Improving Vascular Access Outcomes Through the Implementation of PowerGlide Midlines in a Community Hospital Setting

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BACKGROUND

Peripheral vascular access is a critical component of inpatient care. Traditionally, patients requiring extended intravenous therapy often received multiple PIVs or are escalated to a PICC , both of which carry risks. In 2024, our hospital's newly formed Vascular Access Team implemented the use of Power Glide™ midlines as an alternative for patients requiring intermediate-duration IV therapy. This project aims to evaluate the clinical and operational impact of Power Glide midline adoption on device utilization, patient satisfaction, and vessel health.

PURPOSE

The purpose of this study was to assess the impact of implementing Power Glide midlines on vascular access outcomes, reduction in PICC utilization, assisting in decreasing central line usage days, improvement in patient and nursing satisfaction, preservation of vessel health, and overall efficiency of vascular access management within our hospital.

METHODS

We conducted a retrospective analysis of vascular access device data after the implementation of Power Glide midlines over a 4-month period beginning in January of 2025. Data points included number of Power Glide midlines placed, PICCS downgraded to midline, patients discharged with Midline, Midlines maintained for the duration of the hospital stay, midlines placed on one attempt and Midlines placed on 2 attempts.

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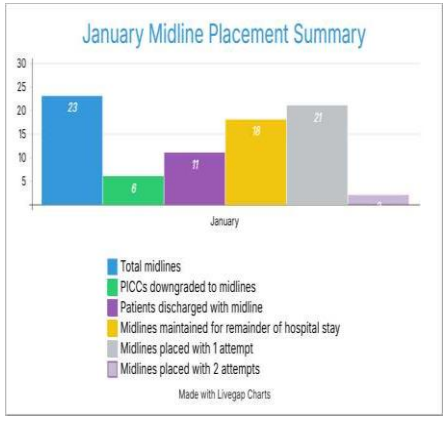

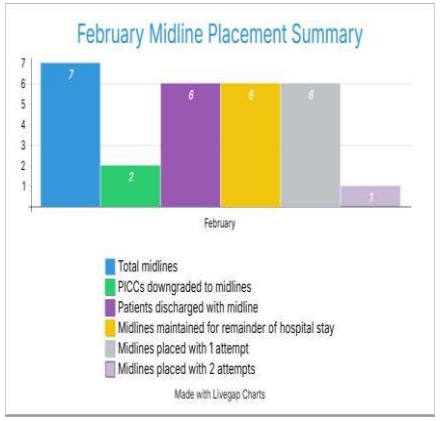

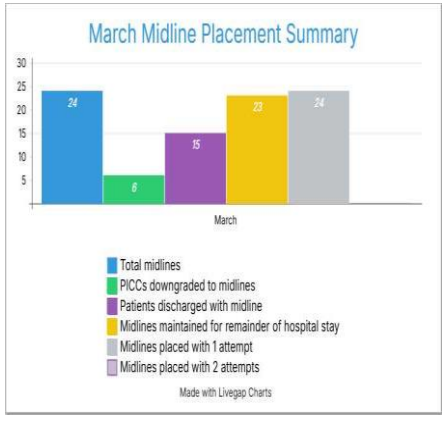

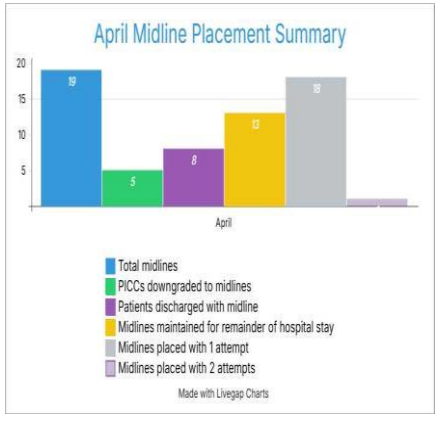

RESULTS

January-April of 2025

*73 total Power Glide Midlines were placed. Of this total number 19 (26%) were originally ordered as PICC insertions. However due to the availability of the Midline device the IV team was able to evaluate the patient's prescribed infusion and pertinent history. Ultimately, if the patient could be equally served by a less invasive device, then the provider was notified to offer this option for therapy. This practice thereby decreased Central line days which ultimately assisted in minimizing potential CLABSI occurrence.

*40 patients with Midlines (55%) were discharged with the Midline in place for post acute IV infusion therapies. This number proved very impactful as it promoted vessel preservation by offering a device which can dwell longer – thereby minimizing re insertion of Vascular Access devices for patient need access beyond the capacity of a Short peripheral IV.

*60 of the devices (80%) dwelled successfully for the patient's entire hospital stay. This robust number proves the efficacy of the device as minimal complications were noted that required premature removal.

*5 Midlines (5%) required a second attempt for successful insertion. Overall, the Midline has proven to be a quicker and more efficient device for placement as opposed to PICCS which proves to help with time management and effective resource utilization for UMC staff. More importantly patient satisfaction can only be positively enforced as these devices a minimizing needs for re-insertion.

CONCLUSIONS

Midline catheters offer a dependable vascular access solution for patients requiring prolonged treatment or those with challenging venous access. Additionally, implementing nurse driven midline programs alongside evidence based selection protocols, has enhanced the clinicians ability to choose the most appropriate device for the patient, while helping to minimize unnecessary central line placements