ICU
MANAGEMENT & PRACTICE

Smaller Hospitals Can Provide Safe and High-Quality Surgical Care Comparable to Larger Counterparts, Study Finds

Smaller, rural hospitals may be quicker and more efficient at implementing surgical safety initiatives than their larger, urban counterparts, and are capable of providing a standard of surgical care that is at par with major hospitals that provide a comprehensive array of care services, according to an 18-month series of studies led by researchers from the University of Louisville Department of Surgery.

"The quality and standard of care in rural and small-town America is an important issue that gets a lot of attention in the mainstream media these days, and research efforts to measure and enhance surgical quality have largely omitted smaller town hospitals that care for a very high proportion of the American population," said Hiram C. Polk, M.D., former chair of the University of Louisville Department of Surgery, and the Ben A. Reid, Sr. Professor of Surgery at UofL. "These studies sought to address some of these previously unaddressed issues."

The results of these studies were published in the July issue of the American Journal of Surgery.
The investigators used the surgical safety tool "the expanded surgical time out" as a template by which to collect their data, Polk said. This is a method by which all participants in a surgical procedure, including, in some cases, the patient, take a moment to clarify critical details about the procedure that is about to take place.

"The basic surgical time-out includes identifying the correct patient, correct surgery and correct site," said Susan Galandiuk, M.D., professor of surgery at UofL and senior investigator on the first study, which served to define the current culture regarding surgical safety and quality initiatives. "The expanded time-out looks at preoperative timing and choice of antibiotics and discontinuation of postoperative prophylactic antibiotics, additional criteria for diabetics or other ill patients, or factors that come into play if a surgery will last longer than two hours, such as measuring core temperature, monitoring blood glucose level and a clear decision about continuing beta blocker drugs postoperatively if they have been used preoperatively."

The availability of blood for transfusion in a surgery and any special instruments needed also were helpful to include on the checklist, Galandiuk said.

The studies looked at how quickly the smaller hospitals -- four in Kentucky and one in Indiana -- adopted quality improvement measures, as evidenced by the implementation of surgical time-out; whether surgical specialists were committed to accepting the quality and safety parameters outlined in the expanded surgical time-out checklist; and how the payment structure may affect quality and safety measures.

Major surgeries examined included hip and knee replacements, hysterectomy, colon resections, and hernia repairs. In all, 2,300 surgeries were examined. The researchers found that all specialties had extremely high rates of adherence to timely administration of prophylactic antibiotics within the recommended one hour before surgery.

"We also found that, although almost one quarter to one third of patients were awake during the surgical time-out, surgical time-out was implemented in more than 97 percent of all cases among the different subspecialties," Polk said.

The researchers also found that all specialties successfully avoided hypothermia in most cases, and gynecologists, especially, made appropriate choices regarding antibiotics in a majority of cases.

"Our research showed that clinicians in these rural hospitals showed an extremely high standard of care to their patients, equal to that given at urban and tertiary counterparts," Polk said. "The hospitals' willingness to commit to participating in these studies with the goal of better patient care should be commended as well."

Approximately 40 percent of Americans get their surgical care in centers that are not large, urban or tertiary care facilities and the willingness and ability of these institutions to implement quality and safety measures is incredibly important, Polk said.

"These studies, looking at representative sites in Kentucky and Indiana demonstrated that these facilities can have the resources necessary, human and otherwise, to provide high quality, safe surgical care, and the commitment to doing so," he said.

Other investigators involved in these studies include Michael McCafferty of UofL; Margaret Tyson of Quality Surgical Solutions; James Watkins of Taylor Regional Hospital in Campbellsville, Ky.; Motaz Qadan, Nathan Hicks and Chris Battista of Price Institute of Surgical Research; Paul Cronen of Kings Daughters' Hospital and Health Services in Madison, Ind.; Eugene Shively of Taylor Regional Hospital in Campbellsville, Ky.; Donald Fry of Northwestern University Feinberg School of Medicine; Michael Pine of the University of Chicago School of Medicine, and Gregory Pine of Michael Pine and Associates.

Editor's Note: The studies were funded by the Physicians' Foundation for Health Systems Excellence (PFHSE), which was formed using a portion of the proceeds of a lawsuit brought against a major insurer by a group of physicians which claimed that the insurer had conspired to pay physicians in hospitals less than they should have. The group was able to collect a substantial amount of withheld payments. Now, PFHSE seeks to advance the work of practicing physicians and improve the quality of health care for all Americans.

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