**Sequential Compression Device Guideline**

SCD is a mechanical prophylactic treatment to reduce the incidence of venous thromboembolism (VTE) by enhancing the blood flow in the deep veins of the legs, thereby reducing venous stasis. SCDs may be used alone or in conjunction with other modalities.

**INDICATIONS:**
- Prophylaxis for patients with high risk of bleeding
- Multiple trauma patients
- As an adjunctive measure (treatment) in patients receiving other anticoagulant therapy

**CONTRAINDICATIONS (DO NOT USE THIS THERAPY ON PATIENTS WITH ANY OF THE FOLLOWING CONDITIONS):**
- Allergy to stocking or compression cuff materials
- Acute DVT or have been diagnosed with a DVT within the past 6 months
- Peripheral vascular disease with absent pedal pulses
- Severe peripheral neuropathy
- Skin grafting within the last 3 months
- Skin breakdown, ulcers, gangrene, cellulitis or dermatitis
- Patients on prolonged bed rest without prophylactic anticoagulant therapy
- An inability to size or apply properly due to deformity, recent surgery, or trauma

**NOTE:** Use is indicated until the patient is ambulating at pre-hospitalization levels or fully ambulating and using the muscle action in the lower extremities to produce sufficient venous return.

**PRE-APPLICATION CONSIDERATIONS**

1. The most responsible health practitioner may order the use of a SCD.

2. Clinical assessment must be completed prior to consideration and application of SCDs. The lower extremity assessment will include:
   - Distension
   - Discoloration
   - Warmth
   - Redness
   - Swelling
   - Pain
3. An order is required for the type, application and termination of SCDs. Both knee high and thigh high SCDs are equally effective in preventing VTE if they are worn at least 90% of each 24 hour period. If circumstances arise where sequential compression therapy cannot be initiated as ordered, notify the ordering practitioner immediately for possible alternative therapy.

4. For optimal effect SCDs should be applied pre-operatively or intra-operatively, with optimal effect when applied prior to anaesthesia. SCDs may also be applied in the immediate post-operative period. If the SCD is applied during this time frame, a limb assessment must be completed prior to application to assess for clot formation.

5. SCDs are to be removed only:
   - To perform skin care and to check skin integrity - at a minimum of every 8 hours and prn.
   - To ambulate the patient.
   - When an order is received to discontinue the SCD.

6. If patient is unwilling to wear the SCD, notify the most responsible health practitioner to determine appropriate alternatives. Explain to the patient that to receive optimal benefit, the SCDs must be worn for at least 21 hours of each 24 hour day.

COMPLICATIONS OF USE
- Discomfort, warmth, swelling beneath sleeves
- Skin irritation
- Impairment of patient mobilization

If any complications are noted:
- Document findings in the chart
- Complete a limb assessment
- Notify the ordering practitioner immediately

PERSONNEL PERMITTED TO APPLY, MAINTAIN AND REMOVE SCDS:
- Health care professionals who have received education and demonstrated proper application according to Potter and Perry and/or manufacturer's instructions; and
- Unregulated health care providers who have received education and demonstrated competency in the application and removal of SCDs.

EQUIPMENT:
- SCD controller and tubing assembly
- SCD sleeve

SCDs consist of a controller and a pair of sleeves. The controller provides intermittent cycles of compressed air which sequentially inflate the individual sleeve chambers.

PROCEDURE:
DOCUMENTATION:

- Document lower limb assessment(s)
- Upon commencement of therapy, record time and date therapy started.
- Document any complications of use from the SCD.
- Document time SCDs were off (eg. patient up ambulating)
- Record time and date of termination of therapy.

REFERENCES:


