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Don't end up on *60 Minutes* — avoid liability with new technology

Arm yourself with education, thorough credentialing

On any given night, you can turn to one of the network news shows and be greeted with another horror story about surgery gone awry because someone somewhere performed a new procedure without adequate training.

"Well you see, Geraldo, it was like this . . . ."

Such stories are becoming increasingly common as surgical procedures evolve with the help of technological advances, such as scopes.

"When a new technique is introduced, the complication rates clearly tend to go up," says **David W. Kennedy**, MD, FACS, professor and chairman of the department of otorhinolaryngology: head and neck surgery at the University of Pennsylvania Medical Center in Philadelphia. Kennedy

EXECUTIVE SUMMARY

Same-day surgery managers are facing liability concerns as patients continue to demand the latest technology and surgeons ask to be credentialed in it. To avoid problems:

- Tell the patient if the procedure is a major deviation from the standard accepted technique. Consider whether the patient's educational level is sufficient to evaluate any additional risks.
- Keep records of any technology used in an off-label manner.
- Make a good-faith effort to read evaluations of the different types of devices available for purchase.
- Offer educational materials, and consider an inservice for your staff when new technology differs substantially from what was used previously.
- For credentialing, determine how significant a departure the new technology is from the previous procedure, what skills are involved, and whether the surgeon has those skills.

is a member of the American College of Surgeons Committee on Emerging Surgical Technology and Education.

In fact, complications can occur with new technology even when the surgeon has been adequately trained, surgery experts emphasize. "I think there is no doubt about the fact that the more cases a surgeon does of a particular type, the better the results tend to be," Kennedy says.

And technology isn't the only factor causing an increase in surgical complications. The media also is to blame, says **Richard Gregory**, MD, director of Celebration (FL) Institute of Aesthetic Surgery and associate professor at University of South Florida in Tampa.

"A lot of what's coming out new is being promulgated through the media long before it's really ready to be used," says Gregory.

Technology needs to be tested in a fairly well-defined setting and proven before it's covered in the media, he maintains. "I think the media is doing a little bit of injustice to the public."

Take these steps to avoid problems

Since the rush in technological advancement and the demand for these procedures from patients don't appear ready to wane, what steps can same-day surgery managers take to ensure they don't risk liability, not to mention negative media exposure? Consider these suggestions from experts in the field:

• **Determine whether informed consent needs to change.**

In addition to the general risks of having surgery, many new procedures have specific risks, such as the pigmentary changes, Gregory says. "Certainly the most common risks and the more devastating risks ought to be discussed with patients."

How informed consent should be handled for new technology depends on whether the procedure is a minor departure or a major deviation from the standard accepted technique, Kennedy says.

"When I first introduced endoscopic sinus surgery here, our feeling in the U.S. was that it was a relatively minor deviation from what had previously been often done with a microscope," he says.

Because only the instrument was different, Kennedy says, he and other surgeons didn't think a different informed consent was required. "I believe it was an ethical and moral decision. But to take care of a cancer that would normally be done with an open en plaque procedure with a minimally invasive technique that may not get the same margin, patients need to be carefully informed about what is standard therapy, what the advantages and disadvantages of the new technique will be, and what's known about results and outcomes."

Consider a written addendum to the chart explaining that the risks, complications, and alternatives were discussed with the patient, some experts advise. Keep in mind that poorly educated patients might not be fully capable of understanding all of the issues such as the relative risk in the outcome, Kennedy warns.

Your state laws may address new technology, advises **Madelyn Quattrone**, Esq., senior risk management analyst at ECRI, a nonprofit health care research organization based in Plymouth Meeting, PA. However, some laws are vague and raise additional questions. In such cases, seek advice from your legal counsel, she suggests.

• **Use rational and medical evidence to select technology.**

One of the most frequently asked questions that ECRI receives is whether facilities are required to purchase the most highly rated (and often most expensive) technology.

Essentially, liability would be judged by reasonableness, she says. "As long as there is rational and medical evidence for the selection being made — for example, ECRI does publish its own evaluations of medical devices and equipment — certainly there may be a range of choices that would be reasonable for the hospital or purchaser to choose from looking at those particular devices."

COMING IN FUTURE MONTHS

- The latest verdict: Acrylic nails in the OR
- Tips for reducing medication errors
- How to avoid losing your shirt with APCs
- Saving money and time with pregnancy tests
- Advice on reaching 100% accuracy on your bills

Health care providers can avoid liability by making a "good faith argument," which is making a good faith effort to select a safe and effective product that has been reviewed by some knowledgeable entity, she says.

• **Determine whether the new technology is being used in an approved matter.**

Frequently, it's good medical practice for a device to be used in an "off-label" manner, Quattrone says. However, if a patient is harmed due to complications from the technology, and use of the technology is construed to be experimental, the provider could be liable, she warns. Consider keeping a record of the device being used in an off-label manner, Quattrone advises.

• **Ensure training and education are thorough.**

When new equipment is introduced in a facility, sometimes staff, and even physicians, are not completely familiar with the equipment or how to deal with problems that might arise, Quattrone says. **(For information on a lawsuit related to lack of training in new technology, see *Same-Day Surgery*, February 1999, p. 19.)**

Credentialing is an essential component

"It's really incumbent upon the hospital to provide written materials or video materials and perhaps even an inservice on a piece of new equipment that is significantly different from equipment used in the past," she says.

• **Don't skimp on the credentialing process.**

For credentialing, consider the background of the surgeon and the differences in the new technology as compared to the previous technology, Kennedy suggests. "I think one of the difficult things that come out when a procedure is developed is determining: Is it a minor modification or dramatic departure requiring new skills?"

Often the answer to that question depends on the surgeon, he says, citing endoscopic cholecystectomy as an example. There was a significant learning curve for those who hadn't worked with endoscopes. In contrast, a surgeon with a strong background in laser surgery might not need a significant amount of additional training to master a new laser technique. In that case, a hands-on course probably would be sufficient, Kennedy says.

With the surgeon or the senior physician responsible for credentialing, determine how significant a departure the new technology is from the previous procedure, what skills are involved, and whether the surgeon has those skills, Kennedy advises. "If there's a question, I recommend the surgeon be proctored for a certain number of cases by someone skilled in that area."

Be sure to document that the certification and additional training have been reviewed before you grant privileges, experts advise. If the manufacturer of the new technology is providing the education and training, ensure the physician has completed that certification, Quattrone advises.

"Having been a defense attorney mitigating these matters for about 20 years, I think I've heard about everything," she says. "Physicians may claim they've received training, but simply shown up at a course and not actually completed the training." Such inadequate training can lead to nightmares such as the liposuction deaths that occurred between 1992 and 1998, she says. **(For more information on the liposuction deaths, see *SDS*, July 1999, p. 80. For more on credentialing for new procedures, see *SDS*, June 1999, p. 65.)**

Some questions regarding new technology remain unanswered, Kennedy says. Can a surgeon's capability with a particular technique be evaluated during a continuing medical education course? Can organizers of those courses be objective evaluators? "I don't think we know the answer to that fully," he says.

