

Decreasing Blood Stream Infection with Alcohol Impregnated caps (Curo) on all Vascular Access Devices

Background:

Historically, the Centers for Medicare and Medicaid Services (CMS) placed much emphasis on preventing CLABSIs, (Central line associated bloodstream infections) which resulted in innovation in practices on management of central lines. Routine use of alcohol-impregnated caps is well recognized and implemented for helping to prevent CLABSIs. More recently, CMS has been exploring placing the same emphasis on BSIs (bloodstream infections) from all vascular access devices, including peripheral IVs (PIVs), because of updated recommendations from the Infusion Nurses Society (INS).

Purpose:

To remain ahead of this curve, this project investigates the possibility of reducing BSIs by applying Curo caps on all VADs for the hospitalized patient rather than the current practice of applying only to patients with central lines.

Methods:

Retrospective data between 11/1/2019 and 11/1/2020 was collected for this quality improvement project. Positive blood cultures drawn at more than 48 h after admission were evaluated for potential VAD related BSI. Elimination criteria were earlier positive blood cultures within the first 48 h of admission, considered contaminated, or another source of infection was identified. This resulted in 46 potential BSI (bloodstream infections) associated with VADs. The COVID19 pandemic put a hold on this project. Then revitalized in 2023, 3 months retrospective data were collected from 1/1/2023 to 3/31/2023 with the same elimination criteria 15 potential BSIs were identified. Curo caps, once removed, are ready for the attachment of a syringe. We looked to determine how often the hub was properly prepared for drug administration. Data were collected to determine nurses are scrubbing the hub for full 5 s further evidence that a Curo cap would help keep the patient safe from BSIs. In 30 observations only 20% scrubbing for the full 5 s. A 90-day test of change was performed on a 30-adult bed unit where Curo caps were placed on all VADs.

Results:

The 90-day test of change using the same criteria as pre-trial resulted in no potential BSIs. When comparing the pre-data infection rate for this unit the expected positive BC would

have been 3.25. This data suggests a significant elimination of BSIs with the application of Curoc caps.

Conclusion:

BSIs for the hospitalized patients can be reduced by applying Curoc caps to all VADs.