

From Capstone Project to Production: The Return of Clinical Decision Support for Operating Room Nurses

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Introduction/Background

Peripheral nerve injuries (PNIs) are an adverse complication from surgery. PNI's are defined as the interruption of electrical activity that affects either the motor, or sensory, or both nerve functions. The causes of a PNI are considered multifactorial. Risk factors play a significant role in increasing a patient's susceptibility¹. This quality improvement project aim was to introduce operating room nurses to a decision support screen that helped the nurses identify patients who were at higher risk of developing a PNI, offer evidence-based nursing interventions, and provide a reminder to document. The post-project results and surveys indicated that the OR nurses wanted to continue using the decision support screen. The opportunity to have this return for the OR nurses appeared when the organization decided to go to one electronic health record (EHR).

Aim

The purpose of this best practice advisory is to raise awareness of PNI and improve documentation. It will also help to raise the OR nurses awareness on this important patient safety issue by appearing for the nurse if patient has two or more risk factors for PNI. This was given final approval from the organization's CDS Committee to be built for the OR nurses.

Challenges

The build team worked with the designer to ensure that this advisory screen will assist, and not interrupt the OR nurses workflow. This was important to ensure the OR nurses will continue to use the advisory. The advisory is directed for OR nurses to appear within the Best Practice section of the OR record. Due to system limitation, this advisory may appear for all nurses during the patient's perioperative phase but will not interrupt their work.

Discussion

Although this advisory will appear for other perioperative nurses, it is intended for OR nurses to reposition the patient four hours after incision. This is stated in the display text of the advisory. It is hoped that this will encourage dialogue among the nurses that the patient has been identified as a PNI risk, and to plan accordingly with patient positioning. In the capstone project, the risk factors were entered manually by the OR nurse. The new EHR will bring forward these risk factors based upon the patient's preadmission assessment. The advisory is set as a recommendation therefore a response is not required from the nurse. If the nurse responds with "Action done" or "See Comments", the advisory disappears for four hours and then reappears to remind the nurse the patient is at risk for PNI. The nurse can choose to disregard the advisory and will not interfere with their workflow. The time element was determined upon the literature research². There will be an opportunity, once implemented, to run a report to see how many nurses use the screen, what response was used, and if the application increased their documentation.

References

1. Beckett, AE. Are we doing enough to prevent patient injury caused by positioning for surgery? *Journal of Perioperative Practice*, 2010; 20:1: 26-29.
2. Bouyer-Ferullo, Sharon. "Preventing perioperative peripheral nerve injuries." *AORN journal* 97.1 (2013): 110-124.