Medical Directive

Title of Medical Directive
General Surgery Physician Assistant (PA): Initiating diagnostic tests/interventions, medications, and consultations supplemental to Physician Assistant Patient Care Directive.

Authorized To (The individual(s) or group of health care professionals practicing in the General Surgery Department, and their qualifications authorized to implement this medical directive):

Physician Assistants (PA), Division of General Surgery (see attached list). The PA is a graduate of an accredited Physician Assistant program. The PA must be able to demonstrate and communicate the knowledge, skill and judgment to implement this medical directive.

Description of Procedure

The PA can implement the Medical Directive for initiation, alteration, or discontinuing medications, initiating a diagnostic test/intervention, and initiating consults for patients under the care of an attending General Surgeon at _____ Hospital.

Medications:
Physician Assistant with the knowledge, skill and judgment can utilize medications that appear in the attached table, if applicable to the patient.

Medications must be on hospital formulary and any restrictions to ordering the medication must be met.

The Physician Assistant may also restart, change, or discontinue medications prescribed prior to hospital admission as the patient clinical status indicates in addition to the medications listed below. Home medications will be ordered based on the patient's history and/or Best Possible Medication History completed by the Pharmacist.

Benzodiazepines and narcotics must be ordered by a physician due to federal legislation restrictions under Controlled Drug and Substance Act.

Diagnostic tests/interventions:
Physician Assistants with knowledge, skill and judgment can utilize diagnostic tests and interventions as listed in the attached table, if applicable to the patient.

Consults:
Physician Assistants with knowledge, skill and judgment can utilize consults as necessary and if applicable to the patient.

Indications

The patient must be a patient of _____ Hospital General Surgery.
The patient must be 17 years old or greater.
The history dictates the procedure is necessary as described in the tables below.
The patient/SDM consents to the procedure.

Contraindications

This medical directive may not be implemented if the patient/SDM declines implementation by the physician assistant.
Specific contraindications related to the procedure can be found in the tables below.

For detailed indications and contraindications, refer to Medications and/or Diagnostic Tests/Interventions and/or Consultations tables.

The medical directive includes the delegation of a controlled act/procedure:

Yes X☐ No ☐ If yes, which procedure(s)?

a. Please see the attached DCA form.

Documentation

The PA must document the name of the attending physician on any medical consult order.
The PA will document "as per medical directive" on any written orders and sign off with the date, time, and name of medical directive being initiated.

Authorizing Physician(s)

Staff physician involved in the development of the medical directive.
General Surgeons, _____ Hospital (see attached list).

Resources/References (e.g., published literature, hospital policies and procedures, program-specific guidelines/protocols/handbooks, medical staff, pharmacist, etc.)

Bates B "A Guide to Physical Examination and History Taking" 10th ed 2008 426-453.

Canadian Immunization Guide 7th Edition. 2006. Part 4. Tetanus Toxoid. <http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-tet-eng.php>

College of Physicians and Surgeons. (2004). Delegation of controlled acts. Retrieved January 12, 2012 < http://www.cpso.on.ca/policies/policies/default.aspx?ID=1554>

The College of Physician and Surgeons of Ontario. (2007) The Practice Guide: Medical Professionalism and College Policies. Retrieved January 12, 2012. <http://www.cpso.on.ca/policies/legislation/default.aspx?id=1768>

The College of Nurses of Ontario. (2008)Practice Standards <http://www.cno.org/Global/docs/prac/41001_documentation.pdf>

Dr. E. Yeo and Sue Jenkins RN MN-APN. Venous Thromboembolism (VTE) Post Operative Prophylaxis. 2009

Federation of Health Regulatory College of Ontario. An Inter-Professional guide on the use of orders, directives and delegation for Regulated Health Professionals in Ontario. (2007) Retrieved June, 2012 <http://mdguide.regulatedhealthprofessions.on.ca/why/default.asp>.

Medical Directives Policy 3.10.022. Located at the Toronto General Corporate internet.

Ontario Hospital Association. Emergency department (ED) prototype medical directives. (2007). MedicalDirectivesImplementationKit.aspx <http://www.oha.com/KnowledgeCentre/Library/Toolkits/Pages/EmergencyDepartment(ED)>

Process for Development, Review, Revision & Approval of Medical Directives. 2011. Located at the Toronto General Corporate internet.

