

Emergency
Department
Consultation
Guidelines

rev. June 2011

Emergency Department Consultation

Guidelines

This document will determine the most appropriate consultation service for certain presenting complaints and diagnoses as endorsed by the Medical Advisory Committee, St. Michael's Hospital.

1. Expected response times for consultations in the ED:

To answer page:

For STAT page (designated by "99" prior to extension): **< 5 minutes**

For all other pages: **< 15 minutes**

To arrive in ED and begin assessment of patient:

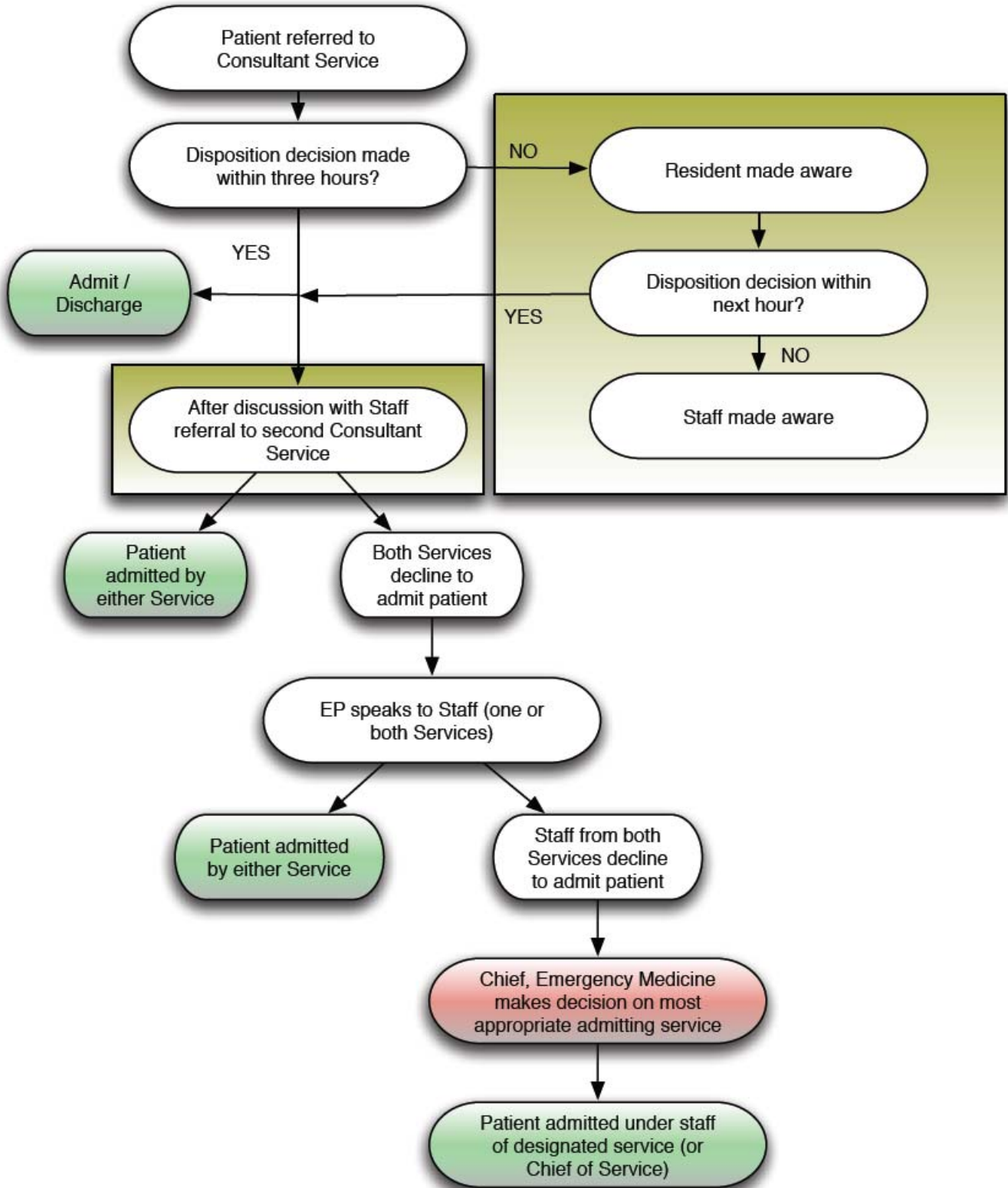
Resuscitation/emergent patients: **<15 minutes**

Urgent patients: **<30 minutes**

Routine Consult: **<60 minutes**

- The acuity category of the patient will be defined by the Emergency Physician, based upon the Canadian Triage and Assessment Scale. The consultant will be advised as to the required response time when the referral is given.
 - It is the responsibility of the entire service, including the responsible staff physician(s), to ensure that these response times are met.
 - It is expected that the above acuity-based response times are achieved 98%, 95%, and 90% of the time respectively.
2. A disposition decision (admission or discharge) will be made by the consulting service within 2 hours of the time of consultation.
- It is expected that these decision times will be achieved 90% of the time.
3. The patient will initially be assessed by a member of the consulting team senior enough to make an expedited admission/discharge decision.
4. When the staff Emergency Physician anticipates that admission will be required, the admitting department will be notified by the ED. The admission order may be cancelled or changed upon further assessment (e.g., to a different admitting service).
5. Once the decision to admit has been confirmed by the consulting service:
- Holding orders will be written
 - The patient will be moved to an available bed as soon as patient condition allows
6. Service-specific response times will be regularly reported to the MAC and Chiefs.

