

Cutting-Edge Tech Means Less Pain, Faster Recovery

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Surgery in the morning, home by dinner

The lanky metallic arm crept into a half-dollar-sized hole cut through the side of Frank Audia's chest, using fine pincer-like tips to navigate layers of fat and muscle before delving into his ailing heart.

A few feet away, surgeon Steven Harrington sat hunched at an arcade-like machine, using joysticks to control the device that in a few hours would strengthen a faulty valve threatening Audia's life – and have him out of the hospital two days later.

The surgical system added in May at St. John Hospital in Detroit, is part of Metro Detroit's growing arsenal of high-tech medical equipment.

New technology is helping doctors perform procedures increasingly with less pain, risk, ugly scarring and lengthy recovery times. It's also fueling what some dub medical arms race, pushing health care providers to drop millions of dollars on the latest gadgets as they scramble to keep pace with their competition.

"If you would have told me 10 years ago that we'd be using a robot for open heart surgery, I wouldn't have believed it," Harrington said. "The pace at which technology is increasing is amazing."

St. John's \$1.2 million da Vinci robot is the eighth of its kind in southeastern Michigan since 2001. The

machine translates the movements of a surgeon's hand, wrist and fingers as the rest on the console.

The same type of machine helped Mary Nowlin become pregnant after two miscarriages.

The Wixom woman had fibroids growing in her uterus that caused her to lose two pregnancies, in 2002, and 2003. She learned about a University of Michigan Health System doctor who could use a robot to remove the growths with small incisions and instruments that left no scar longer than 4 inches. The method, doctors said, carried a lower risk of preventing her from becoming pregnant again and it had her out of the hospital the next day.

"I was nervous about leaving there without a uterus," Nowlin said of the risk that the surgery could force a hysterectomy. "But I was fine."

Surgeries that once left patients laid up for days now can be accomplished with tiny scopes and cameras that allow people to walk out of the hospital that same day.

In Detroit, a pair of surgeons is part of two teams in the world pioneering an alternative to open heart surgery that's done through a catheter. The procedure is safe enough for the weakest patients and requires no hospital stay.

Throughout the region, doctors are using super-small blades to perform knee replacement surgeries with a recovery time that's half the norm.

And dozens of local doctors are using lights and cameras mounted on the ends of tubes no wider than a drinking straw to maneuver through a patient's insides -- removing kidneys, replacing joints and performing bariatric weight-loss operations.

"Within 10 to 20 years, a vast majority of procedures will be done with no cutting at all," said Theodore Schreiber, the Detroit Medical Center's division chief of clinical cardiology, who is testing a method that would replace faulty heart valves using a catheter to deliver and place a new valve. No Cutting is required and patients remain awake.

Not yet approved by the U.S. Food and Drug Administration, the procedure would make it possible for weak and elderly patients unable to withstand traditional open heart surgery to receive new valves.

“These people would probably not live otherwise,” Schreiber said. New Gadgets and procedures are paying off in other ways.

At St. John, more people are donating kidneys since doctors began doing a kidney transplant, operation that leaves the donor with a one 3-inch scar and three small scars, not a 7-inch gash associated with the operation.

Julie Evans was shopping for Mother’s Day presents a week after a surgery in which doctors slipped her healthy kidney through a small slit near her belly and transplanted it to her mother, Angie Wicha.

“I had surgery on a Wednesday and the next Saturday I was out at a grocery store,” said Evans, whose largest scar will be from a 2 ½ -inch incision along her bikini line.

At Mount Sinai-Grace Hospital in Detroit, patients are booked through August for a newly hired surgeon who can do knee replacements without cutting the thigh muscle. Henry Ford Hospital has patients coming from other states to receive minimally invasive treatments offered there, which include several operations to heal lower back pain.

For patients, the bill’s typically the same for high-tech surgeries. Availability is limited since many doctors aren’t trained in new procedures and many hospitals lack equipment.

Health care providers often swallow the cost of new equipment and technology, money that say is recouped via increased demand, shorted stays and fewer complications.

Not everyone’s thrilled with operating rooms that look like something out of a sci-fi movie. Some say the medical technology boom is pressuring doctors to stock up with latest devices that add to the bill of anyone who pays for health care.

John, Birkmeyer, director of bariatric and laparoscopic surgery at the University of Michigan Health System,

said the benefits of the new technology seem obvious, but much of the machinery is too new to have proven results. He noted a study involving laparoscopic hernia surgery that showed the success of cases had more to do with the expertise of the surgeon when with the equipment used. Laparoscopic surgery is done with instruments and cameras inserted through small incision in the patient.

“These exotic new technologies are coming out at quickly as they have because they are cool and fun for surgeons and they’re being hyped by industry,” Birkmeyer said. “Only time will tell if there’s scientific evidence to justify the cost.”

Richard Perry, and orthopedic surgeon at St. John’s who specializes in minimally invasive joint replacement, said he often sees claims and advertisements that convey unrealistic benefits to tout results not likely to materialize for the average patient.

Competition is intense as hospitals scramble to attract insured patients to offset the cost of caring for uninsured.

The company that makes the da Vinci robots sold Metro Detroit’s first machine in 2001. Within four years, four other hospital systems snapped up robots. Nationally, 305 hospitals have them.

“That’s how it works. When one comes, other places want it,” said Tom Higgins, account manager for the Sunnyvale, Calif.-based Intuitive Surgical Inc.

John Combs isn’t interested in debate over hype and cost. The Waterford man just knows that three days after having knee replacement surgery on both legs, he was at church walking with the help of a cane.

“I have two sister-in-laws who have horror stories about their surgeries,” said Combs, 78, who had the operation done March 2 by Rochester Hills surgeon Jeffrey DeClaire.