Establishing Intravenous Access in an Ambulatory Surgery Center

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Introduction

- Several factors can cause difficulty securing peripheral intravenous (PIV) access in ambulatory surgery center (ASC) patients[1]
- Difficult intravenous access (DIVA) can lead to higher healthcare costs, delays in care, and patient anxiety or discomfort[2]
- Although ultrasound guidance for PIV placement is within nursing scope of practice, zero perioperative nurses at this site had ever received training or education to utilize this tool

Purpose

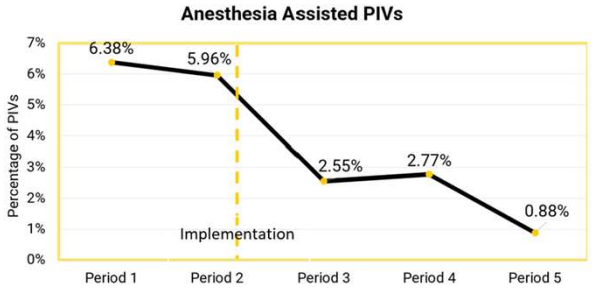
To implement evidence-based recommendations for use of ultrasound guidance to place PIVs in the ASC

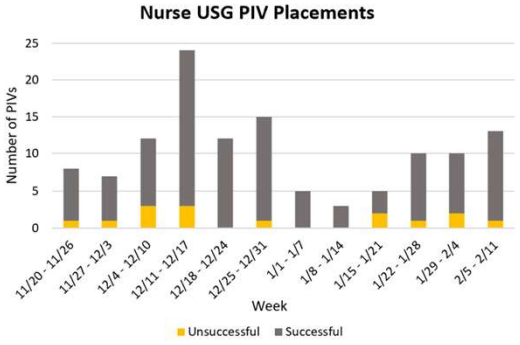
1. Objective 1: Train nurses to use ultrasound to competently place PIVs
2. Objective 2: Preoperative PIV placement by nurses will be successful 95% of the time within 2 attempts
3. Objective 3: Eliminate case start delays, cancellations, and all issues related to PIV placement in the ASC

Methods

- Project was deemed not human subjects research
- Population & Setting: pediatric and adult patients at a busy ambulatory surgery center
- Mastery based learning checklist used to assess competence developed using Modified Delphi method

Outcomes





Year	Case Delays	Cancellations
2022	19	1
2023	26*	0
2024	0	0

*Only 1 case delay after USG PIV training was completed in November 2023

Evaluation

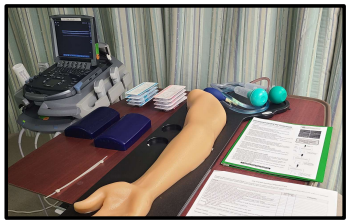
- Five nurses were trained to competency in USG PIV placements, and have since placed 124 successful ultrasound-guided PIVs
- Press-Ganey patient satisfactions scores reflected a 2.39% increase in ratings for "skill of nurse starting PIV" less than two months after training was completed (this is up 6.23% from pre-project scores)
- Less than 4% of ASC patients have endured >2 attempts for successful IV placement since Fall 2022, with an average of 2.4% of patients requiring >2 attempts in 2023

Limitations

- Time constraints and scheduling needs presented obstacles to training higher numbers of staff
- Patients not stratified based on predicted difficulty of IV access

Conclusions

- Train the trainer model used to create sustainability of project
- Interrater reliability established among future trainers, including department educator and assistant nurse manager
- Disseminated at department grand rounds, Iowa Association of Nurse Anesthetists state meeting, and open access digital repository



References

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