Creating Healthy Work Environments 2019

Clinical Significance of a Nurse-Driven Vascular Access Protocol

Cheryl L. Campos, DNP-C, MSN, RN-BC, CEN
Quality Management Services, Salinas Valley Memorial Hospital, Salinas, CA, USA

A lack of standardized practice in IV placement and inconsistent availability of advanced-skilled vascular access nurses was identified at an approximately 275-bed hospital. To address the gap in practice, a performance improvement project was piloted on four medical/surgical units using the standard plan-do-check-act method of quality improvement and Donabedian’s theory of quality assurance in healthcare. The aim of the project was to determine if, in an adult population with difficult venous access (DVA), would the use of an evidence-based vascular access protocol and development of a specialized nurse team affect first-time success rates, cost, catheter dwell times, and complications of peripheral vascular access placement. Several of the Infusion Nurses Society 2016 Infusion Therapy Standards of Practice were incorporated into a nurse-driven protocol and workflow for the identification of DVA patients and combined with an evidence-based practice vascular access device (VAD) selection algorithm to guide nursing actions and improve clinical outcomes.

Clinically significant findings included decreased time from the call for assistance to successful placement of difficult IVs, as well as higher first-time attempt success rates and longer catheter dwell times when guide wire assisted peripheral IV catheters were inserted by specialty vascular access nurses. Opportunities for cost savings were identified by decreasing the number of attempts required to place an IV, fewer IV restarts, and prevention of advancement to more invasive lines. The cost analysis provides preliminary support that can be used when considering hiring additional staff to provide VAD placement after-hours and on weekends.

The results demonstrate the value of translating evidence in VAD placement into practice and the leveraging technology to improve patient outcomes through the use of EBP in vascular access. Recommendations for further study include expanding the project hospital-wide and repeating PDCA cycles. The nurse-driven protocol can implemented at other similar organizations where nurses are primarily responsible for placing peripheral vascular access devices.

Title:
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Difficult venous access, Nurse-driven protocol/evidence-based practice and Vascular access nurse

References:


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Carr, P. J., Rippey, J. C. R., Cooke, M. L., Bharat, C., Murray, K., Higgins, N. S., . . . Rickard,


Abstract Summary:
A PI project was conducted to evaluate patient outcomes resulting from implementing an EBP nurse-driven protocol for vascular access placement. The protocol included several Infusion Nurses Society 2016 Infusion Therapy Standards of Practice and identification of the most appropriate vascular access device per an EBP VAD selection algorithm.

Content Outline:
Problem Description

Best Practices

Rationale

Aims

Theories/Methods

Study of the Interventions

Specially Trained Vascular Access Nurses (Skills and availability at the project facility)

Nurse-drive Protocol for Difficult Venous Access Patients

Evidence-based Vascular Access Device Selection Algorithm
Measures

Analysis

Clinically Significant Findings

Cost Analysis

Final Outcomes

Limitations

Conclusion/Next Steps

First Primary Presenting Author

Primary Presenting Author
Cheryl L. Campos, DNP-C, MSN, RN-BC, CEN
Salinas Valley Memorial Hospital
Quality Management Services
Clinical Performance Improvement Specialist, Peer Review Specialist
Salinas CA
USA

Professional Experience: Cheryl Campos is a Clinical Performance Improvement Specialist at Salinas Valley Memorial Hospital in Salinas, California. She earned her BSN from Chico State and her MSN from University of Phoenix. She completed her DNP through Capella University in September 2018. Ms. Campos has over 20 years of emergency nursing experience and has been teaching since 1994. She is board certified in Nursing Professional Development and is a Certified Emergency Nurse. She is a member of the Omega Gamma Chapter of Sigma Theta Tau International Honor Society of Nursing, the American Nurses Association, Emergency Nurses Association, Infusion Nurses Society, and Association for Vascular Access. She has successfully implemented an ultrasound guided IV insertion program at Salinas Valley Memorial Hospital and is working on completing her Doctoral project in Improving Patient Outcomes in Nurse Placed Vascular Access Devices.

Author Summary: Presentations on the Implementation of AccuCath/Ultrasound guided Peripheral IV insertion in the ED at the ENA 2017 National Conference, the Infusion Nurses of Oregon Fall Conference October 2018, and Arizona Vascular Access Nurse Association Kick off Dinner February 2018 Poster presentation on Stepping up our Game for New Grads at the Stanford Healthcare Research and Education Conference March 2018 Poster presentation on Improving Patient Outcomes in Nurse-Placed Vascular Access Devices SVMH Hospital Week May 2018