Prophylactic Antibiotics required?:     Yes, ordered  
 No, not indicated
- Medications have been HELD (name, date): \_\_\_\_\_         No meds held

<b>Booking Dr. Yong</b>	
Date _____	Time _____

## Endoscopy Request Form ('In-Out Patients' only)

Name: \_\_\_\_\_

Date of Request: \_\_\_\_\_

MRN: \_\_\_\_\_

Most responsible trainee: \_\_\_\_\_

Telephone #: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Pager ID: \_\_\_\_\_

Referring Service:  GIM       Gen Surgery       Med Oncology       Other: \_\_\_\_\_

Provisional Diagnosis: \_\_\_\_\_

**Procedure Required:**     EGD       Colonoscopy       Flex Sigmoidoscopy

Priority:  C (within 48 hours)       D (within 7 days)

Summary

\_\_\_\_\_  
\_\_\_\_\_

Relevant Imaging (including results)

\_\_\_\_\_  
\_\_\_\_\_

Relevant Labs - Date: \_\_\_\_\_

Hb \_\_\_\_\_      WBC \_\_\_\_\_      Platelets \_\_\_\_\_      INR \_\_\_\_\_

Other \_\_\_\_\_

Anticoagulants     on ASA       on Plavix       on Coumadin       on heparin  
 None of the above

Diabetes       N       Y ⇒ Diabetic Meds: \_\_\_\_\_

**Checklist (must be completed prior to scheduling)**

Has been Reviewed with Dr. \_\_\_\_\_ (service attending)

Consent has been obtained by \_\_\_\_\_ (trainee)

Is the patient ISOLATION?       Y       N      Type (MRSA, etc.) \_\_\_\_\_

Medications have been HELD (name, date): \_\_\_\_\_       No meds held

**Booking**

Date \_\_\_\_\_      Time \_\_\_\_\_      Dr. \_\_\_\_\_

## **GASTROSCOPY INSTRUCTIONS**

**Date:**

**ARRIVE BY:**

**To patient: In the event that a date and time for the endoscopy was not provided to you before discharge, please contact the Endoscopy Unit after 10 AM on the next working day at: 416-480-6100 ext 4318, and mention that you are an “in-out patient” with your name and hospital card number.**

**Please inform the doctor if you are on anti-coagulants (blood thinners) or diabetic.**

### **THE DAY BEFORE THE GASTROSCOPY**

1. Please have nothing to eat or drink after midnight, the night before the test.

### **THE DAY OF THE GASTROSCOPY**

2. Do **NOT** have breakfast.
3. Report to the hospital 1 hour before assigned time for registration.
4. **Arrange to have someone drive you home after the gastroscopy as you will be receiving intravenous sedation prior to the procedure.**

**PLEASE REPORT TO:** Sunnybrook Health Sciences Centre  
2075 Bayview Avenue  
ROOM C610 (located on the 6<sup>th</sup> floor of the C-wing)

**ADDITIONAL INSTRUCTIONS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**COLONOSCOPY INSTRUCTIONS**

**Date:** \_\_\_\_\_ **ARRIVE BY:** \_\_\_\_\_

**To patient:** In the event that a date and time for the endoscopy was not provided to you before discharge, please contact the Endoscopy Unit after 10 AM on the next working day at: 416-480-6100 ext 4318, and mention that you are an “in-out patient” with your name and hospital card number.

If you are on iron medications, stop 4 days prior to your test.

If you are taking blood thinners (i.e. Coumadin, heparin, ASA, Plavix), please notify the doctor as you MAY be asked to discontinue 5 days prior to the test.

If you are diabetic, please notify as well.