Eventually, surgical simulators will score a surgeon objectively, Kennedy and others point out, but this technology is in its infancy. "But they are starting to become another method of developing a particular subset of surgical skills," he adds. ■

SOURCES

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Periop nursing shortage threatens SDS programs

Less OR exposure in school means fewer prepared

Across the country, hospitals and other health care providers are bemoaning the shortage of nurses, but within same-day surgery programs, the shortage is felt more strongly. The shortage of perioperative nurses has been called "a shortage within a shortage."[1]

One reason for the shortage is the move from a three-year diploma program that gave nursing students time to work in the OR environment to two- and four-year degrees that focus more on theory and classroom learning than on hands-on clinical experience, says **Lucy H. Miller**, RN, PhD. Miller is an associate professor of nursing at Valdosta (GA) State University.

"Caring for patients today is technologically complex, so students do need extra time in the classroom," she says. "Requirements for licensure also mean more classroom time than in the past."

Nursing schools also don't have the same relationships they had previously with hospitals that provided opportunities for students to work within the OR. Such opportunities allowed students to become acquainted with the facility, the nurses, and the physicians, says **Louise deChesser**, RN, MHA, CNOR, MHA, director of operations at the HealthSouth Surgery Center of Hartford, CT. "This lack of time in the operating room doesn't give students, even those with a natural gift for the operating room, a chance to discover if surgery is the right place for them."

When **Linda Y. Kautzman**, RN, MSN, CNOR, clinical staff coordinator for South Georgia Medical Center in Valdosta, returned to school for an advanced degree, she noticed that nursing students took some elective courses, but most students chose courses outside nursing.

The electives are usually psychology or sociology courses that can be applied to patient care, but Kautzman says the elective requirement is a way to introduce students to perioperative nursing. She developed a course that is being offered at Valdosta State University. **(See story on perioperative course, p. 29.)**

If you don't have a nearby school of nursing, but you want to offer classes that will help train nurses to work in your day-surgery program, the Denver-based Association of periOperative Registered Nurses (AORN) has a class that can be offered at your site. The course covers 24 topics such as patient assessment, sterilization and disinfection, scrubbing, gowning and gloving, patient position, and electrosurgery, says **Eileen Ullmann**, RN, MHS, CNOR, professional education specialist for AORN.

"The total course requires 80 hours of classroom and clinical time that should take about three months," she says. The cost is $1,250 for the initial licensing agreement and per-student cost for course materials. The total number of students determines the fee per student, so it differs from facility to facility. One staff member is needed to serve as a course leader. The course leader must attend a facilitator seminar offered by AORN, Ullmann adds.

While hospital-based same-day surgery programs may be most likely to present this type of course, she sees an opportunity for freestanding same-day surgery centers and small community hospitals to pool resources to present this course.

"Different facilities could work together to supply a course leader for the didactic portion of the course, and the students could complete clinical training at individual institutions," she says.

Another approach to attracting nurses to the operating room is to offer one-to-one training for RNs who are interested in moving from another area to the operating room, says **Sharon C. Wolfrum**, RN, CNOR, director of surgical services at Gulf Coast Medical Center in Panama City, FL.

EXECUTIVE SUMMARY

Changes in the academic preparation of nurses within nursing schools has created a shortage of new perioperative nurses to replace older nurses who are approaching retirement or movement into administration. The burden of identifying, attracting, and training nursing students, as well as RNs with no operating room experience, to work in the operating room falls on the shoulders of surgery program managers and staff members. Some efforts to increase the pool of perioperative nurses include:

- development of perioperative courses to offer within nursing school curriculums;
- building relationships with nursing schools to offer sites for clinical rotations and internships;
- offering courses at the surgery program facility to train nurses with no surgery experience;
- training nurses one on one to work in operating rooms.

Perioperative elective introduces OR to students

When **Linda Y. Kautzman**, RN, MSN, CNOR, clinical staff coordinator for South Georgia Medical Center in Valdosta, GA, returned to Valdosta State University to work on her advanced degree, she saw an excellent opportunity to address the shortage of nursing students who were exposed to perioperative nursing.

While most nursing students only have one to two days to observe in the OR as part of the core curriculum, nursing students do have an opportunity to sign up for elective courses. Kautzman saw an opportunity to offer an elective that focused on perioperative nursing.

She developed the course syllabus that was accepted by the College of Nursing's curriculum committee. She is helping the college market the course to nurses already in the work force as well as nursing students. Because the course teaches basics such as sterile techniques, wound care, and safe positioning of patients, it is a good course for nurses who may want to move to the operating room from other areas, says Kautzman.

The course is also designed as a distance learning course that will enable students in four locations in South Georgia to continue their education while taking the course.

"We've also designed the course to have an optional clinical course to earn extra credits. Students participating in the clinical option will spend three hours one day each week for a total of 45 hours of clinical time during the semester," she adds.

By having the opportunity to work within an operating room during the clinical part of the course, the nursing students have a chance to see what is involved in being a surgical nurse, she explains.

Nurses who are employed can still select the clinical option and can design their clinical time in blocks of eight- or 12-hour shifts, says Kautzman. "This makes it easier for the nurse to get the clinical experience while still working his or her regular job," she says.

Kautzman is helping to teach the course, and her hospital is serving as a site for the clinical experience in addition to continuing to offer internships to nursing students who want extra operating room experience prior to graduation. **(For information on how to contact Kautzman, see source box, p. 30.)** ■

"I didn't plan to take on nurses with no operating room experience, but I had one nurse who expressed an interest in moving from a medical floor to the surgery program," says Wolfrum. After the nurse used her own time to observe the same-day surgery program, she asked to be hired within surgery. Wolfrum set up a training program that involved video education as well as self-study of books about surgical nursing practices. An experienced nurse within the surgery program volunteered to act as the trainee's preceptor for six months.

Wolfrum admits that this type of training takes a full year before the nurse can work completely on her own, but she says it can be worth it. "She's a terrific perioperative nurse because she wanted to become one." She suggests that surgery program managers who take on a single nurse to train start with the basics and pair the nurse with a strong preceptor. "Be sure you let the trainee set the pace of learning so he or she doesn't become overwhelmed or frustrated."

