Analyzing Midline and UGPIV Catheter Utilization Trends (2021-2024)

Jona Caparas, MSN, RN, VA-BC, Cynthia Valcorza, BSN, RN,VA-BC

BACKGROUND

- The Vascular Access Team (VAT) primarily utilizes Midline catheters for peripheral infusions and patients with poor venous access.
- Standard peripheral intravenous catheters (PIVCs) are often placed by unit nurses, potentially increasing the risk of infection and requiring additional venipuncture attempts.
- Midline catheters are more costly than UGPIVs. Infusion Therapy Standards of Practice recommend using ultrasound for PIVC and Midline insertion to minimize venipuncture attempts and reduce the need for central venous access.
- By analyzing trends in device utilization, we can identify opportunities to optimize vascular access practices, improve patient outcomes, and reduce healthcare costs.

METHODS

- **Order Review:** The Vascular Access Team reviewed all midline placement orders to ensure they were appropriate based on patient needs.
- **Data-Driven Selection:** We used data to choose the best catheter for each patient and avoid unnecessary midline placements.
- **Data Collection:** We gathered data on midline and UGPIV catheter placements from electronic records.
- **Data Analysis:** We analyzed the data to see how many of each type of catheter were used each year.

RESULTS

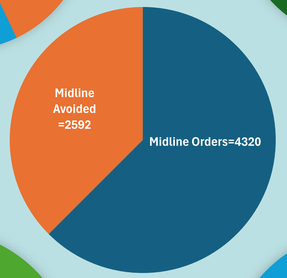
2021-2024

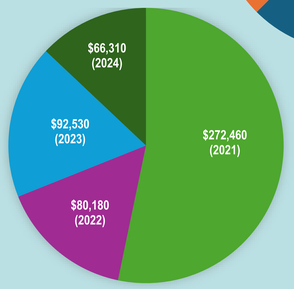
Midline Placement *37.71% ↓*

UGPIV Placement *↑82.71%*

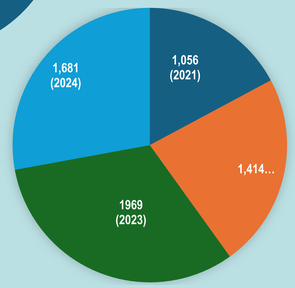
Midline orders

Midline placed





Yearly Cost savings



UGPIV placed

Total cost savings

$511,480

RESULTS

- Midline orders were cut by 37.71% from 2021 to 2024 with a corresponding decrease in placements.
- UGPIV placements steadily rose by 82.71%, indicating successful adoption of the alternative.
- This shift in practice led to estimated cost savings of $511, 480 over four years.
- Fewer sticks and faster placements with UGPIVs improved the overall patient experience.
- UGPIVs preserved valuable upper arm veins for future access, reducing complications.

CONCLUSION

- A shift towards less invasive vascular access devices is evident, driven by technological advancements, increased awareness of complications, and evolving clinical guidelines.
- Ongoing monitoring of device utilization trends, adherence to updated clinical guidelines, promoting evidence-based practices, and considering patient factors are crucial to optimize vascular access practices.
- UGPIVs offer a promising solution, improving patient outcomes, reducing costs, and enhancing resource utilization.

For more information, please contact:
Jona Caparas, RN at: joc9126@nyp.org
Cynthia Valcorza, RN at:cyv9007@nyp.org

REFERENCES