

Status **Active** PolicyStat ID **11232412**



Origination 12/31/2020
Last Approved 3/15/2022
Effective 3/15/2022
Last Revised 2/2/2021
Next Review 3/15/2023

Owner Lisa Owen
Policy Area URM CICU Acute Shock and Transport
Applicability University of Rochester - Strong Memorial Hospital
References URM Cardiac Care

UR Medicine Cardiac Care - Verticalization Therapy Guideline for CICU Patients on Mechanical Circulatory Support (MCS)

Objectives: Provide Verticalization Therapy (VT) to improve early physical rehabilitation of acute shock patients on MCS in the CICU.

Patient Criteria:

- Patient is unable to get out of bed due to femoral advance therapy device placement, such as IABP, Impella, VA/VV ECMO
- Hemodynamic stability, as evidenced by the following:
 - Consistently able to maintain adequate flows (as ordered by provider) on the ECMO circuit.
 - MAP > 65, on or off medications.
 - Heart Rate < 120 bpm
 - Low dose Inotrope/vasopressor requirement.
- Respiratory status stable
 - SpO2 did not decrease more than 10% after VT initiated
 - RR didn't increase more than 20% after VT initiated
- ECMO Cannulas
 - Should not be actively bleeding from cannula sites

- Cannulas should be secured with 3-5 Ethibond sutures
- Additional catheter securement device should be used to stabilize each cannula while ambulating

Contraindications:

- Hemodynamic Instability:
 - Bleeding > 100 cc/ hr from any lines, tubes or drains or requiring >4 units PRBC in past 24 hours.
 - Unable to maintain consistent, adequate flows on ECMO Circuit (frequent chugging or chugging within past 2 hours).
- ECMO Cannulas
 - Active bleeding from cannula site requiring intervention.
 - Inadequately secured cannulas.
 - Concern for proper placement of cannulas.
 - Lack of pulse or notable flow in cannulated extremity.

Key Personnel:

Attending Surgeon:

- The INITIAL approval for VT of a patient on ECMO **MUST** first come from the attending surgeon.

Perfusion:

- Must be present the first time for patient's VT session and should be made aware of daily VT sessions plan.

ECMO Specialist/Acute Shock Resource Nurse (ASRN)

- Must be present any time an ECMO patient participate in VT.
- Should assist in coordinating the timing of VT with appropriate team members.

Bedside Registered Nurse

- Must be trained on verticalization Bed and present any time a patient is in VT position.

Respiratory Therapist

- Notify if patient is intubated, has a tracheostomy, or any other respiratory concerns.

Physical Therapist

- Should be present for first time getting patient to vertical position
- Should be notified when there is a plan for ambulation

APP/Intensivist

- Should be notified of plan and timing of VT sessions.

- Does not have to be at bedside but should be readily available.

Procedural Checklist for use of Verticalization Bed

Before Verticalization Therapy (VT):

- Pre-therapy huddle with all members of the covering interdisciplinary team
- Confirm there is a written order for VT
- Confirm via PT consult note that patient has been cleared for VT
- Confirm there is adequate slack on all lines or cannulas
- Level all pressure transducers
- Apply straps tightly and correctly
- Feet have non-slip socks (preferably shoes)
- Skin protected by foam Allevyn dressing
- ECMO specialist/ASRN is available to assist in verticalization of patient
- Respiratory therapist is an option to have at bedside to visualize ventilator tubing and ETT securement
- Assess hemodynamic stability prior to verticalization
- Document vitals prior to verticalizing and after.

At Peak Therapy Angle (PTA):

- Confirm pressure transducers remain leveled at the phlebostatic axis and there are no kinks in the pressure tubing
- Patient legs should not be hyperflexed
- Feet should remain directly underneath the patient (heels against mattress).
- ECMO specialist or ASRN will ensure visibility of the catheter or cannulas and flows are maintained after verticalization
- Document Vital Signs and PTA

Search terms: Verticalization therapy, ECMO, tilt bed, mobility

Approval Signatures

Step Description	Approver	Date
Acute Shock Director	Karin Chase	3/15/2022
Chief Perfusionist	KarenL Jones	3/11/2022
Director of Nursing	Anna Lambert	3/8/2022
	Lisa Owen	3/1/2022