Freestanding surgery centers don't have the same resources in terms of staff, time, and money to train nurses for the operating room, so most rely upon hiring experienced nurses, says **Jane Kusler-Jensen**, RN, BSM, BSN, CNOR, director of surgical services for Surgicenter of Greater Milwaukee. This often results in creative strategies to lure nurses to their centers, she adds. **(See story on how perks attract experience, p. 30.)**

Hospital-based or freestanding same-day surgery managers need to make a commitment to work with others to increase the pool of perioperative nurses, says deChesser. "The traditionally trained nurses are growing older, and we need to make sure we have well-trained, experienced perioperative nurses in place as we approach retirement. After all, the nurses we hire and train today are the ones who will take care of us when we need it!"

Reference

1. Radziewicz K, Houck P, Moore B. Perioperative education. *AORN J* 1992; 55:1,071. ■

Surgery centers attract experience

While hospital-based or freestanding same-day surgery centers that are part of a larger network have the resources to train nurses with no operating room experience, smaller freestanding centers have to find ways to attract experienced perioperative nurses.

"We just don't have the time or the resources to train a new graduate to work in the operating room," says **Jane Kusler-Jensen**, RN, BSM, BSN, CNOR, director of surgical services for Surgicenter of Greater Milwaukee. "This means that we only hire nurses with at least three years of operating room experience."

Attracting perioperative nurses to a same-day surgery center is easy because there is no call and no weekend hours. While there may be some unexpected overtime or longer days, that is the exception rather than the rule, says Kusler-Jensen. But a pleasant work environment is not enough, she adds.

"When we first opened, we thought we could offer a lower wage than the local hospital since our work environment is more predictable and less stressful," she says. "But we quickly found out that to attract the best nurses, we have to offer the same pay offered by hospital surgery programs, and we even offer signing bonuses that are paid after the nurse has stayed six months and one year."

To attract more nurses to HealthSouth's freestanding surgery centers in Connecticut, the surgery center network offers a chance to work at different locations based on the surgery center's need, says **Louise deChesser**, RN, MHA, CNOR, MHA, director of operations at the HealthSouth Surgery Center of Hartford, CT.

"Although the nurse has a primary workplace, he or she can go to any of eight centers in our region." This is attractive to many nurses because the centers can generally guarantee a 40-hour workweek, and the nurses have a chance to visit other centers, says deChesser. ■

SOURCES

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IC guidelines reach beyond the hospital

Panel suggests getting outside help

In what may signal a landmark expansion of infection control beyond the hospital, a consensus panel has issued a report on the essential infection control requirements for out-of-hospital settings.

With representation from infection control professionals, epidemiologists, public health officials, and quality accreditation, the panel has established the first consensus program standards in a rapidly expanding area of health care. The report calls for nonhospital settings to seek the oversight of hospital-based infection control professionals (ICPs) or infection control consultants in implementing the recommendations. **(See recommendations, inserted in this issue.)**

The panel concedes that some organizations will not be of the size or complexity to justify the resource commitment of a full-time, on-site ICP.

However, the report emphasizes that an ICP should be consulted for oversight if the person charged with the responsibility for infection control in the health care organization is not specially trained or experienced in epidemiology.

"There may be a person designated, but the organization should still seek the wisdom and knowledge and experience of someone who is really trained in infection control and hospital epidemiology," says panel member **Candace Friedman**, MT (ASCP), MPH, CIC, manager of infection control and epidemiology at the University of Michigan Hospitals and Health Centers in Ann Arbor.

ICP can evaluate recommendations

Moreover, given the increasing emphasis on cost containment and the need to justify expenditures, a trained and experienced ICP can be especially helpful in evaluating the benefits and requirements of the infection control program as outlined in the recommendations, the panel noted.

The panel was formed by the Association for Professionals in Infection Control and Epidemiology and the Society for Healthcare Epidemiology of America. It also included representation from the Centers for Disease Control and Prevention and the Joint Commission on Accreditation of Healthcare Organizations.

"It is the duty and responsibility of health care organizations to implement these recommendations," emphasizes **William Scheckler**, MD, hospital epidemiologist at St. Marys Medical Center in Madison, WI, in a written introduction to the report.[1] A key panel member in a similar consensus effort for acute care hospitals, Scheckler says the time has come to underscore the importance of infection control across the continuum.[2]

"Health care is no longer limited to the acute care hospital. It is a continuum from the home to the outpatient clinic, to the hospital, to nursing homes, to rehab facilities and [other] freestanding facilities," he says. "For example, at least 50% of surgical procedures that used to be done in the hospital operating suite are now being done in day-care surgical centers and surgeon's offices. We felt it was important to examine what modest amount of literature was available for these sites and extend the good principles and practices for both epidemiology and infection control to these sites."

Indeed, the report notes that the last decade has seen much nationwide growth in managed care organizations, which has changed provider reimbursements and restructured the entire health care system.

As a result, diversification and integration strategies have blurred historical separations between hospitals, nursing homes, ambulatory care, physicians, and other providers. Accordingly, the degree and complexity of care provided in out-of-hospital settings has increased markedly in recent years.

"Infection prevention and control issues are important throughout this continuum of care," the consensus panel concluded. "Infections in patients may lead to serious morbidity and mortality, readmission or admission to a hospital, increased use of antibiotics, and increased costs of care. Performing surgical procedures, invasive device insertions, and managing and providing care for patients who are increasingly immunocompromised in these settings present new infection control challenges. Therefore, infection control practices must now encompass infections that patients may acquire as a result of their care or treatment outside the acute care hospital as

Ranking categories

A consensus panel recently issued 23 recommendations for infection control programs in nonhospital settings.[1] The ranking categories for the recommendations are summarized as follows:

Rankings:

I. Strongly recommended for implementation based on: Evidence from at least one properly randomized, controlled trial, or evidence from at least one well-designed clinical trial without randomization, or evidence from cohort or case-control analytical studies (preferably from more than one center), or evidence from multiple time-series studies.

II. Recommended for implementation based on: Published clinical experience or descriptive studies, or reports of expert committees, or opinions of respected authorities.

III. Recommended when required by governmental rules or regulations.

Reference

1. Friedman C, Barnett M, Buck AS, et al. Requirements for infrastructure and essential activities of infection control and epidemiology in out-of-hospital settings: A consensus panel report. *Am J Infect Control* 1999; 27:426-428. ■

well as protect health care providers and caregivers in these settings."

But the question inevitability arises about funding the recommendations, which call for surveillance, reporting, and interventions to prevent infectious complications in nonhospital settings. The consensus panel emphasized that health care organizations should provide the necessary resources and personnel to enact the recommendations.

"I think the resources will be there because the accreditation bodies are already looking at outpatient and other kinds of facilities, both at the state level, the Joint Commission level, and even the National Commission on Quality Assurance," Scheckler says. "All of these [groups] will recognize soon, if they haven't already, that prevention of infections — protection of the patient and the health care worker — is in everyone's best interest. So the resources will be there."

Panel discussions in forming the guidelines acknowledged that the level of response to the recommendations may vary considerably in different nonhospital settings, adds Friedman. "But part of what the document hopes to achieve is to help convince an organization that it really should support this kind of a program," she says. "I don't see it as a wish list."

