The monthly publication for OR decision makers

August 2004 Vol 20, No 8

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OR management

Should the perioperative director report to the CNO or to the COO?

Is it better for the director of perioperative services to report to the chief nursing officer (CNO) or to the chief operating officer (COO)?

The question stirred lively debate at the OR Business Management Conference in May in Albuquerque, NM. A panel at the meeting advocated reporting to the COO so the OR gets the resources and support it needs. But some in the audience commented that the COO does not always understand the clinical issues important to nursing.

The OR Manager Salary/Career Survey, conducted since 1991, has consistently found that about 70% of respondents report to nursing rather than the administration.

There are strong advocates on both sides. But in interviews with surgical services directors, administrators, and consultants, opinion leaned toward the COO.

Much depends on the organization and the individuals involved, those interviewed stressed.

“Typically, with perioperative services, we’re viewing a business that accounts for maybe 50% of the hospital’s revenue and upwards of 60% of its net income,” a panel member, Jeffry Peters, president and CEO of Surgical Directions, a Chicago-based consulting firm, told OR Manager.

Though there is no one answer, he sees a shift to having the periop director

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Staffing

OR managers facing challenges of gaps in the surgical schedule

Staffing smart is more crucial than ever. Many ORs find themselves suffering from “gaposis”—gaps in the middle of the day. Surgeons want to work early, go to the office or surgery center, and return for cases later in the day. Though gaps have always been an issue in ORs, some managers say they are more common than they used to be.

As surgeons face tighter reimbursement, they need to see more patients to generate the same revenue. They also may want to spend more time at a surgery center where they have an ownership interest.

At the same time, the administration is pressing managers to keep OR utilization high, overtime low—and surgeons and staff happy.

Staff satisfaction is a competing priority. In a time of shortage, the staff can vote with their feet if they’re burdened with extra shifts, excess call, or forced overtime.

Anesthesia providers may be in short supply and disinclined to cover what they may consider undesirable hours late in the day.

It’s the manager’s job to try to balance these interests.

High-level diplomacy

When orthopedic surgeons decided to double the size of their surgery center, administrators at Kadlec Medical Center in Richland, Wash, found it was time for some high-level diplomacy. Kadlec has

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Please see the ad for LAWSON SOFTWARE in the *OR Manager* print version.
State of OR staffing

What’s the vacancy rate? How many ORs are using agency staff? See the staffing results from our Salary/Career Survey in the September issue.

Annual Salary/Career Survey

Is your salary keeping pace? What about your benefits? Read results of this year’s survey in October.

Does this sound like something that could happen in your organization?

The vascular surgery service is consulted for the placement of a dialysis catheter in a patient on a medical floor.

The surgical resident examines the patient, an elderly woman with dementia and renal insufficiency who is receiving IV hydration. The resident calls the family to obtain an informed consent for the procedure.

The daughter is surprised, saying no one had talked to her about initiating dialysis. She insists it is a mistake. The surgical resident tries to convince the daughter the patient’s life is in danger, but the daughter refuses to give consent.

The next morning, the surgeon returns to the patient’s bedside and meets with the family, who again refuses to give consent. The medical attending who is caring for the patient is called, and he verifies the patient has prerenal azotemia related to dehydration. He is unaware of any request to place a dialysis catheter in this patient.

Worried about the patient’s safety, the family signs her out of the hospital and returns her to the nursing home.

You guessed it—wrong patient. The catheter placement was intended for another patient on the same floor with a similar condition and the same unusual last name.

Real cases for learning

We found this story on a fascinating web site—WebM&M, short for Web Morbidity & Mortality, hosted by the federal Agency for Healthcare Research and Quality.

Each month, the site features 4 or 5 real cases in various specialties, including surgery and anesthesia. An expert commentator discusses the case and gives take-home points.

The June case for surgery and anesthesia, cited above, ties in with the Universal Protocol for preventing wrong procedures, which the Joint Commission on Accreditation of Healthcare Organizations required surgical facilities to implement by July 1.

The commentator is Darrell Campbell, MD, chief of clinical affairs for the University of Michigan Health System. (U-M was featured in last month’s OR Manager for its patient safety efforts.)

On WebM&M, Dr Campbell talks about the case as well as safeguards U-M has put in place, including a new operative permit and a clear process for when an RN may mark the site on a surgeon’s behalf. Copies of the permit are posted with the commentary.

The idea of WebM&M is to use real cases from around the world, submitted by e-mail anonymously, says Kaveh Shojania, MD, a founder of the site. There is a $300 to $400 honorarium.

WebM&M includes an archive. Some past titles from the surgery and anesthesia section:

- OR Peeping
- Inadvertent Castration
- Did We Forget Something?

Often, there’s no better way to learn than to share a compelling story. WebM&M is an excellent resource for any OR leader. ♦

—Pat Patterson

Web M&M is at www.webmm.ahrq.gov

Call for poster abstracts

Showcase your research, process improvement projects, and clinical innovations in the poster display at the Managing Today’s OR Suite conference, October 6 to 8 at the Chicago Hyatt.

Please submit poster abstracts to OR Manager, Inc, by Aug 30. For more information, check the OR Manager website at www.ormanager.com or call 800/442-9918.
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in the OR Manager print version.
Less costly drugs work for nausea, vomiting

With an estimated 1 in 3 patients having postoperative nausea and vomiting (PONV) at an annual cost of several hundred million dollars, preventing this common complication is a priority.

A new study by Christian Apfel, MD, and his colleagues provides the first comprehensive head-to-head comparison of common treatments for preventing PONV.

Their findings, published in the June 10 *New England Journal of Medicine*, show that drugs costing a dollar or two per dose, such as dexamethasone (Decadron) and droperidol (Inapsine), work just as well as ondansetron (Zofran) that costs $10 to $15 per dose.

Not only is the study 20 times larger than most previous ones, but also it is the first with an adequate design and size to compare all of the approaches to PONV and their combinations, Dr Apfel told OR Manager.

“We have shown for the first time that all of the strategies work independently—that is, any double combination or any triple combination is similarly effective. Therefore, all things being equal, the safest or least expensive drugs should be used first.”

More than 5,000 patients in 28 medical centers in 7 European countries were enrolled in the trial and randomly assigned to 1 of 64 possible combinations of 6 prophylactic interventions:

- 4 mg of ondansetron or no ondansetron
- 4 mg of dexamethasone or no dexamethasone
- 1.25 mg of droperidol or no droperidol

- propofol or a volatile anesthetic
- air or nitrous oxide (both with 30% oxygen) for ventilation
- remifentanil or fentanyl.

In the study, ondansetron, dexamethasone, and droperidol each reduced the risk of nausea and vomiting by about 25%. Combinations of 2 approaches were more effective than any single approach but not twice as much, notes Dr Apfel, who is professor of anesthesiology at the University of Louisville in Kentucky.

Propofol reduced the risk by 19%, and nitrogen/oxygen reduced it by 12%. The reduced risk of both (defined in the study as total intravenous anesthesia) was similar to that observed with each of the antiemetics.

“We found that not only are the drugs similarly effective despite the fact that one is cheaper than the other but that the relative risk reduction is constant for every drug,” notes Dr Apfel.

“If a patient has a very high risk, he benefits a lot because we can reduce his absolute risk. If his risk is very low, it doesn’t make sense to give antiemetics because it can’t be very effective—patient-wise or cost-wise.”

Risk factors are key

For the first time, the study provides strong evidence on how to select optimal approaches depending on patients’ risks. Dr Apfel’s team developed a simplified risk score with 4 major risk factors validated in previous studies:

- female gender
- nonsmoking status
- history of nausea or vomiting after anesthesia
- use of opioids after surgery.

One risk factor translates to a 20% risk, and each additional factor increases the risk by 20%, Dr Apfel explained.

For low-risk patients, such as 10% or 20%, an antiemetic should not be given because this would incur unnecessary costs and side effects. Patients with a moderate risk, such as 40%, would benefit from a single antiemetic, such as dexamethasone, which is low cost, effective, and has no known side effects. Patients at high risk, such as 60%, benefit from a double combination. For the few patients at very high risk, such as 80%, a triple combination should be considered. This could be a total IV anesthesia with propofol and

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Will the study impact droperidol use?

Dr Apfel says he would use ondansetron first as a postoperative rescue treatment for PONV, because it has almost no sedating side effects. Ondansetron is expensive, however, and if it has already been given or the first dose doesn’t work, repeating it won’t help.

Droperidol is especially effective against opioid-induced nausea and vomiting and is low in cost. But many clinicians avoid it because of a Food and Drug Administration (FDA) warning. Originally, droperidol was used at high doses in psychiatric patients, but isolated reports of cardiac problems in perioperative patients led the FDA to put a “black box” warning on the drug’s packaging. With the much lower dose used by anesthesiologists, risks in otherwise healthy patients are negligible, Dr Apfel says. Also, in his study, droperidol was not associated with an increased risk of cardiac complications. He believes the new study may have an impact on use of droperidol, which many anesthesiologists believe has been unfairly labeled as unsafe.

—Judith M. Mathias, RN, MA

Mary Murphy is calm. The day I interviewed her, I was packing a family of 4, including a toddler and preschooler, for a 4-night camping trip. Our house was a flock of whirling dervishes. But when I hung up the phone after our half-hour conversation, I could have pulled my family up a mountain on a sled, one step at a time, with a smile on my face.

“I pretty much am always calm, and it does have a calming effect on my staff,” she says. Murphy directs 5 managers, 8 departments, and 260 people as director of surgical services at Munson Medical Center in Traverse City, Mich.

Calm—but not boring. For her 60th birthday last winter, she drove a team of dogs on a sled trip in Minnesota. Murphy, who was OR Manager of the Year in 2002, will be the closing speaker at the Managing Today’s OR Suite conference October 6 to 8 in Chicago. She will tell about lessons she has learned during her career about how to replenish the spirit and energize work.

Her path to inner calmness came from years of struggles: the death of her daughter at age 5 of a brain tumor, a divorce, and single parenthood plus the stress of decades as an OR nurse and manager.

In 1996, when her son left for college, Murphy left her job as OR director of Henry Ford Hospital in Detroit. She bought a small home on a river in northern Michigan and took a job as OR director at nearby Grayling Mercy Hospital, which had 2 ORs.

“I took a year to figure out who I was. Mostly, I learned to be still,” she says.

At Grayling, she met Sister Jean Umlor, who ignited her passion for holistic care, specifically the healing power of music.

Music for healing

Music was a form of healing for her even in childhood when she couldn’t run and play like other children because of a congenital foot anomaly. She learned to play the piano.

“Today when I’m stressed, I come into my office, put my CDs on, and just exist. I can’t be an effective leader unless I’m in the moment,” she says.

