



Standardizing Central Venous Catheter Lab Collection Process to Reduce the Risk of Central Line Associated Blood Stream Infection

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Background

According to the Centers for Disease Control CDC, an estimated 30,100 central line associated bloodstream infections (CLABSI) occur in acute care facilities each year. The Joint Commission National Patient Safety Goals recommends implementing proven guidelines to prevent CLABSI. In a major cancer center, with an average of 60 to 80 surgical procedures performed daily, the risk of CLABSI is significant considering the immunocompromised patient population. Post Anesthesia Care Unit (PACU) nurses committed to infection control developed a standardized process for collecting lab samples from the Central Venous Catheter (CVC).

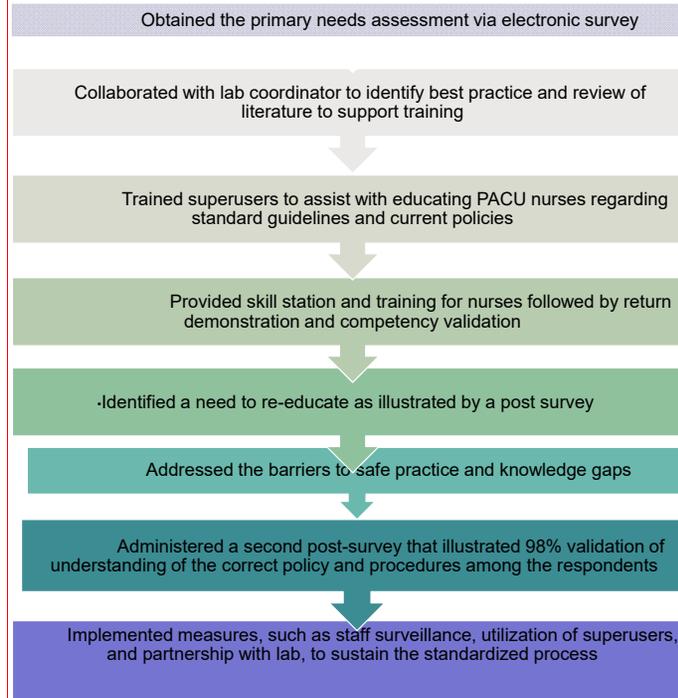


Objectives

- Identify barriers in obtaining CVC blood samples among PACU nurses
- Assess any knowledge deficit and barriers to safe nursing practice related to CVC blood draw
- Implement and educate nurses on a standardized process of CVC blood draw in compliance with institutional policy and CDC recommendations.



Implementation



Clinical Tips for Standardizing Collection

- Use only chlorhexidine to clean the port prior to collection
- Use alcohol to clean all tubes
- Clean blood culture bottles using chlorhexidine then alcohol for 15s each
- Need an MD order to use a port with TPN infusion
- NEVER use a port where chemotherapy or cyclosporine is infusing
- Do not draw coags from a CVC line with a heparin infusion
- If there is an MD order to draw coag studies through the CVC that has been heparin locked, 20ml of blood should be discarded and drawn as the last specimen
- Coag and therapeutic drug studies should not be drawn from a CVC

Statement of Successful Practice

Pre-survey results indicated knowledge deficits among clinical nurses related to proper disinfection, collection techniques, and institutional policies. The post survey results, following reeducation and simulation, illustrated 98% validation of understanding correct CVC blood draw policies and procedures to prevent CLABSI.

Implications for Perianesthesia Nurses

The use of standardized guidelines for the collection of blood samples from CVC lines can potentially reduce the risk of CLABSI. The use of skill stations to provide education can enhance understanding of correct policy and procedure as indicated by the post survey.

Acknowledgements

Jenise Rice MSN RN CPAN
Soo Ok MSN RN CPAN
PACU Nursing Team

References

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World Health Organization (WHO, 2014). Preventing bloodstream infections from central line venous catheters. Retrieved from the WHO webpage: <http://www.who.int/patientsafety/implementation/bsi/en/>

Other Sources:

UT MDACC Blood Sampling from Central Venous Catheter Competency Verification Criteria

UT MDACC CVC Line Draw Training Guide (Train the Trainer)

Atricia Jackson, Phlebotomy Trainer, General Services, UT MDACC

