

Central Line–Associated Bloodstream Infections

Central lines (or central venous catheters) can provide many benefits to patients, such as fluid resuscitation, medication administration, and hemodynamic monitoring. But these benefits bring several risks, the most common of which is central line–associated bloodstream infection (CABSI). The Centers for Disease Control and Prevention (CDC) estimates that 250,000 CABSIs occur in hospitals each year, with an attributable mortality of 12% to 25% for each infection.¹ In addition, bloodstream infection rates are substantially higher among patients with central lines than among those without central lines.¹

Due to the persistence of these infections, the Centers for Medicare & Medicaid Services (CMS) will no longer pay health care organizations for the extra costs associated with vascular



As of 2009, The Joint Commission's National Patient Safety Goals include a requirement designed to prevent CABSIs. (Photo courtesy of the Federal Emergency Management Agency.)

catheter–associated infections. CMS hopes to thereby motivate organizations to prevent a repeat of the 29,536 vascular catheter–associated infections that occurred with Medicare patients

in 2007.²

The Joint Commission approved a new National Patient Safety Goal requirement for 2009 (NPSG.07.04.01),

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Patient Safety Pulse

Your Patient Safety News

HHS Issues Action Plan to Prevent Health Care–Associated Infections

The U.S. Department of Health and Human Services (HHS) has established a set of five-year “national prevention targets” designed to prevent health care–associated infections (HAIs).

According to Centers for Disease Control and Prevention (CDC) estimates, approximately 1.7 million HAIs occurred in U.S. hospitals in 2002, the most recent year for which CDC data were available. These infections were associated with an estimated 99,000 deaths. The CDC also estimates that HAIs lead to an estimated \$20 billion in health care costs annually.

The Joint Commission’s National Patient Safety Goal 7 requires accredited organizations to take steps to reduce the risk of HAIs. The goal’s five requirements include provisions related to hand hygiene, surgical site infections, central line–associated bloodstream infections, multiple-drug-resistant organisms, and management of identified HAI cases as sentinel events. (For more information about the National Patient Safety Goals, visit <http://www.jointcommission.org>)

The HHS’s “The Action Plan to Prevent Health Care–Associated Infections” lists a number of areas in which HAIs can be prevented, such as surgical site infections. According to HHS, this document serves as a roadmap for how the federal government will address HAIs as a public health issue. The plan includes the creation of national benchmarks, a set of prioritized recommended clinical practices, a research agenda, an information management strategy, and a public communications plan intended to raise awareness of HAIs and prevention of HAIs. The action plan also describes the agency’s blueprints for collaboration with other federal agencies and state, tribal, and local governments and organizations.

The agency has submitted a plan for public comment and plans to hold a series of public meetings about the plan. A copy of the plan, a schedule for these meetings, and instructions for commenting on the plan can be found at <http://www.hhs.gov/ophs>. **PS**

Top 5 in the News

1 Agency Advises Organizations About Antiviral Drugs Patients who have weakened immune systems, health care workers, and emergency services personnel should be protected with antiviral drugs throughout an influenza pandemic, according to a recently released guideline by the U.S. Department of Health and Human Services. The guideline is available at <http://www.pandemicflu.gov>.

2 Study: Smoking Cessation Reduces Heart Attacks Heart attack hospitalizations in the city of Pueblo, Colorado, fell from 399 to 237 in an 18-month period after workplaces and public places were made smoke-free, according to the Centers for Disease Control and Prevention’s *Morbidity and Mortality Weekly Report*.

3 Antibiotics Overprescribed for Pediatric Patients Physicians tend to overprescribe antibiotics for children who have upper respiratory infections, according to a recent study in the journal *Ambulatory Pediatrics*.

4 X-rays Help Prevent Surgical Sponge Retention Requiring the use of x-rays to detect surgical sponges before the patient leaves the surgical suite is more cost-effective for hospitals than relying on sponge counts by operating room staff, according to a recent study that appeared in the journal *Surgery*.

5 Some Medical Errors Not Documented A recent study published in the *Annals of Internal Medicine* found that hospital patients reported serious adverse events that were never documented in their medical records.

