Inpatient Cardiac Rehabilitation for VAD Patients

Objectives
- To provide the highest quality of life to patients with end stage heart failure through exercise and rehabilitation.
- To provide readiness discharge from the hospital.
- To minimize duration of VAD support in bridge to transplant patients while optimizing their surgical outcomes.
- To improve muscle mass and tone, maximize strength, flexibility, and exercise capacity, improve myocardial oxygen consumption and improve cardiovascular aerobic conditioning.

Prior to VAD placement
- Cardiothoracic Surgery will consult Cardiac Rehabilitation prior to placement of VAD for baseline exercise data or alternatively if new to service on extubation of the patients in the SICU.
- Assess baseline VO2 (cardiac and respiratory) if patient’s condition allows.
- 6 minute walk test will be performed if the patients condition allows.

Exercise Prescription Guidelines
1. Post-Op Day (POD) 1:
   - Intubated: Passive range of motion (ROM) to all extremities, repositioning every 2-4 hours.
   - Extubated: Passive range of motion (ROM) to all extremities, repositioning every 2-4 hours. Out of bed (OOB) to chair.
2. POD 2 (when hemodynamically stable): Active ROM to all extremities, OOB to chair.
3. POD 3-4: Ambulate with assistance. Frequency: 4x/day for 5-10 min/session.
4. POD 5-7: Advance duration and frequency of activities, ambulate in hallway, cycling as tolerated. Frequency: 4x/day for 5-10 min/session.
5. POD 8: Independent ambulation on level surfaces, begin stairs. Frequency: 4x/day for 5-10 min/session.
6. POD 9-10: Initiate treadmill. Frequency: 2-4x/day for 10-15 min/session.
7. POD 10-30: Progressive aerobic exercise at RPE of 11-13 on Borg scale, progressive resistive exercises (1-3 lbs.) stretching. Frequency: 2x/day, 5x/week for 20-30 min/session.

Patient Monitoring During Therapy
- Heart rate
- Blood pressure
- Signs and symptoms
- Rate of perceived exertion (Borg scale)
Six Minute Walk Test
1. Initiate 1-2 days after being brought to 4N or as patient’s condition allows.
2. Rest for 5 minutes prior to walk; check resting BP, SpO2 and HR.
3. Begin walking on a level surface. Check vitals 3 minutes into the walking portion of the test. During recovery phase check vitals 5 minutes post test.
4. Based on 6-minute walk calculate mph and MET level for inpatient exercise prescription.

II. Charting Patient’s Progress
A. Objective data from exercise sessions will be charted and recorded as VAD 6 minute walk in powerchart.
B. The daily report will be filed in the patients chart under the section “progress notes.”

II. Discharge
A. Perform 6-minute walk 1-2 days prior to discharge to reassess and check for improvements.
B. Repeat VO2 testing.
C. Enroll patient in outpatient cardiac rehab and begin within 1 week post-discharge.