Regulated Health Professions Act (sections 28 & 29). Retrieved January 24, 2009 from http://www.e-laws.gov.on.ca/htmL/statues/english/wlaws_statutes_91re.htm#BK25.

Contact Person(s):

Medications

Drug Classification	**Drug Name & Dosage Range**	**Indications**	**Absolute Contraindicat**
Analgesic:	acetaminophen 325 to 1000 mg PO or enteral tube q4h as needed acetaminophen 320 to 1000 mg elixir PO or enteral tube q4h as needed acetaminophen 320 to 1000 mg elixir PO or enteral tube q6h as needed acetaminophen 325 or 650 mg PR q4h as needed Maximum acetaminophen dose not to exceed 4 grams in 24 hours	Mild to moderate pain - headache pain; - dental pain; - ear, nose and/or throat pain; - musculoskeletal pain; Patients with a temperature of greater than 38°C (route of measurement must be considered)	- Allergy or sensitivity to acetaminophe - History of hepatitis or ot liver disease; - Abdominal pa - Intoxication - Ingestion of acetaminophe last 4 hours (consider ibuprofen instead).
	Ibuprofen 200-600 mg PO q6h as needed (Maximum daily dose 1.2g)	Mild to moderate pain - headache pain; - dental pain; - ear, nose and/or throat pain; - musculoskeletal pain; Patients with a temperature of greater than 38°C (route of measurement must be considered)	- Allergy or sensitivity to ibuprofen; - History of ast urticaria, or allergic type reactions with other NSAID aspirin. - treatment of p operative pai the setting of

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
			coronary arte bypass graft (CABG) surg
	Metoclopramide 5-10 mg IV 4 times daily Metoclopramide 10 to 20 mg PO/enteral 4 times daily (before meals and bedtime)	Used to treat nausea and vomiting associated with conditions such as, http://en.wikipedia.org/wiki/Acute_radiation_syndromemalignancy, migraine headaches, and emetogenic drugs.	- Known sensit or intolerance the drug - Should not be used wheneve stimulation o gastrointestin motility migh dangerous; i.e the presence gastrointestin hemorrhage, mechanical obstruction o perforation. - avoid in Parkinson dis patients as ma increase extra pyramidal symptoms (E
	Domperidone 5 to 20 mg PO or enteral tube 3to 4 times daily (before meals and bedtime)	- Gastroparesis - Nausea/vomiting	- Known sensit or intolerance the drug - Should not be used wheneve stimulation o gastrointestin motility migh dangerous; i.e the presence gastrointestin hemorrhage, mechanical obstruction o perforation. - prolactinoma elevated prola levels; GI hemorrhage; mechanical obstruction o perforation; concomitant u of ketoconazo prolonged QT

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
	Ondansetron 4-8 mg PO/IV q6-8h as needed (max: 16 mg/24h)	Nausea/vomiting Typically used as nausea prevention before chemo, X-Ray Therapy (XRT), or post-op.	Hypersensitivi drug. - congenital or acquired long syndrome - hepatic impairment
Antihistamines	Diphenhydramine 25-50 mg PO/IM/IV or enteral tube q4h to q6h as needed	Prevention and treatment of nausea, vomiting, and/or vertigo. Allergy reaction: - Hives - Pruritic rash prevention or treatment of urticarial, histamine-related drug reaction; anaphylaxis (concomitant use with epinephrine); pre-contrast if previous contrast reaction per UHN policy	Hypersensitivit drug. caution in elde (can cause drowsiness/fall risk) caution if: - increased intraocular pressure /glaucoma - hypertension - COPD, asthm - GI obstructio - CVD - CNS depressa use
	Hydroxyzine 10-25mg PO q6h as needed	Prevention and treatment of nausea, vomiting, and/or vertigo. Allergy reaction: - Hives - Pruritic rash	Hypersensitivit drug. caution in elde (can cause drowsiness/fall risk) caution if: - increased intraocular pressure /glaucoma - hypertension - COPD, asthm - GI obstructio - CVD - CNS depressa use
Anesthetics	Lidocaine 1-2% (with epinephrine	Local injection anesthetic for wound closure.	Hypersensitivit Do not use an