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which requires organizations to implement evidence-based guidelines to prevent CABSIs. NPSG.07.04.01 applies to short- and long-term central venous catheters as well as peripherally inserted central catheter (PICC) lines. The elements of performance (EPs) for this goal focus on four main points: (1) educating staff, patients, and their families regarding guidelines for preventing CABSIs; (2) measuring compliance with the guidelines and CABSIs rates; (3) maintaining aseptic technique during central line insertion, and (4) properly maintaining the central line and continuously evaluating the necessity of the central line.

To ease organizations into the transition of preventing CABSIs, The Joint Commission has included a one-year phase-in period, with expectations for planning, developing, and testing progress at three, six, and nine months in 2009. Full implementation of the goal is expected by January 1, 2010, across an entire organization (not just in intensive care units [ICUs]). This article outlines tips for complying with the EPs under NPSG.07.04.01 and reducing CABSIs. (Organizations can also reference “Preventing Catheter-Related Bloodstream Infections,” which was published in the May 2008 issue of *The Joint Commission Perspectives on Patient Safety*. Subscribers can access that article here:

<http://www.ingentaconnect.com/content/jcahol/jcpps/2008/00000008/00000005/art00004>

TIP Educate providers on evidence-based practices for preventing CABSIs. Both the University of Pittsburgh Medical Center (UPMC) Presbyterian in Pittsburgh and BJC Healthcare System in St. Louis have developed Web-based education modules for physicians who insert central lines and nurses who

assist with insertion and maintain the central line. “The central line insertion course uses Web-based didactic training and a simulation center,” says Carlene A. Muto, M.D., M.S., medical director of Infection Control and Hospital Epidemiology at UPMC Presbyterian. (Find out more about UPMC’s education module at http://www.wiser.pitt.edu/apps/courses/courseview.asp?course_id=3131.) BJC Healthcare also developed educational modules for preventing health care–acquired infections, including CABSIs (see <http://www.apic.org> for more information).

Good marketing of required policies and procedures can improve provider compliance. The Greater Cincinnati Health Council created a slogan, “2 Minutes to Save a Life,” to help providers remember the interventions involved in the central line insertion bundle.³ These interventions include use of alcohol-based hand gel (10 seconds), maximum sterile barriers including sterile gloves, large sterile drape, sterile gown, mask with face shield, and hat (50 seconds); application of chlorhexidine-based antiseptic (30 seconds); and appropriate drying time for antiseptic (30 seconds).

TIP Involve patients and families in CABSIs prevention strategies. Along with basic hand hygiene techniques, patients should be told the following to help prevent a CABSIs⁴:

- If the bandage at the insertion site comes off or becomes wet or dirty, tell your nurse or physician immediately.
- Inform a nurse or physician if the area around your catheter is sore or red.
- Ensure that health care providers wash their hands before entering the room and disinfect the injection port before accessing the central line.
- Do not let family and friends who visit touch the catheter or the tubing.

The Society for Healthcare Epidemiology of America (SHEA) provides an educational flyer that can be given to patients to help them get involved in preventing CABSIs (see <http://www.shea-online.org/Assets/files/patient%20guides/BSI.pdf>).

TIP Follow established guidelines from the CDC or other professional organizations when developing policies and procedures. The gold standard for evidence-based practice guidelines for preventing CABSIs is *Guidelines for the Prevention of Intravascular Catheter-Related Infections*, which the CDC published in 2002.¹ “We are updating the guidelines right now, and they should be ready by the spring of 2009,” says Naomi P. O’Grady, M.D., medical director, Procedures, Vascular Access, and Conscious Sedation Services, Critical Care Medicine Department, National Institutes of Health, Bethesda, Maryland. “Antibiotic and antiseptic impregnated catheters will probably get a stronger rating than they did in the original guideline, there will be a continued emphasis on education and training, including the use of chlorhexidine instead of betadine, and there is an expanded section on the use of positive pressure valves,” says O’Grady.

Although the EPs under NPSG.07.04.01 support the CDC guidelines, there are some guidelines for maintaining the catheter that aren’t specifically included in the goal, including the following!:

- Replacing transparent central line insertion site dressings every seven days or whenever the dressing becomes damp, loose, or visibly soiled. (Gauze dressings can also be used without an increased risk for infection, but these dressings have to be changed every two days and as needed.)

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- Replacing IV administration tubing sets every 72 to 96 hours. However, when a fluid that enhances microbial growth is infused through the tubing (such as lipid emulsions and blood products), the tubing should be changed every 24 hours. (Tubing used to administer propofol should be changed every 6 to 12 hours.)
- Capping all stopcocks when not in use.

TIP Measure compliance with CABSIs prevention guidelines as well as CABSIs rates and report back to stakeholders.

Organizations should measure unit-specific incidence of CABSIs (in terms of CABSIs per 1,000 catheter days) and report the data to nurses, physicians, and leadership on a regular basis.⁵ To correctly perform surveillance for CABSIs, organizations should consult the CDC's *Outline For Healthcare-Associated Infections Surveillance* at <http://www.cdc.gov/ncidod/dhqp/pdf/nhsn/OutlineForHAISurveillance.pdf>.

Most hospitals measure CABSIs rates on ICUs, but not all have the resources to measure CABSIs rates for their entire organization. “Some of our smaller hospitals do surveillance in non-ICU patient care areas, but it’s resource intensive because these patients are spread out all over the hospital,” says

Keith F. Woeltje, M.D., Ph.D., medical director for Infection Prevention at BJC Healthcare System in St. Louis. “Our data suggest that there are at least as many patients outside the ICU with central lines as there are inside the ICU. Therefore, if we had only focused on ICU patients, we would have missed half, if not more, of central line infections.” To help reduce the workload involved with measuring CABSIs outside ICUs, BJC Healthcare System is automating surveillance by evaluating electronically available data on patients who have inserted central lines, positive blood cultures, and positive cultures from other sites of the body. “These data don’t give a completely accurate National Healthcare Safety Network [NHSN]–style CABSIs rate, but they do help us follow infection rate trends over time and focus on the units that need increased education,” says Woeltje.

TIP Use a catheter checklist for central line insertions. The NHSN provides a central line insertion checklist at http://www.cdc.gov/ncidod/dhqp/forms/57.125_CLIP_BLANK.pdf. “An organization should follow the checklist and ensure that the physician inserting the central line is completing all the appropriate steps,” says Woeltje.

TIP Use a standardized supply cart that includes all

the materials needed to insert central lines aseptically. Organizations need to make it easy for providers to comply with evidence-based practices. This means placing the tools and materials needed to prevent CABSIs at their fingertips. Most likely, the supply cart should contain the following items: central venous catheter, chlorhexidine, large sterile drape, sterile gown and gloves, mask with face shield, hat, syringes with saline flush, 1% lidocaine, sutures, hemostats, scalpel blade, and a dressing kit.

TIP Ensure proper maintenance of central lines. Providers who access central lines must ensure that the dressing and administration tubing is changed according to the guidelines and that catheter hubs or injection ports are scrubbed with alcohol before the port is accessed.^{1,5} “We have empowered patients to stop providers from accessing central lines if providers don’t wash their hands or access the port correctly,” says O’Grady. “In addition, when a CABSIs occurs, we try to determine if the infection occurred at the time of insertion or much later, which would indicate that the infection resulted from a maintenance problem and that further education for those who maintain central lines is necessary,” adds O’Grady.

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Strategies for Eliminating Catheter-Related Urinary Tract Infection



Urinary tract infections (UTIs) are the most common hospital-acquired infections, and 80% of these infections can be attributed to indwelling urinary catheters (UCs).¹ The insertion of a UC is a common intervention in health care organizations, and up to 25% of patients will have a UC at some time during their hospital stay.² Most commonly, the adverse outcome of UCs is a UTI, but bacteremia and sepsis may occur in a small proportion of infected patients.¹ Furthermore, UCs can cause restricted mobility, which can contribute to delayed recovery and increased risk for pressure ulcers.³

Due to the persistence of UTIs, the Centers for Medicare & Medicaid Services (CMS) will no longer pay health care organizations for the extra costs associated with catheter-associated urinary tract infections (CA-UTIs). CMS hopes to thereby motivate organi-

zations to prevent a repeat of the 12,185 CA-UTIs that occurred in Medicare patients in 2007.⁴ In addition, The Joint Commission's National Patient Safety Goal 7 requires organizations to take steps to prevent health care-acquired infections.

This article aims to provide health care organizations with tips and strategies for inserting UCs only when necessary, reducing the risk for UTI while a catheter is in place, and for removing UCs as soon as they are no longer necessary to a patient's care. It may be helpful to review the figure on page 7, which presents a decision tree regarding the use of UCs, while reading through the following tips and strategies.