In her current position as director of 13 ORs, Murphy takes a break to play music for patients on her harp. She also donates time to play for patients in hospice and at home. Playing music for patients has put her back in touch with the art of nursing.

“Playing is as therapeutic for me as it is for patients,” she says.

Nature also brings her inner peace. Says Murphy, “I always start my day with a cup of coffee in my hot tub looking at the trees.

“Once I figured out what truly motivates me, what feeds me, I had so much energy. The inner search has led me to the balance I now have in my life.”

—Leslie Flowers

Leslie Flowers is a freelance writer in Indianapolis.

References


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report to the COO. That is because “a lot of the decisions that need to be made are financial decisions that have a significant impact on the hospital as a whole.

“There also are more physician issues in the OR than in almost any other service in the hospital, so you need administrative backing for that.”

Reporting to the COO eliminates a layer of management because the chain of command does not have to go through the CNO.

“This doesn’t diminish the nursing aspects of the profession, and the director still needs to be an advocate for that,” he adds.

Peters is currently working with a health system in the East that has recruited a perioperative director who will be on a parallel level with the CNO reporting to the senior administration.

Power of the committee

Susan Bisol, RN, MSN, CNOR, vice president of operations for the Consulting and Services business of Cardinal Health, sees a variety of arrangements, including reporting to the CNO or COO. In some facilities, the person is both the COO and CNO. She also sees service lines, where surgery has its own VP. In her opinion, the key to strong surgical services management is a well-developed perioperative executive committee.

“If I am a director, that is where my power comes from,” she says. If the committee is weak, the reporting structure is more important. In that case, she sees benefits to reporting to the COO—“I can manage nursing; it is the other departments such as radiology and the lab where the COO can bring some authority to help with throughput for perioperative patients.” On the other hand, it’s beneficial to have a relationship to the nursing department for patient flow issues such as bed shortages, which can hold up cases in the OR.

Another question is whether the perioperative director should report to the same exec as the materials management director.

“Some of our biggest issues are with materials management. Perioperative directors need materials expertise to help them manage supply costs that, other than labor, are the bulk of the budget,” Bisol notes.

The cons of reporting to the CNO outweigh the pros, in the opinion of Kathy Miller, RN, MSHA, CNOR, associate administrator for perioperative services at the University of Mississippi Medical Center in Jackson, Miss. She has been a perioperative director in 3 organizations as well as an OR consultant. In 2 organizations, she reported to the CNO; she is currently a member of the hospital administration.

On the plus side of reporting to nursing:

• They understand nursing needs and support practice standards. You definitely want the CNO to stand alongside you if the COO says, ‘Change the staffing mix to 30% RNs and 70% techs.’” For those reasons, she believes, “You should always have a dotted line to nursing.”

But Miller finds there are more arguments against reporting to the CNO:

• Staffing budgets are different for the OR than other nursing units, which tend to budget in terms of nursing hours per patient day.

• The OR has a far larger budget than other nursing units, particularly for capital equipment, and other nursing units may not understand why the OR budget gets so much attention.

• The majority of time in nursing meetings is spent on issues that don’t concern the OR.

By reporting to the CNO, “you get a better business perspective,” she says, which is increasingly important in a time of shrinking reimbursement. Perioperative directors are expected to develop business plans for their programs and pro formas for equipment, activities that aren’t common in nursing departments.

Agreeing is Julie Blatnik, RN, BSN, CNOR, clinical director of surgical services at St John Hospital, in Maplewood, Minn, who reports to the CEO. Blatnik has been an OR manager in both academic and community hospital settings and has reported through both nursing and administrative channels.

“I think reporting to the CEO allows for making key decisions quickly. Surgical services is one of the most difficult departments to manage. You have multiple customers, and when you need a decision, you need it now.”

When there is a new technology that surgeons want but isn’t in the budget, it helps to have a direct line to the top executive rather than going through the nurse executive, who may not be familiar with the need for the equipment.

Differences have blurred

An arrangement that works well is “a dotted line to the CNO with a direct line to the CEO or COO,” comments Suzanne Richins, RN, MBA, DHA, FACHE, the COO at Kadlec Medical Center in Richland, Wash, and a former perioperative director. “The CNO has responsibility for patient care in the traditional sense, while the COO has responsibility for the financial viability of the organization.”

A growing number of COOs have nursing degrees, she notes.

“Over time, the differences have blurred. More CNOs understand the value of the numbers and making decisions based on data.”

Also blurring the lines is the crossover between interventional radiology and surgery.

“This may weight the decision in favor of reporting to the COO because of the more global view needed for capital...
purchases,” Richins adds.

**Advocates for the CNO**

Reporting to the CNO also has its proponents.

“I prefer a direct report to the CNO with a very solid dotted line to the CEO,” comments Penny Ashburn, RN, CNOR, director of perioperative services at Yampa Valley Medical Center in Steamboat Springs, Colo, which has 3 ORs and performs about 5,000 cases a year.

“I feel strongly that we need to have a relationship with the nursing department because we are nurses. It’s easy to get absorbed in our technical world. But the doctors go straight to the CEO, and I need to be able to go to the CEO without being locked into a chain of command. In this facility, I have a strong relationship with the CEO, the COO, and the CNO.”

Noting that she has been in the OR for 38 years and a manager for 21 years, Mary Starkweather, RN, BSN, CNOR, says although she has a close working relationship with the CEO, she prefers to report to nursing.

“So much of what we do is nursing related—I would not want to lose that,” says Starkweather, who is director of surgical services for the 5-OR department at Mercy Hospital in Cadillac, Mich, with a volume of 4,800 procedures a year.

When physicians go to the CEO, “which happens no matter whom you report to,” she hears about it immediately from the CNO. “If you have good communication, it doesn’t become an issue.”

If she reported to the CEO, she believes “I would miss out on the nursing point of view. Patient safety is so crucial. The physicians are important, but if we didn’t have patients, none of us would be here.”

**Managing in a matrix**

More common today are service lines or matrix organizations with multiple reporting lines. In these structures, reporting lines cut across boundaries rather than going through a traditional chain of command. Management experts say these arrangements can work well in a complex organization like a hospital where there is a need for cross-functional relationships. But they can also cause confusion about who is in charge.

Tighe Simons, RN, BBA, director of the Department of Surgery at Mission Hospitals in Asheville, NC, is in a matrix. Her primary reporting relationship is to the vice president for operations, but she also has a close relationship with the nursing vice president. There are also several service lines that cross boundaries.

She sees no conflict in serving both the business and nursing sides—in fact, she sees them as closely connected.

“If you have a clinical background, nursing is second nature. The beauty of making our business model more efficient is that we have more resources for our recruitment and retention as well as state-of-the-art equipment. That’s part of our business strategy—to keep the focus on patient care and patient safety.”

At Eastern Maine Medical Center in Bangor, Tom E. Callan, RN, MHA, is patient care administrator for the surgical services line, which includes the main OR, postanesthesia care unit, patient intake, outpatient surgery, the eye center, endoscopy, and several patient care units.

He reports to the vice president for patient care services, who is a physician, with a dotted line to the vice president for nursing.

He finds this dual reporting structure works well.

“It gives me the freedom to be creative and independent. You can have multiple reporting and be successful. We’ve been able to grow our business in excess of 3% a year.”

A lot depends on the individuals, he adds. “No one reporting structure is ideal. It’s the individual who makes it a success.”

Bisol observes that these kinds of structures take political savvy because “these dotted lines can be very confusing.”

**Managing upward**

Whatever the structure, much of a director’s success depends on the ability to cultivate a good relationship with senior execs.

“I’m not sure the position matters as much as the individual and the political savvy that person has,” Bisol notes. “The key for me is who is the best connected. If I am the director, I want to report to the person who is going to enable my success: Who is the best coach, the best facilitator? Who owns most of the bats and balls?”

An argument for reporting to nursing is that the CNO will best understand the OR’s need for clinical educators to keep the staff abreast of rapidly changing practice and technology. CNOs also understand why orientation requires more resources, with fewer experienced nurses entering the OR.

Though directors may find it easier to appeal to the CNO for clinical issues, Bisol observes that in these tight times “it’s not easy to sell those positions even to the CNO unless you can justify them based on recruitment and retention.”

Another hard fact in today’s world is that the person you report to today may decide to leave tomorrow.

**Best of both**

Some have the best of both worlds.

At Poudre Valley Hospital in Fort Collins, Colo, Robin Ramsey, RN, BSN, CNOR, administrative director of surgical services, reports to the hospital’s president—an RN who started out as the CNO and became COO before taking the position of president.

“It works well because I have an ear at the top,” says Ramsey. “We have a good working relationship. It is so important at my level to feel comfortable with the executive.”

If she had to choose between reporting to the COO or CNO, which would she select?

All things being equal, “the COO would be my choice,” she says. “But the bottom line is whether that person is 100% business or is also open to the nursing and clinical side of the hospital business.”

Also important to the decision would be which administrator she thought she could develop the best rapport with.

It’s critical for a perioperative director to have a good relationship with his or her superior, whether the CNO or COO, so the expectations are clear, and the director is confident of the exec’s commitment and support.

—Pat Patterson
Adjusting afternoon staffing

This is a method for adjusting afternoon staffing to maximize productivity and minimize costs.

The choice of afternoon staffing should not affect how many ORs are run. If too few OR teams are scheduled, other on-call teams work late on overtime. If too many OR teams are scheduled to work after the end of regularly scheduled hours (eg, 3 pm), there are unnecessary costs.

Taking the following approach, matching staffing to existing OR workload to minimize staffing costs is identical to matching staffing to maximize productivity.

These are the steps:

**Step 1**
Make a list (eg, in Excel) of every possible staffing plan. For example, 10 OR teams are scheduled from 7 am to 3 pm. Then after 3 pm, all cases are performed with overtime. For example, 8 OR teams are scheduled 7 am to 3 pm, and two 2 ORs are scheduled from 7 am to 5 pm. Then if more than 2 ORs are used from 3 pm to 5 pm, any additional ORs are covered with overtime.

**Step 2**
From the start times and end times of historical cases, calculate the total number of ORs with a case running at any time during each 1-hour period between 3 pm and 11 pm. I prefer using 3 years of historical data. (See step 4.)

Although anesthesia and OR nursing workloads differ, optimal staffing for OR cases is generally identical regardless of whether the anesthesia information system, OR information system, or anesthesia billing data is used.

**Step 3**
For every combination of possible staffing plan and workday, calculate what the workday’s staffing cost would have been if the staffing plan had been used. Staffing cost = (average cost per scheduled hour x scheduled hours + (average cost per overtime hour) x overtime hours.

**Step 4**
Calculate the average of the daily staffing cost for each combination of possible staffing plan and 4-week period. Graph the average daily cost (Y axis) versus the 4-week period (X axis). The graphs permit identification of trends and seasonal variation that commonly occur in afternoon OR workload. Using the graphs, choose the staffing plan providing the lowest average staffing cost for the upcoming season of the year.