In implementing the recommendations, nonhospital settings should focus on their best assessment of their high-risk areas, she says.

"Those are the areas that should be followed in some manner," Friedman says. "I don't think anyone on the consensus panel thought that surveillance in a home care setting would be identical to the type of surveillance in an acute care setting. It's not that they need to do the same kinds of things. It's that they need to evaluate what are their issues and then figure out the best way to [address them]."

Regardless of setting, ongoing communication across the continuum is one of the key recommendations to prevent infections as patients move to various points in the delivery system, she says.

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2. Scheckler WE, Brimhall D, Buck AS, et al. Requirements for infrastructure and essential activities of infection control and epidemiology in hospitals: A consensus panel report. *Infect Control Hosp Epidemiol* 1999; 19:114-126. ■

Same-Day Surgery Manager

Joint venture column leads to flood of e-mails

By **Stephen W. Earnhart**, MS
President and CEO
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I felt it only appropriate to share some of the feedback I received on the recent column about why hospitals want to joint venture their ambulatory surgery with physicians. **(For more information, see *Same-Day Surgery*, January 2000, p. 8.)**

This column was in the top 10 in number of responses from readers, and the cross-section of individuals who called, wrote, or e-mailed their thoughts on the column was surprising. I had about the same number of surgical techs respond as I did hospital CEOs (12 each), and RNs as I did MDs (22 each), and then almost as many OB/GYN surgeons as I did anesthesia personnel (9 and 13). There were another dozen ranging from vendors (always the vendors!) and front office staff. I even had an old friend e-mail and tell me it was about time that I wrote something that made sense. (Thanks.)

The vast majority of the comments were from organizations and people already in the process of a joint venture or discussing the idea, or already on the other side of the venture. There were some commonalities between the groups that I think you might appreciate:

From a staff nurse:

We have been told [by senior management] that we are going to build a new surgery center with our physicians across from the hospital and that the physicians are going to run the new center. We were also told that all of our jobs are at risk. Can they do that?

The answer is yes, they can. The facility under discussion is a new limited liability company (LLC) that will be a for-profit, brand new business. Many times these new companies, even though they are doing the same type of work as in the past (for the most part), are going to be investing significant money into the business.

Your jobs could be at risk for the simple fact that they may not be able to afford you. Sad as it sounds, that is the reality. Many nurses, techs, orderlies, and other hospital staff have benefit packages and pay rates that a company just starting out — and cutting about 40% in revenue from hospital-based to surgery center-based reimbursement — cannot match. Clearly, there are exceptions, but rare is the facility that can financially afford to bring over "en masse" the same number of employees or the same benefit package as a hospital.

From an anesthetist:

Our hospital organization is joint venturing a surgery center with most of our docs at the hospital. Our group has an exclusive contract with the hospital to provide anesthesia services to the organization. We have been told that we will have to bid on the contract to provide services to the new surgery center venture. This doesn't make any sense to us, as we will not pick up any new business out of this arrangement.

We just have another center that we will have to cover! Shouldn't our contract with the hospital — especially since this joint venture is a situation where the hospital is a partner — be covered under our existing contract?

At first glance, you may think you are doing nothing but reallocating your anesthesia staff with nothing new coming in. That may very well be the case; however, the reason your facility is doing this is to decrease turnover time, start cases on time, and become more time-efficient (as well as other issues). That is going to benefit the anesthesia department by getting your cases completed faster and getting your staff out sooner. Further, the new partnership is anticipating bringing in new MDs from competing hospitals into the surgery center, which will increase your business.

If your organization did not do this with the surgeons, someone else would have. Subsequently, because of your exclusive contract with the hospital, you would be unable to provide services to that new surgery center. You stood to lose more than 8,000 anesthesia cases per year!

Next, you do need to submit a proposal if you want to be considered for the contract. This will be a completely separate business from the hospital, and you cannot automatically assume that you will be granted the contract.

From a hospital CEO:

This is the craziest thing we have ever done around here. It took me three months to convince my board that if we did not joint venture with our surgeons, we were going to lose all our outpatient surgery. As it turns out, we will now retain 50% and have a non-compete with our surgeons. Not the best of arrangements, but at least I now know the worst.

That sums it up.

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Low-tech zipper plays role in modern surgery

We've all used zippers in our daily lives. There are zippers in our clothing, our briefcases, our backpacks, shoes, suitcases, and just about anything else that requires closure.

Now, zippers also provide a cosmetically enhanced, faster way to close surgical incisions, says **Rita Altman** PA-C of Atlanta Multi-Specialty Surgical Associates in Atlanta.

The Medizip Surgical Zipper, manufactured by Atrax Medical Group in Hamilton, Bermuda, became available in the United States in January 2000, says **Christina Kuhn**, with Atrax Medical Group.

The surgical zipper is composed of a zipper with two adhesive support strips. The strips are attached on both sides of the surgical incision, then the zipper is closed to draw the edges of the wound together, says Altman. The benefits

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A product that has been used for two years in Europe is now available in the United States. The Medizip Surgical Zipper, manufactured by Atrax Medical Group in Hamilton, Bermuda, is a new way to close surgical incisions. Benefits of the surgical zipper include:

- reduced scarring at the incision;
- lower infection rates associated with the incision;
- decreased OR time because closing requires less time;
- fewer patient reports of itching and discomfort during the healing process.

SOURCES

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of the surgical zipper for a day-surgery program include less time in the OR for incision closure. That time savings can decrease costs and improve efficiency, she says.

In a retrospective, unpublished study of patients on whom the Medizip had been used, Altman says they showed a lower infection rate. "I knew that the surgical zipper decreases the time for incision closure to less than two minutes for incisions of any length, but I also discovered that fewer patients suffered postoperative infection at the incision site." The cases reviewed for the study demonstrated a 50% decrease in surgical site infections following the use of the zipper, Altman says.

The decrease in infection makes sense when you consider that the surgical zipper requires no puncture to be made in the skin, Altman explains. Also, there isn't a foreign body introduced into the skin as there is with staples and sutures. The adhesive sides of the zipper do have small holes to allow drainage, so a patient can see if there is drainage to indicate a possible infection, she adds.

Patients also like the surgical zipper because they do not experience the itching and scarring that staples or sutures may produce, adds Altman.

Although many day-surgery procedures don't require long incisions, some procedures in which the surgical zipper would be beneficial include hernia repair, scar revision, or cyst removals, says **Mitchell S. Roslin**, MD, FACS, assistant professor of surgery at the State University of New York in Brooklyn, NY.

"If the skin is aligned properly, the surgical zipper provides the same level of cosmesis as subcuticular stitches in far less time," he says.

