The Intricate Dance of Successful Surgery

I have been asked many times how I do my cases so fast and so efficiently.

I would like to say that it is all me, but without question, a lot of it has to do with my bedside assistant. I have had the honor to work with five magnificent bedside assistants—three of whom are physicians from other countries who work as residents at the hospital and two of whom are the nurse practitioners featured in this newsletter. Many of the techniques we have developed have come from their suggestions and their ability to think outside of the box.

Any surgery, including robotic surgery, is an intricate dance made easier when one leads and one follows closely. With our assistants at Baptist Health, we are able to work together, often without even talking to each other. And they help by training many others, making life easier for all our robotic surgeons. They are as important to your program as the robot itself.

In addition to the bedside assistants, the robotic surgical team is also an integral part of the patients’ and surgeons’ well-being. Helping to facilitate fast turnovers, properly preparing and knowing how to use and connect the appropriate equipment, troubleshooting problems and anticipating changes is what a great surgical team does. That will make your program grow and flourish. I believe we have the best teams here at Baptist Health and our model can be duplicated anywhere with the right leadership and the right people.

Surgeons and their OR teams must work closely and anticipate the other’s needs.

Our talented general surgeons have benefited from knowledgeable OR teams and have successfully led the way demonstrating how single-site cholecystectomies can be safely performed. Although in many procedures single-site surgery has limitations, our general surgeons are adapting techniques and helping to construct the tools surgeons will need to move into the true future of robotic surgery. The ideal tool in the future will be a single port that can rotate to all four quadrants and give the surgeon three arms with which to work on the desired target through the smallest hole possible.

Single-site surgery has huge potential, and we are leading this expedition.

Ricardo Estape, M.D.
Medical Director
Baptist Health Center for Robotic Surgery

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TAKE A HANDS-ON APPROACH
Arrange a case observation or simulator training by calling 786-662-8877.
Since opening in 2006, Baptist Health South Florida’s Center for Robotic Surgery has established itself at the forefront of a burgeoning discipline. Today, utilizing 12 robots in four facilities, its surgeons perform nearly 3,400 robot-assisted procedures annually.

This rapid rise to prominence has been a collective effort. “From the start, we took a team approach to learning together and devising strategies to do things more intuitively in the operating room,” said Carmen Rodriguez, R.N., MSN, MSHSA, assistant vice president of perioperative services at South Miami Hospital.

A decade since its inception, the Center is known nationwide for its robotic surgery specialists, who are among the most experienced and skillful in the country. “Everyone supported each other through the learning curve, and now they all have the same high level of enthusiasm and engagement,” said Rodriguez.

DEVELOPING FOCUSED EXPERTISE

More than 100 credentialed surgeons from various specialties call the Center for Robotic Surgery home. Each surgeon is joined in the operating room by a first assistant, surgical tech, circulating nurse and anesthesiologist or nurse anesthetist. Although the staff are well-versed in all robotic procedures, they focus primarily on one service line. This enables them to maximize their efficiency and competency.

At the Center for Robotic Surgery, teams representing seven service lines offer a wide range of robot-assisted procedures, including:

- **Gynecologic cancer surgery** to treat uterine, cervical and some ovarian cancers.
- **Gynecologic surgery** to treat endometriosis, uterine fibroids and pelvic floor prolapse.
- **Bariatric surgery** including gastric bypass, adjustable band and revisional bariatric procedures.
- **Urologic surgery** to treat kidney and prostate cancers as well as benign kidney conditions.
- **Thoracic surgery** to treat lung cancer as well as conditions of the esophagus and thymus.
- **General surgery** to treat colorectal and gastric cancers, diverticulitis, rectal polyps, pancreatic and adrenal tumors, hernias and spleen conditions.

Nurses and technicians at Baptist Health South Florida train regularly for robotic surgery in a simulation lab at South Miami Hospital.

**Ear, nose and throat surgery** to treat cancer of the tonsils and base of the tongue.

OPTIMIZING PROFICIENCY AND SAFETY

In robotic surgery, instrumentation, console position, robot docking and port placement vary from procedure to procedure. “Because everyone understands the ins and outs of their service line’s procedures, the team can anticipate the needs of the surgeon,” said Noellia Williams, R.N., nurse manager for surgical services at South Miami Hospital.

Minimizing the amount of time patients spend under anesthesia is a top priority. Whenever possible, steps such as administering anesthesia and inserting a Foley catheter are completed simultaneously, rather than sequentially, by team members. “Because we have such a high volume of robotic cases, we have it down to a science,” said Williams. “We know exactly what we need to do to make the operating room run at peak efficiency.”

**TO REACH MS. RODRIGUEZ OR MS. WILLIAMS, CALL BAPTIST HEALTH SOUTH FLORIDA’S CENTER FOR ROBOTIC SURGERY AT 786-662-8877.**
Bedside assistants play a critical role in robotic procedures

Robotic surgeons train for years to perfect their skills, and receive much of the accolades for the ongoing success of robotic surgery. But surgeons are not the only ones in the operating theater.