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
	max dose is 7 mg/kg) (without epinephrine max dose is 5 mg/kg) Bupivacaine 0.5% (max dose 2.5 mg/kg)		anesthetic with epinephrine in distal extremet i.e.the fingers, nose, penis.
Anticoagulants	Unfractionated heparin (UFH) Prophylaxis: 5000 units subcutaneous q12h (or q8h)	Prophylaxis of postoperative DVT and PE in patients undergoing general surgery who are at risk of thromboembolism who are not actively bleeding and do not have an increased risk of bleeding. Can also be used to bridge patients back onto oral anticoagulation.	- Uncontrollab bleeding - Severe thrombocyto ia - History of heparin indu thrombocyto ia (HIT) - Known hypersensitiv
	Low molecular weight heparin (LMWH) Enoxaparin 40mg SC daily Or Enoxaparin 30mg SC daily (for CrCl < 30)	Prevention of postoperative DVT and PE in patients undergoing general/abdominal surgery who are at risk for thromboembolic complications	- Actively bleeding - Severe thrombocyto a - History of heparin indu thrombocyto a (HIT) - Known hypersensitiv - Use with cau in renally impaired patients. No dosage adjustments necessary in patients with mild (Cl_{cr} 50 L/minute) or moderate (Cl 30-50 mL/minute) renal impairm
	Warfarin (adjust/titrate to specific INR goal	Prevention of DVT or PE	- Actively bleeding - Known

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
	as clinically indicated; not initiation)		hypersensitiv
Crystalloid Fluid	IV Normal Saline 0.9% sodium chloride IV with 20 to 40 mEq KCl/L infuse at 50 to 100ml per hour. Initial management includes replacement of an intravenous fluid with an IV bolus of 10-20 mL/kg of an isotonic crystalloid (eg, 0.9% sodium chloride). Additional fluid boluses may be required depending on the severity of the dehydration. Maintenance fluids can be calculated according to weight and output (30 to 100ml per hour)	Establish or maintain a fluid or electrolyte balance - Vomiting - Nausea (unable to take fluids PO) - Diarrhea - Painful to swallow - Dry mucus membranes - Decreased skin turgor - Tachycardia or hypotension related to dehydration NPO Patient, surgical patient, euvolemic, awaiting surgery	- Severe hypertension - Pulmonary edema
	Ringers Lactated IV continuous rate or bolus.	Establish or maintain a fluid or electrolyte balance - Vomiting - Nausea (unable to take fluids PO) - Diarrhea - Painful to swallow - Dry mucus membranes - Decreased skin turgor - Tachycardia or hypotension related to dehydration	- Severe hypertension - Pulmonary edema
Colloids	Albumin 5% and 25% solutions	Hypovolemia Plasma volume expansion Cirrhotic ascites and paracentesis Acute liver failure	- Hypersensiti - Severe anem - Cardiac failu in the presen

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
		Hepatic resection Liver and kidney transplant *Consent must be obtained for blood products.	of normal or increased vascular volu
Cathartics/Laxatives	Mineral oil 30mL PO	Constipation Impaction at rectum	- Hypersensitiv to drug - Acute abdom - Undiagnosed nausea/vomit - GI obstructio perforation, - Toxic megac - Rectal bleedi - Appendicitis
	Magnesium hydroxide 30 mL suspension PO	To soften stool post-operatively and prevent narcotic induced constipation. To assists bowel movements once an obstruction is resolved.	Hypersensitivit any componen the formulation Intestinal obstruction, ac abdominal pain nausea, or vom
	Glycerin suppository	Constipation	Hypersensitivit any componen the formulation Intestinal obstruction or a abdominal pain
Electrolyte replacement.	Potassium chloride 20-40 mEq PO or IV.	Hypokalemia - Plasma K = 2.5 - 3 mmol/L. - Plasma K values less than 2.5 mmol/L treatment to be discussed with MRP.	Hyperkalemia
	Magnesium Oxide 420-840mg PO	Hypomagnesemia -Serum magnesium 0.8 – 1.1 mmol/L. -Serum magnesium less than 0.8 mmol/L treatment to be discussed	Hypermagnese

