3-27-2019

VTE Risk Factors: SCD Education and Compliance

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VTE Risk Factors: SCD Education and Compliance

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Acknowledgements

- 6 Hall Directors & Educator: Priscilla Bell, MSN, RN, CPN, Bobbie Carter, MSN, RN, CPN, and Amanda Woldruff, BSN, RN, CPN
- KT Scholars: Kristen Seuferling, BSN, RN, CPN and Hannah Boehner, BSN, RN, CPN
- QIC: Kate Gibbs, MHA, CCLS, Kaitlyn Hoch MBA, BHS, RT
- 6 Hall Nursing Staff
A3 Overview

A3 for Problem Solving

**Identify Root Cause**
- Lack of education on the risk factors for VTE
- Lack of education on the importance of compliance with SCDs
- Lack of education on the proper donning of SCDs

**Define and Implement Countermeasures**
- Develop a training program for nurses on the risk factors for VTE
- Provide education on the importance of compliance with SCDs
- Develop guidelines for proper donning of SCDs

**Check Results and Process**
- Monitor the percentage of nurses properly educated on SCDs
- Evaluate the effectiveness of the training program

**Standardize and Follow Up**
- Education on all the risk factors for VTE should be enforced on nursing staff.
- Nurses should communicate with medical teams if a patient should have an order for SCDs.
- Possible future action for SCD placement: populating more than once a shift to remind nurses to chart on it.
6 Hall Overview

- On 6 Hall our population consist of orthopedic patients and overflow medical/surgical patients.
- In pediatric patients undergoing orthopedic surgical procedures the incidence of VTE was 0.0515% of 143,808 procedures (Georgopoulus et al., 2016)
Acronym Breakdown

- **VTE**: Venous Thromboembolism - the blocking of a blood vessel by a clot that has broken off from the place where it formed and traveled to another location.

- **SCD**: Sequential Compression Device - an inflatable sleeve to improve blood flow.
Children's Mercy SCD Policy

POLICY:
I. Patients undergoing surgical and/or interventional radiology procedures
   A. Patients who meet the following criteria will have SCD sleeves applied and functional prior to anesthesia induction:
      1. All patients twelve (12) years of age or older and having a procedure scheduled for greater than 60 minutes.
      2. Patients 10 years of age or older having a spinal procedure.
   B. SCD use for patients under the age of 12 will be at the discretion of the physician/advanced practice provider (APP).
   C. Should the physician desire NOT to have SCDs, an order is placed by the physician/APP stating such.
II. Patients experiencing altered mobility during hospitalization
   A. SCDs are ordered by the provider to prevent deep vein thrombosis and venous thromboembolism.
   B. Refer to VTE Risk Assessment Care Process Model
III. Discontinuing external compression therapy
   A. Discontinuation of the SCD can be done with a physician/APP order or when the patient becomes fully ambulatory (performing activities of daily living, child life activities, walking in hallways and/or visiting playroom).
VTE Risk Assessment Algorithm

**Acute Conditions**
- Acute medical illness
- Major surgery
- Major traumatic injury
- Current ambulatory restriction
- Recent lower extremity orthopedic surgery
- Major trauma
- Central venous line for >7 days
- Active cancer
- Severe renal insufficiency
- Severe dehydration
- Protein-calorie malnutrition

**Chronic Medical Conditions**
- Congestive heart failure
- Kidney disease
- Renal failure
- Hepatic cirrhosis
- Chronic obstructive pulmonary disease
- Diabetes mellitus
- Amyloidosis
- Chronic anemia
- Thrombocytopenia (platelet count <100,000/mm³)

**Historical Factors**
- History of VTE
- Family history of VTE
- History of DVT in 1st degree relative

**Interventions**
- Early ambulation
- Mechanical prophylaxis
- Anticoagulation

**Definitions**
- **VTE Risk Assessment Algorithm**
- **Risk Factors**
- **Low Risk**: No risk factors
- **Moderate Risk**: 1-2 risk factors
- **High Risk**: 3 or more risk factors

**Intervention**
- **Early Ambulation**
- **Mechanical Prophylaxis**
- **Anticoagulation**

**Procedure**
- **Low Risk**
- **Moderate Risk**
- **High Risk**

**References**
- T13/1B, T707/15
Clarify the Problem

- Increased risk of VTE in post op patients
- Non-compliance of patients wearing SCDs
- Lack of education on why they should be worn
- Lack of education for the requirements of patients who needs to wear SCDs
- Noncompliance with proper charting on SCDs
Clarify the Problem

Do You Believe that there is a Noncompliance Issue With SCDs?

