

VENOUS THROMBOEMBOLISM (VTE) PREVENTION

MEDICAL PROVIDER
EDUCATION
JUNE 2017

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VTE IS THE 2ND MOST COMMON HOSPITAL ACQUIRED CONDITION

RISK FACTORS

Obesity (BMI > 95%)

Cancer, not in remission

Documented invasive infection requiring IV antibiotics

Inflammatory conditions (e.g. inflammatory bowel disease, rheumatologic disease)

Nephrotic syndrome

Cardiomyopathy

Single ventricle physiology

Diabetic ketoacidosis (hyperosmolar state)

Pregnancy/recent post-partum

History of venous thrombosis or pulmonary embolism

s/p Splenectomy

Thrombophilia

Major surgery of spine, abdomen, or lower extremity

Complex fracture of pelvis or lower extremity

Acute spinal cord injury

Traumatic brain injury

Mechanical ventilation

Estrogen containing oral contraceptives

Asparaginase (within past 2 months)

DECREASED ACTIVITY = VTE RISK (NURSES MEASURE WITH BRADEN Q ACTIVITY)

Patients **at risk**:

- **1: Bedfast**
 - confined to bed
- **2: Chair fast**
 - cannot bear own weight
- **3: Walks occasionally**
 - short ambulation, spends majority of shift in bed or chair

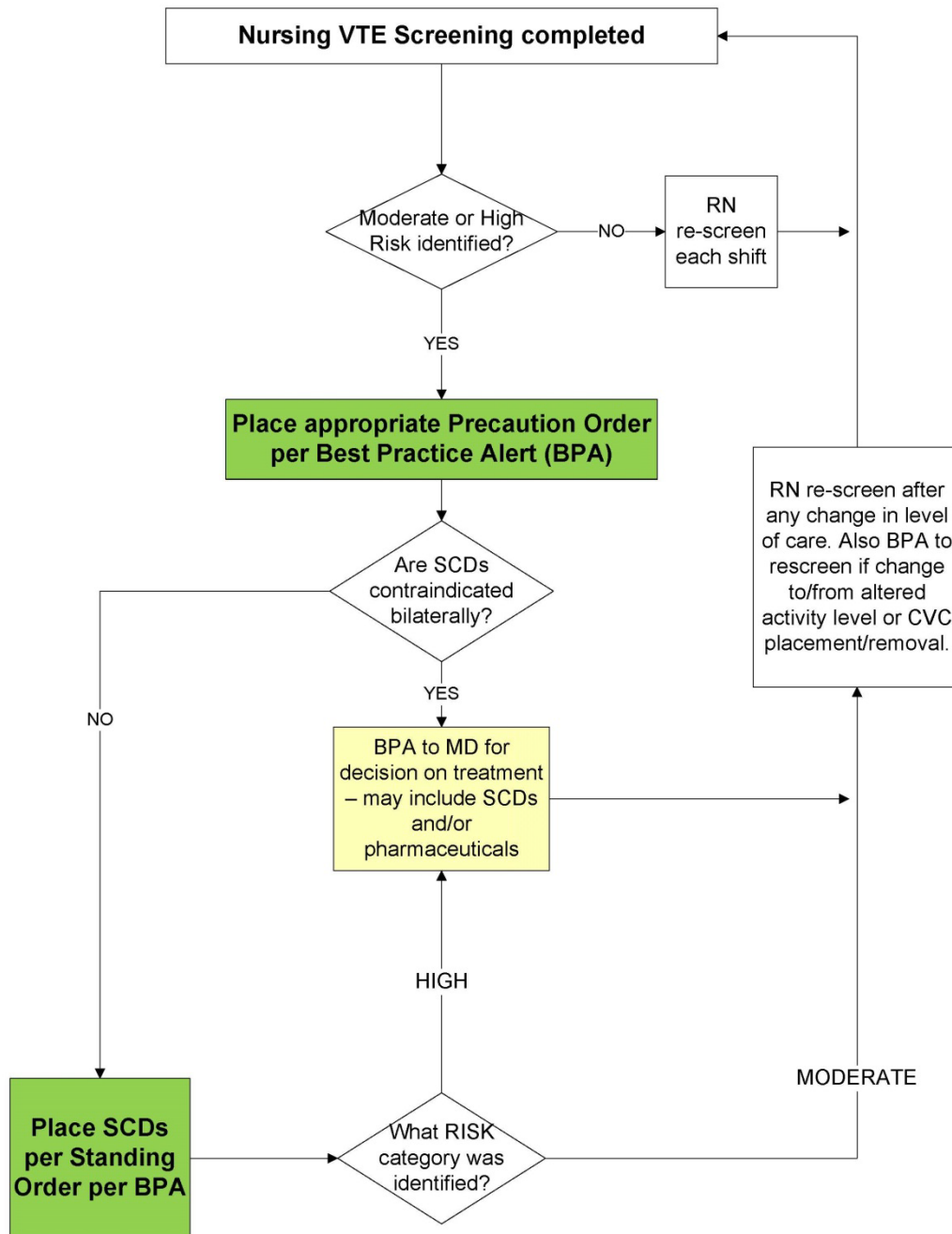
Patients not **at risk**:

- 4: Walks outside the room at least twice a day OR inside room at least once every 2 hours **during waking hours.**

VTE PREVENTION OVERVIEW

- Starting June 26, 2017, all patients ≥ 10 years old admitted to RCHSD will be screened for VTE risk by the bedside nurse on admission to the hospital and with changes in clinical status.
- **Sequential compression devices (SCD)** are recommended for patients at **Moderate Risk** for VTE unless contraindicated.
 - Nurses will enter orders and initiate precautions and SCD per standing order policy based on completed screening.
- **SCD and prophylactic anticoagulation** are recommended for patients at **High Risk** for VTE and at **Moderate Risk with SCD contraindication**.
 - Medical providers will receive BPA (between hours of 8a-5p)
 - Decision to prescribe anticoagulation is at the discretion of the treating medical provider.
 - Anticoagulation may be deferred for patients with cerebral palsy with baseline immobility if they are deemed **Moderate Risk with SCD Contraindications** due to lack of fit.

Nurse Screening to Identify VTE Risk & Interventions



**RN
screening=
early
intervention**

VTE RISK CLASSIFICATION

| Altered Activity Level | Central Venous Catheter | Number of other VTE risk factors* | RISK Category |
|------------------------|-------------------------|-----------------------------------|---------------|
| No | No | any | LOW |
| No | Yes | 0 or 1 | LOW |
| Yes | No | 0 or 1 | MODERATE |
| Yes | Yes | 0 or 1 | MODERATE |
| Yes | No | 2 or more | HIGH |
| No | Yes | 2 or more | HIGH |
| Yes | Yes | 2 or more | HIGH |

*Other than altered activity and central venous catheter which are counted separately

Low Risk- vigilance & ambulation

CONTRAINDICATIONS TO SEQUENTIAL COMPRESSION DEVICES (SCD)

- Contraindications: lower extremity conditions
 - Skin breakdown
 - Amputee
 - Extremity to be used for PIV access
 - Dermatitis
 - Burn
 - Trauma or surgery
 - Suspected or know venous thrombosis
 - Peripheral artery insufficiency
 - Unable to achieve correct fit due to patient size
 - Acute fracture
 - Condition which results in significant pain with compression
- If one extremity has a contraindication, place it on the other, it still has prevention benefits!

CONTRAINDICATIONS TO ANTICOAGULATION

Mechanical

Epidural/spinal catheter in place
Extraventricular drain in place
Intracranial pressure monitor in place

Trauma/Surgery

General/orthopedic surgery within the past 24-48 hours
Spine surgery within the past 7 days
Craniotomy within 2 weeks
Intraocular surgery within 2 weeks
Liver or spleen laceration
Severe trauma to head or spinal cord with hemorrhage within 4 weeks
Peri-operative bleeding concerns

Medication Related

Allergy or religious objection to pork
Heparin induced thrombocytopenia
Aspirin (unless needed for disease management)
High dose NSAIDs

Medical

Active hemorrhage
Hemorrhage within 3 months of admission
Acute stroke
Active intracranial lesions/neoplasms
Hypertensive urgency/emergency
Congenital bleeding disorder
Uncorrected coagulopathy
Platelet count $< 50 \times 10^9/L$
End stage liver disease

