



Make the Change: Using Disinfection Caps on Catheter Ports

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Introduction:

- A common cause of healthcare acquired infections (HAIs) in the United States is primary bloodstream infections due to peripheral or central catheter use
 - Guidelines for prevention of these infections include handwashing and scrubbing the catheter port with alcohol swabs before access
 - Although this is standard protocol, primary bloodstream infections are still prevalent in hospitals
- Changing the protocol from the use of alcohol swabs to disinfection caps imbedded with 70% alcohol can reduce the infection rate and save lives

Implications:

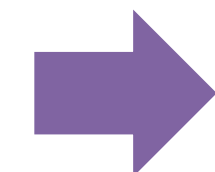
- Roughly 75,000 patients die each year from HAIs; 10% die from primary bloodstream infections
- Patients with HAIs are more likely to develop additional serious health complications
- Using disinfection caps can reduce the number of infectious organisms living on peripheral and central tubing and the ports

Research:

- Common infectious agents include: methicillin-resistant *S. aureus* and *Staphylococcus*, *Micrococcus*, and *Bacillus* spp (Wright et al., 2013)
- The risk of contracting septicemia, osteomyelitis, or endocarditis increases after acquiring an HAI (Langton, 2014)
- In one study, infection rates dropped from 12.7% to 5.5% after implementing the use of disinfection caps (Disinfection Cap Helps Reduce CLABSI rate, 2013)

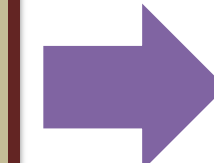
Plan:

- Gather relevant data
- Review the current policy on catheter port disinfection and statistics of primary bloodstream infections in the hospital



Do:

- Present research and plan for change to the hospital review board
- Assemble an associate meeting to discuss the change and the current literature
- Distribute and collect patient consent forms
- Educate physicians and nurses on the use of the new disinfection caps and begin applying the change
- Collect data over a three month period once implemented



Study:

- After three months, review the occurrences of HAIs and compare the statistics to those prior to the study
- Expect to see reduced rates of primary bloodstream infections related to catheter maintenance



Act:

- If the change results are successful, implement a new policy for the use of disinfection caps for peripheral and central catheter maintenance



References:

- Disinfection Cap Helps Reduce CLABSI Rate. (2013). *AACN Bold Voices*, 5(4), 10-10
- Langton, H. (2014). The management of central venous catheters and infection control: is it time to change our approach?. *Journal of Perioperative Practice*, 24(6), 141-146
- Wright, M.-O., Tropp, J., Schora, D., Dillon-Grant, M., Peterson, K., Boehm, S., Robicsek, A., Peterson, L. (2013). Continuous passive disinfection of catheter hubs prevents contamination and bloodstream infection. *American Journal of Infection Control*, 33-38