Preventing Hospital-Acquired Infections

The need to implement innovative technologies and best practices

by Lorri Downs, RN, BSN, MS, CIC

Preventing hospital-acquired infections (HAI) continue to be one of the most important issues in healthcare today. While there has been much discussion about the problem, very little has centered on the evidenced-based solutions available and the challenge providers face in finding and implementing innovative technologies and best practices. The CMS reimbursement changes that took effect in October 2008 helped to bring the issue to the forefront somewhat, as healthcare professionals dealt with the mandate that they eliminate certain HAIs and improve patient safety or risk losing Medicare reimbursement dollars.

Faced with that prospect, many healthcare providers have been looking for ways to address these and other specific issues. The CDC, IDSA and SHEA have developed a compendium of the various practices available, so the information is out there. At the same time, it is common knowledge that some of the possible strategies are not well understood or largely ignored. Two areas where this disconnect is most prevalent is hand hygiene compliance and catheter-associated urinary tract infections (CAUTI).

Hand Hygiene: There is time to do it effectively—every time

Hand hygiene is among the simplest, most effective methods that we know of for preventing HAIs, and yet, there is a struggle that has been going on for a long time to gain a level of compliance worldwide. In a recent interview, Dr. Didier Pittet, hospital epidemiologist and director of the infection control program at the University of Geneva Hospitals, noted just how frighteningly low compliance is, saying “On average it’s around 40 percent, at the best, and it’s not rare that when you come in a unit or a ward that the average compliance will be around 20 percent.”

According to Pitttet, the most prevalent and consistent barrier that he has observed in his studies is the lack of time a healthcare worker has to perform correct hand antisepsis. “When we monitor hand hygiene practices in the intensive care unit, we could really see that nurses had at least 20 opportunities to clean hands every hour of patient care,” he said. “And if you do it with soap and water, it will take you almost half an hour, each hour, to clean your hands. So it means that it is absolutely
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impossible for a regular nurse in the ICU to clean his or her hands using the appropriate timing.

However, Pittet, a key contributing author to both the 2002 CDC and 2009 WHO guidelines, notes that healthcare workers can bypass the time constraint by using a proper alcohol-based hand rub to clean their hands. And by using a product that meets the WHO Guidelines for Hand Hygiene in Healthcare—a concentration of at least 80 percent ethyl alcohol or 75 percent isopropanol—Pittet says that the results are really more effective than washing with soap and water.

“IT is more effective—really more effective,” said Pittet. “We are talking about log reductions, differences in the efficiency and the efficacy between alcohol and soaps. And of course it’s a lot better for your hands, because you know, if you apply soap on your hands, it actually removes the lipids and some of the cross-links between different parts of the skin. Lipids keep water in your skin. If you remove the lipids, then you let the water evaporate from your skin and from your hands. So at that point your hands become really, really damaged.”

With the time constraint barrier removed with the use of an effective alcohol-based hand sanitizer, the other focus area for improvement is recommending that everyone be given permission to remind—or even challenge—a care provider to sanitize his or her hands before touching a patient or their surroundings. That goes not only for doctors, nurses and nursing assistants, but also for food service and cleaning staff, visitors and family. And while patients shouldn’t have to remind staff to perform hand hygiene, they are being encouraged to be vigilant in asking. The CDC patient admission video Hand Hygiene Saves Lives specifically tells patients to “make sure that everyone who touches you—including your doctor—cleanses their hands too.”

CAUTI—Less is more

It’s a statistic that almost every healthcare facility knows: 40 percent of all HAIs are urinary tract infections. It’s also well-known that catheters are the most common source of these infections. In fact, the daily risk for patients acquiring a urinary tract infection is as high as 7 percent when indwelling urethral catheters remain in their original position.

While the use of indwelling urinary catheters is thought to be the most significant risk factor for developing a facility-acquired urinary tract infection, clinicians often pay little attention to the insertion decision, its optimal management and its timely removal. Supporting data also suggests that many times a urinary catheter is inserted without a physician’s order, and that at times patients are not assessed appropriately for alternatives to catheterization. And even though clinicians do their best to practice good hygiene techniques, infections happen due to poor technique or because the catheter is left in too long.

When it comes to proper technique, hand hygiene is absolutely essential, as is maintaining sterility of the catheter and the field the kit is laid out on throughout the procedure. Catheterization, however, is a procedure where clinicians have developed their own individual techniques and traditional tray designs do not necessarily support the recommended guidelines. All this contributes to variance in how the procedure is done and opportunity to break sterile technique.

In an effort to help clinicians reduce the risk of CAUTI, Medline Industries Inc. developed a ground-breaking Foley catheter management system featuring a reengineered catheter tray that is coupled with an evidence-based clinical education program. The catheterization kit is packed in a single layer with each item—gloves, antiseptic swabs, drapes and so forth—available in the order that they’ll be needed. This helps the clinician follow best practices for avoiding infections.

In addition, studies have shown that the most effective way to prevent CAUTI is to avoid catheterization, yet data indicates that approximately one quarter of patients admitted to hospitals have urinary catheters inserted. In 30 percent to 50 percent of these patients, a urinary catheter is not medically indicated but has been inserted for either an unclear or inappropriate indication, such as urinary incontinence. Duration of urinary catheterization is often inappropriately prolonged because physicians forget that their hospitalized patients have catheters in place.

Caregivers should be encouraged to ask “Does this patient need this catheter and when is it going to be removed?” It has been found that if medical indications for the catheter are checked and noted in the patient’s chart before the catheter is placed and if a “remove by” date is assigned, catheters don’t stay in as long. When indwelling duration is shorter, infection rates go down. Doctors don’t have a chance to “forget” that a patient has been catheterized and thus not order the device’s removal.

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