Dispute Resolution Process – Admissions from the ED: TWO SERVICES INVOLVED



CARDIOVASCULAR

<u>Arrhythmia</u>	All	Cardiology
-Hemodynamically unstable	All	Cardiology
-Pacemaker/ICD Failure	Seen by SMH cardiologist within last year	Cardiology
-Arrhythmia requiring continuous monitoring	All others	GIM
	Seen by SMH cardiologist within last year	Cardiology
<u>Syncope NYD</u>	All others	GIM
	Complicated or Uncomplicated	Cardiology
<u>Acute coronary syndrome/ Ischemic chest pain</u>	ECG changes or +ve cardiac enzymes	Cardiology
<u>CHF</u>	Stable, but seen by SMH cardiologist within last year	Cardiology
	All others	GIM
	All	Cardiology
<u>Cardiac medication-related toxicity</u>	Seen by SMH cardiologist within last year	Cardiology
<u>Symptomatic valvulopathy</u>	All others	GIM
	Requires monitoring	Cardiology
	Seen by SMH cardiologist within last year	Cardiology
<u>Hypertensive emergency</u>	All others	GIM
	Operable	Cardiovascular surgery
<u>Aortic dissection</u>	Non-operative	Cardiology

PULMONARY

NOTE: After any referral to the respiratory resident, if there are no beds on 6 bond, or if the referral is (after consultation by the respiratory resident) felt not be respiratory-related, then the respiratory resident will refer to GIM for admission.

<u>Hemoptysis</u>	Massive / unstable	MSICU
	All others	Respirology
<u>Complications of cystic fibrosis</u>	All	Respirology
<u>COPD/ asthma</u>	If seen by a SMH respirologist within the last year	Respirology
	All others	GIM
<u>Bronchiectasis</u>	If seen by a SMH Respirologist within the last year	Respirology
	All others	GIM
<u>Pulmonary hypertension</u>	If seen by a SMH respirologist within the last year	Respirology
	All others	GIM
<u>Pulmonary fibrosis/ interstitial lung disease / Bronchogenic carcinoma</u>	If seen by a SMH respirologist within the last year	Respirology
	All others	GIM
<u>Bronchiectasis</u>	If seen by a SMH respirologist within the last year	Respirology
	All others	GIM
<u>Pulmonary embolism</u>	Hemodynamically Unstable / thrombolysis	MSICU
	All others	GIM

HIV PATIENTS

<u>If the reason for admission is HIV-related AND active: (e.g. ACTIVE cryptococcosis, CMV, encephalopathy, KS, lymphoma, MAI, toxoplasmosis, etc.)</u>	0800h-1700h Mon-Fri	HIV -after consultation, if no beds on 2 Queen patient may then get referred to medicine by HIV
	>1700,or weekends	GIM -if beds available on 2-Queen GIM admits to the HIV service; if no beds on 2-Queen patient admitted to GIM

Examples of patients NOT admitted to the HIV service: Bacterial pneumonia, cardiac disease, cellulitis, homeless / under housed (as the sole reason for admission), unrelated liver disease, unrelated pancreatitis, any acute surgical disease, psychiatric illness, thrombotic or other vascular disease, or undiagnosed conditions.

GENITOURINARY/ RENAL DISEASE

<u>Pyelonephritis</u>	In the setting of (1) infected renal stone or (2) obstruction	Urology
	All others	GIM
<u>All renal transplant</u>	All patients referred to nephrology, subsequent disposition based on guidelines on following page	Nephrology
<u>Hemodialysis</u>	CHF, electrolytes disturbance, sepsis	Nephrology
	Fistula/vascular access problem	Vascular surgery
	All others	GIM
<u>Peritoneal Dialysis (PD)</u>	Reason for admission is a subspecialty issue and presence of PD is incidental	Appropriate subspecialty as outlined elsewhere in this document
	PD or non-subspecialty issue (incl. those for which non-PD pts would go to GIM)	Nephrology

Nephrology-GIM Clarification & Agreement

1. All PD patients are referred and admitted to Nephrology
2. Renal Tx patients presenting to ER with a medical issue are to be referred and evaluated first to Nephrology. Subsequent disposition will be guided by the guidelines attached.
3. Patients on GIM who have been initiated on renal replacement therapy in hospital will be transferred to nephrology once their acute medical issues have been stabilized.
4. The disposition of patients in MSICU who have been initiated on renal replacement therapy will be dealt with on an individual basis.

