



## EP9 – Staffing, Scheduling, and Budgeting Processes

*EP9b: Provide one example with supporting evidence, when nurses collaborated with an AVP/nurse director to evaluate data, in order to meet an operational need (not workforce related).*

### **Example EP9b: Evaluation of Data to Meet Equipment Needs for Sequential Compression Devices in the Surgical Unit**

At KFSHRC-J, nurses collaborate with the nurse director, known as the Program Director, to resolve patient care or healthcare problems. Clinical nurses, known as staff nurses, are the front liners, which places them in the ideal position to assess and identify practice gaps that can potentially put a strain on the daily operations of the nursing units. When such gaps are identified, staff nurses have established processes to report practice concerns and issues that hinder nursing care delivery, including but not limited to internal policies and procedures (IPP), standard operating procedures (SOPs), unit safety huddles, Unit Councils, and access to executives conducting unit rounds.

In December 2020, the Surgical unit faced a shortage in sequential compression devices (SCDs) for patients at high risk of developing venous thromboembolism (VTE), a potential life-threatening postoperative complication. SCD machines act as a mechanical prophylaxis, ordered in conjunction with a pharmaceutical prophylaxis in postoperative patients identified based on their risk factors. The risk factors which determine a patient as low, moderate, or high risk is completed in the patient's electronic medical record for each patient admitted to the Surgical unit, initially by the admitting physician and then daily by the staff nurse.

The VTE Prophylaxis Guidelines are approved by the Formulary and Therapeutic Committee (FTC). The guidelines outline the process for VTE assessment and the indications for VTE prophylaxis, including risks, benefits, and alternatives to therapy. The guidelines are incorporated into the IPP, which includes contraindications for the use of SCDs, as seen in Figure EP9b.1 below outlines the prophylaxis regimen based on the identified risk score. **Evidence EP9b.1 VTE Prophylaxis Guidelines. Evidence EP9b.2 Policy for Venous Thromboembolism (VTE) Screening and Prophylaxis: CIPP-7852**

Total Risk Factor Score	Risk Level	Prophylaxis Regimen
0	Very low	__ Early ambulation
1-2	Low	__ Sequential Compression Device (SCD)
3-4	Moderate	Choose ONE of the following medications +/- compression devices: __ Sequential Compression Device (SCD) - Optional __ Heparin 5000 units SCTID __ Enoxaparin: __ 40mg SC daily (WT < 150kg, CrCl > 30mL/min) __ 30mg SC BID (WT > 150kg, CrCl > 30mL/min)
5 or more	High	Choose ONE of the following medications <b>PLUS</b> compression devices (SCD): __ Heparin 5000 units SC TID ( <b>Preferred with Epidurals</b> ) __ Enoxaparin ( <b>Preferred</b> ): __ 40mg SC daily (WT < 150kg, CrCl > 30mL/min) __ 30mg SC BID (WT > 150kg, CrCl > 30mL/min)

**Figure EP9b.1: VTE Prophylaxis Regimen**

### Identification of an Operational Need

In December 2020, two Surgical unit staff nurses, Mashael Melaise, BSN RN, and Sundos Banjar, BSN RN, designated as charge nurses at the time, identified a shortage in SCD machines. Email correspondence between Diane Ross, MSN RN, CM, Head Nurse, Surgical unit, and Omar Abu Damis, BSN RN, Products Coordinator, raised the concern that there were not enough SCD machines to meet the needs of the moderate- to high-risk patient population. There were twelve functional SCD machines on the Surgical unit.

### Participants

Table EP9B.1 below lists the participants who collaborated to meet the healthcare needs of patients admitted to the Surgical unit.

**Table EP9b.1: Participants in Surgical Unit Procurement of SCD Machines**

Name & Credentials	Job Title	Department
Diane Ross, MSN RN, CM	Head Nurse	Surgical
Mashael Melaise, BSN RN	Staff Nurse 1 (SN1), Clinical Nurse, Charge Nurse	Surgical
Sundos Banjar, BSN RN	SN1, Clinical Nurse, Unit Charge Nurse	Surgical
Alanoud Abualsaud, MSN RN	Program Director	Nursing General Services

Omar Abu Damis, BSN RN	Products Coordinator	Nursing Affairs
Rania Komsany, BSN RN	Products Coordinator	Nursing Affairs
Janis Bruyns, BSN RN, MA	Program Director	Ambulatory Care Nursing
Gillian Sedgewick, BSN RN, MSc	Program Director	Nursing Quality and Research
Lina Bissar, M.D.	Consultant Internal Medicine, Acting Head of Efficiency Office	Department of Medicine
Angela Martin	Executive Consultant	Medical and Clinical Affairs
Mohammad Alatawi	Assistant Head	Department of Planning and Inventory Control