Bedside assistants act as the hands of the surgeon at the bedside while the physician operates the robotic platform. They can visualize the whole patient, manage pre- and post-operative care, and draw on extensive training to make procedures more efficient.

“Even though the robot gives the surgeon three arms to work with, there is often a need for manipulation of tissue and organs,” said Roberto Estape, ARNP, who assists surgeons at Baptist Health’s Center for Robotic Surgery. “By providing the right counter-traction and manipulation, we help make these procedures much faster and easier for the surgeon.”

ASSISTANTS IN ACTION

Bedside assistants at the Center support the full range of robotic and non-robotic gynecologic/oncologic procedures. They play a key role in procedures that require additional laparoscopic skills, where the surgeon would otherwise need to leave the console and get sterile to complete the surgery. And they provide critical assistance when surgical challenges arise.

“If there is venous or arterial bleeding, or if a specimen needs to be removed vaginally, I play a major role,” said Estape. “Having the right knowledge base, as well as calmness and focus, I can help the surgeon get past a potential crisis.”

TO REACH EITHER MR. DIAZ OR MR. ESTAPE, CALL THE BAPTIST HEALTH CENTER FOR ROBOTIC SURGERY AT 786-662-8877.

INTENSIVE TRAINING

Bedside assistants at the Center must undergo extensive training in anatomy and physiology, as well as robotic surgical techniques. They typically begin with a six-month observation period, followed by testing and certification for robotic and single-site procedures.

“It’s very unique to have this much training,” said Robert Diaz, ARNP-C, MBA, who often assists surgeons at the Center for Robotic Surgery. “Many facilities use physician assistants or assistants with less training in these roles, but they’re not allowed to do a fraction of what we provide here. We believe that having dedicated highly trained surgical assistants improves surgical efficiency and improves quality outcomes.”

At the Center for Robotic Surgery, bedside assistants support the same physicians and procedures year after year. Both Diaz and Estape have assisted with thousands of robotic procedures. As a result, they have developed finely honed skills, as well as a close rapport with the surgeons.

According to a paper published in 2014 by Nicholas Lambrou, M.D., a gynecologic oncology surgeon and medical director of South Miami Hospital’s Center of Excellence in Minimally Invasive Gynecology, with whom Diaz works closely at the Center, that approach makes a difference.

“We found that surgical time was improved and complication rates significantly minimized by performing surgery with highly qualified, highly trained bedside assistants,” said Diaz.

Bedside assistants—typically other physicians or advanced practice nurses—help the operating surgeon during robotic surgery.
Study Shows Safety, Efficacy of Single-Site Robotic Cholecystectomy

For years, laparoscopic cholecystectomy has been the preferred approach for gallbladder removal. One downside, however, is that conventional laparoscopy requires four incisions. Given that many patients with gallbladder disease are younger and active, they would prefer the cosmetic benefits of fewer incisions. But surgeons have long felt that single-incision laparoscopic cholecystectomy created unacceptable risks.

Introduced in 2012, robotic single-site cholecystectomy holds the potential to combine the safety and efficacy of standard laparoscopy with the cosmetic benefits of a single-site approach. Now, a study published in *Surgical Endoscopy* suggests that robotic single-site cholecystectomy is both safe and feasible in a wide range of patients.

**OVERCOMING CHALLENGES**

In recent years, surgeons have tried to minimize the cosmetic impact of laparoscopic surgeries by using single-incision methods where possible. For cholecystectomy, however, single-incision methods have been associated with longer operative times and higher complication rates—most significantly, higher rates of bile duct injury, which can cause detrimental injury to the patient. Robotic surgery, however, can prevent these issues.

"Unlike standard laparoscopic instruments, the robotic platform allows for full surgical triangulation, as well as three-dimensional visualization," said Anthony Gonzalez, M.D., Chief of Surgery at Baptist Hospital of Miami. “Add to that immunofluorescence, and we can clearly visualize the liver and biliary tree, identify objects and prevent complications.”

Dr. Gonzalez was among the first surgeons to perform robotic cholecystectomy, and today has done more than 700 procedures. Now, he and his team have published the first large series analysis of its safety and outcomes.

**DEMONSTRATING SUCCESS**

The study reviewed 465 robotic single-site gallbladder procedures among five institutions and six surgeons. They examined outcomes, operative times, length of stay and complications.

Across all cases reviewed, 97 percent were accomplished through single-incision. Bile leak rates were almost nonexistent. And operative times and length of stay were consistent with conventional laparoscopy.

“Our research demonstrated that outcomes are superb in a variety of patients with a variety of surgeons, and that the procedure compares very well with published outcomes for standard laparoscopic cholecystectomy,” said Dr. Gonzalez. “It’s a testament to the leadership, both nationally and internationally, of Baptist Health South Florida’s Center for Robotic Surgery in advancing surgery and care of patients.”