

**Ultrasound Guided Peripheral Intravenous Catheter Placement Implementation in a
Community Hospital**

Alexander Gray Caruso

Under Supervision of

Marilyn Miller

Second Reader

Jana Goodwin

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School of Nursing, University of Maryland at Baltimore

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Abstract

Problem: At community hospital intensive care unit (ICU), patients are having venipuncture attempted on them, on average, every day of their hospital stay. Furthermore, according to a 2022 internal survey, the mean dwell time of peripheral intravenous catheters (PIVC) was just two days. When PIVC cannot be placed or maintained, providers order a central line to be placed, and there are multiple initiatives in place to reduce the number of central lines placed.

Purpose: The purpose of this project was to implement nurse placed ultrasound guided PIVCs in critical care and to implement the adult difficult venous access (A-DIVA) tool to decide which patients would benefit from placement of an ultrasound guided PIVC (USGPIVC).

Methods: Eleven bedside RNs were trained to place UGPIVC by a professional trainer during 6–8-hour training sessions. The training sessions will include a didactic section, practice on a vein block and time to place UGPIVCs on patients. All staff who trained were deemed competent if they placed three UGPIVCs independently. All ICU nurses were trained to use the adult difficult venous access tool (A-DIVA) which determined which PIVC placement method should be attempted.

Results: 29 percent of PIVCs placed were USGPIVCs. Only 10 percent of patients who had access placed in the ICU had A-DIVA documentation.

Preliminary Conclusions: The interventions increased USGPIVC from none placed to a significant part of the PIVCS placed. This study shows USGPIVCs can be implemented in the ICU.