STRATEGY #1 Insert a UC only when necessary. Studies show that at least 40% of patients have indwelling UCs for unjustified

reasons.⁵ "Focusing on whether the patient truly needs the catheter is the number-one intervention to prevent infections," says Susan M. Slavish, B.S.N., M.P.H., C.I.C., consultant, Joint Commission Resources. The only patients who should have UCs inserted include those with the following conditions or needs:^{3,6}

- Urinary tract obstruction/retention
- Neurogenic bladder dysfunction
- Urinary incontinence in patients who are at risk for major skin breakdown or who need to protect a nearby operative site
- Bladder irrigation or instilling medications
- Measurement of accurate inputs and outputs in critically ill patients (for example, patients with hypoxemia, hypotension, or congestive heart failure or patients who need inotropic support or repeated administration of diuretics)
- Fluid challenge in patients with acute renal insufficiency
- Preoperative catheter insertion
- Comfort care for terminally ill patients

Staff education can go a long way toward reducing the number of unnecessary UCs. "People need to understand what a UC is meant for and what potential complications can occur from using it," says Slavish.

TIP Don't forget automatic stop orders. One emergency department (ED) used a "just-in-time" education method, wherein urinary catheter indication sheet was attached to each catheter insertion kit.⁷ Providers filled out the indication sheet prior to UC insertion; the sheet required them to circle a reason for

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inserting the catheter (similar to the list of reasons above) or describe a different reason for ordering the UC if they could not find it in the preapproved list. The UC indication checklist helped these ED providers think twice about inserting a UC. Thereafter, the total number of catheters inserted decreased, and the number of appropriate UCs went from 37% to 51%.⁷

STRATEGY #2 Be open to alternatives to inserting UCs.

“A lot of times, catheters are used more for convenience than for necessity,” says Keith F. Woeltje, M.D., Ph.D., medical director for Infection Prevention at BJC Healthcare System in St. Louis. Even though it may be easier to care for patients when they have UCs in place, the increased risk for infection negates the benefit of time saved by the catheter. Health care providers should reconsider inserting UCs in patients who (1) cannot communicate their need to void, (2) are incontinent and aren’t at risk for major skin breakdown, (3) are hemodynamically stable, and (4) have urinary retention but can be managed with bladder scans and intermittent catheterization.⁵ Care providers can use the following alternative interventions^{1,2}:

- Incontinence pads placed on beds and chairs (use diapers only when a patient is ambulating)
- Regular toileting rounds
- Intermittent catheterization
- External catheters (for men)
- Bladder scans to check for post-void residuals
- Suprapubic catheters

STRATEGY #3 Follow guidelines to reduce the risk of



The Centers for Medicare & Medicaid Services consider CABSIs to be “never events.”

CA-UTIs when catheters are in use. When providers decide that a UC is necessary to a patient’s care, they must ensure that the catheter is well maintained to further reduce the risk of infection. Woeltje and Slavish offer the following tips for reducing the risk of CA-UTIs when caring for a patient who has a UC:

- Use aseptic technique and sterile equipment when inserting a UC.
- Secure catheter tubing to the patient’s leg so that the catheter doesn’t continuously move up and down, causing irritation and allowing bacteria to move up into the bladder.
- Maintain a closed drainage system:
 - Use clean technique when emptying the collecting bag and prevent the drainage spigot from touching the measuring container.
 - Obtain urine samples by aspirating urine from the sampling port only after cleansing the port with disinfectant.
 - Do not disconnect the catheter and drainage tube unless the catheter must be irrigated.
- Use a separate measuring container for each patient when draining urine from the collecting bag to avoid spreading infections from room to room.

- Keep the collecting bag below the level of the bladder at all times to prevent inadvertent backflow of urine into the bladder (especially when the patient is being transferred).
- Clean the perineal area and urinary catheter tubing routinely.
- Use antimicrobial catheters in patients who are at high risk for UTIs (including patients who might require a UC for a long period of time).

STRATEGY #4 Remove UCs immediately when they are no longer indicated.

