

Adult Ventricular Assist Device

Designation of Condition: The patient will have an indwelling Ventricular Assist Device, a mechanical pump implanted in the ventricle(s) to augment the pumping function of the heart. Patients and family members are trained on the device and troubleshooting techniques. Patients and family members are instructed to notify the VAD Coordinators at the implanting facility in case of emergency. EMS is often only activated by the patient or family if troubleshooting techniques fail or the patient experiences acute decompensation.

KEY POINTS

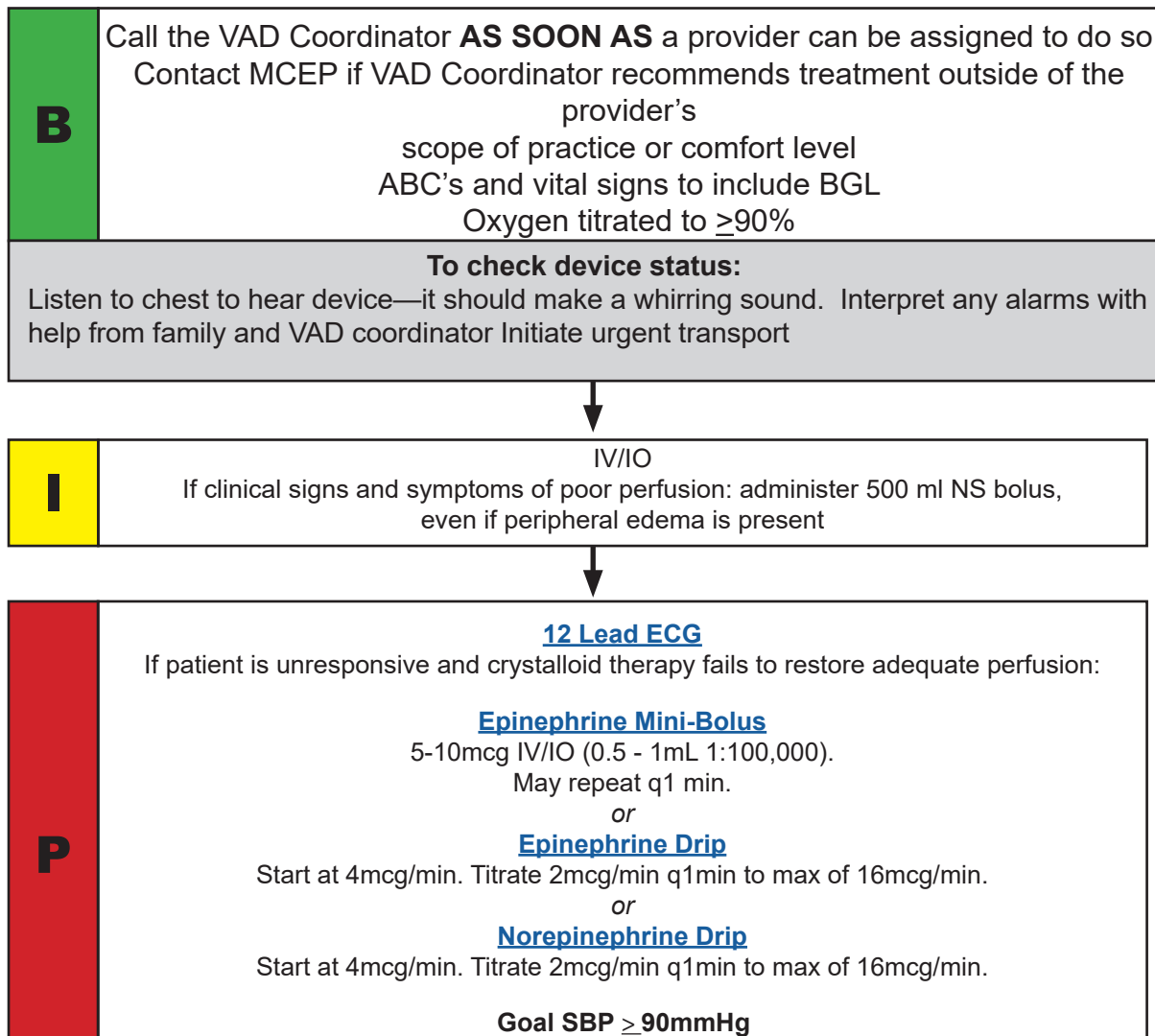
General Considerations:

- VAD patients are likely to have multiple medical problems in addition to cardiac problems.
- In general, treat the patient's condition per the appropriate guideline unless directed otherwise by the patient's VAD Coordinator, by MCEP consultation, or by the points below.
- Blood flow from a VAD is continuous, not pulsatile. Pulses may not be palpable and BP may not be obtainable
- If unable to obtain pulse or blood pressure, use LOC, respiratory rate/ work of breathing, and skin color/temperature/capillary refill to determine adequacy of circulation.
- Use care at all times not to pull on the power cord exiting the patient's abdomen and ensure the power cord is never cut.

Specific Contraindications:

• DO NOT PERFORM CHEST COMPRESSIONS IF DEVICE IS RUNNING

- Since the VAD is directly inserted into the left ventricle and the aorta, chest compressions can dislodge the device and cause massive bleeding into chest.
- If patient is **UNRESPONSIVE**, and the device is **NOT RUNNING**, initiate CPR and contact VAD coordinator and MCEP.
- CPAP is contraindicated because it may increase intrathoracic pressure and impede VAD/heart function.
- Nitrates and diuretics are contraindicated because they may worsen perfusion by affecting blood pressure and preload.



Reversible Causes

Evaluate H's:

- Hypoxia
- Hypovolemia
- Hypothermia
- Hyper/hypokalemia
- Hydrogen Ions

Evaluate T's:

- Tension pneumothorax
- Tamponade
- Thrombosis (AMI or PE)
- Toxins/Tablets
- Trauma