GUAM MEMORIAL HOSPITAL AUTHORITY
ADMINISTRATIVE MANUAL

APPROVED BY:	RESPONSIBILITY:	EFFECTIVE DATE:	POLICY NO.	PAGE
PeterJohn B. Camacho, MPH Hospital Administrator/CEO	Medical Staff, Nursing Services	December 21, 2018	A-PC800	1 of 4

TITLE: DEEP VEIN THROMBOSIS (DVT) PROPHYLAXIS PREVENTION IN SURGICAL PATIENTS

LAST REVIEWED/REVISED: 10/2017

ENDORSED: NMC 10/2017; Surgery 05/2018; Medicine 04/2018; P&T 05/2018; MEC 05/2018; Q&S 08/2018

PURPOSE:

All surgical inpatients should be assessed for their risk of DVT/PE related to **each** surgical procedure and have appropriate prophylaxis ordered.

POLICY:

Evidenced-based preprinted orders should be placed on the chart for every surgical inpatient. The order sheet should be completed by the attending physician with consultation with the surgeon (if the attending physician is not a surgeon) **prior to** the patient leaving the post-anesthesia care unit.

EXCLUSIONS:

Patients at risk for bleeding or actively bleeding may be excluded from pharmacological prophylaxis; however, there should be physician documentation of this risk and mechanical prophylaxis should be used.

Reasons for not administering pharmacological prophylaxis can include active bleeding (gastrointestinal bleeding, cerebral hemorrhage, retroperitoneal bleeding), bleeding risk, hemorrhage, patients on continuous IV heparin therapy within 24 hours before or after surgery, thrombocytopenia, or patient refusal.

Documented reasons for not administering mechanical prophylaxis can include patients with bilateral amputee, bilateral lower extremity trauma, patient refusal, and patients on continuous IV heparin therapy within 24 hours before or after surgery.

PROCEDURE:

A. Evidence-based preprinted order sets should be placed on the chart for the attending physician to complete prior to the patient leaving the post-anesthesia care unit.

B. If the preprinted order set is not used by the attending physician, physician documentation should include a reason for not prescribing mechanical and/or pharmacological prophylaxis. If ordered electronically, PACU nurse should endorse that DVT prophylaxis has been ordered via CPOE to endorse compliance.

C. Nursing documentation should include standard documentation for medication administration for pharmacological prophylaxis. Mechanical prophylaxis documentation should include the application of devices and alternatives if specified order not available for use.

REFERENCE(S):

Bahl,V. et al. (2009). A Validation Study of a Retrospective Venous Thromboembolism Risk Scoring Method. *Annals of Surgery*. Lippincott, Williams, and Wilkins. www.annalsofsurgery.com

Society of Hospital Medicine. (2007). Preventing Hospital-Acquired Venous Thromboembolism. Retrieved from http://www.hospitalmedicine.org/AM/Template.cfm?Section=Home&Template=/CM/ContentDisplay.cfm&contentID=17773

University of Michigan Health System. Venous Thromboemolism (VTE). Ann Arbor (MI): Universty of Michigan Health System; Last reviewed 2012)

ATTACHMENTS:

I. Deep Vein Thrombosis (DVT) Prophylaxis Orders

ATTACHMENT I

ITEMS WITH BOXES/PARENTHASES **MUST BE CHECKED** TO BE ORDERED. Orders that have been changed (additions, deletions, or strike outs) **must be initialed** by the ordering MD for the order to be valid.

PHYSICIAN'S ORDER
(EXCLUDING IV Fluids and MEDICATIONS)

THROMBOSIS RISK FACTOR ASSESSMENT
Choose all that apply, then calculate total risk factor score

EACH RISK FACTOR REPRESENTS 1 POINT

- ☐ Age 41 – 60 years
- ☐ Swollen legs (current)
- ☐ Varicose veins
- ☐ Obesity (BMI > 25)
- ☐ Minor surgery planned
- ☐ Sepsis (< 1 month)
- ☐ Acute myocardial infarction
- ☐ Congestive heart failure (<1 month)
- ☐ Medical patient currently at bed rest
- ☐ History of inflammatory bowel disease
- ☐ History of prior major surgery (< 1 month)
- ☐ Abnormal pulmonary function (COPD)
- ☐ Serious Lung disease including pneumonia (< 1 month)
- ☐ Oral contraceptives or hormone replacement therapy
- ☐ Pregnancy or postpartum (< 1 month)
- ☐ History of unexplained stillborn infant, recurrent spontaneous abortion (≥3), premature birth with toxemia or growth – restricted infant
- ☐ Other risk factors: _____

Subtotal:

EACH RISK FACTOR REPRESENTS 2 POINTS

- ☐ Age 61 – 74 years
- ☐ Arthroscopic surgery
- ☐ Central venous access
- ☐ Major Surgery (> 45 minutes)
- ☐ Malignancy (present or previous)
- ☐ Laparoscopic surgery (> 45 minutes)
- ☐ Patient confined to bed (> 72 hours)
- ☐ Immobilizing plaster cast (< 1 hour)

Subtotal:

EACH RISK FACTOR REPRESENTS 3 POINTS

- ☐ Age 75 years or older
- ☐ History of DVT/PE
- ☐ Positive Factor V Leiden
- ☐ Elevated serum homocysteine
- ☐ Heparin-induced thrombocytopenia (HIT)(suspected/confirmed) (anticoagulant use contraindicated)
- ☐ Elevated anticardiolipin antibodies
- ☐ **Family History of Thrombosis***
- ☐ Positive Prothrombin 20210A
- ☐ Positive Lupus anticoagulant
- ☐ Other congenital or acquired thrombophilia
  If yes: Type _____
  ***most frequently missed risk factor**

Subtotal:

EACH RISK FACTOR REPRESENTS 5 POINTS

- ☐ Stroke (< 1 month)
- ☐ Multiple trauma (< 1 month)
- ☐ Elective major lower extremity arthroplasty
- ☐ Hip, pelvis or leg fracture (< 1 month)
- ☐ Acute spinal cord injury (paralysis) (< 1 month)

Subtotal:

TOTAL RISK FACTOR SCORE: ☐

IVF and MEDICATION ORDERS ONLY

INTRAVENOUS FLUID and MEDICATION ORDERS

ALLERGY:

DVT PROPHYLAXIS MANAGEMENT ORDERS
(See reverse for Dosing Guidelines)

Total Risk Factor Score	Risk Level	Incidence of DVT	Prophylaxis Regimen
0-1	Low Risk	2%	☐ Early ambulation
2	Moderate Risk	10-20%	Choose the following medication **OR** compression devices: ☐ Sequential Compression Device(SCD) ☐ Other: _____ ☐ Heparin 5000 units SQ Q12h
3-4	Higher Risk	20-40%	Choose **ONE** of the following medications +/- compression devices: ☐ Sequential Compression Device(SCD) ☐ Other: _____ ☐ Heparin 5000 units SQ Q8h ☐ Enoxaparin: ☐ 40mg SQ Q24h (WT < 150kg, CrCL > 30mL/min) ☐ 30mg SQ Q24h (WT < 150kg, CrCL = 10 – 29 mL/min) ☐ 30mg SQ Q12h (WT > 150kg, CrCL > 30mL/min) (Please refer to Dosing guidelines on the back of this form)
5 or more	Highest Risk	40-80%	Choose **ONE** of the following medications **PLUS** compression devices: ☐ Sequential Compression Device(SCD) ☐ Other: _____ ☐ Heparin 5000 units SQ Q8h (Preferred with Epidurals) ☐ Enoxaparin: (Preferred) ☐ 40mg SQ Q24h (WT < 150kg, CrCL > 30mL/min) ☐ 30mg SQ Q24h (WT < 150kg, CrCL = 10 – 29 mL/min) ☐ 30mg SQ Q12h (WT > 150kg, CrCL > 30mL/min) (Please refer to Dosing Guidelines on the back of this form)

☐ Ambulatory Surgery – No orders for venous thromboembolic prophylaxis required.