RENAL TRANSPLANT ADMISSIONS

(To be decided by Nephrology resident after consult)

To Nephrology

- 1) Admission for Transplant
- 2) Acute Rejection
- 3) All Infections/Sepsis
- 4) AKI not otherwise explained
- 5) Anti-rejection drug toxicity

To Team Medicine

- 1) Diabetes
- 2) Non TPACVA
- 3) GI bleed
- 4) Malignancies excluding PTLT

NEUROLOGICAL DISEASE

<u>Stroke/ high-risk TIA</u>	If thrombolytic candidate	Neurology
	All others	GIM
<u>Seizure</u>	Status epilepticus, CT +ve	Neurosurgery
	Status epilepticus, CT -ve	Neurology
	All others	GIM
<u>Acute intracranial bleed</u>	Operable/ to assess operability	Neurosurgery
	Non-operable	GIM or ICU
	Palliative care	GIM

GASTROINTESTINAL DISEASE

GI Bleed	If unstable	GI
	If from a known surgical lesion	General surgery
	All others	GIM
Diverticulitis	All	General surgery
Bowel obstruction	All	General surgery
Pancreatitis	If from gallstones or other obstructive cause	General surgery
	All others	GIM
Hepatitis or liver failure	If followed by GI for this	GI
	All others	GIM
Alimentary foreign bodies	Require surgery	General surgery
	All others	GI

TRAUMATIC

Hand injuries	All	Plastic surgery
Spinal trauma	Cervical	Neurosurgery
	Thoracolumbar <u>with</u> neurological deficit	Neurosurgery
	Thoracolumbar <u>without</u> neurological deficit	Orthopedic surgery
Inability to ambulate	Primary reason for admission is the presence of active fracture (incl. stable fractures e.g. pubic ramus fracture, stable vertebral fracture)	Orthopedic surgery
	Primary reason for admission is due to a medical issue normally referred to subspecialty service	Appropriate service as outlined elsewhere in this document
	Neither of the above	Internal Medicine
Rib fracture(s) requiring admission for pain control and observation	All	General surgery

HAEMATOLOGY/ ONCOLOGY

Note: Oncology patients presenting with problems unrelated to their cancer should be referred to the most appropriate service for their acute condition

Congenital bleeding disorder	All	Haematology/ oncology
Acute or palliative oncology problem	Patient of Dr. Haq	0800h-1700h M-F: Dr. Haq
		After hours: haematology/ oncology resident
	Acute structural problem(e.g. bowel obstruction)	General surgery
	All other oncology probs.	Haematology/ oncology

MISCELLANEOUS

Cellulitis	Upper extremity	Plastic surgery
	Face	Plastic surgery
	Requiring surgical procedure e.g. debridement, I & D	Plastic surgery
	All others	GIM
Osteomyelitis	If post-operative	Original service
	Septic or unstable	GIM/ ICU
	All others	Orthopedics
Parotitis	All	ENT

Addendum: Memorandum of agreement (Drs. MacDonald, Hyland, Mourad)

Spinal osteomyelitis/epidural abscess		Neurosurgery
Back or neck pain	Neurological deficit or lesion Requiring surgery or patient previously seen by staff neurosurgeon	Neurosurgery
	All others (eg. Pain control)	Internal medicine

RESPIROLOGY - GIM

All patients seen by a staff SMH respirologist in the past year who present to the Emergency Room with a respiratory chief complaint, and require hospital admission will be referred to the *Respirology Service*. The respirology resident on call will then call 6 Bond to determine if there are any unoccupied respirology beds.

1. If there are no beds available on 6 Bond OR if the most responsible admission diagnosis is not pulmonary related, then the patient will be referred to General Medicine for admission and will be reviewed by the medical team with the GIM staff.
2. If the most responsible admission diagnosis is hemoptysis or related to the care or complications of patients with cystic fibrosis, then the patient will be admitted under the care of the respirology service.
3. If there are respirology beds available, and the most responsible admission diagnosis is pulmonary related [see below] then the respirology resident on call will admit the patient under the care of respirology and review with the respirology attending.

The Respirology attending staff will always be available by telephone to discuss the evaluation and management of Resp patients requiring admission (both to Team Medicine and 6 Bond). Furthermore, when a patient known to the Respirology service is admitted to Team Medicine, the staff respirologist will be notified that their patient has been admitted to GIM. Concurrent care and respirology consultation will be determined on a patient specific basis.

<p>Examples of patient presentations that are referred to and admitted solely to the respirology service regardless of a past affiliation with a SMH respirologist. The disease must be active and the reason for hospital admission.</p> <ul style="list-style-type: none">•Hemoptysis•Complications of Cystic Fibrosis	<p>Examples of conditions that may be referred to respirology if a patient has been seen by a SMH respirologist within the last year.</p> <ul style="list-style-type: none">•COPD/Asthma•Complications of therapy for a primary pulmonary diagnosis [e.g. tuberculosis]•Bronchiectasis•Pulmonary hypertension•Pulmonary fibrosis/ interstitial lung disease•Bronchogenic carcinoma•Thrombotic disease
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CARDIOLOGY - GIM

All patients seen by a staff SMH cardiologist **in the past year** who present to the Emergency Room with a **cardiac chief complaint**, and require hospital admission will be referred to the *Cardiology Service*.

If the most responsible admission diagnosis is non-cardiac, then the patient will be referred to General Medicine for admission and will be reviewed by the medical team with the GIM staff.

Furthermore, when a patient known to the Cardiology service is admitted to Team Medicine, the staff cardiologist will be notified that their patient has been admitted to GIM. Concurrent care and cardiology consultation will be determined on a patient specific basis.

