Risk Adjusted for Real Results

CHI Memorial Uses TSQC/NSQIP Data to Drive Quality

When it comes to making changes to drive quality, it's hard to begin the journey without a firm idea of where you are going … or where you began.

Tammie Crowder, RN, BSN, surgical clinical reviewer at CHI Memorial in Chattanooga, said before joining the Tennessee Surgical Quality Collaborative (TSQC) and the National Surgical Quality Improvement Program (NSQIP), there was limited data regarding surgical outcomes, which made it challenging to focus improvement initiatives.

When it comes to explaining outlier results compared to the nation, Crowder noted with a smile, "Every surgeon has the sickest patients." However, she continued, that actually is true for many surgeons in the state and region who are often dealing with patients with multiple chronic conditions including obesity, diabetes and heart disease.

With NSQIP and TSQC, Crowder said she reports many factors that could impact outcomes including the patient's height, weight, smoking status, anesthesia score, comorbid conditions, lab results and whether or not a surgery was performed as an emergency procedure, among others. By incorporating that detailed information, a much more accurate, risk-adjusted profile emerges.

Tammie Crowder

"We can say our patients are sicker at CHI Memorial than across the nation," she added of leveling the playing field through risk adjustment. And, she continued of participating in TSQC, "We can compare ourselves to other hospitals across Tennessee. That's significant because we truly are pulling out of the same bucket. When we compare Tennessee hospital patients – across the board, comparing all 21 TSQC hospitals to the nation – our patients really, truly are sicker."

Far from being an excuse to accept poorer outcomes, Crowder said leveling the playing field provides surgeons, nurses, and health systems with meaningful data and a true measuring stick for their performance. "So if we have a problem with pneumonia, for example, then we really do have a problem because the level of sickness in our patients has already been risk-adjusted out," she explained.

Because of that apples-to-apples comparison, Crowder said it's easier to flag potential problems. "I could tell pretty quickly when I started abstracting charts that we had an issue with pneumonia," she said. "Sure enough, once we got a full year of data in there, pneumonia was the problem."

As part of membership in NSQIP and TSQC, Crowder has access to additional resources and conferences. Attending an American College of Surgeons meeting, she heard a speaker from Boston talk about the I-COUGH program, which had been formulated by Boston Medical Center to address their own high rates of post-operative pneumonia. "Boston dropped their pneumonia rate in half in the first year, and they feel like they saved over a million dollars just by doing the right thing for the patient," Crowder noted.

Her enthusiasm for the protocol, coupled with the Tennessee Hospital Association making I-COUGH a quality improvement project for the state, helped get the ball rolling at CHI Memorial. "The blessing of the TSQC is it motivated the hospital leadership to have buy-in for the project," she said. Crowder explained Bill Cecil, who provides economic and quality data analyses for TSQC, ranked the participating hospitals across outcomes. "We had the best overall ranking but were among the worst for pneumonia," she said of the added incentive to institute I-COUGH.

"It's truly basic nursing care but so much more," Crowder added of the pneumonic that reminds caregivers to use simple preventive measures that are easy to overlook during a busy shift. I-COUGH, she continued, stands for:

I: Incentive Spirometer,
C: Cough & Deep Breaths,
O: Oral Care,
U: Understanding & Patient Education,
G: Get out of Bed, and
H: Head of Bed Elevated.

Two critical components, Crowder said, are documenting steps and conducting patient education to ensure all the steps are met. Preventing pneumonia, she continued, starts before a patient is even admitted to CHI Memorial. Nurses begin working with patients during pre-testing to educate them on the process and to introduce the incentive spirometer. Patients are shown how to use the equipment, asked to use it two to four times daily before their scheduled surgery and given goals to hit in terms of moving the piston.

Crowder said there are several reasons to begin using an incentive spirometer a week or two before surgery. "First of all, you work those muscles … and secondly, you know what to do with it," she said. Crowder noted that if a patient is first introduced to the incentive spirometer right after coming out of anesthesia and is told to suck, the patient will inevitably blow, instead. By introducing the equipment beforehand, nurses also gain valuable allies among a patient's circle of caregivers. "We try to involve the family. If you explain how important this is, they are like a dog with a bone," Crowder said with a laugh about getting the family on board to remind the patient to complete their exercises.

Having an I-COUGH flow sheet, she continued, keeps everyone honest because each action and cycle must be ticked off. When a patient is asked if they have gotten out of bed and walked, the answer is almost always an emphatic 'yes.' A little questioning, however, often reveals the patient only stood long enough to change a gown rather than actually moving about to help clear secretions from the lungs.

Instituting I-COUGH also impacts other common post-surgical issues, Crowder said. By getting a patient out of bed and moving, it decreases the risk of bedsores and deep vein thrombosis. "And it doesn't really cost anything," she said of the protocol.

While CHI Memorial dipped their toes into the implementation of I-COUGH in 2015, it wasn't until last year that there was a focused commitment to institute the protocol fully. Crowder is anxiously waiting on the latest numbers to see if the efforts have paid off with decreased cases of pneumonia, but she feels confident the evidence-based intervention will prove to be a 'win/win' for patients and providers who are working together to improve outcomes.

TENNESSEE
Surgical Quality Collaborative

The Tennessee Surgical Quality Collaborative is made up of more than 20 hospitals and health systems across the state and represents approximately 1,500 surgeons. TSQC is a collaboration of the Tennessee Chapter of the American College of Surgeons, member hospitals, and the Tennessee Hospital Association's Center for Patient Safety, which serves as the coordinating center.