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Michigan hospitals national leaders in preventing common and costly urinary tract infections

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Patients at Michigan hospitals are less likely to experience a urinary tract infection caused by a catheter than at other hospitals in the country, according to a new study by the University of Michigan.

Michigan hospitals lead the way in using key prevention practices to reduce the number of catheter-associated UTIs and also have lower rates of UTIs – which are one of the most common hospital-acquired infections in the nation– according to the new findings that appear in the Journal of the American Medical Association Internal Medicine.

"Hospitals recognize that UTIs are a common, preventable and costly health issue but many still don't routinely use practices proven to prevent them," says lead author Sanjay Saint, M.D., MPH, the University of Michigan's George Dock professor of internal medicine and the associate chief of medicine at the VA Ann Arbor Healthcare System.

"Michigan hospitals, which have taken the lead in applying low-tech practices aimed at timely removal of urinary catheters, are also proving to be leaders in reducing the risk of patient harm from UTIs."

UTIs, which often arise from catheters used to empty bladders for hospitalized patients, are responsible for 35 percent of infections related to hospitalization and can, lead to serious complications. Aiming to cut expenses and improve care, a 2008 Medicare policy stopped paying

hospitals for the cost of treating preventable urinary tract infections that develop in hospitalized Medicare patients.

Michigan's Keystone "Bladder Bundle" Initiative has focused on a significantly higher use of practices aimed at timely removal of urinary catheters in Michigan hospitals. The study published in *JAMA Internal Medicine*, funded by a $1.7 million grant from the National Institutes of Health four years ago, supports efforts by UMHS and the VA Ann Arbor Healthcare System to help hospitals find the best ways to prevent UTIs.

Saint and his colleagues found that Michigan hospitals were more likely to participate in efforts to reduce catheter-associated infections by using bladder-scanners as well as reminders or stop-orders to ensure catheter use was discontinued at an appropriate time. More frequent use of preventive practices coincided with a 25 percent reduction in UTI rates at Michigan hospitals compared to a 6 percent overall decrease experienced by other U.S. hospitals.

"These data reinforce the significance of appropriately maintaining and removing catheters in the effort to prevent catheter-associated UTIs," says Saint, who is also the director of the U-M/VA Patient Safety Enhancement Program, and leader of several other studies on infection prevention including some taking place in Italy and Japan.

"The Keystone Bladder Bundle project in Michigan provides an effective model for implementing strategies to lower patients' risk of developing a UTI in the hospital. There is clearly a need to identify strategies to help hospitals in other states – and even other countries – enact similar practices to improve care and reduce healthcare costs."

The findings coincide with another U-M-led study in the same issue of *JAMA Internal Medicine* that identifies the barriers some hospitals face

in implementing strategies to reduce urinary catheter use. Common barriers included difficulty engaging nurse and physicians to change their practice styles, patient and family requests for indwelling catheters, and emergency departments' customary process on catheter use.

"Every hospital has its own approach to catheter use that's become ingrained into that specific institution's culture of care," says lead author of the second study Sarah Krein, Ph.D., R.N. research associate professor, U-M Department of Internal Medicine, research scientist, VA Ann Arbor Healthcare System; and of the U-M School of Nursing.

"Changing those expectations and customs won't happen overnight. We hope to identify ways to make the transition to new effective practices smoother and easier in order to reduce UTIs in hospitals across the country."

Krein and Saint are on the national leadership team of a nationwide project funded by the Agency for Healthcare Research and Quality (AHRQ) that aims to reduce catheter-associated UTIs by 25 percent in all 50 states and Puerto Rico. So far, approximately 800 hospitals are participating.

More information: "Preventing Catheter-Associated Urinary Tract Infection in the United States," a national comparative study, online March 25, JAMA Internal Medicine, DOI: 10.1001/jamainternmed.2013.101

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