Examples are in an on-line lecture at [http://www.franklindexter.net/Afternoon_Staffing.htm](http://www.franklindexter.net/Afternoon_Staffing.htm). For samples of graphs and more details of the calculations, see the April 2003 AORN Journal, p 829.

—Franklin Dexter, MD, PhD
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outpatient ORs in the nearby medical office building, the OR committee asked the surgeons to give up some block time and consolidate their prime time. The 4 surgeons agreed to reduce their 4 OR days to 3; 2 days have 8-hour blocks, and the third day has two 4-hour blocks. One of the blocks is in the afternoon.

“It was a win-win for us and them,” Richins says. “We still want their business, but we needed to open up their prime-time blocks. We have been able to bring in other business, and our volume has grown by 10%.” When the orthopedic surgeons relinquished some of their time, other surgeons were able to come who were working at competing hospitals.

A grip on the numbers
As OR utilization becomes more uneven, it’s more important than ever for managers to have a firm grip on their staffing numbers, says Pamela Hunt, RN, MSN, administrative director of perioperative services and critical care at 172-bed Marion General Hospital in Marion, Ind.

“I see nurse managers and leaders more pressed to justify their staffing,” she says. “I remember the time when if you had the staff working some overtime, and your volume was up, you could say, ‘We need to add a partial or full FTE.’ Now that is not enough. We need to justify our staffing with productivity figures.”

(A method for adjusting staffing in the afternoon is in the sidebar.)

Several years ago, Hunt saw the OR’s overtime percentage go “sky high” after a surgery center opened nearby.

“We found we were doing little surgery in the middle of the day, then a lot at the end of the day,” which meant more nurses were working beyond their scheduled hours. The hospital performs

Continued from page 1
153 beds, 6 ORs, and an annual surgical volume of 8,000 cases.

“They wanted to operate there in the day time and come to the hospital in the evening, which meant they had a lot of prime time they weren’t using,” says Suzanne Richins, RN, MBA, DHA, FACHE, chief operating officer. The orthopedic surgeons were big users of the hospital ORs, with 4 days of 8-hour blocks.

A joint-venture surgery center had been built across the street from the hospital, and several physicians purchased shares. Next, an anesthesiologist built an ambulatory surgery center. Then, when an orthopedic group across the street from the hospital decided to expand its

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**Staffing**

**Explaining salary variances**

OR managers typically receive salary and productivity reports from the administration. These reports generally list productive hours (hours worked and staff education) plus nonproductive hours (paid time off).

In turn, managers must often report to their superiors on variances in the salary budget; that is, the difference between what was budgeted and what was actually spent. This task is much easier if the report is broken down by category of staff. (See chart.)

Here are some typical reasons for salary variances.

**Surgical schedule variations**

Salary variances can occur because of the way surgical cases are booked and performed. These scheduling issues can lead to poor productivity, which means there is not a good match between the salary dollars spent and the amount of work produced (ie, surgical cases performed). This can happen when few cases are scheduled and performed during a shift, but no staff members are sent home. Or there may be long gaps between cases when the staff are idle while clocked in. Another example is a quiet weekend when there is not enough work to match the staffing provided.

Managers can improve productivity by flexing staffing so employees are sent home at the end of the scheduled cases and by creating a better balance between scheduled staff and on-call staff for off shifts and weekends. The disadvantage of sending staff home early is that if another case occurs and staff must be called back, they typically earn time-and-a-half for callback time. Too much overtime or callback can result in a larger salary variance.

**Pay-rate variances**

Salary variances can occur because of differences in salary rates paid to staff. Examples are using more overtime or callback than was budgeted or using more contract labor instead of employed labor.

If salaries for staff replacements are either very low or very high compared to the salaries of employees being replaced, a variance occurs.

A mix variance can occur if the ratio of RNs to surgical technologists (STs) changes. For instance, if there is a shortage of STs, the facility would use more RNs, and there would be a variance because RN salaries are higher. If the reverse were true, the total salaries would be under budget.

**Education variances**

At the time of budgeting, education and orientation hours are estimated based on the amount of required education plus orientation for expected growth or turnover. The total number is divided by 12 months. Because education time isn’t used evenly during the year, the manager can explain a variance by watching trends and comparing them to the previous year.

Typically, senior management looks at the year-to-date figure to see if it is in alignment. Some hospitals expense nonproductive hours as they occur, and some use a mix of accrual and immediate expense. Sick-leave variances occur when the dollars are expensed as used. Typically, expenses for funeral leave and jury duty occur when used.

The Family and Medical Leave Act (FMLA) allowance depends on the type of leave used. Under federal law, companies must grant eligible employees up to 12 work weeks of unpaid leave during any 12-month period for reasons such as the birth of a child, adoption or foster care, or a serious health condition. States may have additional requirements. For instance, Washington State passed a law that allows employees to use both vacation and sick time to care for a family member. Other states do not allow use of sick leave except for employees’ illnesses.

**Nonproductive time variances**

When budgeting, nonproductive time, such as sick time and vacation, is trended or compiled from historical data to estimate the time and salary amounts needed to cover these activities. This number is then divided by 12 for a per-month estimate. Variances in nonproductive time occur when paid leave is used at a different rate than was budgeted, or unpredictable events occur, such as an employee who needs to take Family and Medical Leave and must be replaced by a contract worker. The manager can review trends from previous years to see how the usage compares. As with education, senior management typically looks at the year-to-date figure to see if it is in alignment.

Some hospitals expense nonproductive hours as they occur, and some use a mix of accrual and immediate expense. Sick-leave variances occur when the dollars are expensed as used. Typically, expenses for funeral leave and jury duty occur when used.

**Sample salary variances**

<table>
<thead>
<tr>
<th>Category</th>
<th>Actual</th>
<th>Budget</th>
<th>Variance favorable or (not)</th>
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</thead>
<tbody>
<tr>
<td>Management and supervision</td>
<td>$18,201.00</td>
<td>$16,994.00</td>
<td>$(1,207.00)</td>
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<td>Professional-clinical</td>
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<td>$64,836.00</td>
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<td>Registered nurses</td>
<td>$90,316.00</td>
<td>$96,674.00</td>
<td>$6,358.00</td>
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<tr>
<td>Aides, orderlies</td>
<td>$19,149.00</td>
<td>$9,783.00</td>
<td>$(9,366.00)</td>
</tr>
<tr>
<td>Surgical technologists</td>
<td>$18,272.00</td>
<td>$8,711.00</td>
<td>$(9,561.00)</td>
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<tr>
<td>Office staff</td>
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<td>$4,999.00</td>
<td>$2,624.00</td>
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<tr>
<td><strong>Total</strong></td>
<td>$199,476.00</td>
<td>$201,997.00</td>
<td>$2,521.00</td>
</tr>
</tbody>
</table>

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_Suzanne Richins, RN, MBA, DHA, FACHE_  
Chief operating officer  
Kadlec Medical Center, Richland, Wash

Kadlec Medical Center, Richland, Wash
We have taken steps to reduce the call burden.

Hunt also took steps to reduce the call burden after the department downsized from 45 FTEs to 25 FTEs when the surgery center opened.

“We took many of the full-time positions and divided them into 2 part-time positions when we replaced staff,” she says. “They still take their share of call, but it multiplied the number who share the call responsibility. Now we have 35 to 40 who take call, compared to 25 previously.”

Part-timer trade-offs
The part timers are a trade-off, she acknowledges.

“A full-time person is easier to orient, but you can’t have a department this size with all full-time staff and keep them satisfied with the amount of call they have to take,” Hunt notes.

A statistical method for determining whether to have staff members on call or in-house for weekend urgent cases was described in an article by Dexter and O’Neill in the November 2001 AORN Journal.

Hunt enlists help from the medical director in making decisions about add-ons. The medical director is not a paid position at Marion, a community hospital.

“We have strong guidelines for add-ons,” she says. “If a case is added on, and there is a question if it is a true emergency, the record is pulled and reviewed with the medical director. Often this is retrospective, and the case is still done, but if the surgeons know there will be questions, they may be more careful the next time.

“This is something we struggle with. You constantly need to reevaluate,” she says. The emergency may not be because the person is blue or bleeding—the surgery might need to be expedited for reimbursement reasons and to decrease the length of stay.

Anesthesia providers
Finding anesthesia coverage for late cases also can be a challenge. Much depends on how the anesthesia providers are organized and paid. Those who are salaried employees don’t have an incentive to work late and perform added cases because there is no additional pay. Those who belong to contracted groups also may not have an incentive to take on more cases if all of the revenue goes into one pool to be shared equally with the group. Those who are independent may be more inclined to do additional cases because the more cases they do, the more revenue they receive, provided the cases are well reimbursed.

“We have had to develop a structure to help meet their needs,” says Richins. Kadlec’s anesthesiologists are independent.

“We have been able to recruit 6 in the past 2 years, because payment is good in this area. We also are committed to providing enough locum tenens to help with lifestyle issues. One of the complaints we hear from the anesthesiologists is that they don’t have enough personal time.”

Under the system they have worked out, there are policies to guide the scheduling of anesthesia coverage. The anesthesiologist on call makes up the schedule. The physicians then rotate coverage taking turns for long and short days.

The anesthesiologists worked out a system so they now have the day off after taking call. This gives them a day to schedule personal appointments like dental visits or car maintenance. They know which days they have a short schedule and which days they have a long schedule.

As with nurses, managers say they see generational differences in anesthesia providers’ attitudes toward work-life balance.

“Some are Gen Xers. They are making enough to support their needs, and don’t want to work more,” says Hunt. Some are older, and their kids have finished college, so they also are not as motivated to work long hours.

Reference
Lessons learned from new spine program

Spinal surgery is a fast-growing specialty that presents enormous challenges for the surgical staff, managers, and educators—as a New Jersey hospital found out.

The arrival of a new orthopedic surgeon at Underwood-Memorial Hospital, a 305-bed community hospital in Woodbury, N J, started the ball rolling for an advanced spinal surgery program. The OR was soon facing extended OR times, huge capital and supply expenses, major staff training needs, and reimbursement issues.

Lessons learned and essential elements for starting new spinal surgical services were the subject of a poster presentation at the Association of perioperative Registered Nurses (AORN) Congress in March in San Diego. Underwood’s managers shared the lessons learned in an interview with OR Manager.

Embarking on spinal surgery

The more planning the management team can do up front, the more smoothly the launch of these new procedures will go.

“When we embarked on spinal surgery in 2003, we didn’t know the complete operating room support that would be needed,” says Lisa Pilla, RN, MSN, CNOR, Underwood’s perioperative clinical specialist for the 8-OR department.

