



Deep Vein Thrombosis (DVT)/ Venous Thromboembolism(VTE) Prevention 2009



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Objectives

- Increase DVT/VTE awareness to the staff in order to reduce the incidence of DVT
- Enhance nurses knowledge about the DVT symptoms, risks factors and prevention
- Identify the patient risk factors to provide safe effective nursing interventions
- Know the DVT alert to promote DVT/VTE anticoagulation prophylaxis



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Rationale

“DVT Standard of Care”

- The **seventh** American College of Chest Physicians (ACCP) consensus establishes Standard of care in that “every hospital (should) develop a formal strategy that addresses the prevention of thrombotic complications
- The **eight** ACCP guidelines on antithrombotic therapy, updated the evidence-based recommendations for the use of antithrombotic and thrombotic therapy for the management of thromboembolic conditions



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What is DVT/VTE

- Is a condition where a blood clot forms inside the deep vein usually occurs in the lower leg
- SMH calls DVT/VTE= the “killer legs”



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DVT Incidence

- About 350,000 to 600,000 cases of DVT and Pulmonary Embolism (PE) annually
- 200,000 deaths from DVT/PE which is more than AIDS and Breast cancer combined
- The risk of DVT is 6 times greater in pregnancy and PE is the leading cause of death associated with childbirth
- The most common serious complications in hospital and the second most common cause of increase length of stay
- 10% of hospital deaths are attributed to PE but the most common preventable cause death



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DVT Score

- Numbers that quantify the patient risk for DVT/VTE after the completion of the admission assessment profile
- Nurses screening for DVT risks factors are embedded in the admission medical history portion
- The score will appear in the clinical summary and vital signs flow sheet and will be used to order the appropriate DVT/VTE prophylaxis



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Medical History (**indicates DVT screening)

☐ Bleeding Problems:

- ☐ None ☐ **Hypercoagulable States ☐ **Heparin-induced thrombocytopenia/thrombosis ☐ Nose bleeds ☐ Hematoma ☐ Blood Clotting Disorder
☐ Low Blood Platelets ☐ Rectal bleeding ☐ Gastrointestinal bleeding ☐ Vaginal bleeding ☐ Anemia ☐ Other (specify)

☐ Bone/Joint problems:

- ☐ None ☐ **Multiple trauma past month ☐ **Acute spinal cord injury in the past month ☐ **Pelvis fracture in the past month
☐ **Being admitted for elective major lower extremity arthroplasty ☐ **Orthopedic injury in the last 6 months ☐ **Leg fracture in the past month
☐ **Hip fracture in the past month ☐ Arthritis ☐ Osteoporosis ☐ Knee ☐ Other (specify)

☐ History of Cancer:

- ☐ None ☐ Lung** ☐ Skin** ☐ Breast** ☐ Prostate** ☐ Colon** ☐ Bladder** ☐ Non-Hodgkin's-Lymphoma**
☐ Stomach** ☐ Liver** ☐ Pancreatic** ☐ Ovarian/Cervical** ☐ Leukemia** ☐ Other (specify)**

☐ Cardiac/Vascular problems:

- ☐ None ☐ **Current or history of DVT ☐ **Current or history of pulmonary embolus ☐ **MI ☐ **CHF ☐ Hypertension
☐ Hypotension ☐ Angina ☐ CAD ☐ Syncope ☐ PVD ☐ AICD ☐ Pacemaker ☐ Intermittent Claudication
☐ History of Rheumatic Fever ☐ Atrial Fibrillation ☐ Hypercholesterolemia ☐ Other (specify)

☐ Depression:

- ☐ None ☐ Dysthymia (mild) ☐ Seasonal Affective Disorder ☐ Postpartum ☐ Bipolar ☐ Other (specify)



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DVT Screening

- Each DVT risk factor are weighed accordingly
- Two asterisk (**) before a history indicates DVT screening, and the question must be asked
- Every medical history section should be checked if applicable if not, check the NA or None
- Omitting any part of the history section will result to failure in achieving a DVT score



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DVT Risk Factors

Anything that places a patient at risk for:

1. Stasis (reduced blood flow velocity)
2. Hypercoaguable states (changes in blood elements)
3. Endothelial damage (vein wall injury)