Because the duration of catheterization is the most important risk factor for developing infection, it is imperative that providers remove catheters as soon as they are no longer needed.¹ In addition, at least 40% of patients who have a UC in place longer than seven days can develop a UTI, extending their hospital stay three more days.⁶ “I think the two biggest reasons that providers leave catheters in longer than necessary is that they forget about the catheter and the patient’s care is more convenient with a catheter,” says Woeltje. “Sometimes I see patients who can get out bed on their own, but their catheter is still in!”

TIP Use automatic stop orders to remind providers to remove UCs after a certain number of days.

“If you can build stop orders into the ordering system, then the institution can automatically remind people to think about removing catheters,” says Slavish. For example, a study performed at a VA medical center

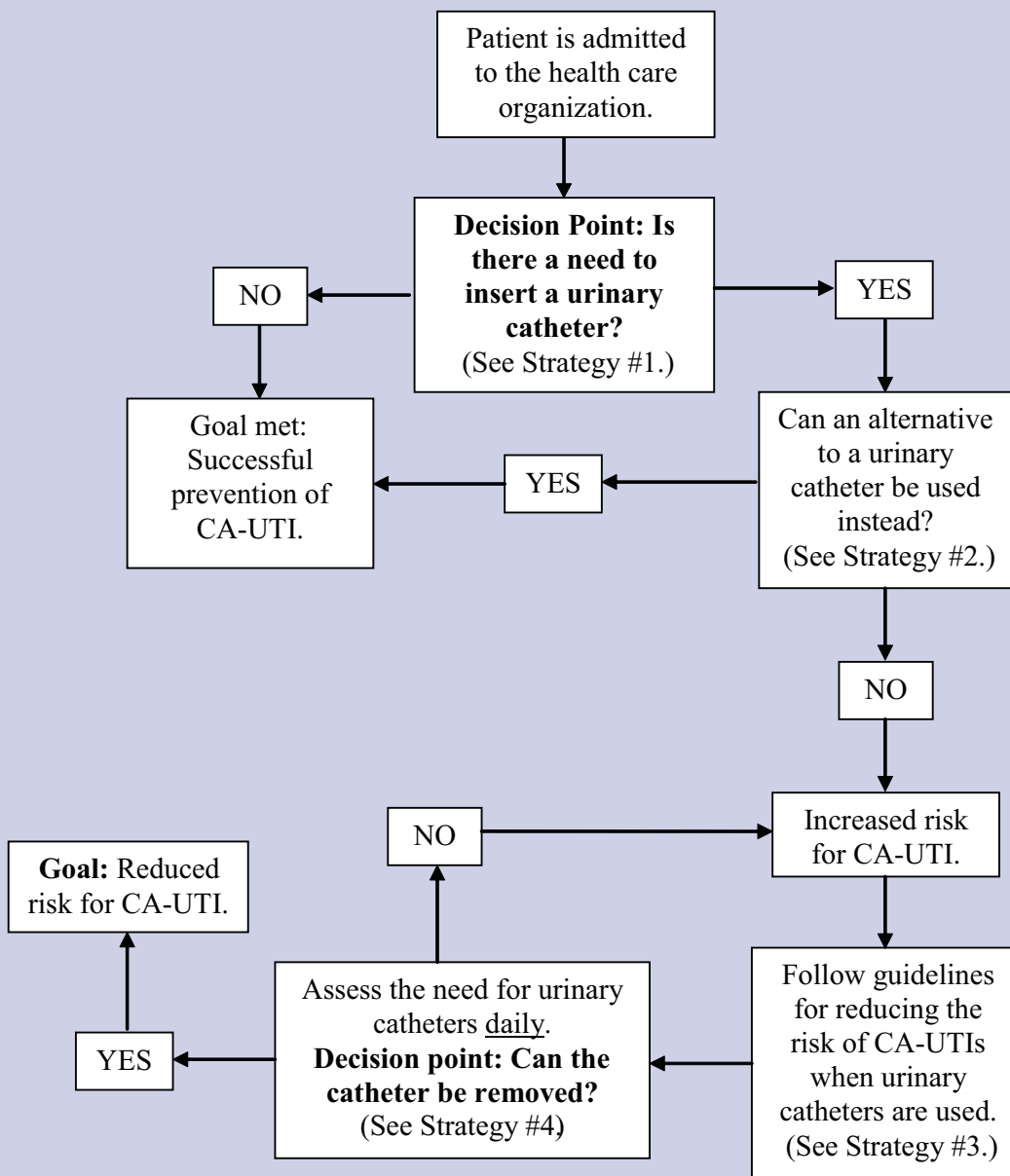
evaluated a computerized reminder, that prompted physicians either to remove or continue a UC 72 hours after UC insertion. This study found that the reminder shortened the duration of catheterization by three days without affecting the recatheterization rate.² “If organizations don’t have access to a computerized system, they can build in a reminder system to daily

rounds by always looking at the appropriateness of invasive lines and the readiness for those lines to be removed,” adds Slavish.

