



**Ventricular Assist Device (VAD)**

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Approval: Victoria Pinette – Executive Director

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- VAD pts may also have an Implanted Cardioverter-Defibrillator (ICD) or a Pacemaker/ICD.
- VAD pts may not have a palpable pulse as these are continuous flow devices. Utilize a cardiac monitor to accurately establish the pt's heart rate/rhythm. Arrhythmias with signs of inadequate perfusion should be treated according to applicable S-SV EMS protocols. If defibrillation or cardioversion is indicated, follow the applicable treatment protocol (the pump is insulated so that electrical therapy should not be an issue).
- VAD pts may not have a blood pressure obtainable by standard EMS measurement methods. An accurate blood pressure is typically obtained via doppler, however, auscultation or NIBP readings may be possible.
- SpO<sub>2</sub> may not be measurable or accurate. Waveform capnography monitoring should be utilized if available.
- VAD pts/companions are taught to call 911 and page the on-call VAD coordinator in an emergency. The VAD coordinator will typically be on the telephone to provide additional assistance to EMS personnel. Contact information for the VAD coordinator is usually attached to or located inside the pt's VAD equipment bag.
- VAD pts should be transported to the nearest appropriate VAD center. If the pt's condition does not warrant transportation to the VAD center, the base/modified base hospital shall be consulted for pt destination. The VAD equipment bag, power source, battery and charger shall be brought with any transported VAD pt.

- Manage airway/assist ventilations, O<sub>2</sub> at appropriate rate if short of breath, or signs of heart failure or shock
- Assess perfusion (mental status, skin color and temperature, capillary refill)

Refer to other treatment protocols as necessary

Adequate perfusion?

NO

Assess VAD function

- Look/listen for alarms
- Listen for VAD hum (left chest/LUQ of abdomen)

VAD functioning?

Attempt to correct malfunction with VAD coordinator &/or trained companion assistance

YES

Perform chest compressions

Signs of life or PETCO<sub>2</sub> > 20 mmHg?

YES

Refer to Pulseless Arrest treatment protocol (C-1/P-4)

- Monitor and reassess
- Refer to other treatment protocols as necessary
- Contact base/modified base hospital for treatment consultation as needed

VAD functioning?

YES