



VENTRICULAR ASSIST DEVICE (VAD)

Adult

Pediatric

Purpose

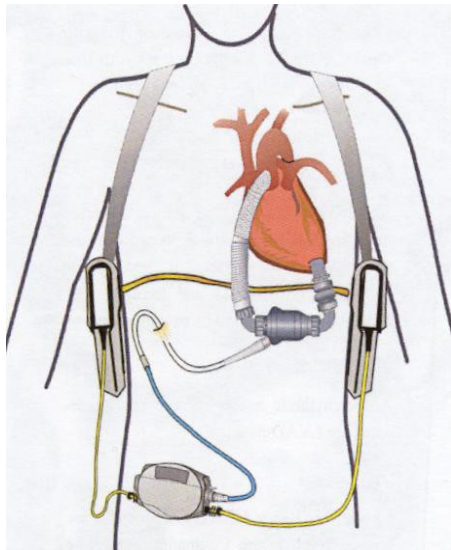
To identify the most appropriate treatment and transport destination for patients with Ventricular Assist Devices.

Definitions

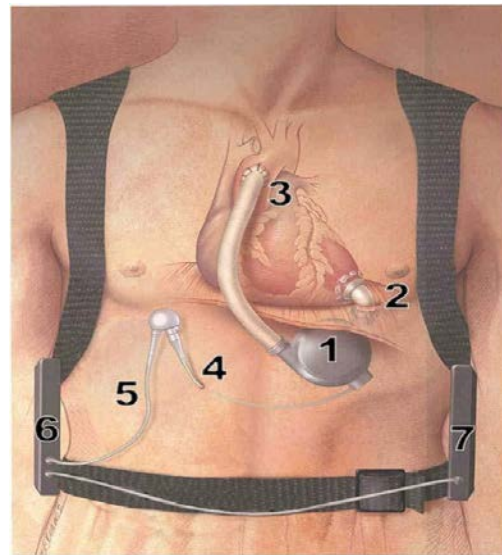
Ventricular Assist Device (VAD): is a mechanical device used to substantially support circulation in a patient with significant cardiac ventricular dysfunction. VADs may be placed for short term use of several weeks, such as in patients recovering from myocardial infarction or heart surgery. VADs may also be placed for long term use from months to the remainder of life, such as in patients awaiting a heart transplant or suffering particularly severe congestive heart failure. A VAD is not an artificial heart, which completely supports circulation in a patient whose heart has been removed. VADs can assist either the right (RVAD) or left (LVAD) ventricle, or both at once (BiVAD). The choice of device depends on underlying heart disease and pulmonary arterial resistance. LVADs are more commonly used, but when pulmonary arterial resistance is high, right ventricular assist becomes necessary.

The HeartMate II (2nd Generation VAD): uses a continuous flow pumping action to produce forward circulation. Hospitals in Northern California are installing this device.

Heart Mate II (2nd Generation)



Levacour VAD (4th Generation)



Levacor VAD (4th Generation): uses magnetic levitation technology to suspend the pump's rotor so that it does not make contact with the pump housing during operation. Second and fourth generation VADs are simpler in mechanism of flow, resulting in smaller VAD size and greater reliability. As with the second generation VAD **a patient utilizing a fourth generation VAD may not have a palpable pulse even though they are alive.** In other words, lack of a pulse does not equal death in these patients



Yolo County Emergency Medical Services Agency

Procedures

Revised Date: September 1, 2018

Adult	Pediatric
Policy	
<ul style="list-style-type: none">• MOST patients have a tag located on the controller around their waist that says what type of device it is, what institution put it in, and a number to call. Most importantly is the color of the tag – it matches the emergency medical service Field Guide and allows you to quickly locate the device you are caring for.	
HEARTMATE II	
<ul style="list-style-type: none">• Assess the patient’s airway and intervene per your protocol.• Auscultate heart sounds to determine if the device is functioning and what type of device it is. If it is continuous flow device, you should hear a “whirling sound”• Assess the device for any alarms• Look on controller usually found around the waist of the patient and to see what color tag and device it is• Match the color on the device tag to the EMS Guide.• Intervene appropriately based on the type of alarm, tag (device) and EMS Guide. Contact support number• Start large bore intravenous line• Assess vital signs• Transport to closest VAD center. Call the number on the device to get advice• Bring all of the patient’s equipment• Bring the caregiver if possible to act as an expert on the device in the absence of consciousness in the patient• Only attempt Cardiopulmonary Resuscitation (CPR) if absolutely necessary	
Consider	
<ul style="list-style-type: none">• Consider use of EMS Aircraft for transport to the support device center that implanted the device, when available and appropriate.	



Yolo County Emergency Medical Services Agency

Procedures

Revised Date: September 1, 2018

Adult	Pediatric
Northern California Hospitals with a Ventricular Assist Device Program	
<p>Mercy General Hospital 4001 J Street Sacramento, CA 95819 (916) 535-3115 (VAD Coordinator, pager) Supported Devices: HeartMate II® LVAD</p> <p>UC Davis Medical Center 2315 Stockton Blvd Sacramento, CA 95817 (916) 734-2011 Supported Devices: HeartMate II® LVAD</p> <p>Sutter Medical Center 2825 Capital Avenue Sacramento, CA 95819 (916) 697-8205 – On Call Pager Supported Devices: HeartMate II® LVAD</p>	<p>California Pacific Medical Center 2340 Clay Street, 1st Floor San Francisco, CA 94115 (415) 600-1050 Supported Devices: HeartMate II® LVAD</p> <p>UCSF Medical Center 1600 Divisadero Street San Francisco, CA 94115 (415) 567-6600 Supported Devices: HeartMate II® LVAD</p>
Direction	
<ul style="list-style-type: none"> Transport to closest VAD center Call the number on the device to get advice Contact Base Hospital Physician for additional treatment 	