Woeltje explains that a provider at Barnes-Jewish St. Peters Hospital in St. Peters, Missouri, went through all the operative order sets to make sure that any time there was an order for a

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Figure. Decision Tree for Using Urinary Catheters



CA-UTI =catheter-associated urinary tract infection

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Preventing Home Fires Associated with Long-Term Oxygen Therapy



Lester grew up in the tobacco fields of Kentucky, started smoking when he was 12, and has been smoking ever since. By the time he was admitted to the Burn Unit at his local hospital at age 75, he was in the advanced stages of chronic obstructive pulmonary disease (COPD). Worse yet, although he'd been advised not to smoke near the concentrator, he felt unable to go without nicotine for longer than 15 minutes at a time.

So when Lester lit a cigarette in the oxygen-enriched environment created by his concentrator, the ensuing flames burned his mouth and nose as well as the skin on his face. He recovered after several weeks of inpatient treatment, but Lester's physician was reasonably certain that unless he refused to prescribe home oxygen for Lester, there was a good chance that his patient could ignite the home he shared with his daughter and three grandchildren the next time he tried lighting a cigarette.

Lester is a fictitious character typical of nearly 1 million patients in the United States who receive long-term oxygen therapy through the Medicare program, most of them due to smoking-related lung conditions.¹ Some patients try to continue smoking while using oxygen. As anyone familiar with basic chemistry can tell you, the combination of oxygen and fire poses serious risks of property damage, horrific pain, injury, disfigurement, and a nightmarish death. Often the victims include not only the smokers themselves but their family members, friends, neighbors, and firefighters.

Reading the Numbers

COPD is the fourth leading cause of death in the United States and is among the leading causes of disability.¹ In another decade, COPD will likely move up, becoming the third leading cause of death around the world.² Smoking is the cause of 80% to 90% of COPD. At least 12 million adults

have been diagnosed with COPD in the United States, and approximately 119,000 adults die each year as a result of the disease.³ In 2002, caring for COPD patients cost an estimated \$32.1 billion.³ Home oxygen therapy is now the standard of care for treating COPD patients. Today more than 800,000 individuals in the United States receive oxygen therapy, an annual cost of \$1.8 billion.⁴ The Joint Commission's National Patient Safety Goal Requirement NPSG.15.02.01 requires organizations to take steps to prevent home fires associated with patients' long-term oxygen therapy. And on March 20, 2001, the Joint Commission issued the *Sentinel Event Alert* "Fires in Home Care Settings" regarding oxygen hazards.

Smoking cessation is key to patient safety during long-term oxygen therapy. In addition, the following steps can help prevent fires in an oxygen therapy patient's home:

1. Do not use oil, grease, aerosol sprays, or petroleum jelly-based products on or near oxygen equipment.
2. Keep oxygen equipment away from open flames or heat sources.
3. Provide adequate ventilation and do not cover concentrators.
4. Educate patients on the safe use of the equipment and about fire safety and prevention.
5. Equip the patient's home with fire safety devices such as extinguishers and smoke detectors.

A Physician's Viewpoint

Michael White, M.D., head of the inpatient clinic in the adult burn unit at Detroit Receiving Hospital, treats one or two patients a month who are on home oxygen therapy and who have

burned themselves while smoking. “I suspect that number will gradually increase as the population ages,” White says. “About half of them are repeat offenders who have undergone repeat admissions but haven’t been able to stop smoking. Once their burns have healed, we don’t continue to treat them.”