<p>Examples of patient presentations that are referred to and admitted solely to the cardiology service regardless of a past affiliation with a SMH cardiologist. The disease must be active and the reason for hospital admission.</p> <ul style="list-style-type: none">▪ Hemodynamically unstable arrhythmias▪ Congestive heart failure or pulmonary edema with EKG changes or positive cardiac enzymes▪ Acute coronary syndrome (complicated and uncomplicated)▪ Cardiogenic shock▪ Cardiac tamponade▪ Complete heart block▪ Ischemic Chest Pain with positive cardiac enzymes▪ Cardiac medication related toxicity▪ Pacemaker or ICD failure	<p>Examples of conditions that may be referred to cardiology if a patient has been seen by a SMH cardiologist within the last year.</p> <ul style="list-style-type: none">▪ Arrhythmias requiring continuous monitoring▪ Congestive heart failure or pulmonary edema▪ Syncope▪ Symptomatic valvulopathy
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Cardiology will automatically be consulted for all patients admitted to GIM with suspected **endocarditis** or **heart failure secondary to a new or severe valvulopathy**.

HIV Admissions Policy – Effective February 18, 2005

Effective immediately, the following guidelines will govern the admission of patients with HIV infection to St. Michael’s Hospital.

From 8 am to 5 pm, Monday to Friday, all patients with HIV infection who present to the Emergency Room and require hospital admission will be referred to the *HIV Service*, **but not superseding the SMH Guidelines for Most Appropriate Service for Emergency Consults**. The patient will be assessed in the Emergency Room by the HIV Service and subsequently admitted to 2 Queen. If there are no beds available on 2 Queen or if the reason for admission is unrelated to the patient’s HIV infection (ie, does not involve an opportunistic infection, opportunistic malignancy or antiretroviral toxicity – see below), then the patient will be referred to General Medicine for admission.

From 5 pm-8 am on weekdays and all day on weekends, all HIV patients who require admission will be referred to *Team Medicine* **but not superseding the SMH Guidelines for Most Appropriate Service for Emergency Consults**. If there is bed availability on 2 Queen and HIV Service admission criteria are met, the medical resident will admit the patient to the HIV Service, and review the case with the HIV/ID attending physician on call. Otherwise, the patient will be admitted to Team Medicine and reviewed with the staff internist on call. The HIV attending staff will always be available by telephone to discuss the evaluation and management of HIV patients requiring admission (both to Team Medicine and HIV). Furthermore, when an HIV patient is admitted to Team Medicine, the HIV service should be formally consulted in order to provide concurrent care for the patient during his/her stay in hospital.

Our hope is that these changes will simultaneously enhance the educational environment, moderate the burden of service associated with subspecialty and General Medicine rotations at St. Michael’s Hospital, and effectively utilize available resources.

<p>Examples of Opportunistic Infections admitted to HIV Service. The disease must be active and the reason for hospital admission.</p> <ul style="list-style-type: none"> •Coccidioidomycosis •Cryptococcosis •Cryptosporidiosis (must be the reason for admission) •Cytomegalovirus disease (active) •Encephalopathy, HIV-related (must be the reason for admission) •Esophagitis (candida, CMV, HIV, HSV, KS) •Histoplasmosis •Isosporiasis (must be the reason for admission) •Kaposi's sarcoma (must be the reason for admission) •Lymphoma (unless admission to Haem/Onc) 	<p>Examples of conditions NOT admitted to the HIV Service.</p> <ul style="list-style-type: none"> •Bacterial pneumonia •Cardiac disease •Cellulitis/wound infections/osteomyelitis •Homeless/Underhoused as sole reason for admission •Liver disease (unrelated to antiretroviral toxicity) •Pancreatitis (unless as a result of antiretroviral therapy) •Surgical disease, acute (any) •Placement issues •Psychiatric illness •Thrombotic or other vascular disease •Undiagnosed conditions
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<ul style="list-style-type: none">•Mycobacterium avium complex (active disease, must be the reason for admission)•Mycobacterium tuberculosis, any site•Pneumocystis jiroveci pneumonia (formerly PCP)•Progressive multifocal leukoencephalopathy (must be the reason for admission)•Toxoplasmosis - brain	
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ULTRASOUND IN THE EMERGENCY DEPARTMENT JUNE 8, 2009

The following changes have been made to streamline US requests from Emergency:

1. We have informed staff that effective July 11, 2009 the weekend rotation will commence at 9am and end at 5pm
2. The ultrasonographers have also been informed that a shift will be implemented as of July 11 for all statutory holidays beginning at 9 am and ending at 5pm
3. The weekend dedicated appointment slots for patients **in the ER** waiting for an US are: 9:00, 9:30. (2 slots). Patients discharged **from the night before** can be accommodated at 10:00am, 10:30am, 11:00am, 11:30am, 12:00pm, 12:30pm (6 slots). This is effective July 11, 2009.
4. The dedicated slots during the week (Monday to Friday) for discharged Emergency patients will be at 10:00am, 10:30am, 2:00pm and 2:30pm. The dedicated slots are reserved for ER patients from the night before. This is effective Monday June 15, 2009
5. Between 4 and 11 pm weekdays, US will be done for a breadth of urgent indications as determined by a conversation between the EP and the radiology resident. Ultrasounds that will determine disposition/referral decisions (e.g. - admit vs. discharge or medicine vs. surgery) are justifiably indicated during this timeframe. Patients who can safely be discharged for a follow-up ultrasound should be managed in this way. Disputes over legitimacy of the indication for US or disagreement over the appropriateness of a test should be directed to the staff EP and radiologist.

