

**VALLEYCARE**  
**OLIVE VIEW-UCLA MEDICAL CENTER/HEALTH CENTERS**  
**RESPIRATORY CARE SERVICES - ADULT**  
**POLICY & PROCEDURE**

**NUMBER: 837**  
**VERSION: 1**

**SUBJECT/TITLE: ARTERIAL LINE DRAWS**

**POLICY:** Instructions for obtaining blood samples from an arterial line to be used by all personnel (RN's, RCP's, MD's) trained in the procedure and responsible for the care, use and or maintenance of an arterial line. It is recommended that arterial lines available at OV/UCLA that employ a safe-drawing mechanism with an in-line syringe and needle less port be utilized whenever possible. Refer to product directions for use.

**PURPOSE:** To provide guideline for obtaining arterial blood samples from patients with an intra-arterial blood pressure line.

**DEPARTMENTS: RESPIRATORY CARE SERVICES**

**DEFINITIONS:**

**MD ORDER:** Yes ( **X** ) No ( )

**PROCEDURE:** EQUIPMENT:

1. 5cc or 10cc syringe for discard
2. Appropriate size syringe for specimens and or blood gas analysis
3. 18 or 20ga sterile needle for transfer
4. Appropriate vacutainer tubes for specimens
5. Sterile luer-lock plug
6. Appropriate specimen labels, requisitions, and barcodes
7. Non-sterile gloves
8. Sterile 4x4 gauze.

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STEPS	
1. Place equipment at bedside for easy access and briefly inform the patient of the procedure.	Do not make any adjustments to FiO <sub>2</sub> or suction patient for at least 20 minutes prior to obtaining ABG
2. Don gloves	
3. Observe quality of waveform on monitor and suspended alarm.	For verification that same waveform quality returns post procedure.
4. Remove and discard luer-lok from stopcock of A-line.	
5. Attach discard syringe to this port of stopcock	
6. Turn stopcock lever to right	Stopcock is now open to patient and closed to transducer
7. Aspirate 3cc of discard solution from the line into discard syringe.	Clears A-line of flush solution and prevents contamination of samples.
8. Close access to all ports by turning stopcock lever to the left ¼ turn (at a 45 degree angle)	
9. Remove and discard this syringe into the sharps container	
10. Attach specimen syringe of appropriate size for amount of blood sample required.	If multiple syringes or samples are to be drawn, turn stopcock ¼ in between samples.
11. Open port to syringe and blood by turning stopcock to right 90-degree angle and aspirate blood.	Venipuncture is access of choice for coagulation studies, however they may be obtained from an arterial line despite heparinized flush solution. Draw off at least 10cc of blood from the line prior to drawing coag (DIC panel and PT/PTT) sample. Draw coag in separate syringe (in effect a 3 syringe procedure).

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12. Close port to syringe (open to patient) and flush line by depressing flush actuator at transducer.	Sluggish or resistant blood flow into syringe may require troubleshooting. For correct lab values, blood flow should be smooth and consistent. (i.e.: hemolysis of cells due ↑ pressure with blood draw will give false ↑ K+.)
13. Attach 18-20 ga. Needle to specimen syringe and transfer blood to correct vacutainer tubes.	Add blood to vacutainer tubes with additives first and gently agitate which stops the clotting process and stabilizes cells.
14. Turn stopcock lever to left (closed to patient and open to syringe port). Flush the port into sterile gauze.	ABG syringe should be rolled to mix heparin with blood, cap securely and expel any air bubbles into cap.
15. Place sterile luer-lok onto port.	
16. Turn stopcock lever to syringe port (open from patient to transducer and monitor). Flush and evaluate for return of quality waveform on monitor.	If waveform dampened, troubleshoot system by: 1. Repositioning extremity 2. Gently manipulate arterial catheter and insertion site 3. Check all ports for patency, flush any air bubbles and tighten all connections. 4. Pressure bag should have 300mmHg pressure. 5. Check that stopcock off position is correct.
17. Dispose of contaminated supplies in appropriate containers.	
18. Label all specimens per Laboratory and ICU protocols.	

Documentation in the patient record should include the date and time sampling was done , what test were performed, the lab/test results and any problems/complications in the nursing notes as per nursing department policy

Rationale: Documents nursing assessment, interventions and blood loss.

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References:

Boggs, R and Woolbridge-King, M (1993) ACCN Procedure Manual for Critical Care (3<sup>rd</sup> ed). Philadelphia: Saunders.

Clochesy, J., Breu, C., Cardin, S., Rudy, E., Whitaker, A. (1993) Critical Care Nursing Philadelphia: Saunders

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