Medizip's prices compare favorably to the prices of many suture kits, says Kuhn. "A 6 cm zipper is approximately $6, and a 12 cm zipper is between $10 and $12," she says.

When looking at costs, surgery program managers need to remember that no additional dressings are required for the zipper and less time is used in the OR closing the wound with the zipper, she points out. ■

Periop pathway cuts costs, improves efficiency

Fewer preference cards contribute to savings

How would you like to cut your supply costs per case by almost 33%?

The day-surgery program at Vanderbilt University Medical Center in Nashville, TN, achieved this result by implementing a perioperative pathway for endoscopic sinus surgery that helped surgeons and staff focus on what is actually needed for sinus patients. **(See endoscopic sinus surgery perioperative pathway, enclosed in this issue.)**

The pathway was implemented in 1996 after almost three months of development that included data review, writing, and evaluation by nursing staff and physicians. Supply cost per case in 1996 was $967.13, and in 1999, the cost per case dropped to $650.23, a decrease of 32.8%.

Implementing perioperative pathways within day surgery began six years ago and was not a difficult task, says **Nancye R. Feistritzer**, RN, MSN, assistant hospital director and administrative director of perioperative services. "We were a

EXECUTIVE SUMMARY

The staff and physicians at the Ambulatory Surgery Center of Vanderbilt University Medical Center in Nashville, TN, were able to cut supply costs for their endoscopic sinus surgery program by almost 33%. Key changes in practice that were made as part of the pathway implementation include:

- Key surgeon now holds preop meetings with patient prior to day of surgery.
- Ten preference cards were consolidated into one with pathway.
- Case carts were redesigned to contain only items that are really used.

very case management-oriented facility, and our inpatient units were very big into pathway utilization, so introduction of pathways into our ASC went smoothly," she says.

After taking a look at data collected on the different types of surgery performed on an outpatient basis, Feistritzer and her staff identified sinus surgery as one area that pathways could have an immediate effect on cost savings and efficiency. "We have one surgeon who performs the majority of our sinus surgeries, so we worked primarily with him to look at changes," she says.

Combining preference cards cuts costs

One of the first steps in developing the pathways was to combine similar surgeries onto one pathway, explains Feistritzer. Not only did this step cut down on the number of pathways with which staff have to work, it enabled the surgery program to cut the number of preference cards for sinus surgery from 10 individual preference cards for different surgeons to one basic card for all sinus surgeries. By working with the surgeons, Feistritzer's staff were able to get them to look at the supplies used and agree to standard supplies that each of them are comfortable using.

The review and elimination of the different preference cards has reduced the cost per case because everything on the case cart is used, says **Ken Peercy**, director of the ambulatory surgery center.

The biggest effect of the pathway is the staff's efficiency, says Peercy. Most of the ear, nose, and throat surgeons were ordering the same items each time, "but we still had to wait for the order to prepare for the case. Now, we are more able to anticipate what is needed and prepare ahead of time."

The nurses knew what was needed so well that they primarily wrote the sinus surgery pathway, explains Peercy. "From experience, they knew what items were routinely used or thrown out. They were able to put together a pathway that met with the surgeons' approval because it reflected their practice anyway."

After evaluating the data, the staff saw one immediate way to become more efficient. "The surgeon who does most of our sinus surgery was meeting with his patients the day of surgery to conduct his pre-op assessment," explains Feistritzer. "We showed him that he could easily schedule more surgeries if he conducted the meeting in his office prior to the day of surgery and eliminate these 30-minute meetings on the day of surgery."

The surgeon had previously scheduled no more than four surgeries per day, and now he averages five procedures per day, says Peercy.

Although Vanderbilt's same-day surgery program has an on-line charting system that captures the patients' history and physical, lab results, nursing pre-op assessment, and discharge planning,

SOURCES

For more information about perioperative pathways, contact:

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there were some items identified during development of the pathway as responsible for holding up surgery, says Feistritzer. "One of our surgeons frequently orders CT scans for his patients, but the documents weren't placed in the patients' charts prior to the day of surgery. So we delayed surgery as we looked for the information."

A simple fix was put into place when the staff realized that the charts of this surgeon's patients were not flagged as surgery patients. "Now we make sure the charts are flagged so that the scans are read and the documents prepared in time for surgery," she adds.

"We also reviewed pre-op standards and eliminated some tests that were unnecessary for most patients," says Feistritzer. "Chest X-rays, urinalysis, and EKGs are not ordered unless there is a special need." A pre-op protocol was also established, and pre-op assessments are performed by nurse practitioner, she adds.

Anesthesiologists were included in the pathway development to help identify anesthetics that would work well for sinus patients but enable them to wake quickly and reduce the amount of time in recovery.

Good data essential

The best way to develop pathways is to focus on your top procedures, says Peercy. "Get detailed data concerning costs and time per procedure, and present it to the physicians."

Because physicians are scientists, they like objective information such as numbers; however, don't expect them to suggest the changes from data only, he says.

"Offer alternatives and suggestions on how the preference card might be changed or how he might alter his practice," Peercy says. The pathway has to reflect what the surgeon wants, or it won't be used, he adds.

Feistritzer admits that the data are crucial, but she says she wasn't prepared for the difficult task of collecting them. "Make sure your program has forms to track the basic items such as costs, times, and reasons for delays," she says. "You can't base your decisions on anecdotal information because things are not always what they seem."

For example, they believed a particular surgeon was the most expensive one because of the supplies and equipment he used. "But once we evaluated the data, we discovered that he was one of the less costly surgeons for that procedure," Feistritzer says. ■

CE objectives

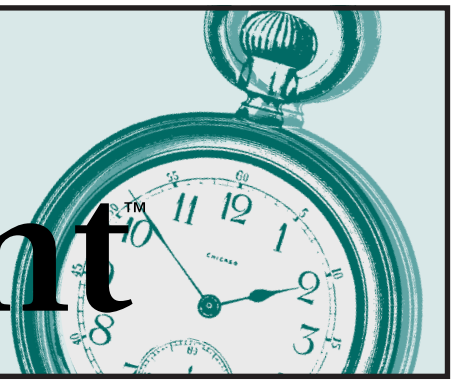
After reading this issue, the continuing education participant will be able to:

• Identify clinical, managerial, regulatory, or social issues relating to ambulatory surgery care and management. **(See "Low-tech zipper plays role in modern surgery" and "Joint Commission adds pain management standards," in this issue.)**

• Describe how those issues affect nursing service delivery or management of a facility. **(See "Don't end up on *60 Minutes* — Avoid liability with new technology.")**

• Cite practical solutions to problems or integrate information into their daily practices, according to advice from nationally recognized ambulatory surgery experts. **(See "Periop nursing shortage threatens SDS programs" and "Periop pathway cuts costs, improves efficiency.")** ■

SDS Pain Management



Complementary therapies offer pain control options

Therapeutic touch, healing touch, and Reiki enhance patient care

Pain management is increasingly recognized as a significant part of the postoperative recovery as evidenced by the recent inclusion of pain management standards for accreditation by the Joint Commission on Accreditation of Healthcare Organizations in Oakbrook Terrace, IL. **(See pain management standards, p. 4.)**

Although the majority of pain management is handled with traditional medical methods such as medication, some same-day surgery programs are exploring the use of complementary therapies to help patients manage the anxiety preceding surgery and the pain following surgery.

