

Bedside battleground

Catheter utilization rates at a Kentucky Magnet hospital are dropping dramatically thanks to a nurse-driven Foley catheter removal protocol.

BY MARY CRESSE

In an ideal world, an infection prevention program would have the wholehearted support of every department in the hospital and see impressive decreases in rates of infection.

Welcome to Central Baptist Hospital in Lexington, Kentucky.

“Between 2010 and 2011, the number of catheter-associated urinary tract infections (CAUTIs) at Central Baptist dropped significantly—38.1 percent in the intensive care units (ICUs) and 37.5 percent in the medical surgical units, for an overall rate of change of 37.8 percent,” said Nurse Epidemiologist Lynn Roser, PhD candidate, MSN, RN.

It was a good start. Catheter utilization rates, which also dropped that year—19.0 percent in the ICUs and 31.3 percent in the medical surgical units—continued to improve in the first

six months of 2012 (*see Figure 1*).

What did they do and how did they do it?

Central Baptist, a 383-bed facility and one of three Magnet hospitals in Kentucky,

implemented an evidence-based, nurse-driven, Foley catheter removal protocol.

Of course, change wasn’t immediate. Said Roser, “We knew it would be at least a two-year process before we started seeing strong results, but we’re committed to the protocol, and we expect to see a further decrease in infections as our utilization rates continue to show

dramatic decreases.”

CAUTIs now comprise 40 percent of infections reported by acute care hospitals and cause 13,000 deaths every year, according to the Centers for Disease Control and Prevention (CDC). CAUTIs are responsible for a host of complications, including cystitis, pyelonephritis, prostatitis, and Gram-negative bacteremia.

Figure 1

Change in Foley catheter utilization rates

Hospital area/year	Utilization rate	Rate of change
ICU 2012 (first 6 months)	.54	
ICU 2011	.68	
ICU 2010	.84	-19.0% (2011) and -35.7% (2012)
Medical Surgical 2012 (first 6 months)	.08	
Medical Surgical 2011	.11	
Medical Surgical 2010	.16	-31.3% (2011) and -50.00 (2012)



Face time is integral to operational effectiveness. Infection preventionists at Central Baptist meet weekly or on the spot, if necessary. From left are Dee Anderson, Terry Altpeter, Mark Dougherty, Lynn Roser, and Jo Ellen Walton.

Every infection preventionist (IP) knows that healthcare-associated urinary tract infections (UTIs) are linked to instrumentation of the urinary tract. But a solid implementation strategy—key in decreasing infection rates—requires that those who work in all departments of the hospital are highly aware of the risks of infection associated with use of catheters.

EMPOWERED AND SUPPORTED BY EXECUTIVE LEADERSHIP

Like other hospitals, Central Baptist had been working mightily to reduce CAUTIs, but it was clear extra force was needed. During the summer of 2010, Karen Hill, DNP, RN, chief operating officer and chief nursing officer, approached Roser with the idea of creating a nurse-driven protocol to remove Foley catheters.

Roser, who had been gathering data on CAUTI, readily accepted, in great part because she had always seen Hill as an agent of change. “Karen is a visionary leader who wants this hospital to be cutting edge. She’s always willing to try new things. By virtue of her leadership style, she creates an atmosphere of empowerment and trust. I find that very motivating and uplifting.”

“She completely entrusted me to put my ideas into action.”

Roser then met with the hospital epidemiologist, Mark Dougherty, MD, and nurse colleagues Dee Anderson, MSN, RN, CIC, infection preventionist; Jo Ellen Walton, ADN, RN, data abstractor; and Sharon Merritt, BSN, RN, Magnet project coordinator. Together they spent the ensuing months crafting a protocol, which Dr. Dougherty then approved for an end-of-year presentation to the medical

executive committee. The protocol was passed in December for implementation the following January 31.