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
		with MRP.	
	Magnesium Glucoheptonate 1500-3000mg PO	Hypomagnesemia -Serum magnesium 0.8 – 1.1 mmol/L. -Serum magnesium less than 0.8 mmol/L treatment to be discussed with MRP.	Hypermagnese
	Sodium phosphate 15 mmol IV	Hypophosphatemia -less than 0.8 mmol/L and serum K is 4.0 mmol/L or above	Hyperphospha
	Potassium phosphate 15 mmol IV	Hypophosphatemia -less than 0.8 mmol/L and serum K is less than 4.0 mmol/L	Hyperphospha
	Calcium Carbonate 650-2500 mg PO	Hypocalcemia -Corrected serum calcium less than 2.2	Hypercalcemia
	Calcium Gluconate 1-2g IV	Hypocalcemia -Corrected serum calcium less than 2.2	Hypercalcemia
	Calcium Novartis 500-1000mg	Hypocalcemia -Corrected serum calcium less than 2.2	Hypercalcemia
Thrombolytic Agent	Alteplase (cathflo) 2mg/2ml – 2ml instilled into occluded catheter	Occluded portacath and PICC lines	
Digestive Enzyme Replacement.	Pancrealipase (Cotazym/ Cotazym ECS 8/ Cotazym ECS 20/ Creon 10/ Creon 25) 1 to 6 capsules with meals	Pancreatic Insufficiency	Hypersensitivit any component the formulation
Vaccine.	Pneumococcal vaccine (Pneumovax-23) 0.5 mL IM once	Post splenectomy	Hypersensitivit any component the formulation
	Pneumococcal vaccine (Prevnar-13) 0.5mL IM once	Post splenectomy	Hypersensitivit any component the formulation
	Haemophilus b conjugate vaccine (ACT-HIB) 0.5L IM	Post splenectomy	Hypersensitivit any component the formulation
	Meningococcal vaccine (Menactra)	Post splenectomy	Hypersensitivit any component the formulation

Drug Classification	Drug Name & Dosage Range	Indications	Absolute Contraindicat
	0.5mL IM once		

Diagnostic Tests/Interventions

Diagnostic Test/Intervention	Indications	Absolute Contraindications	Special Considerations (Including contraindications)
Admission history, physical assessment, admission orders. (Written orders accepted)	Patients admitted to the inpatient unit, seen in clinic or in the Emergency Department; based on clinical evaluation of patient, the PA writes admission orders, including diagnosis, reason for admission, activity, diet, assessment guidelines, investigations, labs and IV therapy.		To be reviewed with the attending physician or on call general surgery resident
Amylase, Lipase	Assessment for pancreatic disease.		
Barium / gastrograffin swallow	To assess for post-op anastomotic leak prior to initiation of po intake, or investigation of potential bowel obstruction		
Blood glucose (fasting and random) / Point of Care blood glucose monitoring / Hemoglobin A1C	Monitoring of blood glucose in diabetics or other patients with unstable blood glucose; screening of borderline diabetics		PA to determine frequency of fingerstick blood glucose monitoring based on stability of diabetic patient's blood sugars and health status
Blood products (PRBC, FFP, platelets, albumin)	suspected bleeding; suspected coagulopathy; volume replacement post paracentesis administration as per UHN policy "Appropriate use of blood products" Policy # 3.130.007		Deterioration of clinical status requires physician notification
Bone Scan	Pre or post-op assessment for metastases		

Diagnostic Test/Intervention	**Indications**	**Absolute Contraindications**	**Special Considerations (Including contraindications)**
CCAC (Written orders accepted)	Patient requires CCAC care in home setting or application to rehabilitation or complex continuing care facility. PA able to complete and sign off on CCAC referrals		
Central line, remove (Written orders accepted)	Established peripheral IV access or central line no longer required		
Chest tube, remove (Written orders accepted)	Absence of air leak with no radiological signs of pneumothorax; drainage less than 50mL/4h		
Diet: NPO, Clear fluids, full fluids, thickened fluids, minced, puree, regular, post-gastrectomy, post-ileostomy diet, diabetic, NG feeds, lactose free, fluid restricted diet (Written orders accepted)	NPO: Pre-op preparation, severe nausea and vomiting, NG in situ, decreased LOC, suspected dysphagia Diet as tolerated. For patient post GI surgery, mechanical obstruction, ileus and/or anastomotic leak must be absent for oral intake. Feeds may be administered		
Discharge or transfer orders (Written orders accepted)	Has been assessed to meet appropriate discharge or transfer criteria and necessary follow-up initiated; CCAC arranged if required; the PA writes discharge summaries, transfer orders, including diagnosis, reason for transfer or discharge, accepting physician if any, activity, diet, assessment guidelines, investigations, labs and IV therapy.		Decision to transfer/discharge is made by the attending surgeon and accepting physician / medical team.
Discharge or transfer orders Sign-off	PA able to sign off on discharge summaries for patients leaving the ward.		Discharge prescriptions will require signature of resident or staff.
Dopplers – arterial and/or venous	Suspected deep vein thrombosis; evaluation of		Doppler results indicative of deep vein thrombosis

