Purpose

The central line exit site is an area where microorganisms can enter the body and cause a local or systemic infection. Keeping the area clean, dry and covered is important in preventing catheter-related infections.

Standards

A transparent dressing on a Central Venous Line (CVL) is changed every 7 days and/or if it is damp, visibly soiled, loosened or if redness/drainage is noted at the site.

The preferred dressing for a cuffed external CVC is Tegaderm™IV. The preferred dressing for a Cuffed PICC or Short Term CVC is Tegaderm CHG™.

If a gauze dressing is used, the dressing must be changed every 24 to 48 hours or more often if it becomes damp/soiled/loose.

Dressings used on short-term external CVC sites are changed at least every 7 days for transparent dressings, except in those pediatric patients in which the risk for dislodging the catheter may outweigh the benefit of changing the dressing.

Aseptic technique is an essential component of all CVL access procedures to reduce the risk of catheter related blood stream infection.

Catheter sites are visually examined when changing the dressing and by palpation through an intact dressing every shift. For outpatients, sites are examined at each visit. If patients have tenderness at the insertion site or other manifestations suggesting local or bloodstream infection, the dressing is to be removed to allow thorough examination of the site.

Tegaderm CHG™ dressings are not appropriate for use in patients younger than 2 months of age or Oncology patients receiving chemotherapy.

Site Applicability

Applicable in all BC Children’s Hospital areas where patients with central venous lines are cared for.

Practice Level/Competencies

Central line care, including blood sampling using syringe method from a CVL is considered a foundational nursing skill and is practiced once the nurse has:

- Attended the Vascular Access Workshop,
- Practiced the procedure in the lab setting,
- Performs at least 3 blood sampling procedures on patients under supervision of a CVL competent RN, and
- Has completed the CVL validation tool at the bedside with the appropriate clinical support person

Definitions

Aseptic no-touch technique (ANTT): a standardized technique that is used during clinical procedures to identify and prevent microbial contamination of aseptic key parts and key sites by ensuring that they are not touched either directly or indirectly. A ‘key part’ is the part of the equipment that must remain sterile and must only contact other key parts or key sites. Or it is the area on the patient such as a wound, or IV insertion site that must be protected from microorganisms. Aseptic key parts can only contact other aseptic key parts/sites. If it is necessary to touch key parts/sites, sterile gloves are to be worn to ensure asepsis is maintained.
Equipment

- Hospital grade surface disinfectant wipe (e.g. Caviwipe®)
- Mask
- Clean gloves
- Dressing tray
- Sterile gloves
- 2% chlorhexidine with 70% alcohol wipes
- 2% Chlorhexidine with without 70% alcohol impregnated swab stick (x2 for CVCs and PICCs)
- Sterile cotton tipped applicators (as needed to remove excess drainage/crusting)
- Sterile water if needed to remove excess drainage/crusting
- Cavilon™ no sting barrier (optional) – note that Oncology patients use the sterile Cavilon™ no sting barrier swab sticks. The spray should not be used as it is not sterile.
- Sterile transparent wound dressing (Tegaderm CHG™ for short term CVC and cuffed PICC, Tegaderm™ or IV 3000™ for long-term cuffed CVC) or sterile gauze dressing if patient is unable to tolerate a transparent dressing (due to allergy, sensitive skin or skin reaction). See Management of Dressing Related Dermatitis algorithm.
- Securement device (i.e. Statlock™) or waterproof tape as required