PUTTING THE PROTOCOL IN PLACE

Over the next year and a half, project leader Roser and her colleagues worked with unit directors and physicians to further develop the plan and elicit support from all departments of the hospital. Diligently instituted, and continually evaluated, the protocol:

- Identified indicators for urinary catheter insertion, maintenance, and discontinuation
- Emphasized alternatives to catheters such as bedpans, bedside commodes, external catheters for males, or incontinence briefs
- Offered bedside education and training for more than 970 nurses, on all shifts

- Empowered nurses to communicate with physicians to determine medical necessity for catheters, and to remove a patient’s catheter unless contraindicated
- Sent regular electronic reports to the nurse epidemiologist for review of catheter activity and medical necessity
- Conducted surveillance rounds to ensure appropriate catheter care and removal.

Dr. Dougherty, who is responsible for Central Baptist’s overall infection prevention program, began to meet with other doctors weekly to review data and to ensure that they were aware of the hospital’s quality goals (the program works through the quality department).

Executive Director Terry Altpeter, PhD, EJD, RN, began meeting regularly with staffers as well. They included physicians, senior leadership, IPs, and

Performance Improvement (PI) Coordinator Emily Piercy, MSN, RN, CNE. “My role is as much a coach as it is facilitator. The nurse-driven protocol is part of a larger hospital initiative, and I help put the pieces together.” After the nurse epidemiologist

reports data to Altpeter, she presents it to the senior team at monthly executive quality committee meetings. “I present infection and utilization rates so everyone knows exactly where we are in terms of risk.”