Diagnostic Test/Intervention	**Indications**	**Absolute Contraindications**	**Special Considerations (Including contraindications)**
	suspected peripheral vascular disease		require physician notification
ECG	Assessment of chest pain, new onset SOB or heart arrhythmias; pre-op assessment		Significant new ECG abnormalities, or clinical status unstable require physician notification
Echocardiogram-transesophageal	Valve assessment, LV function, pericardial effusion, suspected endocarditis, pre-op assessment	• Esophageal spasm • Esophageal stricture • Esophageal laceration • Esophageal perforation • Esophageal diverticula	
Gastrostomy / Jejunostomy feeding tube Insert in radiology	Long term enteral feeding required.		
Heparin Level	Pre-op assessment; Coumadin / heparin dosing; bleeding of unknown etiology; suspected liver disease		
Intravenous access, PIV, foot access, PICC line insertion, heparin / saline lock (Written orders accepted)	Initiate: Maintain access for administration of medications, fluids, blood products, total parenteral nutrition, hemodynamically unstable. Discontinue: Adequate hydration, IV antibiotics completed, hemodynamically stable. Administration as per UHN Vascular Access Policy 3.60.002		
Intravenous fluid administration (Written orders accepted)	Initiate: IV access required for medications, hydration and blood products. Discontinue: Adequate hydration, IV antibiotics completed, hemodynamically stable, epidural / patient controlled analgesia / extrapleural		Will notify the attending surgeon or the responsible general surgery resident.

Diagnostic Test/Intervention	Indications	Absolute Contraindications	Special Considerations (Including contraindications)
	catheter discontinued.		
MRI/MRCP of abdomen	Pre and post op assessment for patients with contrast dye allergy or intra-abdominal pathology better visualized on MRI	Metallic foreign body or cochlear implants.	Patient questionnaire to be completed prior to ordering
Nasogastric/Nasojenunal tube. (Written orders accepted)	Insertion: Absence of bowel sounds, abdominal distension, nausea and vomiting. Discontinue: Bowel sounds present, no abdominal distension, adequate swallowing, barium swallow indicates no anastomotic leak		For post upper GI surgery with gastro-enteric or esophagoenteric anastomosis - will notify the attending surgeon or the responsible general surgery resident of insertion of the NG tube.
Oxygen Saturation	Evaluation of oxygenation status; unexplained dyspnea or restlessness		
Oxygen therapy – initiate or discontinue (Written orders accepted)	For O2 saturation < 90% (unless otherwise ordered by attending surgeon); mild respiratory distress – O2 via nasal prongs (2-5L / min); severe respiratory distress – O2 via facemask, venturi mask, mask with reservoir (FiO2 24% – 100%) to maintain O2 saturation > 90%		
Portal Vein Doppler studies			
Removal of JP drain or Percutaneous drain. (Written orders accepted)	Drainage less than 30cc in the last 24 hours and serosanginous.		
Wound, suture removal	Staples removed from incision 7-10 days post-op; sutures removed from chest tube site 24-48h post chest tube removal	If concern for delayed closure (ie. immunocompromised)	If wound infection or dehiscence notify attending surgeon or responsible general surgery resident. This may require opening of wound, debridement and packing.

Consultations

Consultation	Indications	Special Considerations
Critical Care Response Team	perioperative assessment of multiple or complex medical conditions	
Community Care Access (CCAC)	Discharge planning. Enter orders for CCAC for nursing care (i.e. wound care, drain care, medication administration), personal support worker, palliative care.	
Interventional Radiology	Suspected intra-abdominal infection including cholangitis; symptomatic pleural effusions, ascites or empyema, fluid collections, embolization	Observe contra-indications for drain insertion including but not limited to coagulopathy
Medical Oncology	Assessment for chemotherapy	
Transplant Team	Assessment and management of patients involved in organ transplant care	