

Assessing Nursing Knowledge and Confidence of Operating Room Standards for Emergency Trauma Operations

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Clinical Issue

- The Institute of Medicine mandated 90% of nurses' clinical decisions based on evidence by year 2020.
- New nurses are being educated to utilize evidence-based practice such as the Trauma Nurse Core Course Training, which provides core-level trauma knowledge.
- We sought to determine the peri-operative nursing knowledge and confidence of Operating Room Standards for Emergency Trauma Cases followed by re-assessment after an educational intervention.

Description of Team

- At Vanderbilt University Medical Center (VUMC), the Peri-operative Service is divided into five specialty service.
- Each service consists approximately of 15 circulating nurses and 13 scrub technicians.
- VUMC provides level one trauma care for 65,000 square miles; averaging >3,000 trauma admissions annually.
- All peri-operative nursing staff must be knowledgeable and skilled to participate in an Emergency Trauma Operation.
- Emergency Medicine and Trauma Team personnel are involved in resuscitations and hand-offs to the multidisciplinary Peri-operative Trauma Team.
- The Peri-operative Trauma Team consists of Trauma Surgery, Anesthesiology, Primary and Secondary Circulating RNs, and Surgical Technologists.

Prep and Planning

- Before intervention, non-trauma staff involved with Trauma cases voiced feelings of unease.
- In response, a descriptive research study was planned assessing peri-operative staff confidence and knowledge pre-intervention, which was to be followed by an educational intervention and post-intervention assessment.
- The intervention that was developed included a Trauma Level One Operating Room Pre-Brief, streamlined Trauma Supply Carts, and reference cards listing primary procedures and Current Procedural Terminology codes.

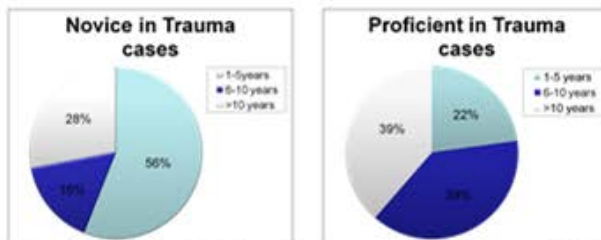


Figure 1 & 2: Years in the Operating Room vs. Operating Room Staff Classification Self in Emergency Trauma Operations

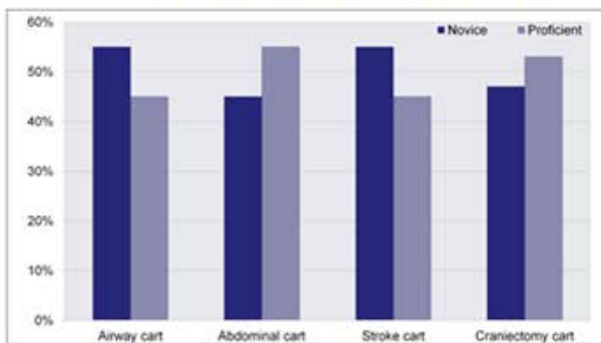


Figure 3: Knowledge of location of trauma carts

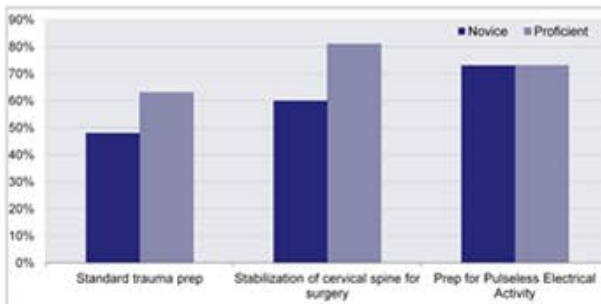


Figure 4: Standard Emergency Operations

Assessment

- The IRB approved survey assessed peri-operative nurses knowledge and confidence of roles, location of supplies and instrumentation, and procedures common to Emergency Trauma Operations.
- Knowledge questions were selected from the Trauma Nurse Core Course Training.
- The survey and intervention were voluntary and anonymous. Confidence was self-rated to be novice or proficient in Emergency Trauma Operations.

Implementation

- Six weeks of survey availability. We then analyzed knowledge questions and stratified by confidence self-rating (i.e., novice or proficient).

Outcome

- Figure 3 baseline data revealed approximately 50% of the operating room staff across novice and proficient have knowledge gaps in the types of Emergency Trauma Carts readily available to utilize during Emergency Trauma Operations.
- In Figure 4, approximately 40% of novice and proficient operating room staff lack general knowledge of Standard Emergency Operations.
- This is leading to future projects involving a Trauma Level One Operating Room Pre-Brief, streamlined Trauma Supply Carts, and reference cards listing primary procedures and Current Procedural Terminology codes.

Implications for Peri-operative Nursing

- Standardization is known to improve patient outcomes, decrease variation in practice and cost; potentially it could decrease friction and mismatched nursing practice on a local level.
- This standardized educational intervention could improve the overall peri-operative nurses' sense of teamwork, decrease frustration, increase skill, and instill confidence.