**NO SEEDS FOR 1 WEEK BEFORE COLONOSCOPY OR START AS SOON AS POSSIBLE IF THE APPOINTMENT IS IN A FEW DAYS**

1. Buy a 4 litre Klean-Prep Kit or Colyte/Golytely Kit, at any pharmacy.

**THE DAY BEFORE THE COLONOSCOPY**

2. Eat a regular breakfast. After breakfast, and until the procedure is finished, **YOU MUST REMAIN ON A DIET OF CLEAR FLUIDS** - such as: beef consommé soup, chicken broth, pop, Freshie, Popsicles, fruit juices (no pulp), Jello, Ovaltine (made with water), tea or coffee (with sugar, no milk).
3. **At 6:00 pm:** Start to drink the Klean-Prep solution. Dissolve the contents of one, sachet in 1000mL (one litre) of lukewarm water. Drink 250mL (1 cup) of this solution every 10 minutes. Continue drinking 250mL of reconstituted solution every 10 minutes, until four sachets have been mixed and consumed.
4. About one hour after you begin to drink the Klean-Prep you will start to experience a diarrhea-type of bowel movement. **Keep drinking the Klean Prep until all 4 litres have been consumed.**
5. If you feel nauseated or you vomit, try lengthening the intervals between cups of Klean-Prep to 20 minutes. Chilling it in the fridge or sucking on hard candies between cups may also help.
6. Remember -you may continue to drink clear fluids even while drinking the Klean-Prep.

**THE DAY OF THE COLONOSCOPY**

7. You may have a clear fluid breakfast.
8. Report to the hospital 1 hour before assigned time for registration.
9. **Arrange to have someone drive you home after the colonoscopy as you will be receiving intravenous sedation prior to the procedure.**

**PLEASE REPORT TO:** Sunnybrook Health Sciences Centre  
2075 Bayview Avenue  
ROOM C610 (located on the 6<sup>th</sup> floor of the C-wing)

**ADDITIONAL INSTRUCTIONS:** \_\_\_\_\_





**COLONOSCOPY INSTRUCTIONS  
MAGNESIUM CITRATE (CITRO-MAG)**

**DATE OF COLONOSCOPY:**  
Date:                      at                      am/pm                      **ARRIVE BY:**                      **AM/PM**

**To patient:** In the event that a date and time for the endoscopy was not provided to you before discharge, please contact the Endoscopy Unit after 10 AM on the next working day at: 416-480-6100 ext 4318, and mention that you are an “in-out patient” with your name and hospital card number.

**If you are taking blood thinners (i.e. Coumadin, heparin, ASA, Plavix), please notify the doctor as you MAY be asked to discontinue 5 days prior to the test. If you are diabetic please notify your doctor as well.**

DOT NOT TAKE MEDICATIONS CONTAINING ASA (aspirin, acetylsalicylic acid) for at least 5 days prior to the procedure. (If you have ulcerative colitis or Crohn’s disease and you are taking 5-aminosalicylate (5-ASA) (Asacol, Dipentum, Mesasal, Pentasa, Salofalk) you do NOT need to stop these.

**DO NOT TAKE ANY IRON PILLS OR ANY PEPTO-BISMOL for at least 5 days prior to the procedure.**

- 1. Buy a one 10 oz. Bottle of Citro-Mag.
- 2. Four Dulcolax tablets.

**These can be obtained at any pharmacy without a prescription.**

**THE DAY BEFORE THE COLONOSCOPY**

- 1. Clear fluids only (i.e. ginger ale, 7-up, clear juices, tea, consommé, broth, water).
  - At 12:00 noon take 10 ounces of Magnesium Citrate (“Citro-Mag”). DRINK AT LEAST 2 LITRES OF CLEAR FLUIDS FOR THE REST OF THE DAY.
  - At 3:00pm take 4 Dulcolax tablets.
  - Have nothing to eat or drink after midnight.

