NICU Central Catheter Bundle

California Children’s Hospital Association-California Children’s Services

NICU Collaborative

1-15-08

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| **Insertion** |  |
| 1. Maximum sterile barrier precautions  | -Cover all infant with sterile drapes-Staff assisting at bedside with procedure  wear maximum barrier-Staff in immediate area wear face mask |
| 2. Skin disinfection – Chlorhexidine (CHG) or povidone iodine (PI) | -Apply over 30 seconds & allow to dry (exception aqueous CHG) |
| 3. Dedicated team for placement & maintenance  | - Insertion training course, including sterile technique, hand hygiene, use of maximum sterile barrier precautions, proper skin disinfection-Educational competencies for all aspects of care |
| 4. Dedicated cart containing all supplies for central catheter insertion | -Ensures supplies required to perform according to standards are located in one place |
| 5. Excellent hand hygiene |  |
| 6. Insertion checklist  | -Staff empowerment to stop non-emergent procedure if sterile technique not followed |
| 7. Optimal timing of CVC insertion | -Prevention of excessive venipuncture attempts |
| Maintenance  |  |
| ***Assessment & Site Care*** |  |
| 1. Daily documentation of catheter need  | -Consider removal when infant reaches >120 ml/kg/day enteral nutrition |
| 2. Reduce lipid days  | -Consider discontinuing lipids when infant reaches >2.5 gm/kg/day of enteral fat intake |
| 3. Daily review of dressing integrity and site cleanliness  | Change PRN using sterile technique and CHG or PI for skin antisepsis |
| ***Tubing, injection ports, catheter entry*** |  |
| 1. Closed systems – for infusion, blood draws & medication administration | -May use manufactured or improvised closed system. If stopcocks are used, they are capped with swabable injection port. -Define consistent practice to be used when accessing catheters |
| 2. Clean **or** sterile technique for infusion tubing assembly & connection. Consistent tubing configurations for each type of VAD | -**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-**Clean** technique includes clean barrier for tubing assembly & wearing of clean gloves |
| 3. Scrub injection port using friction with either alcohol or CHG/alcohol swab for at least 15 sec. prior to entry |  |
| 4. Clean gloves for all VAD entries & excellent hand hygiene | Standard precautions |
| 5. Use prefilled, flush containing syringes |  |
| ***Administrative***  |  |
| 1. Demonstrable administrative involvement in and support for achieving Zero Healthcare-Associated Infections  |  |
| 2. Staff feedback-Posting days since last CABSI-Posting rates of CABSI-Maintain an annotated run chart of practice changes associated with the rates of CABSI | -Celebrations of successes |
| 3. Perform root cause analysis for each CABSI | -Begin process ASAP & within 24 hours of CABSI notification. Review opportunities for system improvements after each RCA |
| 4. Surveillance activities of critical processes related to sustaining the gains:a. Hand Hygieneb. Adherence to unit catheter management and entry standardsc. Monitor patient processes off unit for bundle compliance d. Unit personnel support for the “Stop the Line” safety culture | a. Capture 50 HH observations/month/activity using consistent observersb. As above initially, then smaller volume less oftenc. 100% until stable satisfactory state reached, then periodically. Prospectively establish and maintain bundle compliance with off unit service departments, e.g. operating rooms (Anesthesiology and Pediatric Surgery), radiology suite (Radiology)d. Empower staff to stop intervention at any time when technique is breached. |
| 5. Dedicated trained team to perform specialized maintenance activities | -Consider team for dressing changes, catheter repair, catheter clearance of blockage |
| 6. Education for all staff caring for catheters | -Education to include all aspects of care related to catheter use.-Re-education on ongoing basis as compliance wanes over time |