

# Safety-net hospital reports it achieved better esophagectomy outcomes than national cohort

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Safety-net hospitals—often found in inner cities with a high share of uninsured and Medicaid patients—are often thought to be hospitals of last resort. However, a recent study at a safety net hospital in northeast Florida has found that it could perform a highly complex operation with fewer complications and shorter hospital stays than the national average, according to a study published online as an "article in press" on the *Journal of the American College of Surgeons* website ahead of print publication.

Lead study author Lori A. Gurien, MD, MPH, chief surgical resident at the University of Florida College of Medicine-Jacksonville, credited use of a written, standardized protocol—known as a clinical pathway—for the institution's superior outcomes. "What we think and what we discovered is that it's not because the hospital gives us more money and resources for the surgical oncology portion; it is that we figured out a way to use resources in a smarter way than other places that may not have the limitations that we have at our hospital," Dr. Gurien said.

Dr. Gurien and her coauthors reported on results of 78 esophagectomies performed at University of Florida Health-Jacksonville (UFH) from September 2013 to January 2017 and compared them with 1,825 of the same operation in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database. Esophagectomy is an operation that involves removal of part of the esophagus, typically

as a treatment for cancer of the esophagus.

ACS NSQIP is the only nationally validated [quality improvement program](#) that measures and enhances the care of surgical patients. This program measures the actual surgical results 30 days postoperatively as well as risk adjusts patient characteristics to compensate for differences among patient populations and acuity levels. The goal of ACS NSQIP is to reduce surgical morbidity (infection or illness related to a surgical procedure) and surgical mortality (death related to a surgical procedure) and to provide a firm foundation for surgeons to apply what is known as the "best scientific evidence" to the practice of surgery.

For the study, researchers looked at the three primary outcomes used as quality measures for operations—complications, number of second and third operations, and length of hospital stay. UFH-Jacksonville had significantly lower numbers than the NSQIP average: a complication rate of 16.7 percent vs. 33.3 percent ( $p=0.003$ ); a reoperation rate of 6.4 percent vs. 14.5 percent ( $p=0.046$ ); and an average hospital stay of 10.3 days vs. 13.1 days ( $p=0.001$ ). Other key quality measures—rates of death and hospital readmission, what type of care setting patients go to after they leave the hospital, and average time spent in the operation—were similar between the two study groups. Dr. Gurien noted that the ACS NSQIP data the study used did not distinguish between different types of hospitals.

UFH-Jacksonville was able to achieve these results even though its patients had greater preoperative health challenges than those in the national cohort. They had higher rates of chronic obstructive pulmonary disease (a rate of 19.2 percent vs. 8.1 percent nationally,  $p=0.001$ ), and were more likely to smoke (42.3 percent vs. 26 percent,  $p=0.001$ ). The UFH-Jacksonville group was also less likely to be overweight, with an average body-mass index [BMI] of 26 vs. 28 for the NSQIP group ( $p=0.001$ ). A BMI greater than 25 is considered overweight. Other

patient characteristics, such as incidence of diabetes, high blood pressure, or disease severity, were similar between the two groups.

Dr. Gurien explained that the clinical pathway surgeon, Ziad T. Awad, MD, FACS, and the surgical team maintain detailed instructions for every step of the procedure, from planning and scheduling the operation to postoperative follow-up, sometimes extending out to a year or two. The patient, family members, all surgical residents, floor staff residents, pharmacists, and other [hospital](#) staff involved in the patient's care receive a copy of the protocol. A staff surgical navigator guides each patient through all phases of operative care before, during, and after the operation. After the operation, all esophagectomy patients go to the same intensive care unit. Every step is performed uniformly for each patient: anesthesia (no spinal injections), a minimally invasive operation, timing of placement and removal of breathing and feeding tubes, and pain management protocol after the procedure. "We don't deviate from that pathway unless something unforeseen happens," Dr. Gurien explained. The surgical team reviews and tweaks the protocol on an ongoing basis, she said.

Dr. Gurien said the researchers chose to study esophagectomy because of its high level of complexity and because [patients](#) who have the operation are amongst the sickest to enter the health system.

The study noted that safety-net hospitals face challenges as health care moves from a fee-for-service model to value-based payments, which imposes payment penalties on institutions that perform poorly. Safety-net hospitals are already strained financially. A patient population that's sicker and poorer and lacks access to care only compounds that challenge in a value-based system. While many studies drawing on large datasets have suggested that safety-net hospitals have worse outcomes than non-safety-net hospitals, the UFH-Jacksonville study is the first to look at outcomes on the institutional level.

"The takeaway from this study is that good outcomes are more a result of the process," Dr. Gurien said. "I do think other hospitals can perform this process, especially safety-net hospitals like ours that have limited financial resources." Dr. Gurien said that moving forward, the researchers aim to investigate their results with the Whipple procedure—a complex operation to treat cancer of the pancreas, intestines, and bile duct. The Whipple operation involves removal of part of the pancreas, the small intestine just below the stomach, gallbladder, and bile duct.

The study results were first presented in December 2017 at the Southern Surgical Association 129th annual meeting in Hot Springs, Virginia.

**More information:** How Safe Is the Safety Net? Comparison of Ivor-Lewis Esophagectomy at a Safety-Net Hospital Using the NSQIP Database, DOI: [doi.org/10.1016/j.jamcollsurg.2017.12.036](https://doi.org/10.1016/j.jamcollsurg.2017.12.036) , [www.journalacs.org/article/S10 ... \(18\)30017-6/abstract](http://www.journalacs.org/article/S10... (18)30017-6/abstract)

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