

AHA National CABS I Prevention Collaborative Action Plan

Performance Expectations	Considerations
Insertion	
1. Dedicated team with demonstrated competencies for placement & maintenance of central lines in NICU patients	- Insertion training course, including sterile technique, hand hygiene, use of maximum sterile barrier precautions, proper skin disinfection -Educational competencies for all aspects of care
2. Maximum sterile barrier precautions utilized	-Cover entire infant with sterile drapes or as much as affords safe observation. -Recommend staff wear face mask when within 3 feet of sterile field
3. Skin disinfected with Chlorhexidine (CHG) or povidone iodine (PI)	-Apply over 30 seconds & allow to dry (exception aqueous CHG)
4. All supplies required for the procedure should be available at the bedside prior to catheter insertion	-Consider the development of PICC/central line insertion carts
5. Hand hygiene standards met	
6. Insertion checklist utilized	-Standardize critical elements of line insertion -Ensure staff observers are skilled in monitoring elements of sterile technique.
7. Staff empowered to stop non-emergent procedure if sterile technique not followed	
Maintenance	
<i>Assessment & Site Care</i>	
1. Daily assessment and documentation of catheter need included as part of multidisciplinary rounds and review of daily goals	
2. Removal of catheters in place for nutritional purposes when infant reaches ≥ 120 ml/kg/day enteral nutrition	
3. Review dressing integrity and site cleanliness daily	No routine dressing changes, perform PRN using sterile technique and CHG or PI for skin antisepsis
<i>Tubing, injection ports, catheter entry</i>	
1. Use "closed" systems for infusion, blood draws & medication administration	-May use manufactured or improvised closed system. If stopcocks are used, port(s) are capped with swabable needleless connector(s). -Define consistent practice to be used when accessing catheters
2. Assemble and connect infusion tubing using aseptic or sterile technique. Configure tubing consistently for each type of arterial or venous access device.	- Sterile technique ideally includes sterile barrier for tubing assembly and wearing of face mask, hat, sterile gloves & 2 staff members performing connection to central catheter - Aseptic technique includes clean barrier for tubing assembly & wearing of clean gloves
3. Scrub needleless connector using friction with either alcohol or CHG/alcohol swab for at least 15 sec. prior to entry. Allow surface to dry prior to entry.	
4. Clean gloves for all device entries & hand hygiene utilized before & after glove use	Standard precautions
5. Use pre-filled, flush containing syringes wherever feasible	-Higher risk of contamination when flush withdrawn from another container by a nurse
6. Staff empowered to stop non-emergent procedure if sterile technique not followed	

Administrative Leadership	Considerations
1. Demonstrable administrative involvement in and support for achieving Zero Healthcare-Associated Infections	
2. Engage Staff with feedback	<ul style="list-style-type: none"> -Posting days since last CABS I -Posting CABS I rates -Annotate CABS I rates with descriptions and dates of practice changes -Celebrations of successes
3. Perform investigation and analysis of each CABS I	<ul style="list-style-type: none"> -Begin process within 24 hours of CABS I notification. -Review opportunities for system improvements after each event.
4. Competent trained personnel to perform specialized maintenance activities	<ul style="list-style-type: none"> -Consider specialized team for dressing changes, catheter repair, catheter clearance of blockage
CABS I Diagnosis And Classification	
1. Two blood cultures drawn from separate sites, following skin disinfection with PI or CHG, within 48 hrs of each other.	<ul style="list-style-type: none"> -One culture may be from a central line site if a second peripheral site is not feasible, taking into account circumstances such as vessel accessibility, pain and the infant's clinical status. -The recommended neonatal culture volume is ≥ 1 ml
<p>2. The diagnosis of a laboratory confirmed (LC) catheter-associated BSI (CABS I) can only be made in the absence of another clinically appreciated infectious focus, the presence of one or more positive blood cultures, and one of the following three criteria being met:</p> <p>Criteria 1) at least one blood culture growing a recognized pathogen (see Considerations); or</p> <p>Criteria 2) at least two blood cultures growing a recognized contaminant (see Considerations) and the presence of one (or more) clinical signs of generalized infection (either Fever $> 38^{\circ}\text{C}$ (see Considerations) or Hypotension; or</p> <p>Criteria 3) Age $< 1\text{yr}$ AND one of the following: Fever (see Considerations), Hypothermia ($<37^{\circ}\text{C}$ rectal), apnea, or bradycardia.</p> <p>See: http://www.cdc.gov/ncidod/dhqp/pdf/nhsn/NHSN_Manual_PatientSafetyProtocol_CURRENT.pdf</p>	<ul style="list-style-type: none"> - Recognized pathogens are those not named as common skin contaminants. - Common skin contaminants: diphtheroids, Bacillus species, Propioni-bacterium species, coagulase-negative staphylococci including S. Epidermidis, viridans group streptococci, Aerococcus or Micrococci -Fever: per the CDC's NHSN, the neonatal equivalents of $> 38^{\circ}\text{C}$ rectal are: (38°C rectal/tympanic/temporal art 37°C oral = 36°C axillary) -Hypotension is not defined further. -Hypothermia: per the CDC's NHSN, the neonatal equivalents of $< 37^{\circ}\text{C}$ are: (37°C rectal/tympanic/temporal artery = 36°C oral = 35°C axillary) <p>However this collaborative does not believe the temperature equivalences specified by NHSN realistically reflect their neonatal populations' temperature data.</p> <p>Instead the collaborative recommends that axillary temperatures should be considered a screening method; axillary temperatures $< 36.0^{\circ}\text{C}$ ($< 96.8^{\circ}\text{F}$) should be tentatively labeled as "hypothermia" and axillary temperatures $> 38.0^{\circ}\text{C}$ ($> 100.4^{\circ}\text{F}$) should be tentatively labeled as fever. <u>Because of the variability in axillary temperature readings, the presence of an elevated or hypothermic temperature will only be termed confirmed if there have been at least two consecutive abnormal axillary measurements or one abnormal axillary and one abnormal rectal (or other core) measurement.</u></p>

Adapted with gratitude from the CPQCC Bundle and PQCNC Action Plan