# Mechanical Circulatory Support

**ALS PROCEDURE AP-11**

**Effective Date:** 01-01-2018  
**Revised Date:** 01-01-2018

## Indication
- Patients with mechanical circulatory support that present with any complaint.

## Contraindication
- Do not give aspirin and/or nitroglycerin to mechanical circulatory support patients.

## Procedure
- Identify type of mechanical circulatory support:

  **Ventricular Assist Device (VAD)**
  - Usually pulseless.
  - ECG shows native heart rhythm.
  - Only perform chest compressions with Base Hospital direction.
  - You may provide synchronized cardioversion, external cardiac pacing, or defibrillation.
  - Must auscultate the left upper quadrant of the patient’s abdomen for the “hum” of the VAD.
  - Usually have an internal cardiac defibrillator.
  - You will not be able to obtain a blood pressure.
  - Contact Base Hospital and request assistance with coordinating care and destination decision for mechanical circulatory support patient.
  - Mechanical Circulatory support patients should go to the closest receiving facility unless directed otherwise by Base Hospital.

  **Total Artificial Heart (TAH)**
  - Pulsatile.
  - ECG is meaningless since there is no heart.
  - No compressions.
  - Do not provide synchronized cardioversion, external cardiac pacing, or defibrillation.
  - The TAH’s Freedom Driver is audible without a stethoscope, making a “galloping” type of sound.
  - Do not have an internal cardiac defibrillator.
  - Blood Pressure is obtainable utilizing a normal sphygmomanometer.
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<th><strong>PROCEDURE CONT.</strong></th>
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<td>• Assist family and/or caregiver to troubleshoot mechanical circulatory support due to disconnection, power or mechanical failures.</td>
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<td>• Provide patient care as clinically indicated per field treatment guidelines.</td>
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<td>• <strong>Fluid Challenge AP-09</strong>: Should be considered as a first line therapy for VAD patients.</td>
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<td>• Collect all mechanical circulatory support equipment/information for transport with the patient.</td>
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<th><strong>KEY CONCEPTS</strong></th>
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<tr>
<td>• Patient’s family/caregiver should have direct 24/7 contact information for VAD/TAH program. VAD/TAH program should be contacted through Base Hospital to coordinate care and destination for the patient.</td>
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<td>• When transporting patient with mechanical circulatory support device, ensure that extra batteries and charging device are brought with the patient.</td>
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