Initiating a New Trans-catheter Aortic Valve Replacement Program

Kara Toma BSN, RN, CCRN; Chris Lebel BSN, RN; Ann Alway MS, RN, CNS, CNRN

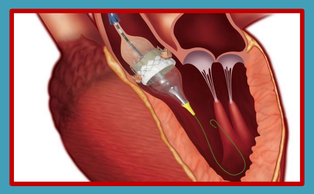
Background/Problem:
Trans-catheter Aortic Valve Replacement (TAVR) procedures replace a diseased aortic valve using a balloon system through the femoral artery. The new valve is expanded to replace the native valve. The procedure is less invasive compared to open heart valve surgery. TAVR candidates needed to travel to Portland or Eugene for the procedure prior to February 2018.

Purpose:
The purpose of this study is to report on the process of initiating a new TAVR program at a community hospital and to compare the patient outcomes for the first 20 cases with national benchmarks.

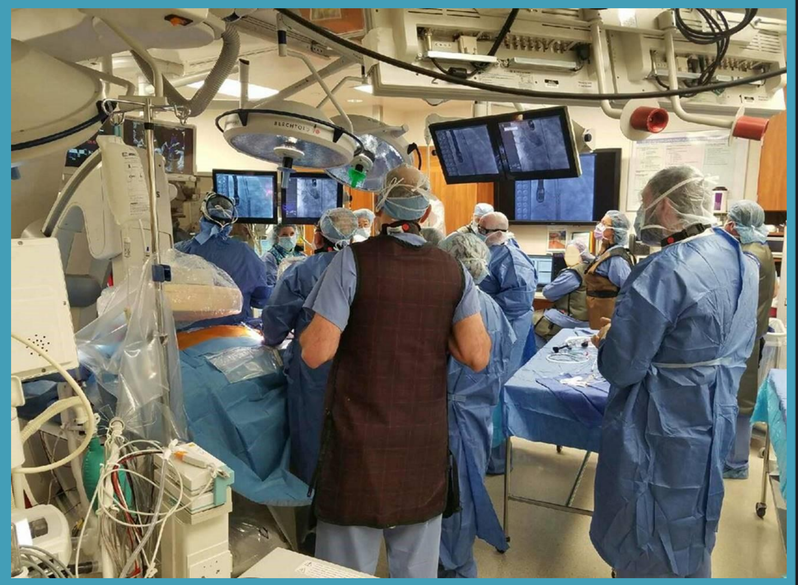
Methods:
Using the Donabedian model, an interprofessional team developed structures and processes and then measured patient outcomes.

- Structures included designated roles for Interventional Cardiology, Cardiovascular Surgery, Cardiac Cath Lab, OR staff, Clinical Nurses and Technicians.
- The team set in motion practices for selection criteria and interventional procedures.
- Two nurses led the necessary educational efforts for clinical staff. These nurse leaders rounded on patients following TAVR procedures, coaching staff and offering advice.

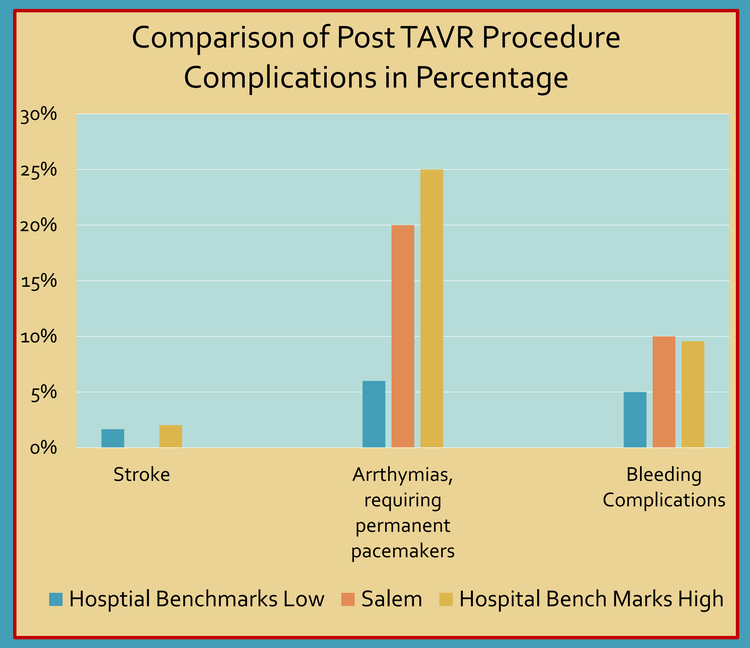
The Edwards Sapien 3 Valve, shown below, was the valve of choice for the first 20 cases. The Edwards company representatives were present for each case to lend guidance to the Salem Health interdisciplinary team.



The TAVR Team includes Cardiology, CV Surgeons, Cath Lab Staff, OR staff and CVCU Staff as shown below.



Results:
When comparing the first 20 TAVR cases to outcomes benchmarked by other hospitals, Salem Hospital fell within the targeted area in all categories except bleeding complications. Bleeding complications had a slight increase of 0.5%. Ninety percent of Salem Hospital TAVR cases were discharged in less than 72 hours, whereas other hospitals reported only 65%.



Conclusion and Clinical Implications:
Initiating a successful TAVR program at a community hospital requires a team effort. Education by nurse experts prepared clinical staff to provide safe care following TAVR interventions in the cardiac cath laboratory.

References
1) Carroll, JD, Vemulapalli D, Dai D, et al. (2017) TAVR Experiences vs. Outcomes *(STS/ACC TEXT Registry)*
2) Khan MH, Ahmad HA, and Iwai S. (2017). AV Block and PPM implantation in TAVR. *American College of Cardiology* *https://www.acc.org/latest-in-cardiology/articles/2017/06/13/07/13/av-block-and-ppm-implantation-in-tavr*

Contacts:
Kara.toma@salemhealth.org
Christopher.lebel@salemhealth.org
Ann.alway@salemhealth.org