She advises forming a team up front with key hospital executives, nurses, the materials manager, and medical leadership to address the operational and financial requirements for a successful spinal surgical program. “It demands a collaborative approach,” she says. Among issues to be addressed are:

- OR scheduling
- capital equipment
- staffing needs
- implant and instrument management
- clinical education
- planning for adjunct services
- reimbursement.

Spinal cases are equipment and personnel intensive, which requires a great deal of education. Though the OR staff had performed laminectomies, they had not performed instrumented spinal cases. They did not anticipate all of the implantables and other technologies that had to be added.

“We learned things along the way,” says Lucinda Quint, RN, BA, CNOR, coordinator of patient care services for the operating room. “If ORs deal with these issues up front, things will go so much smoother.”

Among issues they suggest addressing:

- OR scheduling
- capital equipment
- implant and instrument management
- planning for adjunct services
- reimbursement.

Get ready for sticker shock

Prepare administrators for sticker shock and possible budget overruns, particularly for spinal implants.

“Because of the costs of spine technology, managers must make sure it doesn’t destroy their budgets. This is something that has to be presented to senior management before you get going,” Pilla says.

Underwood purchased a great deal of new instrumentation plus a Jackson OR table for spinal procedures.

Expenses add up quickly. As of May, the OR had already spent 80% of this year’s implant budget. Senior management will have to make strategic decisions about case volume and technology purchases. Capital equipment expenditures can easily reach 6 figures, depending on the hospital’s needs.

Select a single vendor

Getting spinal surgeons to agree on a single vendor for spinal implants and instrumentation is the Holy Grail for managing spinal surgery costs—highly desirable but elusive.

“Having one vendor makes it easier to negotiate contracts,” says Quint. Having a single vendor is also easier and more efficient for staff education because it is easier for the staff to learn and manage one system. Underwood’s surgeons use equipment and implants from multiple vendors.

Staffing needs

Plan for longer cases

Because Underwood is a community hospital, the OR staff was accustomed to cases lasting 1 to 2 hours. In the beginning, the spinal cases lasted 6 to 10 hours, though the time has since come down to 3 to 4 hours.

Underwood’s OR is staffed from 7 am to 8:30 pm. Nights after 8:30 pm are covered by call.

“We didn’t change any of our staffing times or numbers,” says Quint. “Our surgeons got faster quickly, and some staff were interested in working additional time.”

The schedule was adjusted so the new spinal surgeon would start at 7:30 am, minimizing the number of cases running into the evening. Spine cases are staffed with a circulating nurse and surgical technologist, and the surgeons employ their own physician assistants.

Prepare a specialty team

Pilla recommends having exclusive spinal surgery teams if there are enough cases because she believes it is more effective for all involved. A specialized team can become familiar with the surgeons’ preferences as well as the instruments, implants, and supplies.

Underwood has trained 2 teams of nurses to scrub and circulate on spinal cases. That is an exception to the current policy, which is that all nurses learn to scrub and circulate for all cases performed.

Though specialization makes the cases go smoothly, it poses a problem for vacations. This summer, more nurses are participating in spinal surgery to allow
Cost management

Tips on coding and billing for spinal cases

With its high costs and thousands of components, spinal surgery is a financial challenge. Close attention to documentation and coding can help ensure your facility is billing properly and receiving the appropriate reimbursement.

These are tips from Lisa Courneya, RHIT, CCS, data analyst for orthopedic implant registries for the HealthEast Care System in St Paul, Minn.

Dictation is key

“The coders must go by the surgeon’s dictated reports,” says Courneya. If the dictation is incomplete, or there is an error in transcription, the procedure may not be coded correctly.

“If I see hardware was used for a given patient, but it was coded as a diskectomy or a decompression, I know there is something amiss,” she says. She pulls the chart and if an error is found, sends an e-mail to the coding supervisor.

Such coding errors can cost money. The difference in the national average Medicare payment between a spinal decompression (DRG 499) and a spinal fusion (DRG 497) is $8,698.

Make sure co-morbidities are recorded

Co-morbidities can result in higher reimbursement, but they must be recorded in the surgeon’s dictation so the appropriate code can be assigned. If a patient has congestive heart failure (CHF), for example, it is sufficient for the surgeon to dictate that CHF is “possible” or “probable.” But coders are not allowed to deduce co-morbidities from signs and symptoms.

Document use of BMP correctly

Medicare provides a new-technology add-on payment for bone morphogenic protein (BMP) but only if stringent criteria are met. (The only current brand is Infuse from Medtronic Sofamor Danek.) The add-on payment applies only for single-level procedures that comply with on-label use. Medicare defines on-label use as Infuse applied through use of an absorbable sponge and an LT-Cage/ Lumbar Tapered Fusion Device placed at the fusion site. Cases must be assigned to DRG 497 or 498, lumbar spinal fusion, with a combination of ICD-9-CM procedure codes 84.51 and 84.52.

Some examples of off-label use include anterior cervical spinal fusion or lumbar or thoracic spinal fusion without a cage.

Document 360-degree fusions correctly

Higher reimbursement is available for an anterior-posterior (360-degree) fusion than for an anterior or posterior procedure alone, but correct information must be provided for coding. Higher payment is available even if the patient has the anterior surgery on one day and the posterior procedure on another day during the same inpatient hospitalization.

Make sure multiple procedures are coded

It may seem elementary, but if a patient has more than one procedure during the same inpatient hospitalization, make sure all of the procedures are coded.

Consider the treatment setting for kyphoplasty and vertebroplasty

In determining where to perform these procedures for treating osteoporotic fractures, be aware that Medicare reimburses more when these cases are performed on an inpatient rather than outpatient basis.

Consider coding advice from vendors

Spinal implant companies can offer guidance on coding for spinal procedures, but their information is not official. The official source is Coding Clinic for ICD-9-CM, a quarterly publication from the American Hospital Association (www.ahaonlinestore.com). The publication includes information from the Centers for Medicare and Medicaid Services (CMS).

Monitor vendors’ invoices

HealthEast’s implant database enables it to hold sales reps accountable for their billing. When an invoice is received, an accounts payable clerk checks the invoice against the implant database to see what was actually used on the case. Discrepancies are reviewed. For example, the invoice lists a package of 10 bone screws when only 2 were used. Or the company bills for an item that a sales rep gave a surgeon as a free sample. Or the invoice includes a shipping charge that should not be billed.

Spot opportunities to improve coding accuracy

Some opportunities Courneya found in her reviews:

• Based on implant usage, a procedure originally assigned to DRG 233 (other musculoskeletal and connective tissue OR procedures with cc) was corrected to DRG 519 (cervical spinal fusion with cc), with a reimbursement difference of $1,862.

• A procedure originally assigned to DRG 234 (other musculoskeletal and connective tissue OR procedures without cc) should have been assigned to DRG 497 (spinal fusion with cc), with a reimbursement difference of $9,552. In this case, the dictated term “a fusion” was incorrectly transcribed as “effusion.” But the implant database showed a number of parts had been used, so Courneya suspected it was a fusion. She also suspected it should have been coded for a co-morbidity for anemia due to blood loss.

Negotiate better contracts with vendors

With an accurate database, HealthEast was able to negotiate a better contract with a major spinal implant vendor because it had documentation of its implant usage.

HealthEast uses Spinal Metrics software from Mendenhall Associates, Ann Arbor, Mich (www.orthopedicnetworknews.com), which collects the patient’s demographic data and implant part numbers and produces reports for analyzing implant usage. Other OR information systems also have implant tracking components.

But the software is just a tool. The real key to financial management of spinal surgery is for departments to work together to ensure documentation and coding are accurate and to monitor and manage implant usage, costs, and reimbursement. Administrators must be willing to provide enough resources, both in personnel and information technology, to carry out these activities effectively.
specialized staff to take time off.

The number of spinal cases isn’t high enough yet to support an exclusive team. The OR performed 246 spinal cases from January 2002 to April 2004.

**Implant and instrument management**

**Plan for handling of implants**

Involving materials management staff early in planning is essential, Pilla says. At Underwood, the OR-materials management liaison is a former surgical technologist who is knowledgeable about the technology. Arrange for storage and handling for spinal cages, bone grafts, bone morphogenic protein, demineralized bone matrix, putties, gels, and screws, she advises. Underwood relied on recommended practices from AATB and the American Association of Tissue Banks (www.aatb.org).

**Organize instrument trays**

With 10 instrument trays needed, this was a formidable task. Quint spent a great deal of time making sure the sets had all of the instruments the surgeon wanted, but he was still distressed during the first case. To make this process go smoothly, she suggests:

- having the surgeon review every instrument and piece of equipment he or she will need during the first case
- holding a dress rehearsal before the first spinal case

“Set up all of the instruments and pretend you are getting everything ready for a case,” Pilla suggests. “The extra cost and time for opening and resterilizing instruments after this practice will be surpassed by the knowledge gained from the dry run.”

**Anticipate sterile reprocessing issues**

Many pieces of spinal surgery equipment came in from the outside, and some are heavy. Because of their weight, some sets had to be broken into smaller sets. Some trays were so large and heavy they didn’t dry properly. Proper planning can help avoid some of these issues.

**Clinical education**

Education requirements are enormous, Pilla says. Plan for education in the following areas:

## Instrumentation

Provide education on instrumentation, such as how instruments will be obtained and packaged for sterilization and setup. Though the surgeon gave an in-service about the new procedures he would perform, that didn’t cover how to set up the new instrument trays.

Pilla advises having representatives from the instrument companies teach about instrument preparation and use.

The OR held a “spinal education fair” for a week. Reps were stationed in the OR’s center core every day, where the staff could handle the equipment and ask questions. The dress rehearsal also helped with education.

**Neurological monitoring**

Education also is needed for neuromonitoring, which is used intraoperatively to provide information about nerve function. The staff need to understand the role of neuromonitoring and how to plan for it.

**Adjunct services**

Include planning for adjunct services, which should be addressed up front by the multidisciplinary team. Among services used are:

- Neuromonitoring. This is a contracted service. Neuromonitoring must be coordinated with the anesthesia provider. Often, the surgeon and neuromonitoring personnel do not want muscle relaxants given because they interfere with the neuromonitoring. This might require total IV anesthesia, which can be more costly.
- A vascular surgeon to provide access in anterior spinal cases.
- Radiology services including a C-arm and radiologic technician.
- Infection control support to evaluate patients for skin breakdown and potential for infection.

**Reimbursement**

Spinal surgery is expensive, and careful planning is needed to ensure the hospital doesn’t lose a significant amount of money. Accurate documentation, coding, and billing are imperative. (Suggestions for correct coding are on page 15.)

**Negotiate with payers on implants**

The most critical aspect of reimbursement for spinal surgery is being paid for the implants. Underwood was able to negotiate with its payers to cover implant costs plus a per-diem amount for each inpatient day.

