

Optimizing Emergency Preparedness and Reducing Waste in TAVR Procedures

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Background & Assessment

- Level 1 Trauma in New York equipped with 21 Operating Rooms (OR), 3 Cardiac Catheterization Laboratory (Cath Lab) and 535 bed capacity, providing comprehensive surgical and trauma services
- Transcatheter Aortic Valve Replacement (TAVR) is a minimally invasive procedure typically performed in the Cath lab in collaboration with the OR
 - OR scrub & circulator prepare for open heart surgery before the patient arrives, remaining on stand-by in Cath Lab in case emergency open cardiac surgery is required
 - The cumulative cost of unused supplies and FTE on stand-by for potential emergency open surgery is significant & inefficient

Description of Team

- Collaborative team approach including:
 - ✓ Perioperative and Cath Lab Leaders
 - ✓ RN & ST from OR & Cath lab
 - ✓ Cardiac Anesthesia & Surgical Team

Goals



Cath Lab - Confidently and competently respond to cardiac emergencies during TAVR while awaiting the arrival of the OR team.



OR - Efficiently support Cath Lab emergency cases within 5 minutes

Implementation

- Developed a comprehensive training program tailored to the needs of the Cath Lab staff
 - ✓ Didactic sessions to cover theoretical knowledge
 - ✓ Hands-on simulation training to build practical skills in different phases

1 st phase	•Trainer and leader training
2 nd phase	•Frontline staff training
3 rd phase	•Simulation

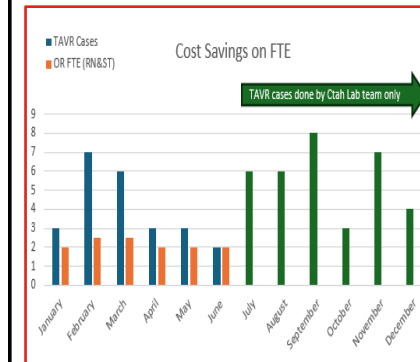
- Designed a detailed OR emergency response checklist
- Created dedicated Cath Lab cardiac cart for quick access to open heart supplies.
- Established strict protocol to prevent supply waste: no supplies are opened unless an emergency is officially declared
- Developed a communication protocol to ensure seamless coordination among the Cath Lab, OR, anesthesia, and perfusion teams during emergencies.

Perioperative Nursing Implication

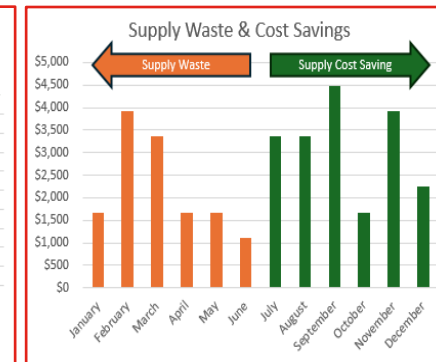
- This project highlights the power of interdepartmental collaboration and evidence-based practice in driving meaningful change
- By empowering the Cath Lab team through targeted education and resource optimization, the Perioperative Department has created a more sustainable and efficient approach to supporting TAVR procedures

Outcomes

- Positive staff feedback**
 - ✓ Training initiatives received strong feedback, indicating improved engagement & satisfaction
- Enhanced Clinical Competency**
 - ✓ Increased confidence and competency in managing Cath Lab emergencies
- Improved Interdepartmental Communication**
 - ✓ Strengthen collaboration between OR & Cath lab teams
 - ✓ Surpassed goal on OR to Cath Lab response– 2-3 minutes
- Operational Efficiency**
 - ✓ Enhanced OR efficiency through streamlined workflows
- Resource Optimization**
 - ✓ Reallocated stand-by OR team to open 2nd Cardiac OR
- Cost Savings**
 - ✓ Significant reduction in supply waste and costs while maintaining patient safety or procedural outcomes



FTE saving (Jul-Dec) – 2.5 staff re-assigned to OR



Total supply cost saving (Jul-Dec) – \$19040

References available upon request
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