Peripheral IV cannulation is the most common invasive procedure performed in hospitals. Obesity, diabetes, chronic kidney disease, and IV drug use are common comorbidities seen in today’s population that make IV cannulation more difficult. Studies show a 98% first time success rate with ultrasound-guided IV insertion. Despite these promising statistics, CRNAs are not routinely trained in ultrasound technique. The purpose of this QI project is to increase CRNA preparedness in the utilization of ultrasound (US)-guided peripheral intravenous (IV) access at a university hospital through the implementation of an evidenced-based peripheral IV placement education bundle.

**Background**

- Peripheral IV cannulation is the **most common** invasive procedure performed in hospitals.
- Obesity, diabetes, chronic kidney disease, and IV drug use are common comorbidities seen in today’s population that make IV cannulation more difficult.
- Studies show a 98% first time success rate with ultrasound-guided IV insertion.
- Despite these promising statistics, CRNAs are not routinely trained in ultrasound technique.

**Methods**

**Participants:**
- Staff CRNAs at a university affiliate hospital
- Inclusion criteria: all genders, all races/ethnicities, part-time and full-time employees
- Exclusion criteria: locum CRNAs
- 38 total participants

**Process:**
- This QI project was implemented from July 25 - September 15, 2023, following IRB approval by the university school of nursing subsidiary.
- A video-guided PowerPoint presentation was provided to all participants via the institution’s education system.
- Upon completion of the module, two hands-on training sessions were implemented in which participants were checked-off by project team members.
- A post-intervention survey was distributed to project participants.

**Framework**

88% of survey respondents indicated an increase in their ultrasound skills and confidence. 100% stated the intervention was helpful in learning this new technique. 18% of participants report using the US more often in practice. Survey results demonstrate positive feedback to intervention and highlight opportunities for additional quality improvement measures.

**Implications**

- Education and hands-on skills sessions increased provider confidence in US use.
- Future QI projects may see a benefit from educating perioperative nurses and other groups of healthcare workers in US-guided peripheral IV insertion.
- Education on US utilization for IV insertion could increase efficiency in the perioperative setting.
- Fewer IV attempts leads to increased patient satisfaction.

**Results**

- **Focus:** Identify the educational practice gap of lack of formal ultrasound training for CRNAs inserting peripheral IVs.
- **Analyze:** Literature review to assess evidenced-based practice education for ultrasound-guided peripheral IV techniques.
- **Develop:** Development of evidenced-based peripheral IV placement education bundle.
- **Execute:** Execution of peripheral IV placement bundle including pre-recording of instructional video and hands-on training sessions.

**Bridging an Education Gap: Ultrasound Guided Peripheral IVs**

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