“We suggest the financial department negotiate a ‘carve-out’ with payers for reimbursement of spinal implants,” Quint says. This is an agreement to reimburse an additional amount for the cost of implants.

Under the hospital’s carve-out agreements, “We must send the payers a copy of the invoice with the exact cost of the implant, and they will reimburse us not a penny more and not a penny less,” she says.

These agreements have allowed Underwood to be reimbursed for most of its spinal procedure costs. Managers in other parts of the country say they have not been successful in getting carve-outs. Hospitals may decide to continue performing these procedures, however, because the surgeons perform other procedures that provide better reimbursement.

**Monitor costs and reimbursement**

Underwood’s administrators created a spreadsheet to track spinal cases and costs. The spreadsheet lists the surgeon, procedure, OR hardware used, any additional OR personnel used, OR time and charge, hospital length of stay, payer, total charges, DRG, and actual reimbursement. Currently, the spreadsheet is maintained manually, but Underwood is exploring the options of using its current software.

“The spreadsheet allows me to see how much we have spent for spinal technology and gives us an opportunity to take a detailed look at our operations,” says Quint.

The spreadsheet shows the DRGs used for filing claims, which helps ensure the procedures are coded correctly.

With the spreadsheet, “I can see how
OR Benchmarks fall schedule

Determining your facility’s costs for high-volume surgical procedures can help you to manage and reduce costs.

OR Benchmarks will be conducting 5 procedure studies this fall:
• total hip replacement
• total knee replacement
• knee arthroscopy
• coronary artery bypass
• laparoscopic cholecystectomy.

OR Benchmarks collects data on supply, labor, and anesthesia costs from participating facilities, then compares these costs showing the range and median cost. OR Benchmarks also tracks times for the procedure and turnover, as well as for patient prep and induction times.

When your facility participates in OR Benchmarks, you receive an extensive report showing how your costs compare with other facilities and where there are opportunities for cost savings.

OR Benchmarks has been conducting surgical procedure studies since 1996 and has an extensive database with cost and time information on these procedures. Reports for participants include data on year-to-year variations in costs and trends in supply usage.

OR Benchmarks is conducting an ongoing laparoscopic gastric bypass study, which is also open to additional participants.

For registration information, please go to www.orbenchmarks.com.

Nurses’ long, unpredictable hours linked to errors in national study

Nurses are working long hours, and that could be taking a toll on patient safety.

Risks of making an error were significantly higher when shifts were longer than 12 hours, whereas nurses worked overtime, and when they worked more than 40 hours a week, according to a new study.

The error rate was highest when nurses worked overtime after a long shift—errors were 3 times more likely with overtime after a 12-hour shift than in a normal 8-hour shift.

Some of the highlights:
• All of the nurses in the study worked overtime at least once during the 4-week study period.
• Almost two-thirds worked overtime 10 or more times during the period, and 30% worked overtime each day they worked during that period.
• Half of the shifts exceeded 10 hours, and 39% were 12 hours or more.
• One in seven nurses worked 16 or more hours in a stretch at least once during the 4 weeks. The longest shift was almost 24 hours.
• Nurses worked an average of 40.2 hours per week, but 25% worked more than 50 hours a week for half or more of the study period.
• 30% reported making at least one error, and 32% reported at least one near-error.

“Our analysis showed that work duration, overtime, and number of hours worked per week had significant effects on errors,” say the researchers, led by Ann E. Rogers from the University of Pennsylvania, Philadelphia.

In the study, 393 of 891 RNs from a national sample completed log books for 4 weeks on their work hours plus any errors or near errors they made on their shifts.

The authors recommend cutting back on routine use of 12-hour shifts and eliminating overtime, especially after 12-hour shifts.

The study, published in the July/August Health Affairs (www.healthaffairs.org), is one of the first national efforts to quantify the hours nurses work and examine the relationship between work hours and patient safety.

Report highlights RNs’ effect on outcomes of patient care

A new report places at managers’ fingertips 8 years of research findings on the relationship between nurse staffing and patient outcomes in hospitals.

A few of the highlights:
• A review of 26 studies found lower nurse-to-patient ratios were associated with higher rates of adverse outcomes that did not result in fatalities, such as nosocomial infections, pressure ulcers, or falls. But evidence has not consistently shown lower staffing levels are associated with higher patient mortality.
• In hospitals with high nurse staffing levels, major surgery patients had lower rates for 2 patient outcomes: urinary tract infections and failure to rescue (the death of a patient from complications a nurse might have been able to identify and address).
• Three federally funded studies found a significant correlation between lower nurse staffing levels and higher rates of pneumonia.
• Studies are examining the relationship between staffing and patient safety. One project is assessing the impact of nurses’ working conditions on medication safety. The aim is to describe how workload, automation, and other variables affect safety. A number of other studies are underway.

**Frequent questions on tissue handling**

Bone dowels and putty, heart valves, skin, cartilage, and tendon grafts—these are a few of the array of tissues used in surgery. What do you need to know to manage tissues safely and appropriately?

**Q** Do you have suggestions on meeting the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirements for tissue handling?

Osborne: JCAHO’s standard for tissues has been moved from the hospital accreditation manual to QC.5.300 in the 2004 Comprehensive Accreditation Manual for Laboratory and Point-of-Care Testing. Under federal regulations, laboratories must be surveyed every 2 years. Your hospital may not choose JCAHO for its laboratory accreditation. But if it does, tissue storage and handling will be evaluated during JCAHO’s laboratory survey. If your hospital stores tissues in the OR, the surveyors would review your compliance with the tissue standards at that time. In general, the QC.5.300 standard requires the organization to use standardized procedures to acquire, log in, and store tissue. This includes transporting and storing tissue according to the source’s written directions; monitoring temperatures for refrigerators and freezers; monitoring alarms and backups; and keeping records to show tissues were stored at the required temperatures.

**Q** How should frozen tissues be stored?

Osborne: This is covered in the standards of the American Association of Tissue Banks (AATB, www.aatb.org), the major voluntary accrediting body for tissue banks. According to AATB, frozen and cryopreserved tissue should be stored at –40°C or colder. For short-term storage (up to 6 months), tissue should be stored at –20°C to –40°C. After 6 months, grafts must be transferred to temperatures of –40°C or colder, used, or discarded. AATB also recommends that tissues not be stored in freezers where food and drinks are stored.

**Q** Should frozen and freeze-dried tissue be stored in the OR or elsewhere in the facility?

Osborne: There is no right or wrong answer. It depends on what works best for your organization. In some institutions, the blood bank is the ideal place because it handles blood components, which are similar to tissues. Others decide the OR is the best place.

**Q** Must frozen tissue be thawed before use?

Osborne: Review the package insert to see what is recommended. We advise keeping a copy of the package insert on file so users can refer to this information. Tissue banks usually recommend thawing and rehydrating frozen and freeze-dried tissue. This is important because frozen tissue is brittle.

**Q** If our freezer goes down, what can be done with the tissue?

Osborne: We get these calls frequently, particularly after a weekend or holiday. Keep in mind that tissues should be kept under the conditions recommended by AATB. If those conditions cannot be met, the tissue may have to be discarded. Also refer to the package insert.

We strongly recommend that freezers used for storing tissues have an alarm system that will go off in an area that is manned 24 hours a day. That is something a lot of people overlook.

You should also have a backup plan in case a freezer fails. You should either have access to another freezer in the facility or access to dry ice where the tissue can be stored until the freezer is repaired or replaced.

**Q** Are patients with latex allergy at risk from tissue transplants?

Osborne: Most tissue banks can issue a document saying their packaging materials are latex free. But people involved in tissue recovery and processing typically wear latex gloves, and the industry can’t guarantee that latex particles are not transferred to tissues. Tissue
Patient safety

Advice for selecting a tissue bank

Points to consider:

- Is the tissue bank accredited by the American Association of Tissue Banks? A list of accredited banks is at www.aatb.org.
- Is the tissue bank registered with the Food and Drug Administration, as required by regulation? A list of FDA-registered banks is at www.fda.gov/cber/tissue/tisreg.htm. Some states also require registration, including California, New York, Florida, and Maryland.
- Is the tissue bank ISO certified? This is not required, but meeting this international standard indicates that the bank is routinely inspected and has an active quality monitoring system.
- What is the surgeon’s preference?
- What type of packaging is used? How does the bank ensure tissues are not contaminated and cross-contaminated? How are these processes validated, as required by the FDA?
- What is the availability of tissues? Some tissues are in high demand, such as those used in sports medicine. Can you obtain these when you need them?
- What is the tissue bank’s safety track record? Has the bank had any recalls? Has it had safety-related inspections? Has it received any FDA warning letters?
- What have been the clinical results of tissues from the bank? Much of this information is anecdotal but can be helpful.
- What are the processing fees? Tissues may not be bought or sold, but tissue banks charge processing fees, which vary.
- What type of packaging is used? How easy is the packaging to use in the OR while maintaining aseptic technique?
- How good is the service? Does the bank have a well-informed person available to answer questions?

handled prefer latex gloves because of the dexterity.

We are not aware of any incidents where patients have had a reaction to latex as a result of a tissue transplant, and we are not aware of any reports in the literature. That does not mean there haven’t been cases that are unreported. But unless there is an issue related to latex in tissue, I am not sure the industry will make changes.

Should patients who are receiving a tissue transplant give informed consent?

Osborne: We believe informed consent is something facilities should consider, similar to the consent given for blood transfusions. In some cases, patients are not aware they are receiving a tissue transplant. Whether the consent should be obtained by the hospital or the physician has not been determined. We are not aware of lawsuits involving failure to seek consent from tissue recipients.

Does a hospital have to register as a tissue bank if it shares tissue with another facility?

Osborne: According to the FDA’s registration rule for tissue banks, which was finalized in 2001, hospitals are not required to register if they simply store and transplant tissue. If your facility is transferring tissues to other hospitals or surgery centers, it is best to check with the FDA. The FDA is concerned about traceability. If you are sending tissue to another facility and are not able to trace the tissue, that would be a big issue.

I understand that soft tissues such as knee allografts cannot be sterilized. Is that a safety issue for patients?

Osborne: The processing of tissue is a balancing act. Tissue banks must balance the biological and biomechanical function of the tissue against the processing, which may destroy those characteristics. Especially with soft tissues such as tendons and ligaments, maintaining the structure and function is a major issue. At MTF, soft tissues are processed aseptically rather than sterilized. These aseptic processes are performed in clean-room environments and employ various types of antibiotics, detersgents, and other agents to reduce the risk of bacterial contaminants. The FDA requires that tissue banks validate their processes so tissue is not contaminated or cross-contaminated.

The importance of validated processes was illustrated in the Minnesota case. The tissue bank that provided the graft did not have an adequate procedure for culturing the tissue at the time of recovery. The investigation also found that the processing agents used can interfere with the microbiological tests performed on the tissue. That is a part of validation—to ensure the chemicals used do not interfere with the final culture results.