The above schedule will change the weekend on-call coverage to: Friday call will commence from 5pm to 8am Saturday, 5pm Saturday to 8am Sunday and 5pm Sunday to 7am Monday.



Glen Bandiera
Chief, Emergency Medicine, St. Michael's Hospital.

Abdominal Pain Bloods

Abdominal Pain

Age < 50

Stable, looks well

- Discuss blood, urine, BHCG with MD
- EKG if epigastric pain or cardiac history

Age ≥ 50, Abnormal vitals or looks unwell

- SEND 'Abd Pain Panel'*
- Hold BGAS, Urine C&S
- 1 IV minimum
- If FEMALE (age 12-55) SEND ** 'Abd Pain Panel – Female'

Epigastric pain or cardiac history

- EKG, send Trop
- (ALWAYS consider CODE STEMI)

Fever, Suspected sepsis

- SEND 'Sepsis Panel'***

Significant Bleeding

- 2nd IV access
- SEND BGAS

*ABD PAIN PANEL (MALE)

– Send : CBC, electrolytes, BUN, CR, INR/PTT, Bili, ALP, AST, ALT, (Protein), Albumin, Amylase/Lipase, urine R&M;

- Hold : Blood Group and Screen

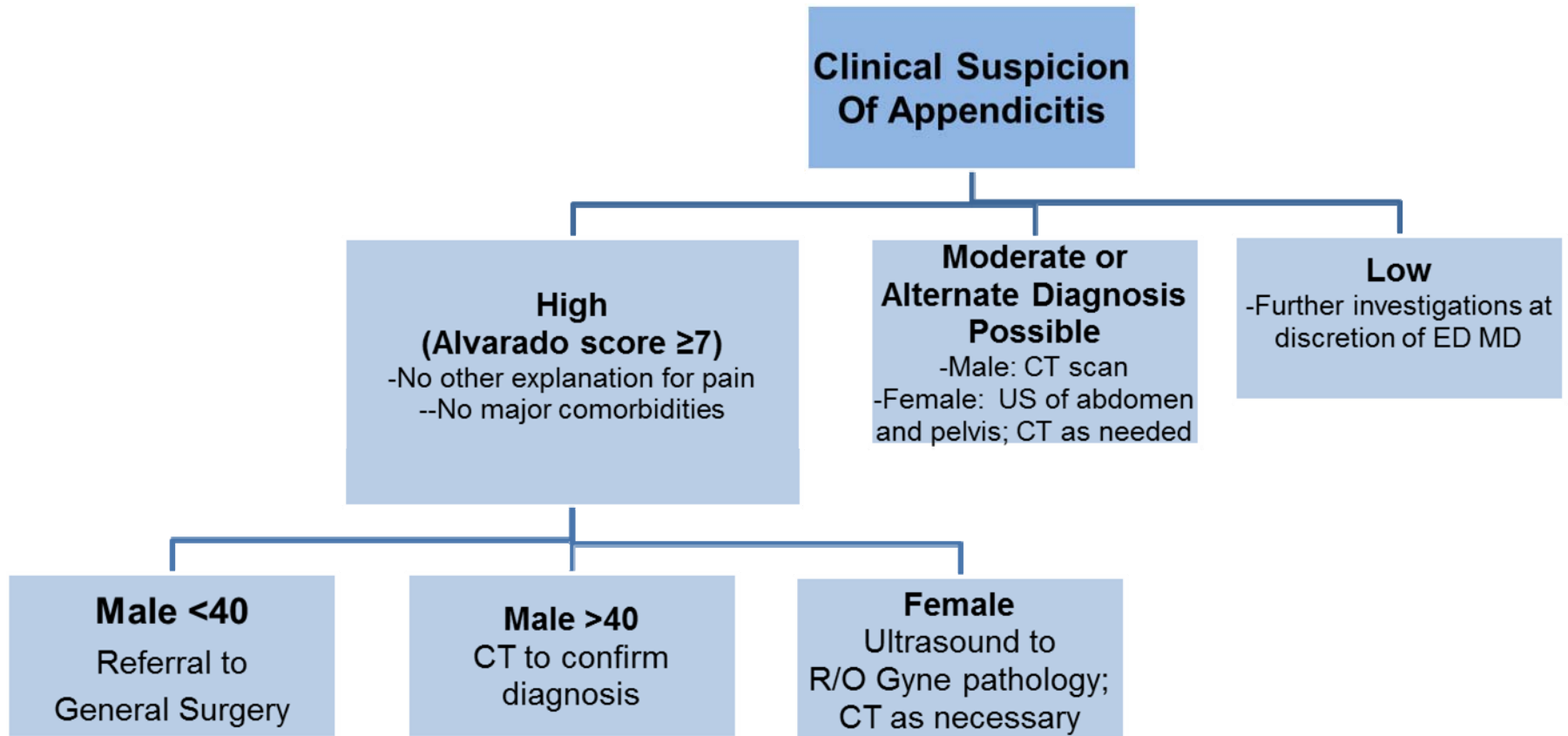
**ABD PAIN PANEL (FEMALE) If Female (age 12-55)

- Send - BHCG, Blood Group and Screen)

***SEPSIS PANEL

– Lactate, Blood C&S X 2 (different sites OR 20 min apart); Urine C&S if R&M is positive

