


Name of Policy: Blood Sampling from Indwelling Cannula Systems Policy Number: 3364-136-08-01 Approving Officer: Chief Operating Officer Responsible Agent: Director, Respiratory Care Scope: University of Toledo Medical Center		 Effective date: 7/2025 Original effective date: 7/1/1987	
Key words: Blood Sampling, Indwelling Catheter, Cannula Systems, Arterial, Blood Draw			
<input type="checkbox"/>	New policy proposal	<input checked="" type="checkbox"/>	Minor/technical revision of existing policy
<input type="checkbox"/>	Major revision of existing policy	<input type="checkbox"/>	Reaffirmation of existing policy

(A) Policy Statement

The Respiratory Care staff will adhere to the University of Toledo Medical Center (UTMC) policy and procedure developed for indwelling arterial and venous cannula systems.

(B) Purpose of Policy

To provide specific guidelines for all Respiratory Care personnel to follow when drawing blood from indwelling arterial and venous cannula systems.

(C) Procedure

1. Equipment required for obtaining blood samples for blood gas analysis:
 - a. Sterile 10cc syringe,
 - b. Sterile 3cc pre-heparinized aspirator.
 - c. Clean container of ice, identifying label with patient identification label, room number, time sample was drawn, initials of person drawing the sample, the patient's FiO₂ and ventilatory parameters.
 - d. Sterile male luer lock plugs.
2. Procedure for obtaining blood samples from an adult arterial line system:
 - a. After verification of physician order, gather the appropriate equipment.
 - b. Identify the patient according to policy #3364-136-01-11 of this manual.
 - c. Careful attention should be given to maintaining aseptic technique and following UTMC Infection Control policy #3364-109-ISO-401, "Standard Precautions".
 - d. Look at the arterial pressure wave pattern on the monitor unit and note the configuration.
 - e. Remove and discard the male luer lock plug from the stopcock outlet. Next, insert the sterile 10cc syringe into the outlet.
 - f. Turn the stopcock 45 degrees (OFF to the transducer system). Next, withdraw approximately 5cc (depending on the length of tubing) into the 10cc syringe, thus emptying the flush out of the line, and ultimately drawing fresh blood into the syringe. Turn the stopcock 30 degrees (to a position in which it is OFF to both sample port and patient), maintaining the connection between the 10cc syringe and the stopcock. Remove and discard the 10cc syringe.

- g. Remove the cap from the sterile 3cc syringe and eject any residual air from the barrel. Insert the sterile heparinized 3 cc syringe onto the stopcock outlet. Turn the stopcock slowly until it is OFF to the transducer.
- h. Withdraw approximately 1cc of blood into the syringe and then turn the stopcock off to the sample port.
- i. Remove the 3cc syringe, expel any air bubbles and cover the tip with the vented cap provided.
DO NOT COVER THE TIP WITH THE NEEDLE.
- j. Attach an identifying patient label to the syringe while at the patient's bedside. Place the syringe in the container of ice and cover well if sample is not analyzed within 30 minutes
- k. Watching the patient line for air bubbles, slowly flush the line (by squeezing the white flush-valve on the transducer) until no blood is visible in the patient line. Next, turn the stopcock OFF to the patient and flush out the sample port.
- l. Return the stopcock to its original position and place a sterile male luer lock plug on the stopcock outlet.
- m. Note the pressure monitor oscilloscope for wave form changes that may indicate a blood clot or air bubble in the line.
- n. Check the pressure bag manometer and adjust as necessary to maintain 300 mmHg pressure.

<p>Approved by:</p> <p>/s/</p> <hr/> <p>Russ Smith Chief Operating Officer</p> <p>7/29/2025</p> <hr/> <p>Date</p> <p>/s/</p> <hr/> <p>Melissa Kukiela Director, Respiratory Care</p> <p>7/29/2025</p> <hr/> <p>Date</p> <p><i>Review/Revision Completed by: Director, Respiratory Care</i></p>	<p>Policies Superseded by This Policy:</p> <ul style="list-style-type: none"> • None <p>Initial effective date: 7/1/1987</p> <p>Review/Revision Date:</p> <p>05/27/1992 05/11/1993 09/17/1996 08/31/1999 08/01/2001 01/05/2005 03/06/2008 02/11/2011 08/16/2012 08/05/2014 08/01/2017 09/01/2020 08/10/2023 7/2025</p> <p>Next review date: 7/2028</p>
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