Spread Knowledge, Not Infection: An Educational Assessment of PICC Line Maintenance

Ashley M. Erwin BSN, RN
Lehigh Valley Health Network, Ashley.Erwin@lvhn.org

Anne L. Workman BSN, RN
Lehigh Valley Health Network, Anne.Workman@lvhn.org

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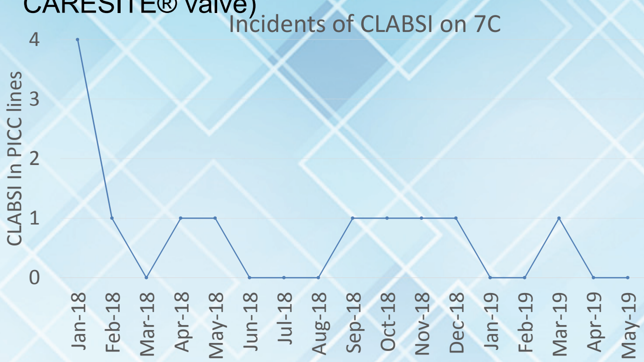
By: Ashley Erwin BSN, RN and Anne Workman BSN, RN

Lehigh Valley Health Network, Allentown, Pennsylvania

Background/Trigger

- Central line-associated bloodstream infections (CLABSI) are serious infections causing prolonged hospital stays, increased cost, and risk of mortality.[1.]
- LVHN Cedar Crest unit 7C has an increased incidence of CLABSI in peripherally inserted central catheters (PICC) than the sister unit at LVHN Muhlenberg
- 7C has an increased incidence with CLABSI in PICC lines versus Ports
- Inconsistencies between LVHN's policies were noted in the procedure for obtaining blood specimen via a central line – particularly related to needleless connector valve care (ULTRASITE® or CARESITE® valve)

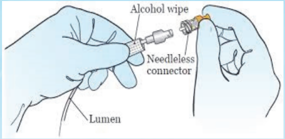


PICO

- In patients with PICCs, will re-education of nurses to use CDC and manufacturer recommended care of the line vs. current LVHN policy result in a decreased rate of CLABSI in PICC lines?
  - P – patients with PICC lines
  - I – Re-education of nurses to use the CDC/manufacturer guidelines
  - C – LVHN current protocol
  - O – decrease in incidence of CLABSI in PICC lines

Evidence

- "Of all the healthcare-associated infections, CLABSIs are the most costly, accounting for approximately $46,000 per case" (Haddadin & Regunath 2019).
- "CLABSIs lead to prolonged hospital stays and increase health care costs and mortality" (Haddadin & Regunath 2019).
- "[CLABSIs] are usually caused by contamination of the hub…often due to a breach of standard aseptic precautions to access hub" (Haddadin & Regunath 2019).



Implementation / Process

- Obtained monthly audits from 2018 forward of incidence of CLABSI in PICC lines on 7C
- Observed 7C RNs performing blood draws on PICC lines
  - To observe various techniques performed by each nurse compared to protocol
- Re-educated all RN's on proper technique for obtaining blood specimens from PICC line
  - Created TLC PowerPoint education tool
  - Current LVHN policy changes based on manufacturer guidelines – targeted on needleless connector valve removal / change
- Continue to review patient safety reports pertaining to incidence of CLABSI in PICC lines on unit 7C

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Results

- TLC completion on unit 7C was at 80%
- Patient Safety Reports on CLABSI rates in PICC lines will continue to be done each month
  - Rate of CLABSI in PICC lines following re-education – will continue to be monitored
- Data Collection: Observed technique of 15 RNs for obtaining blood specimens from PICC lines

	Registered Nurses on 7C
Washed hands and donned gloved for procedure	15/15
Changed needless connector more frequently than manufacturer recommendations	7/15
Use manufacturer recommended Aseptic Non-Touch Technique (ANTT) when changing needless connector	1/15

Outcome / Conclusions

- Needleless connector valves attached to the end of the PICC are only to be changed once a week OR if obtaining blood cultures – do not remove if obtaining any other lab specimen
- When changing needleless adaptor (ULTRASITE® or CARESITE® valve), use strict ANTT
- A setback on this project is time. Audits will continue to be done monthly at LVHN on CLABSI rates, but are unable to determine effectiveness of this project until more results are available in the months to come