And yes, he and his colleagues do recommend strongly to their patients that they quit smoking. “But we can’t follow them home,” he says. “For those who don’t stop smoking, they tend to slide back into their addiction. It’s often one of the few pleasures they have in life.” The average age of White’s patients is around 66; his oldest patient is 79. Most have additional medical issues besides COPD. Most have unhealthy lungs to begin with, and half of those patients die from diseases such as lung failure and comorbidities. “Those are the ones for whom quitting is difficult,” White says “So they keep coming back. I don’t have a good handle on what outpatients do. I may prescribe them a nicotine patch, but I don’t have a good way of following up on them.”

According to White, trying to get these patients to quit is the job of their primary care physician. “Sometimes their family gives them cigarettes,” he says. “We see the hard-core of the hard-core smokers, even though they’ve been told by their primary physician not to smoke. Sometimes the Veterans Health Administration has given them a tracheotomy tube, and they continue to smoke through the tube. A lot of patients hope that if they’re careful, nothing will happen. Some of them go outside to smoke or go to another room. Others have trouble leaving their oxygen supply for even a few minutes, and the oxygen is still in the atmosphere when they smoke. That’s when they’re most likely to trigger a home fire.”

A Social Worker’s Viewpoint

Erin Terkoski, M.S.W., L.M.S.W., is a clinical social worker on the burn unit



Smoking cessation is a key part of preventing fires associated with home oxygen therapy.

and works closely with White. She sees the same patient population and advises patients following their treatment for acute burns. “We see them when they have an injury related to their smoking. Often they see a pulmonologist or some other specialist other than their primary care doctor. Sometimes they’re treated by a pulmonologist and/or monitored by a home care agency after they’re released, especially if they’re on home oxygen delivered by a durable medical equipment agency.”

According to Terkoski, the home care agency is responsible for handling the oxygen safety training at a patient’s home. “The hospital is a nonsmoking facility, so we don’t do any safety training here. If we have oxygen delivered to the patient’s beside, the agency that handles the delivery also does the training before the patient is released.” If the patient returns for a checkup and it’s clear that they’ve been smoking at home while on oxygen, the clinical staff and social work staff address the problem with the patient. “Even if the patient understands the issue of home oxygen and smoking, that doesn’t mean they will change their behavior at home. We can’t force them; they may indeed go home and continue to smoke. It’s just

like your doctor telling you that you must exercise. Your doctor can’t go home with you.”

Has a health professional ever refused to prescribe home oxygen for a known smoker? “Yes, a health professional has refused to prescribe home oxygen for an indigent patient who’s a known smoker if he or she is clearly noncompliant,” says Terkoski. “The majority of our patients are homeless and have a history or drug and alcohol use. These patients may require home oxygen or home antibiotics. The hospital may pay for antibiotics, and if a patient requires home oxygen and won’t use the oxygen correctly and it’s evident that the oxygen isn’t benefiting them and/or is endangering them and others, it’s up to our department to refuse to pay for the oxygen intended to be sent home with the patient.”

And what about patients who are homeless? “Some of our patients are homeless,” says Terkoski. “And if they leave our hospital for a shelter, and there’s nowhere to keep a concentrator that has to be plugged in to an electrical outlet, our case managers have to decide whether it’s advisable to give

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them oxygen equipment to take with them, especially if they have no electricity, and especially if they must leave the shelter during the day.”

The Bottom Line on Preventing Fires

According to Terkoski, the company that supplies the oxygen equipment is responsible for teaching the patient to use the home oxygen equipment wherever they call home—and to use it safely. “Ultimately, people who don’t have dementia and who are oxygen patients need to understand that if they continue to smoke, they need to shut off the oxygen and go outside to smoke in a well-ventilated area and avoid cooking near an open flame.”

Finally, says Terkoski, the requirement in most communities is that patients are responsible for contacting their local fire department to get safety equipment on a first-come, first-served basis. **PS**



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National Patient Safety Goal 15

The organization identifies safety risks inherent in its patient population.

Requirement NPSG.15.02.01

The organization identifies risks associated with home oxygen therapy, such as home fires.

Rationale for NPSG.15.02.01

Many sentinel events reported by home care programs to The Joint Commission were due to a fire in the patient’s home. In each case, when patients were injured or killed as a result of a home fire, home oxygen was in use.

