Two Broken Hearts Repaired on Valentine's Day at St. Vincent's Medical Center

BRIDGEPORT, CT, March 7, 2013 - Valentine's Day took on a new meaning at St. Vincent's Medical Center when two patients, who previously had no treatment options left, successfully underwent a revolutionary new cardiac procedure called TAVR. TAVR, or transcatheter aortic valve replacement, a new, non-surgical, minimally invasive procedure, brings hope to cardiac patients suffering from aortic stenosis who are not candidates for traditional open heart surgery.

This groundbreaking procedure, a first in Fairfield County, was performed on February 14 at St. Vincent's Medical Center by interventional cardiologist Robert Jumper, MD. Dr. Jumper was assisted by a multidisciplinary team of surgeons, specialists and other medical staff who make up the five teams of the Hybrid O.R.

The fact that this was done on Valentine's Day was not lost on Fairfield residents Robert Packham, 88, and Alfred Beauchemin, 84, whose hearts successfully received the replacement valves.

"TAVR for each of these patients required no more than two-and-a half hours, with the bulk of that time taken up by preparation," said Dr. Jumper. "Afterward, both gentlemen soon showed marked improvement over their long-term poor health. Mr. Packham, who also has a pacemaker, was even smiling and chatting with staff that evening as he sat having dinner in his room."

Dr. Jumper explained that TAVR is uniquely suited to help the elderly because it uses the hardening, or calcified, spots common in older heart valves to hold the new valve in place. "With calcification, the valve has been opening and closing like a rusty gate," he said. "That puts great pressure on the patient's heart. Blood flow to vital organs such as the kidneys typically becomes inadequate and fluid backs up into the lungs, producing a drowning feeling."

A catheter carrying the tiny, slightly larger than 10-millimeter valve made of natural material is inserted into the aorta after a small incision is made at the groin. The placement positioning is done from an area down in the groin. "We use imaging to guide the catheter to the heart," said Dr. Jumper. "Once there, a tiny balloon inflates to squeeze the valve into place. Enormous patience is required and we have to be prepared for any contingency. That's where our multidisciplinary team comes in."

"St. Vincent's is one of only three hospitals in Connecticut, and the only one in Fairfield County, able to offer TAVR, and our Hybrid O.R. is perfect for its needs," said Chief of Cardiothoracic Surgery Rafael Squitieri, MD. A member of the cardiothoracic team himself, Dr. Squitieri noted that in the Hybrid model, multiple medical disciplines are represented in teams that work together, each team consisting of physicians, nurses, technicians, etc., from its specialty area.

"Traditionally, disciplines have been quite individuated, in terms of their energies," he said. "Here, we've created an environment of collegiality where all our subspecialties collaborate. In our Hybrid O.R., the teams draw on the newest, most sophisticated technology to produce wonderful outcomes for high-risk, inoperable elderly patients."

Airline Pilot Leads Project

To ensure team effectiveness and safety, St. Vincent's took the bold step of bringing in Joe Brown, a healthcare safety consultant who is also an airline pilot from a major airline, to train staff members. Coming from a high-risk industry, Brown, transferred many of the safety principles that make the airline industry a "highly reliable" one driven by standardization of procedures. He worked with the multidisciplinary TAVR team to ensure the best outcome with the highest safety and quality possible. This novel approach further exemplifies St. Vincent's commitment to ensuring the highest levels of patient safety.

Both the decision to launch TAVR and to hire the air-line pilot was ground-breaking for a community hospital, according to Brown. "St. Vincent's had the vision to do something bold, hire an outside consultant from another industry to build, from the ground up, a TAVR program. Both the complexity of the procedure combined with a new work environment, the Hybrid OR, demanded a new approach to doing business both operationally and clinically in the interest of safety and high reliability."

"One of the most helpful suggestions was that team members wear hats in their discipline's designated color," Dr. Jumper said. "With 20 to 24 people assisting, this eliminates confusion and saves valuable time. If I need something from our cath lab nurse, I look for a burgundy hat. If I am in need of the vascular surgeon, I look for red."

TAVR Benefits

"For patients with aortic stenosis who are approved for TAVR, the benefits of TAVR include a 20 percent reduction in yearly mortality and a significant increase in exercise tolerance," said Chief Medical Officer and Senior Vice President Lawrence S. Schek, MD, FACC.

"Their quality of life is greatly improved. We're excited to be able to offer this procedure right here at St. Vincent's in Bridgeport, building on our already proud reputation as a premiere cardiac center. Our team is highly skilled, talented and caring and proud to bring another "first" in innovative procedures to our community and save lives."

For more information, please call St. Vincent's at **203-576-5708** or visit www.stvincents.org/TAVR



Physicians, nurses and technicians participate in a revolutionary new non-surgical heart procedure, the first of its kind in Fairfield County, which took place in the state-of-the-art hybrid operating room at St. Vincent's Medical Center. Since trans-catheter aortic valve replacement or TAVR, which gives hope to patients considered too high-risk for open heart surgery, is highly complex, St. Vincent's introduced changes such as color-coded surgical caps related to each medical specialty (see photo) at the recommendation of an airline pilot/healthcare safety consultant brought in to ensure patient safety.

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