Appendicitis

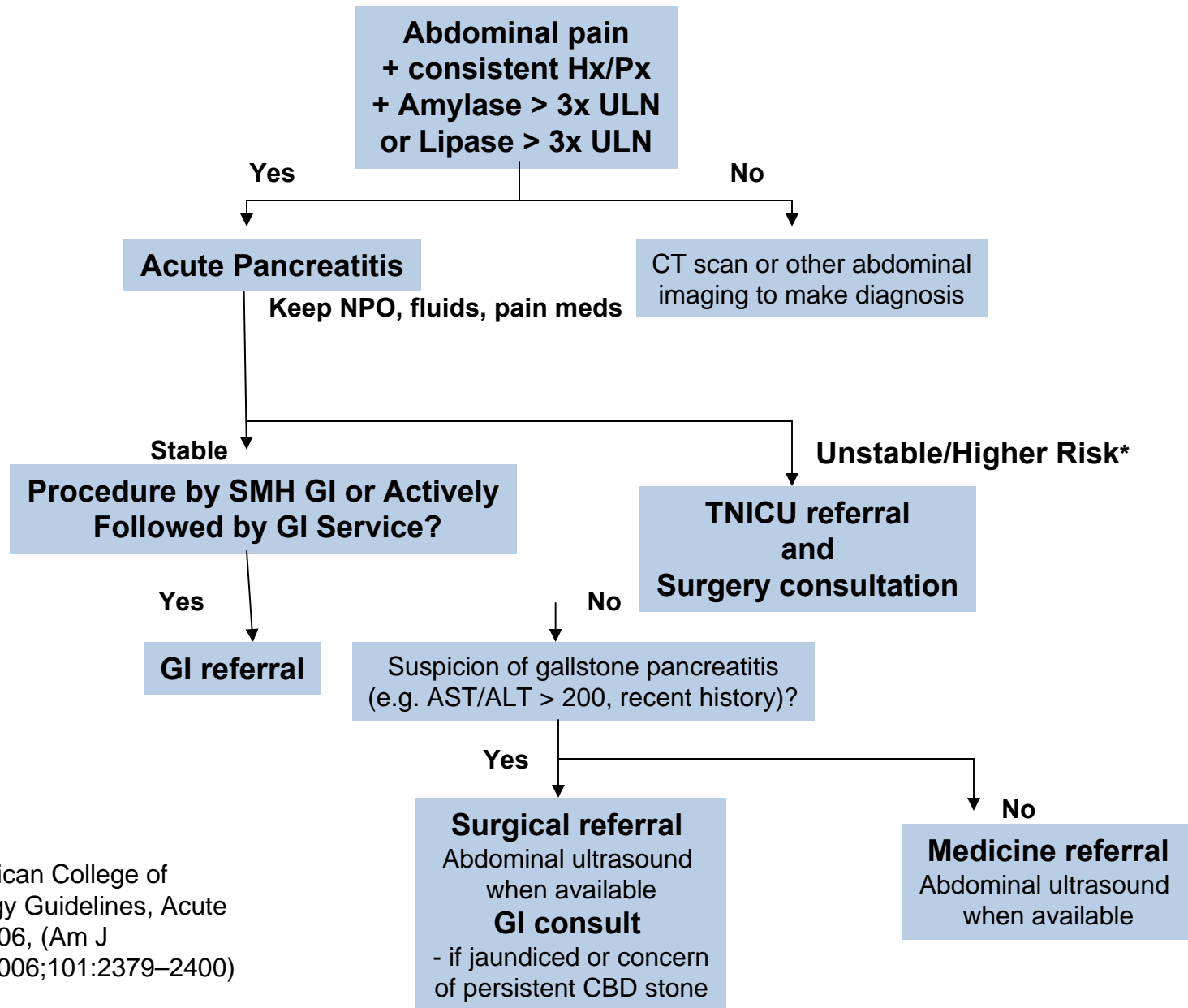


Appendicitis

- Supplementary Information

Alvarado Score		Value
Symptoms	Migration	1
	Anorexia (Ketones)	1
	Nausea-vomiting	1
Signs	RLQ tenderness	2
	Rebound pain	1
	Temp (>37.3 oral)	1
Lab	Leukocytosis (>10)	2
	Left Shift (>75% N)	1
Scoring		10
1-4	Appendicitis unlikely	
5-6	Appendicitis possible	
7-8	Appendicitis probable	
9-10	Appendicitis very probable	

Acute Pancreatitis



* See reverse
Based on American College of
Gastroenterology Guidelines, Acute
Pancreatitis, 2006, (Am J
Gastroenterol 2006;101:2379–2400)

