

## **Transcatheter Aortic Valve Replacement Education Program; A Multi-Modal Approach**

Team Leader: Kristyn Melsenti MSN RN SCRNP PDS Pre-Op/PACU

Yale New Haven Hospital, New Haven, Connecticut

Team Members: Rebecca Kadel MSN RN, Melissa Todice APRN

**Background Information:** Yale New Haven Hospital (YNHH) maintains Transcatheter Valve Certification™ by the American College of Cardiology. A multi-modal educational program was developed to increase staff members' knowledge, understanding, and comfort level in caring for patients undergoing Transcatheter Aortic Valve Replacement (TAVR) procedures. The target audience included peri-anesthesia nurses, as well as nurses and technologists in the Cardiac Catheterization Laboratory (CCL).

**Objectives of Project:** TAVR is being increasingly performed not only for high-risk patients but also as a less invasive option for younger, lower risk patients to treat aortic stenosis. Early detection and management of complications associated with TAVR must be addressed with a timely and schematic approach to reduce incidence of potentially dangerous outcomes.

**Process of Implementation:** A gap analysis demonstrated a need for didactic Structural Heart nursing education. A multimodal approach was applied in developing a staff education program to increase knowledge of TAVR patient management. The program included a content expert lecture, case study review, and virtual escape room. Escape rooms allow for subtle prompts in critical reasoning for the learner to protocolize the treatment plan for TAVR complications. Identifying clear roles and responsibilities in a virtual space creates effective team building, clear communication and ultimately improves patient outcomes.

**Statement of Successful Practice:** In evaluating this educational program, pre and post surveys were deployed and interpreted. Professional Development Specialists saw a positive impact in TAVR complication recognition time as well as increased knowledge of peri-anesthesia and CCL staff, evidenced by pre and post intervention survey data. The surveys consisted of the same three questions and data revealed an increase in knowledge of participants when comparing pre and post intervention surveys: Question #1=58%; Question #2=26%; and Question #3=71%. Staff reported a heightened level of awareness of common complications, leading to an increased confidence level in early detection and anticipation of interventions.

**Implications for Advancing the Practice of Perianesthesia Nursing:** Didactic, innovative nursing education improves perianesthesia patient outcomes.