

Background

Perioperative management of patients with cardiac implantable electronic devices (CIED) is essential for safe patient care. At the University of Michigan Cardio-Vascular Center, the pre & post-anesthesia recovery unit (PACU) nurses are responsible for identifying CIEDs patients and ensuring appropriate cardiac monitoring. Our nurses rely exclusively on the expertise of the device team for pre & post-surgical CIED management. Although this is a safe practice, it is apparent a vast knowledge gap exists amongst the peri-operative nurses relative to the fundamentals of CIEDs; specifically when trying to interpret the information provided by the device team. When informally surveyed about this educational gap, nurses were impartial about the relevance it may have on their clinical practice.

Currently the CVC PACU does not have educational competency requirements for understanding CIED fundamentals nor is it addressed in unit orientation for new nurses. We were unable to find any guidance offered by ASPAN, and little was published in the nursing literature that addresses the need for this type of perioperative competency. **The chasm between what is assumed to be understood and what is actually understood, is wide open.**

Methods

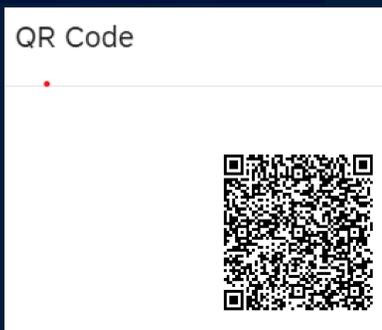
Using a Qualtrics 25-point questionnaire we surveyed pre-existing knowledge in order to prepare an educational program. Based off the results of the survey, education was provided via in person in-services, on-line training, pocket cards, and a CIED reference binder with journal articles, EP algorithms, and quick tips, also made available in a nursing shared drive. A post education survey was conducted. Results recorded.

A final evaluation survey was issued to determine whether this outreach of inquiry provided enough of a consensus amongst nursing staff to establish a unit-based competency for CIEDs.

Educational Material



Qualtrics survey



Conclusions

Nursing staff identified a knowledge gap in caring for patients with implanted cardiac devices.

An educational training program was designed to address the knowledge gap.

The process was significant enough that the nurses chose to have training incorporated into the CVC PACU orientation program and become an annual competency requirement for working in this specialty area.



Results

Question Content	Pre-Test % Proficiency	Post-Test % Proficiency
Magnet ICD	20%	66%
ICD pacing & shocking	30%	90%
DDD mode	60%	44%
ERI indication	10%	100%
VOO mode	50%	100%
Leadless magnet response	30%	77%
Magnet VT	50%	100%
Magnet Pacer	40%	66%
EMI indication	66%	70%
Bi-v pacing	50%	77%
Nurse Understanding	40%	100%
Annual Competency for Unit Vote		100%

Goals

The overall goal of this innovative initiative is to successfully introduce educational training that will demonstrate the need for CIED competency requirements to nursing staff who already have established nursing care standards.

Our specific goals are:

- 1) to demonstrate the existing knowledge gap regarding the fundamentals of CIED's and its applicability to patient care using an online anonymous survey questionnaire.
- 2) to create and provide educational training and resources to staff through a variety of modalities based off the results from the initial questionnaire.
- 3) to reflect a substantial impact on the pre-existing knowledge base in comparison to a similar post-training survey questionnaire.
- 4) to encourage professional accountability by having nursing staff collectively determine whether to implement a unit based annual CIED competency requirement as a qualification for staffing in this specialty area based on results between both surveys and the impact the education has had on their own "knowing".

Significance

It is difficult to measure the impact on patient care directly, but it is expected that when educational requirements are instituted to augment the level of nursing knowledge relevant to clinical practice, where little existed prior, and hold nurses accountable to these requirements, what was unknown, becomes known, and when we begin to recognize the significance of what we did not know, we raise the bar for nursing competency requirements and that translates into improved patient care, safety and clinical outcomes.

References

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