

## PRE-EXISTING VASCULAR ACCESS DEVICES (PVAD)

### PURPOSE

To provide vascular access utilizing a Pre-Existing Vascular Access Device (PVAD) for patients in extremis when no other vascular access is available.

### AUTHORITY

California Health and Safety Code 1797.220 and 1798.

California Code of Regulations, Title 22, Division 9, Chapters 3 and 4.

### DEFINITION

A Pre-Existing Vascular Access Device (PVAD) is an indwelling catheter / device placed into one of the central veins, to provide vascular access for those patients requiring long-term intravenous therapy or hemodialysis.

### POLICY

Paramedics and Advanced EMTs may access pre-existing vascular devices on any patient who is in extremis and no other vascular access is available or appropriate. The types of catheters used are:

- A. Indwelling catheter / device exiting externally inserted into the superior vena cava or right atrium (Broviac, Hickman, PICC and others).
- B. Hemodialysis shunt (fistulas / grafts): used to divert blood flow from an artery to a vein.
- C. Internally implanted devices (Portacaths, etc.): access that is subcutaneous requiring entry through the skin and special equipment to access. These types of devices are **Not approved for use by Yolo EMS personnel.**

### INDICATIONS

Only in the absence of any other observable vascular access, when the patient has:

- A. Cardiopulmonary arrest
- B. Extremis due to circulatory shock
- C. Critical need for pharmacological intervention

### COMPLICATIONS

- A. **Infection:** Due to the location of the catheter, strict adherence to aseptic technique is crucial when handling a PVAD.
  - 1. Use of sterile gloves is recommended;

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2. Prep injectable port and surrounding skin with chlorhexidine prior to attaching I.V. tubing;
  3. Use new supplies if equipment becomes contaminated;
  4. Re-cover port with sterile dressing and securely tape.
- B. **Air Embolism:** The PVAD provides a direct line into the central circulation; introduction of air into these devices can be hazardous

### APPROVED INFUSIONS

- A. Intravenous solutions
- B. All medications **except diazepam (Valium) as it interacts with silicone causing crystallization of the medications and deterioration of the silicone.**

### PROCEDURE

- A. Do not remove injection cap from catheter.
- B. Do not use a syringe smaller than 10 ml to prevent catheter damage from excess infusion pressure.
- C. Always expel air from syringe prior to administration.
- D. Follow all medications with 5 ml of saline to avoid clots.
- E. Do not inject medications or fluids if resistance is met when establishing patency.
- F. Do not allow I.V. fluids to run dry.
- G. Do not manipulate or remove an indwelling catheter under any circumstances.
- H. Should damage occur to the external catheter, clamp immediately between the skin exit site and the damaged area to prevent air embolism or blood loss.

### CONTINUOUS QUALITY IMPROVEMENT

A copy of the completed PCR for any patient on whom a pre-existing vascular access device is utilized must be forwarded to the YEMSA within 30 days for Continuous Quality Improvement purposes.