

**VENTRICULAR ASSIST DEVICE(S)**

Patient has a continuous flow Ventricular Assist Device(s): Single LVAD. The manufacturers of these devices include the Thoratec HeartMate II VAS and HeartWare HVAD.

- Contact 24 hour mechanical heart specialist: (509) 481-7996 or (509) 474-7326.** If no answer, contact Sacred Heart Medical Center Operator (509-474-3131), who will locate the call person.

2. Emergency Scenarios

Scenario	Response
VAD Failure	<b>VAD has stopped pumping:</b> Indicated by a high-pitched tone with a red alarm-either a red heart or triangle on the controller attached to percutaneous line from the abdomen (the driveline). Also, auscultation of the device with stethoscope a “hum” or the VAD is not heard indicating the device has stopped.
VAD Working – Blood Flows Low- ECG Abnormal	A patient with a single VAD is dependent on ventricular function of the side not mechanically assisted. With arrhythmia, decreased function of opposite ventricle will affect VAD flows. The VAD may be able to maintain flow high enough to keep patient from going into shock. <b>If patient is symptomatic, initiate appropriate therapy to correct arrhythmia and optimize heart function.</b>
VAD(s) Working – Blood Flows Low-ECG Normal	Suspected internal bleeding (hypovolemia). <b>If patient is symptomatic, initiate appropriate therapy to stabilize patient including volume replacement.</b>

- Heart Monitor:** If patient has an LVAD that is working properly, it is providing patient’s cardiac output.
- Vital Signs:** Due to the continuous flow on the LVAD devices, blood pressure with a stethoscope or automated cuff may not be accurate. Blood pressure is best measured by Doppler. Clinical signs and symptoms of hypotension should be considered. A normal blood pressure for a LVAD patient is 70-100mmHg by Doppler. A traditional blood pressure measurement by automated cuff may give a value similar to a normal blood pressure for a LVAD patient.

5. **Large bore** peripheral venous access should be started on patient.
6. Perform routine CODE procedure, if indicated. Do not initiate cardiac compressions if the device is still running. Consult the mechanical heart specialist on-call prior to initiating chest compressions.
7. Transport companion with patient and bring equipment (i.e. emergency bag, extra batteries, and backup controller).
8. Patient should be transported to Sacred Heart Medical Center, if possible.