Often the referrals are from nurses, physicians, or the patients themselves, who describe the pain they are experiencing.

"Same-day surgery patients are ideal candidates for complementary therapies because they are healthy people who want to maintain control over their treatment and generally don't like to take drugs," says **Carolyn Bartlett**, RN, MS, staff nurse on the same-day surgical unit at Massachusetts General Hospital in Boston.

At Massachusetts General, nurses who are trained in Reiki, therapeutic touch, or positive imagery work with same-day surgery patients at the time they come in for preadmission and pre-op teaching or on the day of surgery, says Bartlett. **(See definitions of therapies, p. 2.)** Pre-op nurses have handouts that explain different therapies, and they can discuss complementary therapies with patients, she says.

Several same-day surgery nurses have been trained for therapeutic touch, and each day one nurse serves as the "on-call" therapeutic touch provider, says Bartlett. On the day of surgery, nurses give treatments before or after surgery, to help the patient relax and reduce pain.

The program has evolved from the bottom up with nurses providing the therapy on an informal basis and receiving positive reinforcement from patients, says Bartlett. "Because we have had good feedback from patients, we are now starting to formalize the program and introduce protocols," she says. Some physicians refer patients to Bartlett, but most of the referrals come from nurses, she adds.

The program at DeKalb Medical Center in Decatur, GA, is more formalized, says **Kas Sheehan**, RN, CHTP, healing touch practitioner. Same-day surgery patients benefit from healing touch and similar therapies most when the treatments can be applied in small doses before and

EXECUTIVE SUMMARY

Not only is the number of scientific articles that identify undertreatment of pain as a medical problem increasing, but organizations such as the Oakbrook Terrace, IL-based Joint Commission on Accreditation of Healthcare Organizations have introduced pain management standards as part of the accreditation process. For this reason, same-day surgery staffs are exploring options to offer patients for pain management. Same-day surgery programs that offer complementary therapies are beginning to organize the programs with protocols and procedures that define how the service will be offered.

- Staffs need to evaluate the variety of therapies and establish credentialing requirements and protocols for patient care and documentation.
- Scientific studies that document the positive effects of different therapies can be used to develop physician support.

RECOMMENDED READING

- P. Huddleston. *Prepare for Surgery, Heal Faster: A Guide to Mind-Body Techniques*. Cambridge, MA: Angel River Press; 1996.
- The Agency for Health Care Policy and Research. Acute pain management can be improved. *JAMA* 1992; 267:2,580.
- Good M. Effects of relaxation and music on postoperative pain: A review. *J Adv Nurs* 1996: 24:905-914.

after surgery, she says. "The wonderful thing about healing touch is that family members can easily be taught some techniques that will relax the patient before surgery and reduce pain after surgery," she explains.

While the complementary therapy program at Massachusetts General is based within the same-day surgery program, DeKalb's healing touch and other complementary therapies are offered as part of an overall complementary medicine program at the facility. The therapy is scheduled through and performed within the medical center's Wellness Center, says Sheehan.

"It is ideal to be within the Wellness Center because patients don't have to have a nurse or physician referral to access our services," she explains. Patients learn of the therapies from nurses and some physicians and through literature offered during pre-op teaching. While patients often will ask for a particular modality, the practitioner will suggest other treatments if the patient does not respond to the treatment they requested, she says.

Because third-party payers generally don't reimburse for complementary therapies, Sheehan's patients pay for the therapy themselves. Sheehan's charge for healing touch is $60 per hour. At Massachusetts General, staff nurses provide the therapy as part of their care of the patient and don't bill separately for the service.

"We see this as a value-added service for our patients that can set us apart from other same-day surgery programs, and patients experience less pain postoperatively," says Bartlett. **(For information on complementary therapies and**

Know the definitions of complementary therapies

A wide range of therapies can be used for pain management within a same-day surgery setting, says **Carolyn Bartlett**, RN, MS, staff nurse on the same-day surgical unit at Massachusetts General Hospital in Boston. Therapeutic and healing touch, Reiki, and music therapy are especially easy to offer because they don't require special space and can be performed during the brief time the patient is within the surgery program setting, she says.

When you are setting up a program to offer complementary therapy, be sure to include different types of therapy that will appeal to a variety of patients, says Bartlett. General definitions of some of the most common types of therapy are:

- ✔ **Reiki, therapeutic, and healing touch.** Energy healing techniques in which practitioners move their hands over the patient's body in a very specific way. All three of these modalities are used to move and balance the body's energy. While there are training programs for all three modalities, only Reiki and healing touch offer certification.
- ✔ **Reflexology.** A practice that applies pressure to areas of the foot, hand, or ear that correspond to other parts of the body. Massaging these areas helps the body relax and return to its natural balanced state.
- ✔ **Acupressure.** A technique developed by the Chinese in which pressure is applied to certain points in the body to relieve pain.
- ✔ **Sound therapy.** The use of music, nature sounds, or musical tones to relax the body and decrease pain.
- ✔ **Imagery.** The practice of guiding patients to develop a scene in their minds to facilitate healing. Sounds and smells may be used to enhance imagery.
- ✔ **Relaxation and meditation.** A variety of techniques to get the patient into an altered state of awareness. Deep breathing, relaxing each muscle group in order from head to toe, and repeating one word over and over are a few techniques used.
- ✔ **Aromatherapy.** The use of essential oils as a natural treatment through inhalation, massage, or baths. ■

SOURCES & RESOURCES

For more information about complementary therapy pain management programs, contact:

- **Carolyn Bartlett**, RN, MS, Staff Nurse, Same-Day Surgical Unit, Massachusetts General Hospital, P.O. Box 199, Rowley, MA 01969. E-mail: cbartlet@gis.net.
- **Kas Sheehan**, RN, CHTP, Healing Touch Practitioner, Complementary Medicine Program, DeKalb Medical Center Wellness Center, 2701 N. Decatur Road, Decatur, GA 30033. Telephone: (404) 501-2222. E-mail: kassheehan@aol.com.