Elements of Performance for NPSG.15.02.01

1. The home safety risk assessment includes the presence or absence and working order of smoke detectors, fire extinguishers and fire safety plans, and a review of all medical equipment.
2. The organization provides education to the patient and family regarding the findings of the home safety risk assessment, possible interventions, causes of fire, and fire prevention activities.
3. The organization assesses the patient’s level of comprehension of and compliance with fire prevention activities and reports any concerns to the patient’s physician.

The Patient Safety Blog

Readers no longer have to wait a whole month for new information from *Perspectives on Patient Safety!*

Beginning soon, the editor will be posting to a blog on the Joint Commission Resources Web site (<http://www.jcrinc.com>) that will provide supplemental information to the articles in the newsletter and other news.

What’s more, this blog gives you, the reader, an opportunity to give your feedback about the newsletter and voice your opinions on the issues discussed in the blog and in print.

See the blog at <http://www.jcrinc.com/blog/2008/12/11/greetings>.

TIP Remove nonessential catheters immediately. The longer central lines remain in patients, the more the risk for CABSIs increases.^{1,5} “You can use electronic documentation systems to prompt nurses and physicians to consider whether a patient’s central line is necessary,” says Woeltje. “If a patient no longer needs IV medications or their peripheral access has improved, it’s probably time to remove their catheter.” **PS**

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Strategies for Eliminating Catheter-Related Urinary Tract Infection (continued from page 7)

perioperative UC, there were also orders to remove the catheter after surgery.

In addition to implementing these tips and strategies, organizations should collect data on the number of symptomatic CA-UTIs (numerator) and the number of patients with catheters in place each day (denominator). “The goal is to limit catheter use to drive down the number of catheter infections,” says Woeltje. “But recognize that infection rates are expressed as the number of CA-UTIs per 1,000 catheter days. So as you reduce the denominator by decreasing the use of inappropriate catheters, the infection rates may not decrease as much because you’re only putting catheters in the patients who really need them, and those patients are most likely at high risk for UTI.” **PS**

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The Essential Guide for Patient Safety Officers, co-published with the Institute for Healthcare Improvement (IHI), is a comprehensive and authoritative repository of essential knowledge on patient safety. The book is geared to help patient safety leaders create a culture of safety; plan, oversee, and implement new safety practices; and improve safety-related management and operations. The book is applicable to community hospitals, teaching hospitals, health care systems, rural/critical access hospitals, and ambulatory care settings. The editors/authors are: Allan Frankel, M.D., principal, Lotus Forum, Inc., Washington, D.C., and faculty, IHI; Michael Leonard, M.D., physician leader of patient safety, Kaiser Permanente, Oakland, California, and faculty, IHI; Terri Simmonds, R.N., C.P.H.Q., director, IHI; and Carol Haraden, Ph.D., vice president, IHI.

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Joint Commission Perspectives on Patient Safety

March 09 Patient Safety Abstracts

Central line-Associated Bloodstream Infections

Central lines (or central venous catheters) can provide many benefits to patients, such as fluid resuscitation, medication administration, and hemodynamic monitoring. But these benefits come at the cost of several risks, the most common of which is a central line-associated bloodstream infection (CLABSI). The Centers for Medicare & Medicaid Services (CMS) will no longer pay health care organizations for the extra costs associated with vascular catheter-associated infections.

Strategies for Eliminating Catheter-Related Urinary Tract Infection

Urinary tract infections (UTIs) are the most common hospital-acquired infection, and 80% of these infections can be attributed to an indwelling urinary catheter (UC). The insertion of a UC is a common intervention in health care organizations, and up to 25% of patients will have a UC at some time during their hospital stay. Most commonly, the adverse outcome of UCs is a UTI, but bacteremia and sepsis may occur in a small proportion of infected patients. Furthermore, UCs can also cause restricted mobility, which can contribute to a delayed recovery and an increased risk for pressure ulcers.

Preventing home fires associated with long-term oxygen therapy

Nearly 1 million patients in the United States receive long-term oxygen therapy through the Medicare program, most of them due to smoking-related lung conditions. Some

patients try to continue smoking while using oxygen. This poses serious risks of property damage, horrific pain, injury, disfigurement, and death. Often the victims include not only the smokers themselves but their family members, friends, neighbors, and firefighters. The Joint Commission's National Patient Safety Goal Requirement NPSG.15.02.01 requires organizations to take steps to prevent home fires associated with patients' long-term oxygen therapy.