

VENTRICULAR ASSIST DEVICE (VAD)

1. Purpose/Background: A Ventricular Assist Device (VAD) is a mechanical circulatory device that is used to partially or completely replace the function of a failing heart. Some VADs are intended for short term use, typically for patients recovering from myocardial infarction or recent heart surgery, while others are intended for long term use, typically for patients suffering from congestive heart failure. VADs are designed to assist either the right (RVAD) or left (LVAD) ventricle, or both (BiVAD). The type depends primarily on the underlying heart disease and the pulmonary arterial resistance that determines the workload on the right ventricle. LVADs are most commonly used, but when pulmonary arterial resistance is high, right ventricular assistance becomes necessary. Long term VADs are normally used to keep patients alive with a good quality of life while they await a heart transplant (“bridge to transplantation”), but sometimes LVADs are used as a destination therapy or bridge to recovery.
2. VAD Description: A common type of LVAD has a tube that pulls blood from the left ventricle into a pump. The pump then sends blood into the aorta. This effectively helps the weakened ventricle. The pump is placed in the upper part of the abdomen. Another tube attached to the pump is brought out of the abdominal wall to the outside of the body and attached to the pump’s battery and control system.
3. Considerations:
 - 3.1. Upon identification of a VAD patient, immediately contact the patient’s VAD center. Contact the communications center and have them conference you into the VAD center so the conversation is recorded. VAD center information can usually be obtained from the patient, family members, or in the battery pack attached to the patient.
 - 3.2. The VAD center will provide valuable information regarding your patient and specific considerations in caring for the VAD patient. The VAD center will be helpful in determining the most appropriate hospital destination which will usually be the patient’s VAD center.
 - 3.3. When transporting a VAD patient, remember to take the VAD battery pack, extra batteries, and the AC/DC wall charger.
 - 3.4. Some VAD patients will not have a palpable pulse or blood pressure. This is normal and requires no specific treatment.
 - 3.5. Some VAD patients will present with ventricular fibrillation on the EKG despite having a functional VAD. Defibrillation is not indicated for these patients.
 - 3.6. If the patient is found unresponsive, is in presumed cardiac arrest, and the VAD pump is still functioning, chest compression are not necessary. The VAD pump is still circulating blood. Ventilations should be provided via BVM at a rate of 8-10 per minute.
 - 3.7. If the patient is found unresponsive, is in presumed cardiac arrest, and the VAD pump is not functioning, you should:
 - 3.7.1. Compress the manual pump if the device has a manual pump, otherwise, CPR should be initiated
 - 3.7.2. Immediately contact the patient’s VAD center for further instructions.