For information and resources about therapeutic touch and healing touch, contact:

- **Healing Touch International**, 12477 W. Cedar Drive, Suite 202, Lakewood, CO 80228. Telephone: (303) 989-7982. Fax: (303) 980-8683. E-mail: htiheal@aol.com. Web site: www.healingtouch.net.
- **Nurse Healers-Professional Associates International**, 11250-B Roger Bacon Drive, Suite 8, Reston, VA 20190. Telephone: (703) 234-4149. Fax: (703) 435-4390. E-mail: nh-pai@drohanmgmt.com. Web site: www.therapeutic-touch.org.

postoperative pain, see recommended reading list, p. 2.)

Research supports the use of complementary therapies, says Sheehan. Patients who receive training in positive imagery, meditation, or energy techniques such as healing touch before surgery experience a boost to their immune system and are more relaxed, she says. Therapy following surgery results in less wound pain and a faster recovery, she adds.[1]

If you want to evaluate adding a complementary therapy pain management program to your same-day surgery program, Bartlett and Sheehan offer these suggestions:

• **Evaluate financial impact.** Take a look at your payers' policies, because you might have a payer that will reimburse for complementary therapies in some instances, says Bartlett. Even if no one reimburses for the therapy now, see if the addition of the service will make your program more appealing than a competitor's program that doesn't offer complementary therapies, she says.

• **Obtain physician support with scientific data.** Use the research that exists in medical and professional publications to present your case to physicians, says Bartlett. Anecdotal information and patient feedback alone won't convince most physicians that there is scientific support for the therapy, she adds.

• **Develop protocols.** Not only should your protocols include credentialing requirements for nurses or other practitioners, but you also should be specific about charting requirements to document therapy provided, says Sheehan. "Organizations such as Healing Touch International and Nurse Healers-Professional Associates International can be valuable resources for models and examples," she adds. **(See resource box, at left, for contact information.)**

• **Offer a variety of therapies.** Different therapies work for different people, says Bartlett. For this reason, offer a variety of complementary therapies so patients can choose a therapy with which they feel most comfortable, she suggests.

Reference

1. Wirth D. The effects of on-contact therapeutic touch on the healing rate of full thickness dermal wounds. *Subtle Energy* 1990; 1:1-20. ■

JCAHO adds pain management standards

The Oakbrook, IL-based Joint Commission on Accreditation of Healthcare Organizations has developed pain management standards that require same-day surgery programs to recognize pain management as part of the patient's treatment and demonstrate that a process is in place to help patients manage pain. **(See standards, p. 4.)**

"Pain is more than an unpleasant sensation," says **June L. Dahl**, PhD, professor of pharmacology at the University of Wisconsin-Madison Medical School. "Scientific studies document that untreated pain delays recovery," she says.[1] "On the other hand, acute pain that is treated aggressively results in a faster recovery and fewer complications."

The importance of the Joint Commission standards is that all academic and professional efforts to increase awareness of the undertreatment of pain may have increased awareness but have not changed clinical practice in many cases, says Dahl. "There are studies that show that at least 45% of surgery patients report an inadequate treatment of pain," she adds.[2] Requiring a process to ensure that patients receive pain management

JCAHO Pain Standards

The following pain management standards are included in the *1999-2000 Comprehensive Accreditation Manual for Ambulatory Care*. The complete standards, along with intent, examples of compliance, and scoring are located on the Joint Commission Web site at www.jcaho.org/standard/pm_idx.html.

- **Patient rights and organization ethics**
  - RI.1.2.7. Patients have the right to appropriate assessment and management of pain.
- **Assessment of patients**
  - PE 1.4. Pain is assessed in all patients.
- **Care of patients**
  - TX.3.3. Prescribing and ordering medications follow established procedures.
  - TX.5.4. The patient is monitored throughout the post-procedure period, with specific attention to:
    - TX.5.4.6. pain intensity and quality (for example, the character, frequency, location, and duration of pain) and responses to treatments.
- **Education of patients and family**
  - Standard PF.2. Patient education is tailored to address patients' needs, values, abilities, and readiness to learn. Education addresses:
    - PF.2.5. pain management as part of treatment.
- **Continuum of care**
  - CC.6.1. The follow-up process provides for continuing care based on the patient's care needs.
- **Improving organization performance**
  - P1.3.1. The organization collects data to monitor its performance.

information and support can affect actual practice, she adds.

Although the new pain management standards are included in the 2000-2001 Joint Commission standards manuals, the standards will not be scored for compliance until 2001, says **Susie McBeth**, associate director of the standards department for the Joint Commission.

"Surveyors are scoring the standards in order to collect feedback and check the readiness of the field," says McBeth. The surveyors also use a questionnaire that collects information related to how an organization is already managing the pain management process and collecting information that can be used to document compliance. The data collected will show how much documentation already exists that will meet the Joint Commission needs and how much needs to be created, she explains.

"One of the issues raised early on in the development of the standards was that we didn't want to burden the organization with the creation of a lot of new documentation," she says.

In July 2000, the data collected by the surveyors and the scores of organizations surveyed during the testing period will be reviewed by the standards committee, which will determine how to weight each standard.

McBeth offers these tips to help ensure compliance:

• **Read the standards in light of the scope of your services.** "Don't create elaborate protocols and documentation processes if your program can't handle them," McBeth advises. Instead, look at what you already have in place and enhance or alter it to meet the requirements. For example, make sure you have a place to document assessment of pain or referral for treatment of pain, she says.

• **Set up a good pain assessment process.** "Assessment will be key whether you treat the pain yourself or refer to another provider to treat pain," she says. Your assessment process must show that you check the patient's pain status and provide relief, whether it is by administering medication within a recovery room setting or referral to a physician after hours, she says.

• **Develop a thorough education process.** "Make sure your staff know how to teach patients to manage pain and use pain medications," she says.

References

1. Wattwill M. Postoperative pain relief and gastrointestinal motility. *Acta Chiurgica Scandinavica* 1988; 550:140-145.
2. Donovan M, Dillon P, McGuire L. Incidence and characteristics of medical pain in a sample of medical surgical inpatients. *Pain* 1987; 30:69-78. ■

SOURCES

For more information about Joint Commission pain standards, contact:

- **Joint Commission on Accreditation of Healthcare Organizations Interpretation Unit**. Telephone: (630) 792-5900. Web site: www.jcaho.org/standard/pm_idx.html.
- **June L. Dahl**, PhD, Professor of Pharmacology, University of Wisconsin-Madison Medical School, 1300 University Ave., Room 4715, Madison, WI 53706. E-mail: jldahl@facstaff.wisc.edu.

Requirements for Infrastructure and Essential Activities of Infection Control and Epidemiology in Out-of-Hospital Settings[1]

Managing Critical Data and Information, Including Surveillance for Infections

Recommendation 1: Infection control personnel should develop policies and procedures for ongoing communication with other health care organizations (HCOs) to identify, prevent, manage, and control infections as patients move between HCOs throughout the continuum of care. *Category II*

• Report infectious complications and adverse events associated with medical and surgical procedures (i.e., surgical site infections) to the HCO in which the procedure was performed or from which the patient was discharged.