### Collaboration with Program Director

Diane escalated this safety concern to Alanoud Abualsaud, MSN RN, Program Director, in December 2020, and both collaborated to devise a plan to support a request for additional SCD machines through the Supply Chain Management department. Alanoud was advised to report an incident in the Quality Information System (QIS) for every moderate- to high-risk patient where a SCD was not available. Over the next eight weeks, Diane assessed the operational need on the Surgical unit by working closely with the unit charge nurses to obtain data that reflected SCD shortage. **Evidence EP9b.3 Emails SCD shortage and plan to address SCD shortages**

Diane communicated with Janis Bruyns, BSN RN, MA, Program Director, for assistance from the Nursing Products Coordinators, who reported under her authority to facilitate procurement of the devices required. Diane communicated with Alanoud to borrow available SCD machines from other units as a temporary measure until additional machines could be provided to meet Surgical unit patient needs. After further discussions, a plan to collect data on the unavailability of SCD machines to review the impact on patient care was agreed.

### Evaluating SCD Availability Data

In February 2021, data was collected by the Surgical unit charge nurses on the unavailability of SCD machines to meet the moderate- to high-risk patient population in the Surgical unit. This data was entered on a tracking form that was reviewed daily by Diane and the charge nurses to ensure adequate reporting of each incident. The expectation was that the charge nurse would document the unavailability of the SCD in the electronic patient record and inform the physician; an incident was entered in the incident reporting QIS system for each occurrence by the charge nurse, as seen in Table EP9b.2 below and a daily email was sent by Diane to Alanoud about the impact of the problem on patient safety.

DAILY RISK SCREENING					
Availability of SCD Machines for Moderate/High Risk for VTE					
3 N/S Surgery Unit					
Available SCD's = 12		Functional SCD's = 12		Requested Additional SCD's = 13	
Date:	Total Patients Moderate/High Risk (REQUIRING SCD)	Number of Patients WITHOUT SCD	Documented in Nursing Plan of Care	QIS COMPLETED	Email of Concern Sent (PD, QM, THS)
02-02-2021	30	18	✓	✓	✓
03-02-2021	37	25	✓	✓	✓
04-02-2021	38	26	✓	✓	✓
07-02-2021	36	19	✓	✓	✓
08-02-2021	33	20	✓	✓	✓
10-02-2021	32	18	✓	✓	✓
11-02-2021	34	20	✓	✓	✓
14-02-2021	29	19	✓	✓	✓
16-02-2021	35	21	✓	✓	✓
17-02-2021	35	19	✓	✓	✓
18-02-2021	26	18	✓	✓	✓

**Figure EP9b.2: Tracking Form on Unavailable SCD Machines**

	Jan 2021	Feb 2021	Mar 2021	Total
Clinical Administration	2	1	1	4
Clinical Documentation	8	4	3	15
Electronic Systems	0	0	1	1
Equipment/Device	1	1	1	3
Invasive Lines & Drains & Tubes	1	0	1	2
Medication	2	3	8	13
Patient Fall	1	1	0	2
<b>Patient Management</b>	<b>14</b>	<b>44</b>	<b>6</b>	<b>64</b>
Pressure Injury	0	3	0	3
Procedural	0	1	0	1
Safety	1	0	6	7
Security	1	4	2	7
Specimen	4	5	8	17
Supplies/ Consumables	4	4	3	11
Transfusion Related (Blood / Blood Product)	1	0	0	1
<b>Total</b>	<b>40</b>	<b>71</b>	<b>40</b>	<b>151</b>

  

SCD	Jan 2021	Feb 2021	Mar 2021	Total
Total 42 out of 64 patient management incidents were related to SCD.	9	33	0	42

**Figure EP9b.3: QIS Incidents Reported on Unavailable SCD machines**

Between January to March 2021, 42 reported incidents were related to inadequate supply of SCD machines in the Surgical unit. This data was presented by Mashael and reviewed by the team on March 07, 2021, who confirmed the need for additional SCD machines. The request was submitted by Alanoud to the Supply Chain Management department and

approved by Mohammad from Planning and Inventory Control. **Evidence EP9b.4 SCD Procurement Meeting Minutes March 07, 2021**

On March 15, 2021, the Surgical unit received an additional nine SCD machines from Supply Chain Management, making the total number 21. Based on the average daily patient needs, the SCD machines received were sufficient to meet the unit's operational needs. Furthermore, due to excellent collaboration between the Surgical clinical nurses and head nurse, and their program director, who facilitated ongoing efforts, 55 SCD machines were received and distributed to various inpatient and intensive care units where there was also a need for additional machines. **Evidence EP9b.5 SCD Equipment Distribution March 15, 2021**