APPENDIX C

Venous ThromboEmbolism (VTE) Safety Zone Program

Objectives:
1. To increase awareness among medical staff members, patients and relatives, including lay persons, of the potential risks of Venous Thromboembolism (VTE)
2. To be able to recognize patients who may be at risk of developing VTE
3. To be able to implement the policies for the routine risk assessment and prophylaxis among patients at risk for developing VTE

Goals:
1. Together we can improve patients’ VTE safety in our hospital
2. The VTE SAFETY ZONE program is designed to:
   a. Improve the quality of care in our hospital through measurable reductions in Venous ThromboEmbolism (VTE).
   b. Improve the quality of life (QoL) of patients.
   c. Assist in meeting our local quality standards of care in acquiring and maintaining accreditation.
   d. Reduce the overall costs of care.
**Please Check All That Apply**

<table>
<thead>
<tr>
<th>Each Risk Factor Represents 1 Point</th>
<th>Each Risk Factor Represents 2 Points</th>
<th>Each Risk Factor Represents 3 Points</th>
<th>Each Risk Factor Represents 5 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Age 41 - 60</td>
<td>☐ Minor surgery planned</td>
<td>☐ History of prior major surgery (&lt; 1 month)</td>
<td>☐ Varicose Veins</td>
</tr>
<tr>
<td>☐ Swollen legs (current)</td>
<td>☐ Obesity</td>
<td>☐ Acute myocardial infarction (&lt; 1 month)</td>
<td>☐ History of inflammatory bowel disease</td>
</tr>
<tr>
<td>☐ Obesity</td>
<td>☐ Serious lung disease including pneumonia (&lt; 1 month)</td>
<td>☐ Congestive heart failure (&lt; 1 month)</td>
<td>☐ Oral contraceptives or hormone replacement therapy</td>
</tr>
<tr>
<td>☐ Serious lung disease including pneumonia (&lt; 1 month)</td>
<td>☐ Medical patient currently at bed rest &gt; 3 days</td>
<td>☐ Sepsis (&lt; 1 month)</td>
<td>☐ Pregnancy or postpartum (&lt;1 month)</td>
</tr>
<tr>
<td>☐ COPD in acute exacerbation/ in respiratory failure</td>
<td>☐ Leg plaster cast or brace</td>
<td>☐ History of unexplained stillborn infant, recurrent spontaneous abortion (≥ 3), premature birth with toxemia or growth restricted infant</td>
<td></td>
</tr>
</tbody>
</table>

Sub-total score

- **Each Risk Factor Represents 2 Points**
  - ☐ Age 61-74 years
  - ☐ Major surgery (> 60 minutes)
  - ☐ Laparoscopic surgery (> 60 minutes)
  - ☐ Diagnosed malignancy
  - ☐ Central venous access
  - ☐ Morbid obesity
    - For Caucasian (BMI >40 kg/m²)
    - For Asian (BMI >27·5 kg/m²)

Sub-total score

- **Each Risk Factor Represents 3 Points**
  - ☐ Age over 74 years
  - ☐ Major surgery lasting 2-3 hours
  - ☐ BMI > 50 (venous stasis syndrome)
  - ☐ History of Superficial Venous Thrombosis, DVT/PE
  - ☐ Elevated antithrombin antibodies
  - ☐ Positive Factor V Leiden
  - ☐ Positive Prothrombin 20210A
  - ☐ Elevated serum homocysteine
  - ☐ Positive Lupus anticoagulant
  - ☐ Antithrombin III Deficiency
  - ☐ Other thrombophilia Type___________

Sub-total score

- **Each Risk Factor Represents 5 Points**
  - ☐ Elective major lower extremity arthroplasty
  - ☐ Hip, pelvis or leg fracture (< 1 month)
  - ☐ Stroke (< 1 month)
  - ☐ Multiple trauma (< 1 month)
  - ☐ Acute spinal cord injury /paralysis (< 1 month)
  - ☐ Major surgery lasting over 3 hours

Sub-total score

**TOTAL RISK FACTOR SCORE**

Nurse Examiner: ___________________________  Physician Examiner: ___________________________

PHILIPPINE HEART CENTER
Venous Thromboembolism Risk Assessment and Prophylaxis Sheet
(Form A)

Name: ___________________________  Age: _______  Sex: _______
Weight (Kg): _______  Height (cm): _______  BMI: _______
Hospital #: _______  Room #: _______
Diagnosis: ___________________________
Attending Physician: ___________________________
**VTE Risk and Suggested Prophylaxis**

<table>
<thead>
<tr>
<th>TOTAL RISK FACTOR SCORE</th>
<th>Incidence of DVT</th>
<th>Risk Level</th>
<th>Prophylaxis Regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>&lt;10%</td>
<td>Low Risk</td>
<td>No specific measures; early ambulation</td>
</tr>
<tr>
<td>2</td>
<td>10-20%</td>
<td>Moderate Risk</td>
<td>GCS, IPC, LDUH, or LWMH</td>
</tr>
<tr>
<td>3-4</td>
<td>20-40%</td>
<td>High Risk</td>
<td>IPC, LDUH, or LWMH</td>
</tr>
<tr>
<td>5 or more</td>
<td>40-80%</td>
<td>Highest Risk</td>
<td>Pharmacological: LDUH, LWMH, Warfarin, or FXa I alone or in combination with GCS or IPC</td>
</tr>
</tbody>
</table>

GCS – Graduated Compressive stockings, IPC – Intermittent Pneumatic Compression, LDUH - Low Dose Unfractionated Heparin, LWMH - Low Molecular Weight Heparin, FXa I - Factor X Inhibitor