The new GTP rule will give the FDA more authority to inspect tissue processing.

Should we be culturing tissue prior to implant?

Osborne: There are different opinions. You should abide by what your organization recommends. MTF does not recommend culturing tissues. The reason is that many facilities, if they don’t have adequate procedures, may actually contaminate the tissue when attempting to culture it. The more you manipulate the tissue, the greater the risk of contaminating the tissue.

What’s the safety record for tissue transplants?

Osborne: Overall, the safety record has shown tissue transplants are very safe. There have been isolated cases of bacterial contamination and disease transmission. There are over 800,000 units of tissue transplanted a year. If there was a safety issue, you would see far more cases. Unfortunately, the majority of the incidents reported were from one tissue bank.

How actively is the FDA inspecting tissue banks?

Osborne: There are over 1,000 facilities registered with the FDA. A list of registered facilities is at www.fda.gov/cber/tissue/tisreg.htm. Of those facilities, the last report was that the vast majority of processing facilities have been inspected at least once. In most cases, FDA is routinely inspecting facilities about every 2 years.
CDC gives advice on tissue safety

When a healthy 23-year-old Minnesota man died of an infection in December 2001 after routine surgery to receive a knee allograft, alarm bells went off across the country.

The question on everyone’s mind—did the relatively rare type of infection caused by Clostridium sordellii come from the graft?

The Centers for Disease Control and Prevention (CDC) started an investigation and asked surgeons and public health officials to report any other allograft-related clostridium infections.

As of March 2003, 14 such patients had been identified, according to the CDC’s report published in the June 17, 2004, New England Journal of Medicine. All 14 patients had received allografts from the same tissue bank, identified in the report as Tissue Bank A and in press reports as CryoLife.

What caused infections?

The infections were probably caused by microbes present in the cadaver tissue when it was recovered, according to an accompanying editorial by physicians from the Mayo Clinic College of Medicine. As a person is dying, microorganisms can pass through the intestinal wall and seed blood or tissue with normal intestinal flora, such as clostridium. Even with refrigeration, the body cools slowly enough for the organisms to proliferate. Clostridium has spores that can persist for years, and implanting a contaminated allograft in a closed wound sets up an ideal setting for a clostridium infection, they note.

The CDC reports that the 14 patients received allografts from 9 donors. Tissues from 3 donors were processed by Tissue Bank A. Tissues from 5 donors were processed and distributed by Tissue Bank A as well as other tissue banks. The other tissue banks used either gamma sterilization or a low-temperature chemical sterilization method (BioCleanse by Regeneration Technologies Inc, or RTI). No infections were reported from the grafts processed by these tissue banks. Tissues at Tissue Bank A were not sterilized but were processed using a solution of antibiotics and other chemicals. Tissue Bank A did not validate this method for killing spore-forming organisms, according to the CDC’s report.

The report includes the CDC’s recommendations for reducing the risk of allograft-associated infections (sidebar). The Food and Drug Administration is expected to issue final regulations for good tissue practices shortly.

Though guidelines can help improve tissue safety, the CDC says, the best way to reduce the risk of infection is to develop sterilization methods that don’t affect the function of the tissue after it is transplanted.

Recommendations to reduce risk of allograft-associated infections

- Tissue banks should process tissue using a method that can kill bacterial spores. Existing sterilization techniques used for tissue allografts, such as gamma irradiation, or new techniques effective against bacterial spores can be used.
- Unless a sporicidal method is used, tissue should not be considered sterile. Health care providers and patients should be informed of the possible risk of bacterial infection from these tissues.
- If no sporicidal method is available (eg, for fresh femoral condyles), tissue banks should minimize the potential for release of contaminated tissue.
  - Allograft tissues should be cultured before suspension in antimicrobial solutions, and if clostridium or other bowel flora are isolated (ie, if the presence of enteric pathogens suggests that clostridium spores may be present), all donor tissue that cannot be sterilized should be discarded.
  - Tissue banks should consider performing both destructive testing and swab cultures of tissue to increase sensitivity for detecting bacterial contamination.
- Recommended time limits for recovery of tissue, from the time of donor death or asystole to the time of tissue recovery, should be followed [American Association of Tissue Banks, 2001]. Research should be performed on the effect of such restrictions on tissue procurement and tissue safety.
- Tissue banks should validate all quality assurance methods used for tissue culture to ensure that carryover of residual antimicrobial agents does not result in false-negative culture results.
- After a tissue bank receives a report of potential allograft-associated infection, any remaining tissue from the implicated donor should not be released until it is determined that the allograft is not the source of infection. In the event of a reported allograft-associated infection, tissue-bank personnel should notify health care providers of other recipients of tissue from the same donor. A sample of non-implanted tissues that was processed in the same way as the tissue from an allograft-associated infection should be cultured by an independent laboratory using a validated method.
- Tissue banks with identified tissue-processing problems that resulted in a contaminated end product should perform a one-time audit of their unreleased tissue inventory to estimate the proportion of unreleased tissue that may be contaminated with microorganisms or spores.


Reference

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How will surveyors assess competence?

A column on JCAHO standards.

The new survey process by the Joint Commission on Accreditation of Healthcare Organizations is quite different than it has been in the past. One new feature is the tracer methodology, where surveyors select a patient and use that person’s chart as a roadmap for evaluating compliance with the standards and the organization’s systems for providing care.

How does the new process affect one of the toughest standards for hospitals to meet—assessing the competence of staff?

Two experts, Maureen Carr, project director, and Caroline Christensen, associate project director, in JCAHO’s Division of Standards & Survey Methods, responded to questions about how surveyors will address staff competence.

How does competence assessment for staff fit in with the new survey process, particularly the tracer methodology?

JCAHO: As surveyors move through the tracer process and encounter staff who are in direct contact with patients, they may identify individuals or topics they want to explore in the competence assessment session. Surveyors may or may not be looking at files in this session—we don’t want it to be a review of files. We want it to be a broader system discussion.

The other thing we hope our surveyors pick up during the tracer activity are any issues regarding the organization’s overall approach to competence assessment. In other words, surveyors would be learning from the staff they encounter in interviews about the organization’s approach to orientation, in-services, support for continuing education, and how the organization learns about how staff meet requirements if they are required to have continuing education as part of their profession. These would then carry over to a more systemwide discussion of issues surrounding competence.

This is not intended to be an audit. In the past, it may have appeared to have been an audit of files for selected individuals. Now we want our surveyors to focus on the organization’s system and processes for ensuring that it has a competent staff.

Would you give an example of a competence issue that might arise during the tracer process?

JCAHO: An example might be new medication that is being introduced. The surveyor may have learned about the medication while tracing a patient. The surveyor may ask a nurse who is responsible for administering that drug what kind of education the nurse received about possible adverse drug reactions and other aspects of that medication. If the nurse says, “Well, there was nothing in particular, beyond the drug coming up with an order telling me how to administer it,” and there was no further education, the surveyor might take that topic back to the competence assessment session. In that session, the surveyor might talk about medications in general and ask how new meds are introduced to the staff. That might raise a systemwide issue related to staff education about medications, all generated by one medication delivered to one patient who happened to be the subject of a tracer.

How is the competence assessment session going to work?

JCAHO: That is one of the scheduled discussion sessions. It’s about an hour. It’s intended to be specific to the organization rather than a general discussion of human resources. It’s intended to look at the system of how the organization establishes and maintains a competent staff. Sources of information for the discussion come from the tracer activity. There may be issues about orientation, in-services, new technology, new medications, and how the organization makes sure staff are prepared to utilize new technologies and medications. The discussion may also include how the organization addresses patient safety issues and other new initiatives from beyond their walls, like the National Patient Safety Goals.

Surveyors will also be exploring the process for assessing competence itself—how do you go about doing periodic reviews of a person’s competence? That is so they can understand if the review is comprehensive and covers everybody it should cover, such as contract employees.

How do you suggest organizations establish a framework for areas of competence to be assessed? Previously, a recommended framework was to identify issues with high risk/high volume, high risk/low volume, and new technology.

JCAHO: It is up to the organization—we are not going to dictate that. We are not saying the criteria previously included in the standards are bad. We are not being prescriptive. We want organizations to take a broader approach based on needs of the populations they serve. We want them to base their job descriptions and competencies on those populations and the types of services they are providing. Those areas that were in the standards previously are still valid, but it was a limited list. The idea is to broaden it to let organizations choose.

Are there areas of competence assessment that would be identified through the presurvey steps, such as the self-assessment and PFP, that would be looked at during the on-site survey?

JCAHO: In the midpoint self-assessment, or periodic performance review (PPR), the organization evaluates its compliance with the standards. The PPR has nothing to do with the on-site survey and does not influence the on-site survey.

The PFP, or priority focus process, identifies organization-specific processes relevant to patient safety and quality. The PFP identifies issues for initial focus in the survey through information we get from a number of sources—these could be complaints, past recommendations, the survey application, and probably new data sources that will be developed over time. We have mapped our standards to these topic areas, one of which is staffing. The surveyors may initially focus on competence if staffing is identified as an issue through the PFP.

Continued on page 24
Sneak preview
General session speakers already on board…
• Carl Hammerschlag, MD, The Way it Was is Not The Way it Is
• Michael Roberto, Harvard Business School, Leadership Lessons Learned from the Everest Disaster
• Mary Murphy, RN, 2002 OR Manager of the Year

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Could temporary or contract personnel be interviewed during the tracer?

JCAHO: Yes, they would be included if encountered during a patient tracer. We would ask the organization how it knew this staff person was qualified to do what she was doing. We would ask the individual how she was oriented to the organization, to the unit she was working on, and to the patient she would be working with. The same might be true for a new employee. Surveyors would be working with. The same might be true for a new employee. Surveyors would be working with.

What about age-specific competence?

JCAHO: The reference to age-specific competence has been removed from the standards. The standard has been changed to refer to competencies of working with populations. Some of this might be age related, such as a pediatric population, but it also could be cultural and linguistic, such as primarily Hispanic populations. It might be based on specialties or diagnoses, such as working with patients with diabetes or Alzheimer’s disease. We didn’t want staff competence to be limited to age. It is up to the organization to define staff competencies based on the populations served. We want the organization to understand its population, then determine what kind of services and staff it needs to provide.

Do you have impressions from surveys done so far of what kinds of competence issues are arising?

JCAHO: Not at this point. We haven’t accumulated enough data yet to aggregate.

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Where I spent my summer vacation—nursing camp

High school students shadow nurses at the Mayo Clinic Hospital in northeast Phoenix. They wear scrubs and learn skills such as suturing and giving injections. They suture pig’s feet and practice injections on dummies.

The free weekend camp in June completed its fourth season with 14 campers participating in a staged trauma scenario, including a chance to ride an air evacuation helicopter.