These are the common causes of DVT known as
Virchow's Triad



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DVT/VTE Risk Factors

Risk Factor= 1 Point

- Age 41-60 years
- Bedrest
- COPD
- CHF (<1 month)
- Acute MI
- Pneumonia (< 1 month)
- Sepsis (<month)
- Inflammatory Bowel Disease
- Minor surgery planned
- Hx of prior major surgery
- Obesity (BMI>25)
- Swollen legs
- Pregnancy
- Oral Contraceptives

Risk Factor= 2 Points

- Age 60-74 years
- Athroscopic surgery
- Laparoscopic surgey
- Malignancy (present or history)
- Major surgery (>45 Minutes)
- Patient confined to bed (>72 hours)
- Immobilizing plaster cast(<1month)
- Central Venous Access
- Infection
- Nephrotic Syndrome



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DVT/VTE Risk Factors

Risk Factor= 3 Point

- Age >75 years
- Major surgery(>3 hours)
- Hx of DVT/PE
- Family hx of Thrombosis
- Heparin-induced thrombocytopenia
- Thrombophilia
- Hx of clotting disorder

Risk Factor =5 Points

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



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Risk Levels for DVT/VTE

- Low Risk- DVT score 1
- Moderate Risk- DVT score 2
- High Risk- DVT score 3 or more



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Procedure

- After completing the Medical History section of the admission profile in SCM, the DVT score will pop up with the risk level
- The nurse can order the DVT/VTE Nursing protocol based on risk level without finishing the admission profile



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Sarasota Memorial Hospital-CareVISION order set

DVT/VTE Nursing Protocol

LOW RISK (DVT Score 1 or Less)

- Activity Early Ambulation

MODERATE AND HIGH RISK (DVT Score= 2 or Greater)

- Activity Early Ambulation
- Antiembolism Stockings/Devices.
TED Stockings or Bilateral SCD'S (Sequential Compression Device),
unless contraindicated
CONTRAINDICATED FOR: Ischemic vascular disease, ulceration, local
inflammation, trauma to the legs, and acute/superficial DVT



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DVT/VTE Alert

- DVT Score 3 or >
- If the patient has DVT score of 3 or greater,
- The DVT alert will pop up including the risk factors
- The DVT alert is a reminder for physicians to order the anticoagulation prophylaxis



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DVT/VTE Pop Up Alert

SCM 45 - ED Manager NEW Test - Citrix Presentation Server Client
MED, EXAM - Structured Notes Entry Dialog

Admission Profile - Structured Notes

Authored: ☐ Date ☒ Now 18-Mar-2008 Time: 13:21
Authored By: ☒ Me ☐ Other Source:
Co-Signatures: ☐ ☐
Flag As: ☐ Incomplete ☐ Results Pending ☐ Priority Modify Template

SCM Notice
Sunrise Clinical Manager

DVT SCORE 13: High DVT risk, Initiate "DVT Nursing Protocol" order set including nurse ordered activity, SCD/TEDs, consider additional prophylaxis per physician.

OK

☐ Admitted or scheduled for major surgery- greater than 3 hour ☐ Major surgery within the last month
☐ Central Venous line in place or expected ☐ Currently taking oral contraceptives or hormone replacement (include in home med list)

DVT Score: 13

Auto Enter
Section Document

Copy Forward Calculate Submit Cancel
Refer to Note Hide Review

Start | [Icons] | [Inbox - ...] [Remedy ...] [PaLETTE ...] [SCM 45 ...] [Blood rep...] [DVT pop ...] | 1:24 PM



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SCM 45 - ED Manager NEW Test - Citrix Presentation Server Client
Alert Detail - MED, EXAM - Chest Pa and Lateral

Alert Summary

Acknowledged	Viewed	Alert	Priority	Type	Comment	Scope
		DVT Prophylaxis Recommended	HIGH	WARNING	*	Chart
		Medication Reconciliation Required	LOW	REMINDER	*	Chart

Alert: DVT Prophylaxis Recommended

Message: **THIS PATIENT HAS A DVT SCORE OF 3 OR GREATER AND IS POTENTIALLY AT HIGH RISK FOR DVT.**

According to the admission profile (documentation in SCM), this patient has multiple risk factors and is potentially at high risk for developing DVT. The recommendation from the 2004 American college of Chest Physicians (ACCP) guidelines, strong consideration for DVT prevention should include not only mechanical devices or TED hose but also pharmacologic preventive measures. See the standard **DVT Prophylaxis Anticoagulation Order Set**.

