



Department of Patient Care Services

POLICY: Guidelines for the Insertion and Management of Central Venous Catheters (CVC)		DEVELOPED BY: Interdisciplinary Council	
POLICY COMMITTEE: Janice Kozzi MSN, RN, CNL Policy Committee Chair <input type="checkbox"/> N/A		APPROVED BY: Rita Smith, DNP, RN CNO, Senior Vice President Patient Care Services Name: Title: Dept: Chair/Designee of Developing Committee	
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Distribution: All Nursing Unit Manuals

Reference: Centers for Disease Control and Prevention. Guidelines for the Prevention of Intravascular Catheter-Related Infections. MMWR 2002; 51(RR10) 1-26 (N0.RR-10)

Chaiyakunapruk, N., Veenstra DL, Lipsky, BA, Saint, S. Chlorhexidine compared with povidone-iodine solution for catheter site care: a meta-analysis. Ann. Intern Med. 2002; 136: 792-801.

Freel, A. et al., American College of Surgeons Guidelines Program: A Process for Using Existing Guidelines to Generate Best Practice Recommendations for Central Venous Access. Journal of American College of Surgeons (2008) Vol. 207, No. 5

Institute for Healthcare Improvement Map: Central Line Bundle. <http://www.ihl.org/imap/tool>

Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. N Engl J Med 2006;355:2725—32

The Joint Commission: Accreditation Program: Critical Access Hospital. National Patient Safety Goals. http://www.jointcommission.org/assets/1/6/2011_NPSGs_CAH.pdf

Approvals:

Professional Practice	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Nursing Education	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Critical Care	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Emergency Dept	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Peri-Op	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Trauma	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Maternal Child Health	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Behavioral Health	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Cardiac Cath Lab	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Interventional Radiology	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Med Exec	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Pharmacy/ P&T	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Pathology/Blood Bank	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Other:	Y <input type="checkbox"/>	N/A <input type="checkbox"/>
Other:	Y <input type="checkbox"/>	N/A <input type="checkbox"/>

PURPOSE:

To provide guidelines for insertion, management and infusions via Central Venous Catheters excluding tunneled catheters, dialysis access catheters PICC, implanted venous access devices, and pulmonary artery catheters.

POLICY:**Insertion of Catheters**

1. Hand hygiene with hospital-approved soap and water or waterless alcohol-based cleanser is required before CVC insertion.
2. Sterility must be maintained throughout CVC insertion.
3. Except in acute, life threatening situations, the operator and assistant shall use full barriers during CVC insertion, regardless of where in the hospital the procedure is performed, including: cap, mask, sterile gloves, sterile gown and large sterile drapes so the guide wire does not extend beyond the sterile field. Healthcare professionals peripheral to the procedure are to wear masks when in the vicinity of the bedside during the procedure. All providers must adhere to “Central Line Associated Blood Stream Infection” (CLABSI) bundles.
4. “Time Out Documentation” form will be completed prior to placement of the central line.
5. “Bedside Procedure Care Team Checklist” must be completed before, during and after insertion of CVC. Completed form must be kept in a designated area of unit for reference and review

6. The subclavian vein is the preferred site for non-tunneled CVC ; however, patient-specific factors (e.g., renal failure, coagulopathy, anatomic deformity or cardiothoracic surgery), operator skill and relative risk of mechanical complications(e.g., subclavian vein stenosis, bleeding, pneumothorax), shall be considered and shall guide selection. The next acceptable access site is the jugular vein, with the least preferred, the femoral site. The incidence for DVT and infection is greater for femoral access sites. If a CVC is femorally placed, the CVC must be changed to a new site (cannot be changed over a guide wire) or removed in 24 hours or when medically feasible.
7. Skin preparation is preferred using a chlorhexidine gluconate solution, according to manufacture recommendations. Iodine may be used as an alternative due to patient allergy but must be allowed to dry prior to skin penetration. Remove hair from insertion site only if heavy growth is present. DO NOT SHAVE: surgical clippers must be used.
8. At the completion of the procedure, a chlorhexidine impregnated sponge should be applied to insertion site and dressed with an occlusive transparent dressing. The dressing is to be dated, timed and initialed by provider. Use a sterile 2x2 gauze under the occlusive transparent dressing if insertion site is not dry and remove as soon as possible.
9. At the completion of the procedure radiographs must be taken to visualize placement of the catheter tip if applicable.
10. The physician placing the CVC will document on the “procedural documentation form” the following information: Date of insertion, time of insertion, type of line, body site, anesthesia used, sterile technique and results of confirmatory X Ray if available
11. CVC’s placed in emergent situations shall be removed or changed to a new site within 24 hours or when medically feasible. Wire exchanges are to be avoided unless there is limited access at other sites and the catheter is not a source of infection.
12. All Ports may be used for infusions, the distal ports on central lines are used for measurement of pressures.

Central Catheter Management

13. The insertion site is to be inspected per shift for signs of patency, blood return, tenderness, redness, exudate and intactness of the dressing. Any complications associated with CVC need to be reported and addressed.
14. CVC injection ports must be disinfected with alcohol using friction for 15 seconds prior to accessing.

15. Whenever accessing or instilling solutions/medications, a 10 mL syringe must be utilized. When flushing or instilling medications into CVC, aspirate blood to ensure patency and placement of line.
16. The site dressing is to be changed under sterile technique using the Dressing Change Tray every 7 days or when damp, loose or soiled and to be dated, timed and initialed by RN.
17. All extension devices (i.e. stopcocks, end caps etc...) are to be changed if opened, left exposed or have any visible blood.
18. The catheter is to be changed to a new site:
 - a. When there is compromise in the intactness of the access ports / hubs /
 - b. When there is catheter failure
 - c. Purulent drainage at puncture site or cellulitis
 - d. Positive blood culture results when no other source of bacteremia or fungemia is found

Infusions

19. IV tubings, main line and additions such as extension sets and other devices are to be changed every 72 hours and tagged with date, time and initials.
20. All intravenous and pressure line solutions are to be changed every 24 hours.
21. Solutions containing fat emulsions are to be changed every 12 hours.
22. If possible, one port should be designated for TPN, (including lipids) only. NO other fluids/medications may be infused or blood drawn from designated lumen.