THE STUDY VAULT

Clinical Chaos

LVAD Care

SKILL SNAPSHOT

Purpose
- Maintains continuous-flow mechanical circulatory support, driveline integrity, power, perfusion, and complication surveillance.

When to use
- Ongoing care of a patient with implanted LVAD in hospital, transport, emergency, or home-transition settings.

Supplies needed
- Patient controller; two power sources; charged backup batteries; backup controller; driveline supplies; Doppler; LVAD emergency contacts.

PREP + PATIENT SETUP

- Identify device/model, implant center, baseline speed/flow/power/PI, usual MAP, anticoagulation, and emergency plan.
- Assess consciousness, perfusion, breathing, bleeding, infection, stroke signs, and alarms.

VAULT TIP

- LVAD emergencies start with two checks at once: the patient's perfusion and the device's power/connections.

STEP-BY-STEP

1. Hand hygiene; identify patient; contact LVAD coordinator early for any acute concern.
2. Assess patient first. Continuous-flow patients may lack a palpable pulse; use Doppler and calculate/record MAP per device protocol.
3. Check controller display for speed, flow, power, pulsatility index, battery status, and alarm message; compare with baseline.
4. Verify driveline is connected to controller and controller has two secure power connections. Never disconnect both simultaneously.
5. Keep patient on wall power when stable/asleep per plan; ensure batteries are charged and change one power source at a time.
6. Inspect driveline from exit site to controller for tension, damage, kinks, exposed wire, and securement.
7. Perform exit-site dressing with sterile technique and prescribed kit; assess redness, drainage, tenderness, odor, and trauma.
8. Avoid BP cuffs/standard pulse assumptions when unreliable; assess perfusion using mentation, skin, cap refill, urine output, Doppler MAP, and device data.
9. Monitor anticoagulation, hemolysis, bleeding, infection, right-heart failure, arrhythmia, stroke, and pump thrombosis signs.
10. For low-flow alarm, assess preload, bleeding/dehydration, RV failure, arrhythmia, hypertension, tamponade, obstruction, and pump issue; follow device plan.
11. For unresponsive patient, check breathing/perfusion and device connections/display immediately, call emergency/LVAD team, and follow current device-specific CPR protocol.
12. Never stop the pump or change speed/controller unless directed by trained LVAD personnel/device emergency protocol.

SAFETY REMINDERS

- Always maintain two power sources; change one at a time.
- No pulse does not equal no perfusion.
- Do not disconnect driveline or stop pump.
- Keep backup controller and batteries with patient.

COMMON MISTAKES

- Using pulse alone to assess arrest.
- Disconnecting both power leads.
- Ignoring alarms/changed power.
- Traction on driveline.

DOCUMENTATION

- Device/model and baseline parameters.
- MAP/perfusion assessment.
- Controller values/alarms/power.
- Driveline/site/dressing.
- Anticoagulation, complications, coordinator contact.