### Modalities of Treatment Options

#### Risk Level

- **Moderate Risk**
  - LDUH Heparin
  - LMWH Enoxaparin
  - LMWH Nadroparin
  - LMWH Tinzaparin
  - LMWH Dalteparin
  - FXa I Fondaparinux

#### High Risk

- LDUH Heparin
- LMWH Enoxaparin
- LMWH Nadroparin
- LMWH Tinzaparin
- LMWH Dalteparin
- FXa I Fondaparinux

#### Highest Risk

- LDUH Heparin
- LMWH Enoxaparin
- LMWH Nadroparin
- LMWH Tinzaparin
- LMWH Dalteparin
- FXa I Fondaparinux

### Prophylaxis Regimen

<table>
<thead>
<tr>
<th>Generic</th>
<th>Preparation</th>
<th>Surgical Dose</th>
<th>Medical Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDUH Heparin</td>
<td>20 mg(2,000 iu/0.2 ml); 40 mg(4,000 iu/0.4 ml)</td>
<td>5,000 iu BID SC</td>
<td>5,000 iu BID SC</td>
</tr>
<tr>
<td>LMWH Enoxaparin</td>
<td>&lt;3,400 iu OD SC</td>
<td>40 mg(4,000 iu OD SC)</td>
<td></td>
</tr>
<tr>
<td>LMWH Nadroparin</td>
<td>0.3 ml(2,850 iu); 0.4 ml(3,800 iu)</td>
<td>65 iu/Kg OD SC</td>
<td></td>
</tr>
<tr>
<td>LMWH Tinzaparin</td>
<td>3,500 iu/ml; 4,500 iu/ml</td>
<td>3,500 iu OD SC</td>
<td></td>
</tr>
<tr>
<td>LMWH Dalteparin</td>
<td>0.2 ml(2,500 iu); 0.2 ml(5,000 iu)</td>
<td>5,000 iu OD SC</td>
<td></td>
</tr>
<tr>
<td>FXa I Fondaparinux</td>
<td>2.5 mg; 5.0 mg; 7.5 mg</td>
<td>2.5 mg OD SC</td>
<td></td>
</tr>
</tbody>
</table>

### Prophylaxis Safety Considerations: Check box if answer is ‘YES’

**Anti-coagulants: Factors Associated with Increased Bleeding**

- Is patient experiencing any active bleeding?
- Is patient’s platelet count <100,000/mm³?
- Is patient taking oral anticoagulants, or platelet inhibitors (e.g., NSAIDS, Clopidogrel, Salicylates)?
- Is patient’s creatinine clearance abnormal? If yes, please indicate value

If any of the above boxes are checked, the patient may not be a candidate for anticoagulant therapy and you should consider alternative prophylactic measures: elastic stockings and/or IPC

### Intermittent Pneumatic Compression (IPC)

- Does patient have severe peripheral arterial disease?
- Does patient have congestive heart failure?
- Does patient have an acute superficial/deep vein thrombosis?

If any of the above boxes are checked, then patient may not be a candidate for intermittent compression therapy and you should consider alternative prophylactic measures.

---

**PHILIPPINE HEART CENTER**

Venous Thromboembolism Risk Assessment and Prophylaxis Sheet

(Form B)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Age:</th>
<th>Sex:</th>
<th>Hospital #:</th>
<th>Room #:</th>
<th>Diagnosis:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attending Physician: _____________________________

---

<table>
<thead>
<tr>
<th>Date</th>
<th>Adverse Event</th>
<th>Medication Given</th>
<th>Dosage</th>
<th>Diagnostic/Confirmation</th>
<th>Evaluator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment:

PHILIPPINE HEART CENTER
VTE Monitoring Form
and Prophylaxis Sheet
(Form C)
Guidelines on how to go about the VTE form

I. These forms will be part of the patient’s chart.
   a. On admission these forms will be placed on the first page of the chart.
   b. After the third hospital day, these forms will be placed on the last page of the chart.

II. Venous Thromboembolism Risk Assessment and Prophylaxis (VTRAP) Forms A, B and C will be filled up by
   a. Admitting nurse will fill the demographic and check the risk factors for VTE of the patient and score.
   b. This will be cross check by the Attending Physician/fellow-in-charged.

III. The Fellow in charge will notify the Attending Physician and any member of the VTRAP committee once admitted with a score of moderate to higher.

IV. Look for appropriate treatment options for the risk level (VTRAP form B)
   a. Treatment option(s) will be ordered on the patient’s chart after highlighting the option chosen.
   b. See also safety consideration to assess if option is applicable

V. Daily Monitoring of patient condition until discharge for untoward adverse event (worsening of risk level, bleeding, hematoma, etc)

VI. All data of the patient admitted will have duplicate VTRAP forms and will be compiled in a data base for future research.
Objectives:
4. To increase awareness among medical staff members, patients and relatives, including lay persons, of the potential risks of Venous Thromboembolism (VTE)
5. To be able to recognize patients who may be at risk of developing VTE
6. To be able to implement the policies for the routine risk assessment and prophylaxis among patients at risk for developing VTE

Goals:
3. Together we can improve patients’ VTE safety in our hospital
4. The VTE SAFETY ZONE program is designed to:
   a. Improve the quality of care in our hospital through measurable reductions in Venous ThromboEmbolism (VTE).
   b. Improve the quality of life (QoL) of patients.
   c. Assist in meeting our local quality standards of care in acquiring and maintaining accreditation.
   d. Reduce the overall costs of care.