

	POLICIES & PROCEDURES Number: 40-80 Title: Intravascular Infections-Prevention
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Introduction

Peripheral and central intravascular therapy can allow direct access of pathogenic microorganisms into the client’s vascular system, putting clients at risk for local and systemic infections including local site infections, catheter-related blood stream infections (CR-BSI), septic thrombophlebitis, endocarditis and other metastatic infections.

Serious catheter-related infections are associated with central venous catheters (CVCs), especially those that are placed in intensive care units. These infections are caused by cutaneous microorganisms that contaminate the catheter during insertion or migrate along the catheter track or microorganisms from the hands of health care workers that contaminate and colonize the catheter hub during care interventions.

Policy

It is expected that all departments will practice according to current best practice bundles (e.g., Safer Health Care Now!).

Purpose

1. To provide guidance related to prevention of Intravascular Infections.
 For procedure information refer to the Nursing Policy and Procedure manual (CVC Peripherally Inserted PICC–Removal (#1003);CVC Insertion - Assisting (# 1073); CVC Short Term –Removal (#1058); CVC –Care Of (# 1086); CVC –Implanted Ports (#1032); Hemodialysis - (#1099 & #2410) and program specific P&P.

Guidelines:

1. IV Catheter Type:
 - For frequent or continuous access, a PICC or tunnelled CVC is preferable to a standard IV catheter.
 - Use peripherally inserted catheters (PICC) as an alternative to subclavian or jugular vein.
 - Choose a CVC with the minimum number of ports or lumens.
 - Designate one port exclusively for hyper-alimentation for parenteral nutrition
 - Using inline filters is not recommended as a routine infection control measure.

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- Antimicrobial impregnated CVC may be considered if it is expected to remain in place >5 days AND, after successful implementation of a comprehensive strategy to reduce rates of CR-BSI, the CR-BSI rate is not decreasing. Consult ID.

2. Site

- Adult: When a non-tunnelled CVC is necessary choose a subclavian site rather than jugular or femoral (with the exception of hemodialysis)..
- Pediatrics: Optimal catheter type and site selection in children is more complex. Site preference needs to be individualized.
- Do not apply antimicrobial ointment to CVC insertion sites as routine care.
- Showering may be permitted if caution is taken to prevent the introduction of organisms into the catheter (e.g., cover the catheter and connecting device with an impermeable covering). Tap water at the catheter site should be avoided for Hematopoietic Stem Cell Transplant recipients.

3. Insertion

Hair removal:

- Do not shave the hair at the puncture site, use a clipper if necessary.

4. Maintenance

IV Solutions:

- Bags should be examined prior to use and discarded if turbidity or precipitate is detected. Notify Pharmacy and provide the lot number of this solution.

Anticoagulant therapy:

- Do not routinely use anticoagulant therapy to reduce the risk of infection.

Culturing:

- In the absence of suspected or proven sepsis routine culturing is **not** advised.

5. Replacement:

- Routine replacement of CVCs is not necessary.
- Replace all CVCs if the client is hemodynamically unstable and CR-BSI is suspected.
- **DO NOT** use guidewire exchanges routinely for non-tunnelled catheters to prevent infections.
- **DO NOT** use guidewire techniques to replace catheters when there is a clinical suspicion for blood stream infection.
- **Cautious consideration may be given to a guidewire exchange technique being used when replacing a malfunctioning non-tunnelled catheter if no evidence of infection is present.**

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References:

1. Canadian Patient Safety Institute, Safer Health Care Now! Getting Started Kit: Prevent Central Line Infections, 2012.
<http://www.saferhealthcarenow.ca/EN/Interventions/CLI/Documents/CLI%20Getting%20Started%20Kit.pdf> (accessed Feb13, 2013)
2. Center for Disease Control and Prevention (CDC). *Guidelines for prevention of intravascular catheter-related infections*. Hospital Infection Control Practices Advisory Committee (HICPAC), 2011.
3. Institute for Healthcare Improvement, How-to-Guide: Prevent Central Line Infections, Safer Health Care Now! Campaign, 2005.