Procedure

<table>
<thead>
<tr>
<th>Steps</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>1. IDENTIFY patient and EXPLAIN procedure.</td>
<td>Failure to correctly identify patients prior to procedures may result in errors. Reduces child and family’s anxiety. Evaluates and reinforces understanding of previously taught information and confirms consent process.</td>
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<td>2. ASSEMBLE equipment.</td>
<td>Facilitates completion of task in a timely manner</td>
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<td>3. CLEAN working surface using Hospital grade surface disinfectant wipe (e.g. Caviwipe®)</td>
<td>Routine infection control practices; reduces transmission of microorganisms.</td>
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<td>4. MASK, SCRUB hands for 1 minute using soap and water.</td>
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<td>5. PREPARE equipment using aseptic no-touch technique at beside.</td>
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<td>6. DON clean gloves. REMOVE old dressing and DISCARD. REMOVE securement device/waterproof tape if present. May use adhesive remover if patient requires.</td>
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<td>7. ASSESS exit site for redness, swelling, tenderness, or drainage. CULTURE significant drainage and NOTIFY physician. For alternate dressing options for dressing related dermatitis, refer to Management of Dressing Related Dermatitis algorithm.</td>
<td>Assessing the entry site for inflammation will prevent unnecessary delays in providing appropriate interventions in care of the patient.</td>
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<tr>
<td>8. REMOVE gloves and PERFORM hand hygiene. DON sterile gloves.</td>
<td>Routine infection control practices; reduces transmission of microorganisms.</td>
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<td>9. LIFT catheter off skin with sterile gauze. With first chlorhexidine/alcohol swab, CLEAN, using friction, the catheter away from the exit site. Repeat at least 2 times, until catheter is visibly clean. Continue to HOLD catheter with sterile gauze lifted off skin.</td>
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10. **CLEAN** skin around exit site immediately around the catheter with the swab stick using a back-and-forth motion with light friction to area for 15 seconds. 

**NOTE:** Excess drainage or crusting can be removed with cotton tipped applicator soaked with sterile water if needed.

**This action promotes binding of the chlorhexidine to the layers of skin and improves efficacy.**

**Do not use normal saline as chlorhexidine may be inactivated if in contact with normal saline.**

11. **FLIP** the swab stick and moving in opposite direction, **CLEAN** site using a back-and-forth motion with light friction around the exit site for another 15 seconds. **REPEAT** steps 10 and 11 with a second swab stick if patient has an external CVC.

**Flipping the swab stick allows for maximum dispensing of antiseptic solution from the sponge.**

**Flipping the swab during the application allows for maximum dispensing of the antiseptic.**

12. **ALLOW** chlorhexidine/alcohol solution to air dry for at least one minute and until visually dry or, for three minutes if using swab sticks without alcohol.

**Provides time for optimal efficacy and decreases risk of skin irritation or burn.**

13. For cuffed CVCs and cuffed PICCs, **COIL** catheter as shown.

**Provides added securement.**

14. **APPLY** Cavilon™ no sting barrier (if using) to skin that will be in contact with dressing adhesive only. Ensure to **AVOID** 1-2cm around exit site. Allow Cavilon™ no sting barrier to dry for a minimum of 30 seconds.

**Protects skin and improves adherence.**
**Documentation**

**LABEL** the dressing with the following information: date, time, and initial of the nurse performing the dressing change.

**DOCUMENT** on Central Line Flowsheet:
- procedure, date and time
- dressing used
- cleaning solution used (if patient uses alcohol free swab sticks)
- assessment of site and surrounding skin
- patient's response to procedure
- unexpected outcomes and related treatment
- any other actions or observations

**References**


CENTRAL VENOUS LINE DRESSING CHANGE: CUFFED CENTRAL VENOUS CATHETER, CUFFED PERIPHERALLY INSERTED CENTRAL CATHETER, HEMODIALYSIS/APHERESIS CATHETER, SHORT TERM CVC

DOCUMENT TYPE: PROCEDURE


Version History

<table>
<thead>
<tr>
<th>DATE</th>
<th>DOCUMENT NUMBER and TITLE</th>
<th>ACTION TAKEN</th>
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<tr>
<td>03-Oct-2018</td>
<td>CV.03.15 Central Venous Line Dressing Change: Cuffed Central Venous Catheter, Cuffed Peripherally Inserted Central Catheter, Hemodialysis/Apheresis Catheter, Short Term Cvc</td>
<td>Approved at: BCCH Best Practice Committee</td>
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