• Report epidemiologically important infections to the HCO to which the patient will be transferred.

Recommendation 2: Surveillance of health care associated infections must be performed. *Category I*

Incorporate the following elements in the surveillance process:

• identification and description of the problem or event to be studied;

• standard case definitions appropriate for the setting;

• definition of the population at risk;

• selection of the appropriate methods of measurement, including statistical tools and risk stratification;

• identification and description of data sources and data collection;

• definition of numerators and denominators;

• preparation and distribution of reports to appropriate groups.

Recommendation 3: Surveillance data must be appropriately analyzed and used to monitor and improve infection control and health care outcomes. *Category I*

Recommendation 4: Clinical performance and assessment indicators used to support external comparative measurements should meet the criteria previously delineated by APIC and SHEA for hospitalized patients. *Category II*

Specifically, these indicators and their analyses must address:

• how process is related to outcomes;

• how to measure variation and quality;

• that the numerators and denominators are defined;

• that data collection is feasible, and the collected data are collected completely and reliably;

• that the data are appropriately risk-adjusted when analyzed;

• that data be adjusted for the populations' severity of illness and case-mix differences when analyzed before external comparison;

• that personnel be trained regarding proper study and use of indicators;

• that benchmarks be developed and used to compare the indicators' performance.

Developing and Recommending Policies and Procedures

Recommendation 5: Written infection prevention and control policies and procedures must be established, implemented, maintained, and updated periodically. *Both Categories II and III*

• The policies and procedures should be scientifically sound.

• The policies and procedures should lead to improved prevention of infections and other adverse events or improved patient and employee outcomes.

• The policies and procedures should be reviewed regularly to assess their practicality and cost-effectiveness.

• The policies and procedures should incorporate compliance with regulatory issues.

Recommendation 6: Policies and procedures should be monitored periodically for effectiveness, both to ensure that staff are able to comply fully with and fulfill organizational requirements and to ensure that the policies are having the desired result in preventing and controlling infections. *Both Categories II and III*

Compliance With Regulations, Guidelines, and Accreditation Requirements

Recommendation 7: HCOs should engage infection control personnel in maintaining compliance with relevant regulatory and accreditation requirements. *Both Categories II and III*

Recommendation 8: Infection control personnel should have appropriate access to medical or other relevant records, information in regard to the HCO's compliance with regulations, standards, etc., and to staff members who can provide information on the adequacy of the HCO's compliance with regard to regulations, standards, and guidelines. *Both Categories II and III*

Recommendation 9: The infection control program should collaborate with, and provide liaison to, appropriate local and state health departments for reporting of communicable diseases and related conditions and to assist with control of infectious diseases in the community. *Both Categories II and III*

Employee Health

Recommendation 10: The infection control program personnel should work collaboratively with the HCO's employee health program personnel. *Category II*

• The HCO should have access to consultation and direction from a physician (or designee) with expertise in infectious disease and health care epidemiology.

• Infection control personnel should review and approve all employee health policies and procedures that relate to the transmission of communicable diseases in the HCO.

Recommendation 11: At the time of employment, all HCO personnel should be evaluated for conditions relating to communicable diseases. *Both Categories II and III*

The employment record should include the following:

• medical history, including immunization status and assessment for conditions that may predispose personnel to acquiring or transmitting communicable diseases;

• tuberculosis screening;

• serologic screening for vaccine-preventable diseases, as deemed appropriate;

• such medical examinations as are indicated by the above.

Recommendation 12: The HCO evaluates employees and other health care workers (e.g., students, volunteers) for conditions related to infectious diseases that may have an impact on patient care, the employee, or other health care workers periodically. This evaluation should include a review of required immunizations and status of tuberculosis screening. *Both Categories II and III*

• Medical records of all health care workers must be kept confidential.

• The HCO should track employee immunization and tuberculosis screening status.

Recommendation 13: Employees must be offered immunizations based on regulatory requirements. HICPAC Personnel Guidelines and recommendations of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices for health care workers should also be followed. *Both Categories I and III*

Recommendation 14: The HCO's employee health program should institute policies and procedures for the evaluation of exposed or infected health care workers. *Category I*

• Exposed health care workers should be evaluated for circumstances surrounding the exposure, evaluation of symptoms, need for postexposure prophylaxis, need for treatment, and work restrictions.

• Infected symptomatic and asymptomatic health care workers should be assessed for disease communicability, work restrictions, and treatment, as appropriate.

Intervening Directly to Prevent Infections

Recommendation 15: Infection control personnel in HCOs must have the capacity to identify and implement measures to control endemic and epidemic infections and adverse events. *Category I*

• HCOs must have an ongoing system to obtain pertinent microbiologic data.

• Ongoing communication and consultation with clinical staff throughout the organization must be maintained to identify infectious and adverse events, to assist in maintenance and monitoring of infection control procedures, and to provide consultation.

• When an outbreak occurs, infection control personnel must have adequate resources and authority to ensure a comprehensive and timely investigation and the implementation of appropriate control measures.

• Institutional policies and procedures should be developed so that roles and responsibilities are outlined clearly.

Educating and Training Health Care Workers, Patients, and Nonmedical Caregivers

Recommendation 16: HCOs must provide ongoing educational programs in infection prevention and control to health care workers. *Both Categories I and III*

• Infection control personnel knowledgeable regarding epidemiology and infectious diseases should be active participants in the planning and implementation of the educational programs.

Recommendation 17: Educational programs should be evaluated periodically for effectiveness. *Both Categories II and III*

• Educational programs should meet the needs of the group or department for which they are given and must provide learning experiences for persons with a wide range of educational backgrounds and work responsibilities.

• Participation of health care workers at educational programs should be documented.

Recommendation 18: The health care organization must have a mechanism to ensure that patients and caregivers receive appropriate information regarding infection prevention and control. *Category II*

Resources-Personnel

Recommendation 19: The HCO must assure adequate personnel and supporting resources to fulfill the functions of the infection control program. *Category II*

Recommendation 20: All HCOs should have access to the ongoing services of a person who is trained in infection prevention and control (i.e., an infection control professional [ICP], who provides oversight for the infection control program). *Category II*

Recommendation 21: All HCOs should have access to continuing services of a physician trained in health care epidemiology. *Category II*

Recommendation 22: ICPs should be encouraged to obtain Certification in Infection Control. *Category II*

Other Resources

Recommendation 23: Resources should be provided for continuing professional education of employees and infection control personnel who work directly for the organization. *Category II*

Reference

1. Friedman C, Barnett M, Buck AS, et al. Requirements for infrastructure and essential activities of infection control and epidemiology in out-of-hospital settings: A consensus panel report. *Am J Infect Control* 1999; 27:426-428. ■