INTERVENTIONS BASED UPON RISK CATEGORY ASSIGNED

| Intervention | Low Risk | Moderate Risk | High Risk |
|---|----------|------------------------------|-----------|
| Communication to healthcare team via precaution order | | YES | YES |
| Encourage highest degree of activity | YES | YES | YES |
| SCD unless contraindicated via standing order | | YES | YES |
| Anticoagulation via medical provider order | | only if SCDs contraindicated | YES |

If anticoagulation is recommended, providers will get appropriate BPA. Providers will review risk assessment, review SCD contraindications, review bleeding risk, and decide whether to order prophylactic anticoagulation via order set.

Example of BPA

Review Current Risk Factors

Review Contraindications to SCD

Review Recent Anticoagulant Orders

High Risk VTE

Accept (1)



This patient has a **HIGH** risk for VTE and **Contraindications to SCDs**. Anticoagulation prophylaxis is recommended.

Risk category and recommendation

Current Risk Factors:

Activity Scale: **2** (1=Bedfast, 2=Chair Fast, 3= Walks Occasionally, 4=Ambulatory)

Central Venous Catheter Present: **Yes**

Other Risk Factors Present: **Cancer, not in remission, Documented invasive infection requiring IV antibiotics, Acute spinal cord injury**

Risk factors from nurse assessment

Contraindications to SCDs: **Trauma or surgery of lower extremity**

Location of contraindications: **Bilateral lower extremities**

Contraindications to SCDs from nurse assessment

Recent Anticoagulant Orders:

Anticoagulants

| | | | |
|------------------|---|-----------|---------------|
| 06/14/17 1211 | heparin lock flush 10 units/mL **PF** catheter lock 3 mL Rate: -- | -- IK PRN | 06/14/17 1212 |
|------------------|---|-----------|---------------|

Current anticoagulants: don't count heparin flush or lock

Guidelines for clinical decision making and use of BPA.

If you agree with the risk assessment and recommendation, review the bleed risk list available under the “Select Other Option” drop down list below. If patient has bleed risk(s), pick the primary one. If no bleed risk, then select “Accept” at top of BPA to open the order set for anticoagulation prophylaxis.

✓ Accept (1)

Open Order Set

Do Not Open

VTE Prevention - High Risk

Preview

Acknowledge Reason

Defer 1 Hour

Already anticoagulated

Select Other Option



Select “defer 1 hour” if you are not the primary medical provider or need to discuss with attending physician.

Select “already anticoagulated” if patient already on or will be started on heparin (other than heparin flush/lock), enoxaparin, fondaparinux, argatroban, dabigatran, edoxaban, apixiban or rivaroxaban for treatment or prevention of clot.

Select “do not agree this admission” if you disagree with risk assessment and recommendation for this admission.

Drop Down List

Select Other Option
Epidural/spinal catheter in place
Spine surgery in past 7 days
Severe trauma to head or spinal cord with hemorrhage in the past 4 weeks
Hemorrhage within 3 mo of admission
Hypertensive urgency/emergency
Platelet count < 50 x 10 to 9th/L
Heparin induced thrombocytopenia
EVD in place
Craniotomy within 2 weeks
Peri-operative bleeding concerns
Acute stroke
Congenital bleeding disorder
End stage liver disease
Aspirin (unless needed for disease management)
ICP monitor in place
Intraocular surgery within 2 weeks
Active hemorrhage
Active intracranial lesions/ neoplasms
Uncorrected coagulopathy
Allergy to pork or religious objection
High dose NSAIDs
Do not agree this admission

Can use for post-op patients at risk for bleeding and pre-op patients

MEDICAL PROVIDER RESPONSIBILITIES

- Co-sign orders for SCD and risk precaution when initiated per standing order
- If you receive a BPA
 - Review VTE risk assessment
 - Review contraindications to SCD
 - Document contraindications to anticoagulation in BPA
 - Make medical decision regarding anticoagulation prophylaxis; if ordering prophylactic anticoagulation use order set provided with BPA
 - Medical decision making documentation
 - Document in note: free text or with dot phrase (.vte); OR
 - Document in VTE Note (found in admission navigator)

GO LIVE JUNE 26TH, 2017

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