Training and Utilization of Ultrasound Guided
Peripheral IV Placement by Nursing Staff

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Introduction

Ultrasound guided peripheral IVs (USPIVs) are a relatively new way to address the problem of patients with difficult to access blood vessels. Current procedure is to call for assistance from out-of-department specialists (IV therapy) or to ask non nursing providers to place IVs which results in delays in patient care. Ultrasound devices are quickly becoming widely available in Emergency Departments. Capable and experienced nurses are an invaluable resource that with capable training can be equipped to utilize Ultrasound devices and minimize the time to place IVs in difficult patients. This has the potential to result in the department becoming more self sufficient, to expedite patient care, to cause less failed IV attempts, and to result in higher patient satisfaction.

Abstract

A group of capable and qualified nurses volunteered to take part in a US training course. These nurses will be utilized to ensure effective metrics are in place to allow the process to be applied to a broader group of participants within the Emergency Department or other departments within AOMC. Surveys will be used to determine efficient metrics in gauging comfortability with ultrasound devices, the individuals comfortability with placement of IVs in difficult patients, and specifically with USPIVs pre- and post- training. Individual interviews with the pilot members will be compared with the surveys and feedback obtained to help modify the surveys to be more easily applied to a broader group of participants and provide effective metrics.

Methods

- Obtain Volunteer Group Members
- Survey Members Pre-Training
- Provide one (1) training session on USPIVs
- Provide sufficient supervision for nurse sign-off
- Survey Group Members Post-Training
- Interview Group Members
- Prepare for small scale ED Study

Results/Discussion

Results have demonstrated various hindrances in the first two groups. While the training was reportedly effective, the sign-off process length varied significantly amongst the small number of volunteers. Possible causes for this variation include, disruption of work flow, and steepness of the learning curve infrequency of needing to utilize an US to obtain IV access. The surveys include largely subjective data that is difficult to quantify. This is due to the nature of IV placement and the lack of objective recorded data from which to pull.

References


Moving Forward

Nurse experience with ultrasound devices varies greatly from institutions and departments. Nurses are experienced and efficient in placing peripheral IVs, however there are some patients that are difficult to obtain access, regardless of nurse skill level. Current guidelines require out of department or provider assistances which results in a delay of care and potential inefficient use of resources. US is already readily available at AOMC. The pilot group members have demonstrated an increase in USPIV proficiency with minimal training an no additional capital costs. One of the changes made to the program was to have smaller class sizes offered at many more time slots to help align with the various volunteers’ schedules. This was well received by the nurses and many more were interested in participating for this reason alone. A repeat ED session will resume prior to the coming of the new resident intern class. With more nurses trained in USPIV the goal is to help the AOMC Emergency Department become more self sufficient while also providing more timely care of patients and higher patient satisfaction for those with difficult IV access. The importance of self-sufficient departments is even more emphasized with the current pandemic and strict provider assignments in place with high risk patients.