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Application for Innovation Award

Title of Submission -A novel approach to teaching a surgical skills fair to nurses: Utilizing the Surgical Technology and Technique (STaT) Lab and applying principles of cognitive learning theory.

For various reasons, there has been a growing proportion of novice nurses on the surgical floor at our institution. Nursing turnover has resulted in less experienced nurses acting as a resource to the beginner. This in turn creates a knowledge gap of critical thinking. At baseline nursing education can be a challenging process. The logistics of varying schedules, management of care for continued high volume and complex pediatric surgical patients, learning types, experience level and financial availability continue to pose questions of optimal learning platforms and technique. Traditionally, nursing education is provided in a lecture style/PowerPoint format in a "lunch and learn" environment. Teaching sessions are often rushed and not well attended.

Our goal was to utilize our STaT lab to teach a surgical skills fair to nurses while incorporating the six concepts of cognitive learning theory: retrieval practice; spaced learning; interleaving; self-practice; reflection; and elaboration (McSparron et al 2018). The surgical skills fair focused on teaching skills related to all types of surgical drains, chest tubes, enteral and cecostomy tubes, as well as, ostomy care. The teaching style utilized offered maximal "hands on" learning and minimized use of repetitive power point slides. Nurses were provided protected time away from the clinical environment to learn and reflect. Although novel, the approach would optimize clinician to bedside nurse dialogue of basic knowledge concepts, critical action steps and complex principles. Our hope was that this skills fair would be a catalyst for change in the way we approach teaching surgical nurses.

We identified all key stakeholders which included: the nurse manager of the surgical unit, clinical leadership nurses , the unit based clinical nurse specialist , surgical advanced practice nurses (APN), wound ostomy and continence nurses (WOCN) and expert nurse clinicians.

Our initial goal was to enroll and teach all 78 surgical nurses from novice to expert. We offered 6 sessions which included day, evening and night time sessions to capture nurses that work all shifts. The skills fair was 4 hours in length. The classes were offered from 3/26/2018-4/25/2018.

We recruited nurse experts in the field and then developed the curriculum based on frequent topics asked from unit staff. Curriculum was focused on surgical drains such as: JP,TLS, Blake, Hemovac, Penrose and pigtail catheters, chest tubes and chest tube drainage systems, salem sump and replogle

tube basics and the diverse group of enteral feeding tubes at Our institution. Colostomy and ileostomy care was highlighted in the curriculum with a “hands on” experience by pouching all types of stomas using fabricated silicone ostomy models built in our lab. We did not endorse any particular products during our teaching sessions.

McSparron et al describe that cognitive learning is about thinking to learn, they suggest that by integrating aspects of this theory into clinical teaching would greatly enhance knowledge retention and application (2018). We applied active learning strategies such as "hands on" learning rather than passive learning such as power point slides to enhance retention of the material. We included frequent questions during the skills fair to be sure that we understood the learners needs. Clinical scenarios were used to enhance discussion. We incorporated “why” and "what if" questions to encourage critical thinking. Hypothetical situations were presented to the learner and open discussion about decision making was encouraged. We observed learners demonstrate technical skills such as gastrostomy tube changes and ostomy pouching and provided real time feedback to help strengthen their new skill set.

Outcomes achieved

With the undying support of the leadership nurses we successfully enrolled all of the surgical nurses in the skills fair. We utilized Survey Monkey to evaluate the skills fair. Of the 78 attendees, 56% answered the survey. As expected, 45 % of nurses had 1-3 years if nursing experience. Overall, the results showed that the learning needs of the group were met and that the skills fair was the right length of time. 74% of nurses strongly agreed that the skills fair would impact their practice. Interestingly, 31% felt the skills fair would improve their confidence, 45 % felt it would improve their performance but only 22 % felt that the skills fair would improve patient outcomes. The nurses were clearly able to identify 2 new skills they learned to during the skills fair.

After reviewing the survey results, we identified that smaller group sizes would make for more time for hands on experiences. Also, it is essential to recruit teachers that feel comfortable applying the teaching strategies outlined herein versus more traditional lecture style teaching.

The Skills fair was overwhelmingly successful. Since 2018, we continue to offer this class quarterly at our institution. We continue to critically evaluate the class using survey monkey and have made adaptations when applicable. We have enrolled 24 more nurses and 2 APNs since its inauguration. The nurses loved this teaching style so much that we have started to have small breakout sessions such as a 1 hour “hands on” session focused on chest tube management.

This work directly aligns with APSNA’s mission to promote excellence in pediatric surgical nursing practice through research, professional collaboration and peer support. This skills fair could easily be replicated by any APSNA member that desires a truly rewarding teaching experience. Our future plans include a publication of our curriculum to include a user manual of sorts, so that the teacher can pose thought provoking questions and provide real life scenarios.

References-

McSparron, J., Vanka, A., & Smith, C. (2018) Cognitive learning theory for clinical teaching. *The Clinical Teacher*, 15, 1-5.