Pancreatitis

- Supplementary Information

- Higher Risk Patients

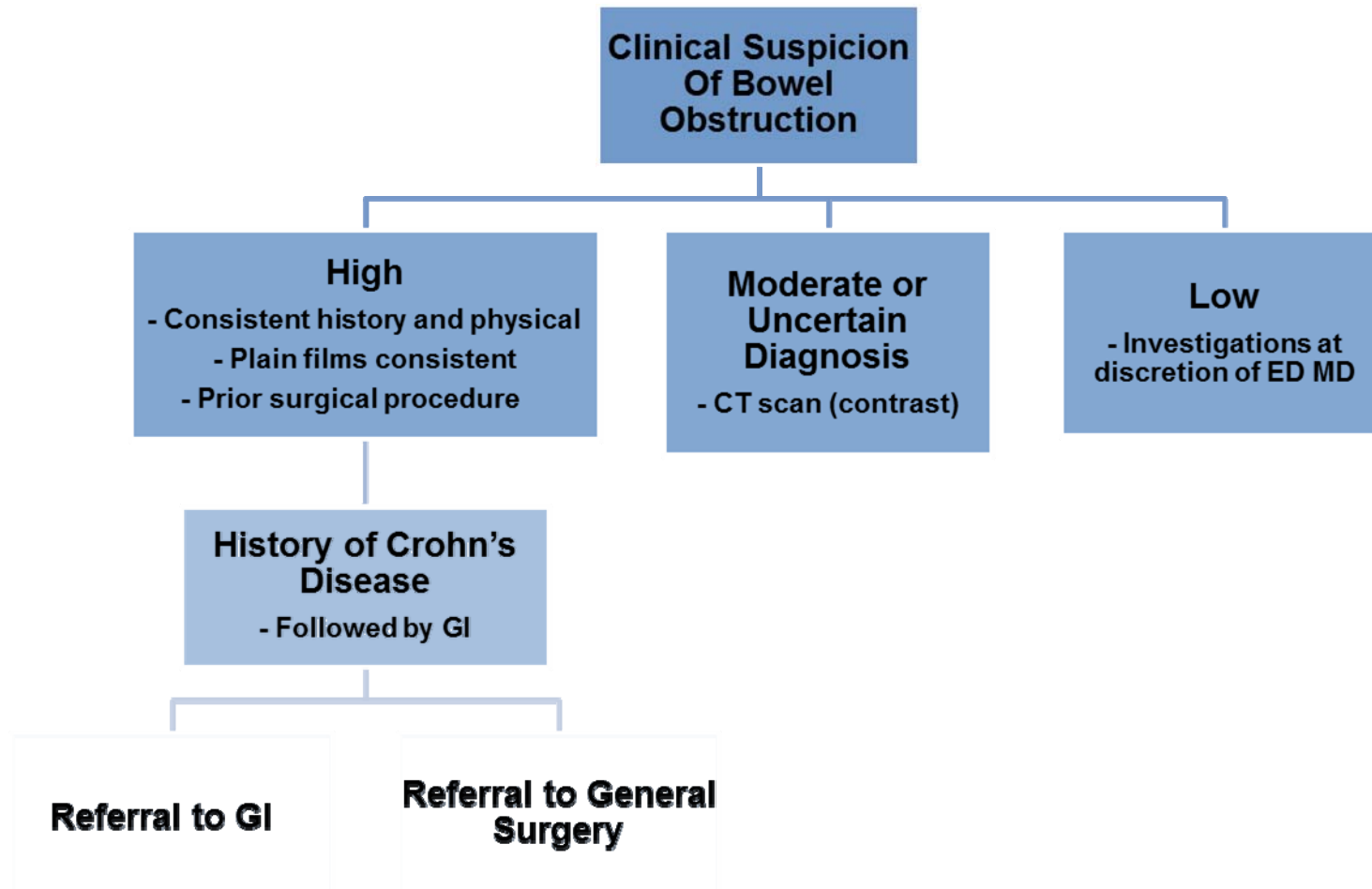
- Age >55
- Obesity (BMI >30)
- Organ Failure on admission
- CXR – effusion or infiltrate

- Ranson's Criteria - Admission (1 point each)

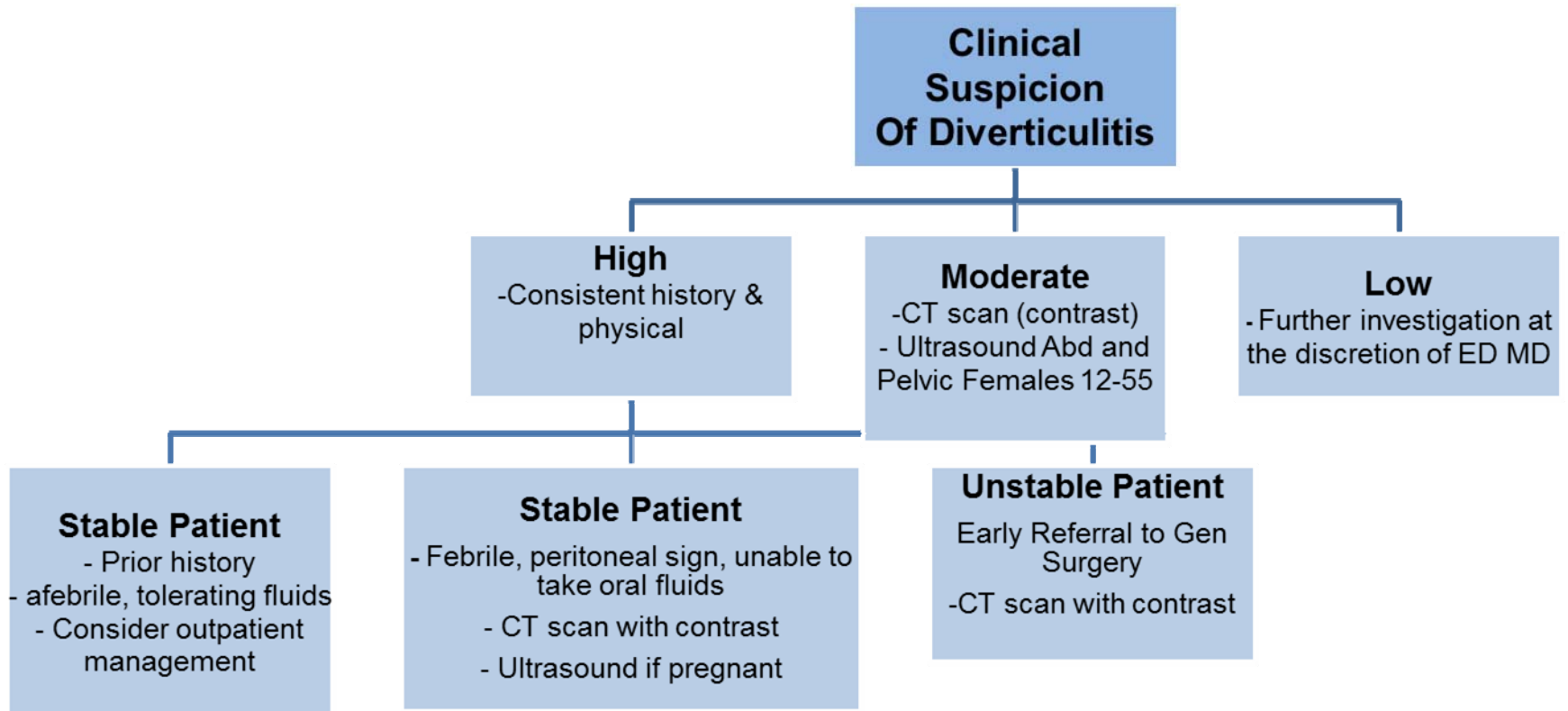
- Age >55
- WBC >16
- Glucose >10
- LDH >350
- AST >250