The nursing camp went so well that Mayo was planning to hold a doctor camp in August, The Arizona Republic reported.

New dynamics of foreign nurses

The Philippines, which has exported nurses for years as a deliberate policy to send home to their families, is now seeing a shortage of its own. Ireland, once an exporter of nurses, has seen the flow reverse because of an economic boom and a growth in the number of nursing positions. The United Kingdom is seeing greater numbers of foreign-educated nurses join its workforce than nurses prepared at home.

Trends raise broad questions about hiring nurses away from their home countries who also need them, according to recent articles in Health Affairs.

“The world’s nurse supply appears insufficient to meet global needs now and in the future,” writes Linda Aiken of the University of Pennsylvania and her colleagues.

She argues that countries that use the most nurses should invest the most both in educating their own nurses and in educating nurses in foreign countries from which they recruit.

Latest source of nurses—Mexico

Mexico is the latest focus of nurse recruiting, particularly for RNs to serve the US’s rapidly growing Latino population.

“The Mexican nurse understands, speaks, and lives the culture of Latin America,” Guillermo Sanchez, president of MDS Global Medical Staffing, a Mexican company that recruits nurses for US hospitals, told the Associated Press.

Mexican nurses with advanced degrees can multiply their pay up to tenfold.

Recruiting of Mexican nurses still is in its early stages. Just 58 took US nurse licensing exams in 2002, according to the latest statistics from the National Council of State Boards of Nursing. Of those 28% passed, well below the 47% of foreign nurses who take the test, which is given in English.

Off-shoring may bring more workers into health care

A lot of US jobs will move offshore in the coming years, but health care won’t be among them. In fact, more American workers will migrate to fields such as health care and education, which require face-to-face contact, experts predict.

Forrester Research, a technology research firm, predicts nearly 10 million US jobs will move offshore between 2003 and 2015, the June 26 Dallas Morning News reported.

Many of the jobs that stay in the US are expected to spring from health care and education. The Bureau of Labor Statistics predicts that 1 out of every 4 jobs created in the US between 2002 and 2012 will be in health care and social assistance or education. Among the top occupations with the most openings: RNs, teachers, medical assistants, physician assistants, and home health aides.

Orthopedic surgeons most-recruited MDs

Orthopedic surgeons top the list of the most-recruited physicians, according to search firm Merritt, Hawkins & Associates, Irving, Tex. Rounding out the top 5 were radiologists, cardiologists, and family practice and internal medicine MDs. General surgeons came in at number 6 and anesthesiologists at number 9.

Anesthesiology, along with radiology, saw a decline in demand from 2003 to 2004 as the specialties begin to catch up from shortages.

“Despite the decline, we project that increasing rates of both inpatient and outpatient surgery will ensure that anesthesiology will remain a competitive search for the foreseeable future,” the firm said.

www.merrithawkins.com
Rabies transmitted in organ transplants

The Centers for Disease Control and Prevention (CDC) confirmed June 30 that 3 patients had died after transplants of organs infected with rabies. The organs were donated by an Arkansas man who died at a Texas hospital. A week later, it was announced that a fourth patient had died.

The cases are the first reports of rabies transmission in solid organ transplant recipients, though rabies has been transmitted to 8 recipients of transplanted corneas in 5 countries.

The rabies strain identified in the recipients is commonly found in bats. The CDC said it does not know when or where the donor was exposed to rabies.

The donor presented at 2 emergency rooms in Texas, where he was diagnosed with subarachnoid hemorrhage. He died within 48 hours.

Donor screening did not reveal any contraindications to transplant, and the patient’s family agreed to donate his organs. His liver and kidneys were transplanted into 3 recipients in Texas on May 4, and his lungs were transplanted at an Alabama hospital into a patient who died of intraoperative complications.

Organ recipients

After receiving their organs, the 3 recipients developed encephalitis. The liver recipient died on June 7, and the kidney recipients died on June 8 and 21. On June 9, a pathologist at the Texas hospital called the CDC for help in solving the puzzle of why the recipients died. No one suspected rabies until the last week of June when the diagnosis was made at the CDC.

Risk to health care workers low

The CDC is working with health officials in Arkansas, Texas, Oklahoma, and Alabama, the states where the transplants took place or where the donor and recipients resided, to identify emergency room, critical care, and OR personnel as well as other health care workers and family members who might have come in contact with the infected patients.

Transmission of rabies from infected patients to health care workers has not been documented, and the risk is extremely low, the CDC says. The rabies virus can be transmitted through percutaneous and mucocutaneous routes, such as through a wound, nonintact skin, or mucous membranes. The CDC notes that use of Standard Precautions for contact with blood and body fluids prevents exposure to the rabies virus. That includes use of gloves, gown, mask, goggles, or face shield as indicated for the type of contact.

The CDC is working with federal agencies to evaluate screening procedures and other steps to reduce the risk of rabies transmission through organ transplants. Human rabies is rare in the US, with only 1 to 3 cases reported each year.

The report is in the July 1 issue of the CDC’s Morbidity and Mortality Weekly Report available at www.cdc.gov/mmwr/
Implants are among the most costly items used in surgery. But it’s not always easy to get reimbursed for them. The full cost of implants may not be covered by the flat-rate payments ambulatory surgery centers (ASCs) receive for many of their services.

To improve the odds of recouping their costs, ASCs need to keep a close eye on their insurance contracts, have well-thought processes to capture implant use consistently, and be sure billing is done correctly.

Here are some expert strategies for improving implant reimbursement.

Know your payer contracts
There is no rule of thumb for how payers reimburse for implants. You need to know each payer’s contract and its terms for implant payment, notes Dawn Gray, CPC, CCP, business office manager and managed care specialist for Surgery Center Billing (www.ascbilling.com), an ASC billing firm in Fort Myers, Fla. That can be a big job because some ASCs contract with dozens of payers.

Some insurers pay for implants based on a percentage of billed charges. Others pay the invoice amount. (“Be sure to include shipping and handling in your charge,” Gray advises.) Still others pay for implant charges over a certain dollar amount.

“On the West Coast, some payers are trying to get away from paying additional amounts for implants and supplies. They say their grouper rates are sufficient to cover that,” notes Shannon Smith, CPA, of The Rush Group (www.therushgroup.com), San Francisco, who consults on financial and managed care issues. These payers figure that on average, an ASC’s reimbursement for the group will balance out—the ASC may lose on some procedures but make up for the loss with others in which implants are not used.

“If there is one trend I see, it is that third-party payers are limiting reimbursement to the cost of the implant and implementing caps,” Smith says. One of the nation’s largest insurers has limited implant reimbursement to $850.

If your ASC has many contracts, focus on your big payers first, she suggests. “You’ll find 20% of your payers probably drive 80% of your business. Go for the biggest bang for your buck—make sure you absolutely have your processes down for your major payers.”

She recommends creating a matrix for the billing staff that lists the major payers with each of their terms for implant payment. Then work with them to see if they will standardize their implant billing methods. That makes the billing process more routine and improves the accuracy of claims.

Know Medicare’s rules
Medicare has a limited list of approved implant HCPCS codes that it will consider for reimbursement, Gray notes. In most cases, Medicare will reimburse only when these HCPCS implant/supply codes are billed with the appropriate CPT-4 procedure codes. The guidelines for billing for these HCPCS codes seem to vary by state.

Smith says implants are often billed using revenue codes rather than HCPCS. Some payers specify revenue codes 274, 275, and 278. “I would advise confirming billing practices with each payer,” she says.

Ask for carve-outs for implants
“When negotiating a new contract, ask for a carve-out for implants up front,” says Gray. “If you don’t ask for it, you probably won’t get it.”

It is much easier to request carve-outs when the contract being negotiated than to try to amend the contract later. To prepare for negotiations, know the specialties your ASC performs and the implants you normally use.

“You never know when a provider will want to schedule a case that will require an implant that is above the normal cost of performing the procedure. That person will be much happier if you can accommodate it,” she says.
Key information to know from payers is what is classified as an implant and how the payer is set up to pay such claims. “Have it all documented in your contracts so there is no misunderstanding,” says Johnna Nichols, CMM, business office manager/privacy officer for the Harmony Surgical Center LLC, Fort Collins, Colo.

Find out who the payer’s contact person is, such as the provider relations representative, so you contact them if necessary. Harmony has audit trails, especially for high-dollar implants such as spinal cord stimulators. The original invoice goes to the certified coder, a copy is mailed with the claim to the carrier, and a copy is given to the insurance coordinator for follow up. The accounts receivable coordinator has copies of all contract information to use in reviewing payments received. The senior accountant reviews high-dollar invoices to make sure the facility is at least paid for its costs. Any discrepancies are given to Nichols to review and to discuss with the staff and the insurance company if necessary.

If you were not able to negotiate a carve-out at the beginning of the contract, try to do it when renegotiating for renewal.

**Carve-out language**

Make sure the carve-out language specifies:
- How an implant is defined.
- What code the payer requires if there is not an assigned HCPCS code for the implant:
  - 99070: Supplies and materials over and above those usually used. (This code is not necessarily for physician billing only; it can be used by the facility if required by the payer.)
  - L8699: Implant, not otherwise specified.
- What revenue code the payer wants used on the UB-92 forms.
- Whether the payer requires an invoice to be submitted with each implant billed or whether the ASC should just keep the invoice in the patient’s file.

Smith recommends whenever possible negotiating terms that don’t require submitting invoices. “Put the onus on the payers so they have to come in and audit the medical record to make sure the implant used is documented,” she says.

Waiting for an invoice can hold up the billing process. “A best billing practice is to submit bills to payers within 48 hours of the procedure,” Smith says. But invoices are not always submitted that quickly. As an alternative, a payer will sometimes accept an invoice that is not specific to the implant used. For example, if an ASC uses a lot of knee allografts, the payer may accept a copy of a similar invoice.

**New technology**

A difficult area is negotiating carve-outs for new technology the ASC plans to use but isn’t using yet. Smith encountered this situation when working on a contract for a group of pain specialists who want to begin using implantable pain pumps, which cost about $18,000 each. Before approving a carve-out, the payer wanted invoices for devices that had actually been used.

“The payer wants to see that you actually are purchasing the supplies you are trying to negotiate a payment for,” she says. “That makes it hard if you are trying to develop a practice for a center and want to make sure you actually can be paid for these costly devices.”

The reason payers insist on invoices is to avoid fraud and abuse, Smith explains. In some cases, billing for pain pumps has been abused. One provider billed for $18,000 pain pumps when actually using $200 external pain pumps.

**What if payers won’t negotiate carve-outs?**

Some payers resist carve-outs for administrative reasons. They say carve-outs hold up the claims process because they require more handling.

“We are finding more payers adopting this policy,” Gray comments.