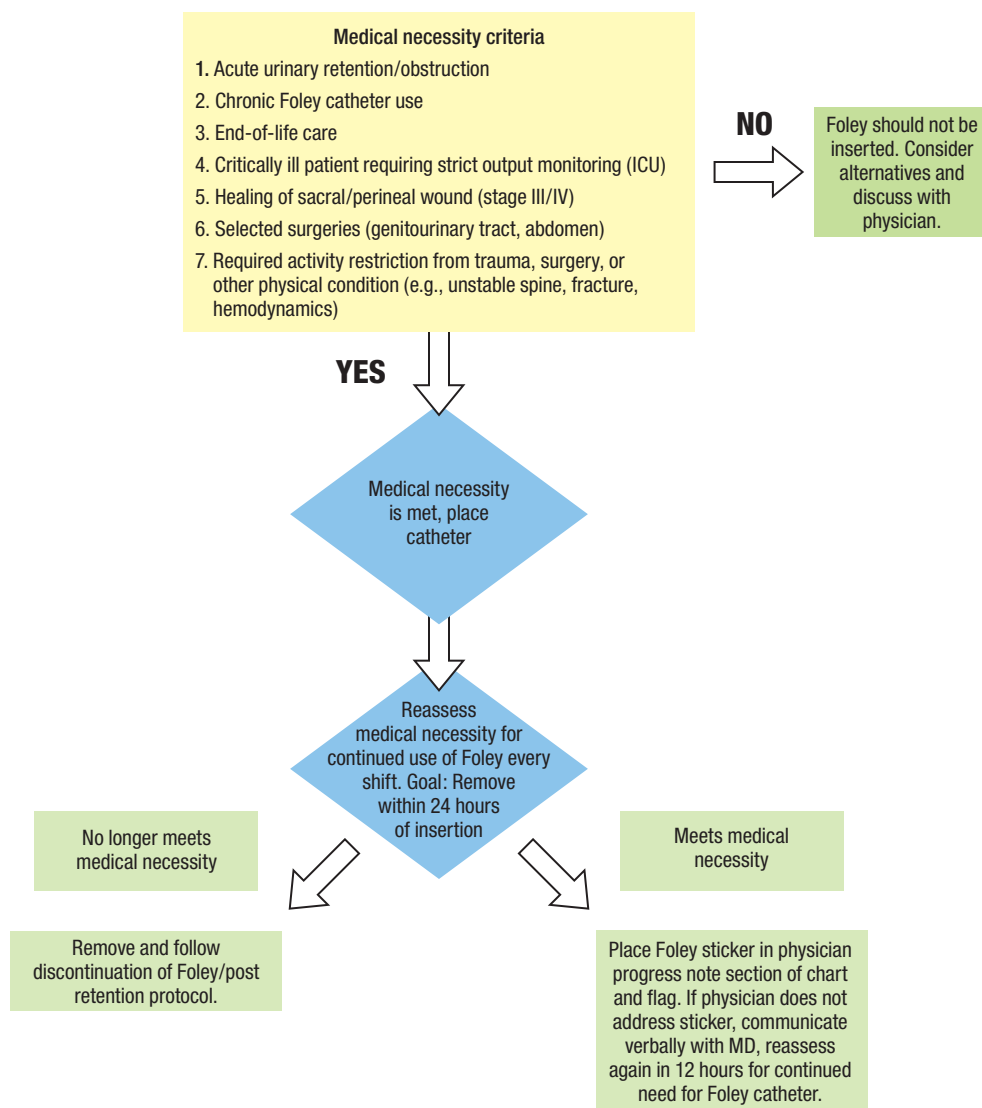
Altpeter also may suggest

changes in operations and staffing. It was she who assigned the PI to the nurse-protocol project—a move essential to further dialogue and promote efficiency. “Between the PI coordinator, Lynn, and me, we have smoothed out the process,

strategized, and really looked at what we could put into place.”

Roser notes, “I have complete buy-in from my senior team. They’ve made it a priority to get these infection rates down. The president and chief executive officer of this hospital [William G. Sisson] is always saying, ‘We want zero catheter infections.’”

Figure 2
Catheter placement and removal protocol diagram



A PLAN IN ACTION

Despite avid support from management, all facility departments, and a varsity front-line team, the IPs have faced challenges.

The protocol is not a magic bullet. It is one strategy among many. “You can’t forget the basics —proper insertion and maintenance of the urinary catheter,” she said. With members of the education department, IPs train and test nurses repeatedly in the basics of catheter insertion and removal—emphasizing all the while the direct effect of these actions upon infection rates. Insertion and care of the Foley catheter is now a mandatory yearly check-off for all registered nurses. Nursing assistants must also check off on care of the catheter.

Roser, Anderson, and Walton also make daily rounds evaluating compliance with Foley utilization based on medical necessity (see Figure 2) as well as proper maintenance and securement of the catheter—offering one-to-one instruction at the bedside, if necessary. Compliance rounds also offer an opportunity to encourage nurses to put into action their strong assessment skills and employ their power to remove unnecessary Foleys.

Challenges can extend beyond clinical care, as with

data presented in evaluating and conveying the success of the protocol. “The purpose of the protocol is to decrease catheter days, which in turn should decrease the rate of CAUTIs. But when an institution decreases its catheter days as dramatically as we have, the infection rate may remain unchanged or even go up. That can be disheartening and difficult to explain to administration, physicians, unit directors, and the bedside nurses,” said Roser.

“To complicate matters more, hospitalcompare.hhs.gov publishes CAUTI rates based on old claims and discharge data, which is quite different from how we are mandated to report [them] by

the CDC’s National Healthcare Safety Network’s definition,” said Roser. “So it’s important to articulate the success of this program not only in terms of

“Each one gives you a different picture and helps you to further evaluate your program and where it needs to go. So it is important to have colleagues like Dr.

said. “However, changing practice is difficult. In the past, we have utilized Foley catheters routinely in the care of patients, not fully appreciating the serious

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infection rates per catheter days but also infection rates per patient days, number of infections, utilization rates, rates of change over various points in time, and standard infection ratios.”

Dougherty, Terry Altpeter, Dee Anderson, and Jo Ellen Walton who understand this and are able to discuss the success of this program with others at different levels within the hospital,” Roser

risk for infection their presence posed to our patients. Today we know better and we have made significant strides,” said Roser. “We realize we have to aim for zero every day.”

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