



Rancho Los Amigos National Rehabilitation Center
DEPARTMENT OF NURSING
CLINICAL
POLICY AND PROCEDURE

SUBJECT: INTRAVENOUS THERAPY: DRAWING
BLOOD FROM A CENTRAL VENOUS
CATHETER

Policy No.: C122.14
Effective Date: 12/1988

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PURPOSE: To provide guidelines for drawing blood from a central venous catheter (CVC).

PHYSICIAN ORDER REQUIRED: Yes

PERFORMED BY: Physicians, Licensed Independent Practitioners (LIPs) RNs, affiliating nursing students under the supervision of an RN.

POLICY STATEMENTS:

1. Gloves are worn when contact with blood or any body fluid is anticipated.
2. A needle-free system will be used to prevent the transmission of blood-borne pathogens through needle stick injuries, promoting employee safety.
3. A closed blood sampling system will be used to prevent microbial contamination and catheter-related infections.
4. Avoid using a CVC for obtaining blood samples for culturing as these samples are more likely to produce false-positive results.
5. Do not use CVC infusing parenteral nutrition for blood sampling as this is a significant risk factor for catheter related blood stream infection.

EQUIPMENT NEEDED:

Alcohol pads
Alcohol cap protector(s)
Three (3) 10ml saline flush pre-filled syringes
Blood transfer device
Blood collection tube(s)
Patient labels
Gloves
12 ml syringes – one for blood discard; additional one(s) for blood collection

PROCEDURAL STEPS:

1. Verify physician's order.
2. Gather all necessary equipment.
3. Identify patient using two identifiers.
4. Explain procedure to patient.
5. Perform hand hygiene and don gloves.
6. Stop all infusions to avoid possible contamination for about 10 minutes.

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7. If there are no infusions, remove and discard alcohol cap protector from selected catheter port. If alcohol cap protector is not used, scrub the catheter port with alcohol pads for **15 seconds** and let it dry completely.
 8. If working with a multi-lumen CVC use the largest and most distal lumen to obtain blood sample.
 9. Flush with 10ml normal saline.
 10. Aspirate 5mL of blood from catheter and discard syringe in the appropriate disposal container.
KEY POINT: Midlines can be used for blood draws.
KEY POINT: Do not re-insert aspirated blood into the catheter.
 11. Connect syringe and withdraw desired amount of blood.
 12. Transfer blood from syringe into blood collection tube(s) using the blood transfer device.
 13. Change the needleless connector when device integrity is compromised, contains blood or debris.
 14. Flush catheter with 20ml saline flush and resume infusion of existing IV fluid.
 15. If no infusion, apply new alcohol cap protector.
 16. Label blood collection tube(s) in the presence of the patient with the time, date and the employee number of the collector on each label.
 17. Scan specimen label and click 'Sign' to complete the task.
 18. Place specimen in a biohazard bag and send to laboratory as soon as possible.
 19. Dispose of used safety devices and syringe in the appropriate disposal container.

PATIENT/ FAMILY EDUCATION

Discuss rationale for drawing blood and tests to be done.

DOCUMENTATION

Record tests drawn in the electronic medical record.

Revised by: Roumayne David, BSN, RN

References:

- Jarding, E. K., & Flynn Makic, M. B. (2021). Central line care and management: Adopting evidence-based nursing interventions. *Journal of PeriAnesthesia Nursing*, 36(4), 328–333. <https://doi.org/10.1016/j.jopan.2020.10.010>
- Kuriakose L. (2020). Decreasing Central Line Associated Bloodstream Infection Through Limiting the Use of Central Venous Catheters for Routine Blood Draws. *Journal of doctoral nursing practice*, 13(2), 173–183. <https://doi.org/10.1891/JDNP-D-19-00071>
- Lalthanthuami, H., Kumari, M., Venkateswaran, R., Lakshmi, P., & Ramamoorthy, L. (2021). Performance of 3 ml versus 5 ml discarded volume for blood sampling from central venous access device. *Journal of Laboratory Physicians*, 13(02), 112–117. <https://doi.org/10.1055/s-0041-1726669>
- Lippincott Procedures (2022). *Central venous access catheter blood sampling*. Retrieved from <https://procedures.lww.com/lnp/view.do?pld=6607317&hits=central,draw,drawing,line,draws,blood&a=true&ad=false&q=central%20line%20blood%20draw>

The Joint Commission (2023). *Central Line-Associated Bloodstream Infections: Toolkit and Monograph*.

12/88 – Revised
08/90 – Reviewed
10/90 – Reviewed
07/97 – Revised
07/99 – Revised
10/99 – Revised
08/02 – Revised
04/06 – Revised
01/11 – Revised (Renamed)
11/13 – Revised
12/16 – Revised
09/17 – Revised
05/20 – Revised
08/23 – Revised