Risk factors for this patient:
Bleeding Problems: ""Hypercoaguable States,
Bone/Joint Problems: ""Multiple trauma past month,
History of Cancer: ""Lung,
Cardiac/Vascular Problems: ""CHF,
Ambulation Status: ""Bedrest or bedbound

DVT Prophylaxis Contraindication documentation required. Click 'Acknowledge' button below and enter the reason for not using DVT Prophylaxis if you are not planning to order DVT prophylaxis.

Acknowledgement Comment:

This Alert must be acknowledged and a comment added before clicking Proceed.

☒ Acknowledge all on Proceed

Acknowledge
<< Previous
Alert 1 of 2
Next >>

View Actions...
Proceed
Go Back
Help

To view suggested actions for the Chest Pa and Lateral order click View Actions

To continue with the Chest Pa and Lateral order unchanged click Proceed.

To return to the Chest Pa and Lateral order and discard alerts click Go Back.

Start
Inbo...
Rem...
Paul...
Bloo...
DVT ...
Doc...
SCM ...
SCM ...
1:27 PM



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Recommendation

DVT/VTE Prophylaxis Anticoagulation

High Risk (DVT Score 3 or more)

- Enoxaparin 40mg Inj (Lovenox) - Subcu daily
(NOT FOR USE IN PATIENTS WITH CRCL LESS THAN 30)
- Enoxaparin 30mg Inj (Lovenox) - Subcu daily RENAL DOSE
for patients with CRCL less than 30
- Heparin Inj 5000 unit(s) Subcu Q8H
- Enoxaparin 30mg Inj(Lovenox) - Subcu 12H (Recommended
for knee replacement patients only)



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Contraindication

- If patient has contraindication, the comment area has a drop down menu to check for the reason of not ordering prophylaxis
- Once the alert is acknowledged, just like Med Reconciliation it will continue the order entry



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Acknowledgement Comment:

- ☐ DVT Prophylaxis Contraindicated-already anticoagulated
- ☐ DVT Prophylaxis Contraindicated due to Hx of Bleeding
- ☐ DVT Prophylaxis Contraindicated due to Hx of HIT
- ☐ I have reviewed/reconciled home meds and active med orders
- ☐ Patient is not taking any meds at home.

☒ Acknowledge when seen

☒ Acknowledge all on Proceed

Unacknowledge

<< Previous

Alert 1 of 1

Next >>

To view suggested actions for the Erythromycin Base 250mg Tab order click View Action ▶

View Actions...

To continue with the Erythromycin Base 250mg Tab order unchanged click Proceed.

Proceed

To return to the Erythromycin Base 250mg Tab order and discard alerts click Go Back.