Score	Predicted Mortality
1-2	1%
3-4	15%
5	40%

Bowel Obstruction



Diverticulitis



Antibiotic Choices for General Surgery Conditions

MD Instructions:	
<ul style="list-style-type: none"> • Antibiotic use is considered adjunctive to source control, which is definitive treatment for intra-abdominal infections. • Consider whether infection is community acquired versus hospital acquired. • The rate of E.coli resistance to fluoroquinolones in isolates from both ICU and non-ICU patients admitted to St. Michael's hospital is more than 30%. Fluoroquinolones should be used cautiously as empiric therapy in severely ill patients or in any patient that has recently received therapy with a fluoroquinolone 	
Acute Cholecystitis (Community Acquired)	<p>Mild to Moderate:</p> <p><input type="checkbox"/> Cefazolin 1g iv q8h</p> <p>Severe (profound physiologic disturbance/immunocompromised):</p> <p><input type="checkbox"/> Piperacillin – Tazobactam 3.375g IV q6h</p> <p>or</p> <p><input type="checkbox"/> Ampicillin 1 g IV q6h and Gentamicin 5 mg/kg = _____ mg IV daily and Metronidazole 500 mg IV q12h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Ciprofloxacin 400 mg IV q24h and Metronidazole 500 mg IV q12h</p>
Biliary Infection (Hospital Acquired) Any Severity	<p><input type="checkbox"/> Piperacillin – Tazobactam 3.375 g IV q6h</p> <p>or</p> <p><input type="checkbox"/> Ampicillin 1 g IV q6h and Tobramycin 5 mg/kg = _____ mg IV daily and Metronidazole 500 mg IV q12h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Ciprofloxacin 400 mg IV q12h and Metronidazole 500 mg IV q12h</p>
Appendicitis	<p><input type="checkbox"/> Cefazolin 1 g IV q8h and Metronidazole 500 mg IV q12h</p> <p>or</p> <p><input type="checkbox"/> Ampicillin 1 g IV q6h and Gentamicin 5 mg/kg = _____ mg IV daily and Metronidazole 500 mg IV q12h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Ciprofloxacin 400 mg IV q12h and Metronidazole 500 mg IV q12h</p>
Diverticulitis (Community Acquired)	<p>Mild to Moderate Diverticulitis:</p> <p><input type="checkbox"/> Cefazolin 1 g IV q8h and Metronidazole 500 mg IV q12h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Moxifloxacin 400 mg IV q 24h</p> <p>Severe Diverticulitis (severe physiologic disturbance or immunocompromised):</p> <p><input type="checkbox"/> Piperacillin/Tazobactam 3. 375 mg IV q6h</p> <p>or</p> <p><input type="checkbox"/> Ampicillin 1 g IV q6h and Gentamicin 5 mg/kg = _____ mg IV daily and Metronidazole 500 mg IV q12h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Ciprofloxacin 400 mg IV q12h and Metronidazole 500 mg IV q12h</p>
Diverticulitis (Hospital Acquired)	<p><input type="checkbox"/> Piperacillin/Tazobactam 3. 375 g IV q6h</p> <p>For severe penicillin /cephalosporin allergy (anaphylaxis, angioedema, hypo-tension):</p> <p><input type="checkbox"/> Ciprofloxacin 400 mg IV q12h and Metronidazole 500 mg IV q12h</p>

EMERGENCY DEPARTMENT REFERRALS FROM NEPHROLOGY CLINIC / DIALYSIS

