

# Reducing Returns to the OR

## *Holston Valley Takes Multifaceted Approach to Rightsize Surgical Services*

There will always be times – both planned and unplanned – when a patient must return to the operating room for follow-up surgery. There are also national benchmarks that make it clear when a hospital becomes an outlier for such returns.

“We just knew in looking at our data that we were concerned with how many times our patients were returning to the operating room,” said Holston Valley Medical Center’s Elizabeth Jackson, MD, MBA, FACS.

The 505-bed hospital, part of Ballad Health System, has made meeting and exceeding national expectations for quality and safety a top priority. The hospital is an active participant in both the American College of Surgeons (ACS) National Surgical Quality Improvement Program (NSQIP) and the Hospital Improvement and Innovation Network (HIIN) under the umbrella of the Tennessee Hospital Association’s (THA) Tennessee Center for Patient Safety (TCPS). Jackson serves as surgeon champion for NSQIP and has been a speaker and poster presenter for the THA Leadership Summit.

### Drilling Down on the Data

When the data review process began, nearly one out of every six surgery patients at Holston Valley Medical Center returned to the operating room following their initial case. In 2017, the return rate to the OR was 16.1 percent overall. The review team looked at data across the spectrum to see if there were any common denominators. Was there a particular surgeon outlier or an OR suite linked to more returns? Did the day of the week the initial case was performed or the assigned post-op unit have an impact? What percentage of returns were planned? Were there air flow changes during the initial surgery? Did patients who returned to the OR have commonalities such as diabetes, tobacco use or a high BMI? Jackson said the goal was to leave no stone unturned.

While the 2017 overall surgical return rate was right at 16 percent, the rate rose to 17.3 percent for general services, which included trauma cases. The team also discovered orthopedic procedures had a much higher return rate than most other types of specialty surgeries such as bariatric, oral or plastics. “We targeted joint replacements because we know once you have a return, you have increased risk for multiple returns,” Jackson explained.

Drilling down even further on surgical returns, she said the reviewers found cases where multiple procedures could be safely accomplished during one trip to the operating room, lessening the natural stress related to all surgeries and decreasing exposure to anesthesia. “We noticed a shift in mentality among surgeons as we went along, with less staged procedures,” Jackson said of the changing culture.

### Review, Retrain, Rework

“We review 100 percent of OR returns,” noted Jackson. She said the medical director for surgical services looks at every case and makes notes, such as whether or not the return was planned. That information is then shared with a multidisciplinary review team including the chief medical officer, medical staff executive officers, quality physician chair, chief nursing officer, pharmacy director and representatives from quality and risk management. Retraining is provided as needed, and generalized reeducation programming also has been adopted for staff and vendors.

Operating room set-ups were moved farther away from the core door to minimize pressure changes. The infection prevention team conducted a thorough audit of all surfaces, and ATP testing to evaluate environmental issues uncovered an opportunity to improve the sanitation of transport

stretchers. “We also reeducate floors periodically on proper post-operative care,” Jackson said, adding random audits are conducted to ensure evidence-based steps are consistently followed.

### Patient Education

While internal changes have made a difference in returns to the OR, the medical staff also recognized the important role patients play, as well.

“We instituted a joint boot camp so patients get educated ahead of time,” Jackson said of pre-op joint replacement preparation. The hospital also reviewed the literature and decided to institute cut-off criteria for elective total joint procedures. In such cases, patients with a BMI  $\geq 60$  cannot have the joint replacement surgery at Holston Valley, and those with a BMI of 50-59 must sign a consent form and undergo additional education on risks associated with their BMI. Similarly, patients with an A1C  $\geq 9$  within the previous six months aren’t eligible for elective total joint replacement and are referred to Ballad Diabetes Treatment Center to try to achieve better control before surgery is approved.

Although colon surgery wasn’t an outlier for surgical returns, the medical center adopted a colorectal bundle in November 2016 and implemented Enhanced Recovery after Surgery (ERAS) in April 2017. Jackson said patient education centered on reducing surgical site infection, and the overall result has been to lower all types of readmission for these patients.

### Continuous Improvement

“We started at 16.1 percent (surgical return rate) and cut that almost in half to 8.2 percent for January through August 2019,” Jackson said, adding the rates were factored on the first eight months of 2019 before the hospital’s Trauma Division dropped from a level 1 to a level 3 in order to keep the comparisons fairly weighted. Similar results have been seen for patients in the colorectal bundle and ERAS protocol. Prior to implementation in 2016, colorectal returns to the OR were at 9.1 percent. In 2019, the rate of return dropped to 5.4 percent.

Although Jackson is pleased with the reduction in returns to surgery, she knows quality improvement is an ongoing endeavor. “You always have to keep your watchful eye on it, or you’ll return to where you came from,” she said. Still, she noted the progress and process so far have been a win/win. “It has really allowed a lot more physician buy-in because it translated across all the surgical lines and established a nice workflow. And, by dropping that rate, we have provided better care to our patients with less exposure to the OR.”



Dr. Elizabeth Jackson

*The Tennessee Center for Patient Safety, a department of the Tennessee Hospital Association, develops and shares hospital and health system success stories and promotes best practices.*