- No: 14%
- Yes: 86%

NURSES ON 6 HALL

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KANSAS CITY

9
Breakdown the Problem

Lack of education on why SCDs should be worn:

- Nurses unaware that there is a policy on SCDs
- Nurses unaware of where to find the policy on SCDs

Lack of education on who needs to wear SCDs:

- Confusion on amount of ambulation that would excuse a patient from needing SCDs
- Nurses are not educated on ALL the risk factors for VTEs
- Noncompliance of proper charting on SCDs
Breakdown the Problem

Survey Taken October-November 2018

Are You Aware there is a Policy for SCDs?

79% Yes
21% No
Set a Target

- We will increase the percentage of nurses on 6 Hall properly educated on SCDs from 79% to 90% by January 15th, 2019.
Identify Root Cause

- Knowledge deficit is the primary root cause for the concern of improper use of SCD’s or lack of use.
- With many factors that impact the use of SCD’s such as the patient, hospital staff, equipment, and documentation.
Develop and Implement Countermeasures

**AIM STATEMENT**
We will increase the percentage of nurses properly educated on SCDs from 79% to 90% by January 15, 2019

**PRIMARY DRIVERS**
- Education
- Charting

**SECONDARY DRIVERS**
- PowerPoint education about qualifications for SCDs specific to 6 Hall in breakroom
- Education at Huddle Board related to charting and qualifications
- Reminder on computers to chart SCDs at least once a shift and with any changes
- Where to chart SCDs in Cerner

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Develop and Implement Countermeasures

Remember to chart SCDs Please!
At least once a shift & with any changes!

LET’S TALK ABOUT SCDS

By: Kaly Hayden, Baleigh Haag, Shari Gardner and Alex Wofford
Develop and Implement Countermeasures

Let's Talk About SCDs

- Identified Risk Factors for VTE
  - Spinal cord injury
  - Trauma
  - Severe dehydration
  - Surgery within the last 30 days
  - Lower extremity orthopedic surgery
  - Patient is not completing their ADLs
  - Obesity
    - 12-16 years >80kg
    - Over 16 years >85kg

Where?
- I-VIEW
- Respiratory/Cardiovascular
  - Cardiovascular interventions
  - SCDs on/off

Why?
- To decrease the risk of VTEs
- Help improve circulation

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Check Results and Process

Patients at Risk for VTE

- 44% Order for SCDs
- 56% No Order

Total of 263 Patients

Data collected from 11/18/2019-01/15/2019
Check Results and Process
Check Results and Process

Do you feel that our education pieces (Huddle board, Break room PP, and SCD reminder cards increased your knowledge about SCDs and will help improve your charting on them?

[Bar chart showing 78.55% for Yes and 21.45% for No]
Check Results and Process

Survey Taken January-February 2019

Are You Aware there is a Policy for SCDs?

95%

5%

Survey Results and Analysis:

- 95% of respondents are aware of the policy for SCDs.
- 5% are not aware.

Future Steps:

- Continue to educate staff on the policy for SCDs.
- Monitor awareness levels over time.
- Ensure all staff are trained and aware of the policy for SCDs.
Standardize and Follow Up

- Education on all the risk factors for VTE should be enforced to nursing staff.
- Information on SCDs in admission packets for patients and families
- Nurses should communicate with medical team if a patient should have an order for SCDs but does not.
- Nursing staff should be educated on where to chart SCD placement in Cerner and how often to chart them (At least once a shift and with any changes such as off with skin assessment, ambulating, etc.)
- Possible future Cerner task for SCD placement to populate more than once a shift to remind nurses to chart on/off
References


Questions?