**THE DAY OF THE COLONOSCOPY**

- 5. DO NOT HAVE BREAKFAST.
- 6. Report to the hospital 1 hour before assigned time for registration.
- 7. **Arrange to have someone drive you home after the colonoscopy as you will be receiving intravenous sedation prior to the procedure.**

**PLEASE REPORT TO:** Sunnybrook and Women’s College Health Sciences Centre  
2075 Bayview Avenue  
ROOM C610 (located on the 6<sup>th</sup> floor of the C-wing)

**ADDITIONAL INSTRUCTIONS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**COLONOSCOPY INSTRUCTIONS FOR AFTERNOON PROCEDURES**

Date: \_\_\_\_\_ am/pm **ARRIVE BY:** \_\_\_\_\_

**To patient:** In the event that a date and time for the endoscopy was not provided to you before discharge, please contact the Endoscopy Unit after 10 AM on the next working day at: 416-480-6100 ext 4318, and mention that you are an “in-out patient” with your name and hospital card number.

**If you are on iron medications, stop 4 days prior to your test.**

**If you are taking blood thinners (i.e. Coumadin, heparin, ASA, Plavix), please notify the doctor as you MAY be asked to discontinue 5 days prior to the test. If you are diabetic, please notify your doctor as well.**

1. Buy a 4 litre Klean-Prep Kit or Colyte Kit, at any pharmacy.
2. Buy one bottle of Citromag or a Fleet Phosphosoda at any pharmacy.

**FOUR DAYS PRIOR TO COLONOSCOPY**

3. Avoid foods with insoluble fibre such as celery, tomato/apple skins, peas & foods with seeds until after the colonoscopy.

**THE DAY BEFORE THE COLONOSCOPY**

4. Eat a regular breakfast. After breakfast, and until the procedure is finished, **YOU MUST REMAIN ON A DIET OF CLEAR FLUIDS** - such as: beef consomme soup, chicken broth, pop, Freshie, Popsicles, fruit juices (no pulp), Jello, Ovaltine (made with water), tea or coffee (with sugar, no milk).
5. **At 6:00 pm:** Start to drink the Klean-Prep solution. Dissolve the contents of one, sachet in 1000mL (one litre) of lukewarm water. Drink 250mL (1 cup) of this solution every 10 minutes. Continue drinking 250mL of reconstituted solution every 10 minutes, until four sachets have been mixed and consumed.
6. About one hour after you begin to drink the Klean-Prep you will start to experience a diarrhea-type of bowel movement. **Keep drinking the Klean Prep until all 4 litres have been consumed.**
7. If you feel nauseated or you vomit, try lengthening the intervals between cups of Klean-Prep to 20 minutes. Chilling it in the fridge or sucking on hard candies between cups may also help.
8. Remember -you may continue to drink clear fluids even while drinking the Klean-Prep.

**THE DAY OF THE COLONOSCOPY**

9. Drink the CtroMag or Fleet Phosphosoda **4 hours before you leave for the hospital.**
10. You may have a clear fluid breakfast
11. Report to the hospital 1 hour before assigned time for registration.
12. **Arrange to have someone drive you home after the colonoscopy as you will be receiving intravenous sedation prior to the procedure.**

**PLEASE REPORT TO:** Sunnybrook Health Sciences Centre  
2075 Bayview Avenue  
ROOM C610 (located on the 6<sup>th</sup> floor of the C-wing),

**Inpatient Service Follow-up Clinic**

Attending MD: \_\_\_\_\_

Date of Clinic: \_\_\_\_\_

Time Slot	Surname	Given Name	MRN	Telephone #	Reason for appt

***What to tell patient:***

- name and phone number of attending MD
- clinic location and room number
- time of appointment

### Resident Endoscopy Case Tracking

Date	Patient ID	Age/Gender	Indication	Procedure	Depth unassisted	Unplanned event	Technical success	Adjuvant procedures

Totals: EGD \_\_\_\_\_ FS \_\_\_\_\_ CS \_\_\_\_\_ forceps \_\_\_\_\_ snare \_\_\_\_\_ inject \_\_\_\_\_ clip \_\_\_\_\_ thermal \_\_\_\_\_