☐ VTE Prophylaxis Contraindications: ☐ pharmacological ☐ mechanical ☐ both

Reason: _____

MD Signature: _____

Date: _____ Time: _____

FACTORS ASSOCIATED WITH INCREASED BLEEDING

Patients may not be a candidate for anticoagulant therapy and SCDs should be considered

Active Bleed, ingestion of Oral Anticoagulants, Administration of glycoprotein IIb.IIIa inhibitors, History of heparin induced thrombocytopenia

CLINICAL CONSIDERATION FOR THE USE OF SEQUENTIAL COMPRESSION DEVICES (SCD)

Patients may not be a candidate for SCDs and alternate prophylactic measures should be considered.

Patients with Severe Peripheral Artery Disease, Congestive Heart Failure, Acute Superficial Deep Vein Thrombosis

- ✓ Summary/Blanket orders are unacceptable.
- ✓ Medication orders must be complete.
- ✓ PRN medication orders must include an indication.
- ✓ Write legibly.
- ✓ Rewrite orders upon transfer and/or post-operatively.
- ✓ Date, time, and sign verbal & telephone orders within 48 hours.

Physician's Order Form (Page 1 of 2)
Deep Vein Thrombosis (DVT) Prophylaxis Orders

PATIENT ID LABEL

GMHA # 9904905 Stock # 9904905
Revised: 04/2014
Approved Date: NMC 04/2013; SURG 06/2013; P&T 09/2013; MEC: 08/2013; HIMC: 04/2014

Guam Memorial Hospital Authority
ENOXAPARIN DOSING GUIDELINES

- MUST wait 24 hours before starting Enoxaparin if patient has epidural catheter
- Discontinue Enoxaparin 10 – 12 hours prior to removing epidural catheter
- May restart Enoxaparin 24 hours after epidural catheter has been removed

NON-PREGNANT PATIENTS/RENAL DOSING

Body weight < 150kg, CrCl > 30 mL/min: Enoxaparin 40mg SQ Q24h
Body weight < 150kg, CrCl = 10 – 29 mL/min: Enoxaparin 30mg SQ Q24h
Body weight > 150kg, CrCl > 30mL/min: Enoxaparin 30mg SQ Q12h

PREGNANT PATIENTS

***Prevention of DVT:**
Maternal body weight (start of therapy) < 75 kg:
Recommend Enoxaparin 30mg SQ Q24h until 20 weeks gestation
Recommend Enoxaparin 30mg SQ Q12h after 20 weeks gestation
Maternal body weight (start of therapy) ≥ 75 kg:
Recommend Enoxaparin 40mg SQ Q24h until 20 weeks gestation
Recommend Enoxaparin 40mg SQ Q12h after 20 weeks gestation

Note: For pregnant patients with renal impairment, renal dosing takes precedence over pregnancy dosing.

*Wait 12 hours before regional anesthesia

MONITORING RECOMMENDATIONS

- Patients who are obese (actual body weight > 150 kg)
- Patients who are pregnant
- Patients with renal insufficiency (creatinine clearance < 30mL/min)

Indication	Desired Level (Draw 4 hours after the 4th dose)	Recommendations for Dose Alteration		
		Anti-factor Xa level (units/mL)	Dose Adjustment	Repeat Anti-factor Xa to be obtained
Prevention of DVT/PE	0.2 to 0.5 units/mL	< 0.2	Increased by 25%	4 hours after 4th dose
		0.2 to 0.5	No change	Repeat in 1 week, then monthly thereafter
		0.6 to 1	Decreased by 20%	4 hours after 4th dose
		> 1	Hold for 3 hours, then decrease next dose by 30%	4 hours after 4th dose

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