VENTRICULAR ASSIST DEVICES

(Revised: June 2018)

A Ventricular Assist Device (VAD) is a life-sustaining *continuous flow* mechanical pump used for patients with advanced heart failure. Most frequently, a VAD is used in the following situations:

- During or after heart surgery or a procedure ("bridge to recovery")
- While waiting for a heart transplant ("bridge to transplant")
- As a long term treatment option for patients ineligible for a heart transplant ("destination therapy").

Important PHYSIOLOGICAL DIFFERENCES of patients with a VAD:

- Most patients *will not have a palpable pulse*
- *Blood pressure cannot usually be measured*
- Pulse oximetry may not be present normally
- Perfusion should determine treatment
- Patients may be in ventricular fibrillation and still be conscious (as the VAD provides adequate circulation). Defibrillation is not indicated, unless the patient is unconscious and with low flow.
- Low flows may not be the reason that a patient is unconscious. If the controller screen shows that there is a flow (even as low as 2 litres/minute) then circulation is present
- ***CPR should only be commenced if the patient is unconscious with a flow rate less than 1.5 litres/minute*** (*as shown on the controller screen*). All ALS interventions can be administered in cardiac arrest, as clinically indicated.

ASSESSMENT NOTES:

THE PATIENT AND CARER ARE YOUR BEST RESOURCE.

They are highly trained in the management of the VAD and emergency procedures.

Initial assessment should include checking the power supply and connections (with help from the carer if available), and the flow rate.

TREATMENT NOTES:

- ✓ may be defibrillated (if unconscious with low flow, and in VF/VT) – no need to disconnect anything
- ✓ may be externally paced and cardioverted if required – no need to disconnect anything
- ✓ patients are on anticoagulants
- ✓ may receive intravenous fluids
- ✓ cardiac monitoring may not be useful, depending on the device. An ECG may be misleading or irrelevant

REGARDING TRANSPORT:

- the patient should be transported with all relevant equipment, especially their backup power supply
- the carer should be transported with the patient, or be contacted if not present
- the patient should be transported to the Canberra Hospital.