Building a Hybrid OR In Preparation for Thoracic Endovascular Aortic Repair Program

Lori Fuehrer RN  
*Lehigh Valley Health Network, Lori.Fuehrer@lvhn.org*

Beth E. Frickmann RN, CNOR  
*Lehigh Valley Health Network, Beth.Frickmann@lvhn.org*

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Building a Hybrid OR In Preparation for TAVR Program
Perioperative Services
Lehigh Valley Health Network, Allentown, Pennsylvania

PROBLEM STATEMENT:
As a community focused health network, caring for the members of our community is paramount. A vast number of patients within our community and the surrounding areas were treated for Aortic Valve Disease, but were too sick for conventional Aortic Valve Replacement (AVR). This need inspired the organization to develop a state of the art Hybrid OR to provide the best possible care for this vulnerable population.

OUTCOMES:
The newly created Hybrid room consists of 1000 sq ft of space and a 200 sq ft control room. The flexible C-Arm is ceiling mounted and operates on two axes simultaneously. This allows for it to swing in a three dimensional movement around the patient from head to toe if needed.
The talents of Cardiologists, Cardiac Surgeons, Operating Room and Cardiac Catheterization Lab personnel are combined to provide comprehensive care to the sickest of patients.

GOALS/PURPOSE:
Transcatheter Aortic Valve Replacement has become the gold standard for AS patients who are at high risk or are considered inoperable for conventional AVR Surgery. In order to provide the best possible treatment option for our inoperable Aortic Valve Stenosis (AS) patients, a steering committee researched the option of building a state of the art Hybrid Operating Room.

RESULTS:
The TAVR program has added positive growth through referrals, community awareness, and an increase in conventional AVR and interventional procedures for the Cardiac Program. Since its inception in 2012 we have completed 183 TAVR procedures in the Hybrid OR. Through dedication, collaboration and teamwork, our success rate has exceeded expectations with an overall mortality rate of 13% as compared to the national benchmark of an overall mortality rate of 26% as stated by Society of Thoracic Surgery (STS)/ American College Cardiology (ACC) (O’Riordan, 2014).

METHODOLOGY:
A two year plan was implemented that included a multidisciplinary planning committee to pursue the Hybrid OR. The Hybrid OR would benefit the community by, offering multiple procedures including TAVR, Thoracic Endovascular Aortic Repair (TEVAR) and Abdominal Aortic Endovascular Repair (EVAR), Endovascular Peripheral Stenting and Hybrid Catheterization Lab /Coronary Artery Bypass Grafting procedures. Multiple meetings and sites visits were held to determine the hybrid OR’s equipment needs, imaging system room layout, design and setup. The collaborative efforts of Perioperative Nursing, Anesthesia, Perfusion, Surgery, Cardiology, Cardiac Catheterization Lab, Radiology, and Materials Management incorporated multiple site visits to other institutions to observe other Hybrid ORs and their TAVR programs.

REFERENCES:

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