Go Back

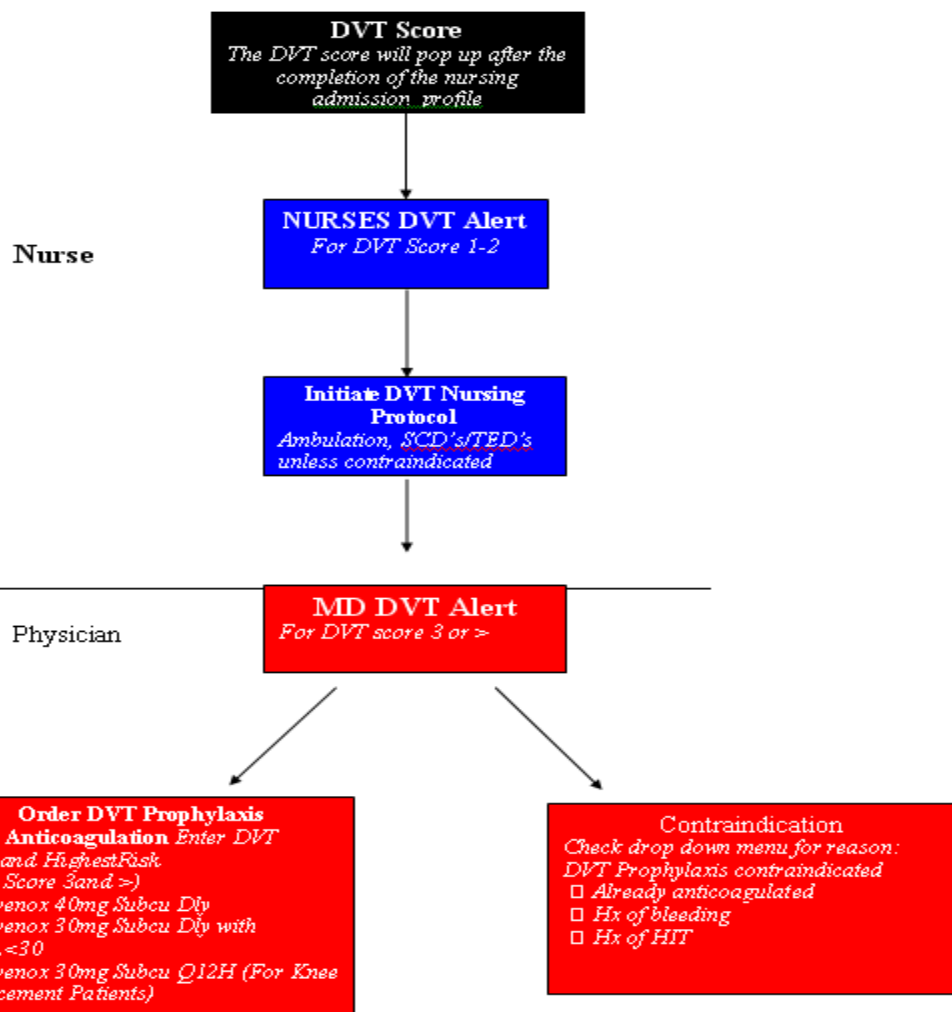
Help



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DVT/ VTE Alert Education



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Responsibility

- It is the responsibility of the admitting nurse to initiate the DVT nursing protocol
- If the admitting nurse is unable to initiate the DVT/VTE nursing protocol, it should be included in the shift report and the nurse accepting will initiate the protocol
- DVT score should be check daily to ensure that patients are prophylax



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**The Development of Deep Vein Thrombosis (DVT)/
Venous Thromboembolism (VTE) Nursing Protocol**
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- **DVT/VTE NURSING Protocol**

- Low Risk (DVT Score 1)
- Early Ambulation
- Moderate Risk (DVT Score 2)
- SCD's or TED hose
- High Risk (DVT Score 3 and >)
- Notify physician to consider prophylaxis

METHOD

The hospital uses electronic documentation and order entry. A DVT Program Coordinator was designated to pursue this project. A team was then formed consisting of a clinical educator, a physician, a computer system analyst (to assist with computer charting integration), and directors of both pharmacy and education. The team met roughly four times over six months to develop a more efficient and widely used nursing protocol. The goal is for a nurse to be able to initiate the DVT nursing protocol once the patient has been properly screened during admission. Interventions were based on the research evidence- based practice guidelines.

- **DVT/VTE Prophylaxis Anticoagulation**

High Risk (DVT Score 3 or more)
Enoxaparin 40mg Subcu daily
(Not for use in patients with CRCL <30)
Enoxaparin 30mg Subcu daily (Renal dose –for patients with CRCL<30)
Heparin 5000 units Subcu Q8H

FINDINGS Based on the new protocol, a DVT/VTE risk assessment score is derived by the computer from the nursing admission data. The new DVT/VTE nursing protocol addresses the patient's risk level and recommends prophylaxis based on this risk level. Low and moderate risk interventions are nursing based which consists of early ambulation, sequential compression device (SCD's) or TED stockings, unless contraindicated. "High" and "highest risk" interventions require the use of prophylaxis anticoagulation therapy. The physicians are notified by a computerized DVT "pop up alert" which includes the ent's risk factors and a prompt to order the standard DVT/VTE prophylaxis anticoagulation therapy.



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Certificate of Completion

I have read, reviewed and understand the
DVT/VTE Education Update 2009

Signature _____

Print Name _____

Date _____



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