In this situation, it may be possible to negotiate a higher payment rate (grouper rate) for procedures using implants.

To do this, you need excellent records of your implant usage. You will need to determine which cases you perform that require implants, which implants are most commonly used for those procedures, and what they cost. You then need to determine under which grouper rate the payer would reimburse for these procedures.

“You should then go to the plan with this information and negotiate a higher reimbursement for these groupers,” she says.

“The downside is that you probably will not get the payer to increase reimbursement for the group enough to cover all of your implant costs. But the loss may be recaptured from procedures in that group that do not require use of implants.”

Gray notes that some payers will develop additional payment groups to move these procedures into to assist ASCs in capturing reimbursement for supplies and implants.

**Tips for successful implant billing**

- Negotiate contracts that clearly spell out the terms and process for implant reimbursement.
- Keep all invoices on file.
- Track implant reimbursement and compare to costs.
- Make sure implants used for Medicare patients are on Medicare’s approved list and will be covered for the procedure being performed.
- Include implants in the process for verification of insurance benefits and preauthorization.

Continued on page 30
Two patient deaths after cosmetic surgery at a prominent Manhattan hospital are stark reminders of the importance of having sound policies and procedures and making sure they are followed.

The deaths involved two socially prominent women who had cosmetic procedures at the Manhattan Eye, Ear and Throat Hospital. One of the patients, Olivia Goldsmith, a novelist who wrote *The First Wives Club*, had surgery in January. The second, Susan Malitz, 56, died during a facelift in February.

In an investigation, the New York State Department of Health found 10 violations and in May fined the hospital $20,000.

The department did not identify the patients, but they were identified in news reports.

The hospital submitted a corrective action plan June 7, which the department accepted. The department will make an unannounced visit to see if the plan has been implemented.

The state’s health commissioner, Antonia C. Novello, MD, said the state was particularly concerned about the hospital’s failure to have safeguards for patient monitoring. The state also found the hospital’s plan to address them:

**Preop history and physical**

In the first case, the department found physicians failed to complete a thorough preoperative history and physical even though the patient had a significant health history.

“In any case that is considered elective or cosmetic surgery, we stress the importance of assessing the patient’s current health condition,” the health department spokesman told OR Manager. “The physician should then consider whether to go forward with the elective surgery.”

In its action plan, the hospital said perioperative nurses will review all patient charts for a history and physical before the patient is sent to the holding area. If this requirement isn’t met, an “appropriate physician” will be requested to document the history and physical on the chart before the patient is sent to the holding area. The hospital set up a 12-month program to audit charts for compliance.

**Patient monitoring**

The patients’ respiration and vital signs weren’t monitored adequately during the procedures, the department found.

The first patient did not have CO₂ monitoring, and chest movement could not be observed because of the drapes. When it was noticed that she was hyperventilating, there was a delay in ventilation and intubation. Instead, the patient, already heavily sedated, was given fentanyl, according to the report. The surgeon and nurse anesthetist did not communicate adequately, and the surgeon did not investigate the patient’s bradycardia, which led to cardiac arrest.

Even though capnometry was used for the second patient, the anesthesiologist “failed to recognize the patient was hyperventilating,” according to the report. The patient developed tachycardia, went into cardiac arrest, and could not be resuscitated.

In response, the hospital developed a new policy on airway management that says deep sedation and general anesthesia require use of an endotracheal tube, laryngeal mask airway (LMA), or facemask with supplemental oxygen.

End-tidal CO₂ will be monitored continuously and recorded every 15 minutes in the anesthesia record. The respiration rate will be recorded every 5 minutes.

Minimal or moderate sedation may be given with spontaneous ventilation. The patient’s responsiveness will be monitored continuously by verbal or tactile stimulation, and the respiration rate will be recorded every 5 minutes.

Respiration rate will be measured from exhaled CO₂ using nasal prongs designed for that purpose. If the nasal prongs can’t be used, such as in facial surgery, a precordial stethoscope and/or impedance respiration monitor will be used. Charts will be monitored for compliance.

In addition, a supervising anesthesiologist will review and approve the anesthesiology plan. Any changes must be reported to the supervising anesthesiologist and the surgeon.

**Alarm audibility**

There was a question about whether alarms on the monitoring equipment were audible during the cases. The staff told investigators they did not remember hearing the alarms, but the hospital said the alarms were set to be audible.
The hospital adopted a new policy standardizing alarm and volume settings in the OR. All anesthesia equipment was programmed with the standardized alarm settings set in the policy.

A National Patient Safety Goal of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires alarms to be activated and audible.

**Emergency response**

In both cases, the department found a “significant delay” in responding to emergencies. The staff did not identify sudden changes in the patients’ conditions quickly and thus were not able to take prompt action to address the situations.

The department said it found no documentation that surgeons had received continuing education in cardiopulmonary resuscitation (CPR) when their credentials were renewed. New York State regulations require policies for orientation and continuing education in CPR, among other things.

The hospital said surgeons who attended the second patient were certified in Basic Life Support (BLS). It also said it would review all surgeons’ credentialing files for continuing education in BLS and take disciplinary action for those who don’t comply.

JCAHO does not have standards that specifically require CPR training for medical staff. The standards do require under PC.9.30 that hospitals have policies and procedures for resuscitation, provide the appropriate equipment, and have staff who are trained and competent in resuscitation. JCAHO does not specify how often training must be renewed.

The American Heart Association recommends that all health care professionals be able to demonstrate competency in BLS. All heart association courses require renewal every 2 years.

**Lidocaine dosage too high?**

The health department found the second patient received a much higher dose of lidocaine than the maximum of 7 mg/kg recommended in the Physicians’ Desk Reference (PDR).

The hospital responded that the PDR is a guideline, and clinical research shows lidocaine can be given safely at higher dosages. The hospital cited New York State’s Clinical Guidelines for Office Based Surgery (www.health.state.ny.us/nysdoh/obs/surgery.pdf), which state that an infusate for liposuction typically contains up to 500 mg to 1,000 mg of lidocaine.

The hospital said it has reminded cosmetic surgeons of the dose limit but that physicians’ judgment is required in determining the right dose for an individual.

The hospital’s pharmacists have developed a dosing chart posted in each OR that shows the recommended dosage based on the patient’s weight.

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**Have a good system for documenting implant use**

A good system begins with documentation by the nursing staff and includes tracking of invoices and reimbursement. Coach the nursing staff to be diligent and consistent in documenting supplies and implants used, Smith advises. That includes monitoring implants vendors may bring in the day of the case. Also make sure accurate invoices are on file for each implant used.

In addition, Gray recommends creating a method for tracking reimbursement such as a spreadsheet. “By doing this, you can determine which payers are reimbursing you adequately and which payers you need to negotiate a higher payment with.”

The tracking form should include:
- name of the implant used
- manufacturer
- cost of the implant
- billed charge
- reimbursement
- physician or specialty using the implant
- payer.

Smith encourages facilities that have an information system to use the system to track implants rather than creating a separate process.

“Automate processes whenever possible,” she advises. “Too many ASC managers don’t utilize their information systems to the fullest capacity. That’s unfortunate because the work-arounds they develop typically are more time consuming and costly than learning to use their existing systems for this purpose.”

**Implant cost management**

Physician profiling is a strategy some ASCs are using to manage costs of implants.

One of Smith’s clients compared preference cards for its high-volume procedures.

“They lined them up side by side, minus the physicians’ names and showed them the range in supplies used and the costs. Then they asked them, ‘Can we refine and standardize the supplies being used?’” she says. This strategy is even more effective if the ASC has access to outcomes information for the procedures being performed.

Realistically, implant reimbursement overall is unlikely to increase dramatically because insurers are trying to create incentives for providers to control costs, Smith comments.

The purpose of flat-rate reimbursement is to encourage ASCs and surgeons to choose treatments that stay within the payment limits.

“We are not going to see huge increases in reimbursement,” she says. “ASCs need to apply basic business principles and be cost conscious.”

Though ASCs may not be able to expect much more in the way of payment, they can take steps to improve their implant payments by making sure the nursing staff is educated about implant documentation and has good documentation tools as well as by making sure the facility has good tracking and billing systems in place.

“The only way a center is going to stay profitable is by managing its costs and developing effective processes,” Smith says.

**Call for abstracts for 2005 meetings**

Share your successes with your colleagues. Proposals are requested for OR Manager’s conferences:

**Managing Today’s OR Suite**
Oct 19 to 21, 2005, San Diego

**OR Business Management Conference**
May 2 to 4, 2005, Tampa, Fla

Send proposals of about 500 words describing the session you wish to present. Sessions are approximately 1 1/2 hours long.

Managing Today’s OR Suite focuses on practical topics related to management of surgical services, such as achieving greater efficiency, management of information, leading and developing staff, and keeping costs under control. The OR Business Management Conference emphasizes financial management, materials management, OR technology/equipment management, and OR design and construction.

The deadline for proposals and suggestions is Nov 1.

Fax or e-mail proposals to Billie Fernsebner, RN, MSN, education specialist, OR Manager, Inc, at 303/442-5960 or bfernsebner@ormanager.com. If you have questions, please call 303/442-1661.
Please see the ad for 3M HEALTHCARE in the OR Manager print version.
At a Glance

New Jersey to mandate certification for central service techs

New Jersey approved a law June 17 that will mandate certification for central service (CS) professionals. Under the new law, existing CS techs will have 5 years to become certified, and new hires will have 3 years. Those in the ambulatory setting will have 2 years to complete the requirement. Sterile processing managers will have to become certified immediately. More information is available from the International Association of Healthcare Central Service Material Management.

—www.iahcsmm.com

AAMI offers sterilization CD

AAMI, the Association for the Advancement of Medical Instrumentation, is making its complete collection of 50 sterilization documents available on CD-ROM.

The collection includes the recommended practices for sterilization in health care facilities and the safety and performance standards for sterilizers, among others. The CD is $475 for AAMI members and $655 for nonmembers. Contact AAMI at 800/332-2264 ext 217 or visit http://marketplace.aami.org

Hospital notifies patients after endoscope cleaning lapse

North Shore University Hospital in Manhasset on New York’s Long Island notified 177 patients they might have been exposed to HIV or hepatitis because endoscopes might not have been properly reprocessed, The New York Times reported June 16. Of 86 patients who returned for tests, none had tested positive. The hospital said it discovered 2 employees had failed to test a disinfectant solution used for the endoscopes. One was suspended without pay, and the other was fired.

—www.nytimes.com

New guide to pain medications

What are the best medications for moderate pain? Severe pain? When should opioids be used, and when are nonsteroidal anti-inflammatory drugs (NSAIDs) a better choice? What about drug combinations?

New treatment guidelines from the Medical Letter summarize the latest information on analgesic drugs.

Copies are available for $10 from the Medical Letter, an independent nonprofit organization.

—www.medicalletter.org